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8	Transcript of Meeting
9	of the Committee to Advise on Reassessment and Transition
10	
11	October 11 and 12, 2000
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3	АТ	TENDEES
4	MEMBERS OF CARAT:	
5	<u>Name</u>	<u>Organization</u>
6	John Ehrmann	Meridian Institute
7	Mike McCabe	Deputy Administrator, EPA
8	Jim Aidala	Environmental Protection Agency
9	Susan Wayland	Acting Assistant Administrator,
10		EPA
11	Steve Johnson	Deputy Assistant Administrator,
12		EPA
13	Marcia Mulkey	Director, Pesticide Program, EPA
14	Jim Jones	Director, Registration Division,
15		EPA
16	Lois Rossi	Director, Special Review and
17		Reregistration Division, EPA
18	Carolyn Brickey	National Campaign for Pesticide
19		Policy Reform

1	Bob Rosenberg	National Pest Management
2	Associat	ion
3	Ed Snetsinger	White Earth Band, Minnesota
4	Olga Moya	Environmental Law Professor
5	Rob Hedberg	Weed Science Society of America
6		
7	АТТЕ	N D E E S (Cont'd)
8	MEMBERS OF CARAT:	
9	<u>Name</u>	<u>Organization</u>
10	John Rigolizzo	Michigan Farm Bureau
11	Eldon Ortman	Agricultural Research, Purdue
12	Uni	versity
13	Jose Amador	Director, Texas A&M Research and
14		Extension Center
15	Dave Whitacre	Novartis Crop Protection
16	Cindy Baker	Gowan Company
17	Steve Balling	Del Monte Foods
18	Tanya Bobo	Makhteshim-Aghan of North
19	Ame	rica, Inc.

1	Dan Botts	Florida Fruit & Vegetable
2	A	ssociation
3	Jean-Mari Peltier	California Citrus Quality
4	Co	ouncil
5	Mike Carter	Wisconsin Potato & Vegetable
6	G:	rowers Association
7	Lori Berger	California Minor Crops Council
8	Mark Whalon	Michigan State University.
9	Mark Miller	American Academy of Pediatrics
10		
11	A T T	ENDEES (Cont'd)
12	MEMBERS OF CARAT:	
13	<u>Name</u>	<u>Organization</u>
14	Robin Spitko	National Alliance of Independent
15		Crop Consultants
16	Wally Ewart	Northwest Horticulture Council
17	Robert Kiefer	Chemical Specialties
18	Manufa	cturers Association
19	Steve Rutz	Florida Department of

1	Agric	culture and Consumer
2	Services	
3	Paul Helliker	Director, California Department
4		of Pesticide Regulation
5	Sarah Lynch	World Wildlife Fund
6	Bill Lovelady	National Cotton Council
7	Cliff Ohmart	Lodi-Woodbridge Winegrape
8		Commission
9	Jay Vroom	American Crop Protection
10	Assoc	ciation
11	Mike McGeehin	Centers for Disease Control and
12		Prevention
13	Al Jennings	USDA
14		
15	АТ	FENDEES (Cont'd)
16	MEMBERS OF CARAT:	
17	<u>Name</u>	<u>Organization</u>
18	Terry Troxell	FDA Center for Food Safety and
19		Applied Nutrition

1	Therese Murtaugh		Office of Pest Management
2		Pol	icy, USDA
3	Richard Rominger		Deputy Secretary, USDA
4	Valerie Wilson		Tulane Center for Environmental
5			Research
6	Shelley Davis		Farmworker Justice Fund
7	George Wichterman		Lee County Mosquito Control
8		Dist	trict
9	Erik Olson		NRDC
10			
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17			
18			
19			DAY ONE

OCTOBER 11, 2000 1 PROCEEDINGS 2 3 4 MR. EHRMANN: I would like to welcome you to this 5 session of the Committee to Advise on Reassessment & Transition, which is a subcommittee of the EPA NACEPT 6 7 Committee operating under the rules of the Federal Advisory 8 Committee Act. And I'll talk in a few minutes about a couple 9 of those procedures which we will follow today in terms of public comment, etc. 10 I'm John Ehrmann from Meridian Institute and 11 12 service facilitator for the Committee. And what I would like 13 to do first is ask the Committee members who are at the table to introduce yourself. If you're here as an alternate for a 14 15 formal member of the Committee, please identify the primary 16 member as well as yourself, so we can orient everyone to who 17 is represented around the table.

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the co-chairs for some opening comments. Then I'll make a

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After we do the introductions, then I'll turn to

- few comments myself about the agenda and how we want to
- 2 proceed over the next day and a half.
- And with that, let me turn to Mr. McCabe to just go
- 4 around with introductions.
- 5 MR. MCCABE: Hi. I'm Mike McCabe, Deputy
- 6 Administrator, Environmental Protection Agency.
- 7 MR. AIDALA: Jim Aidala from the Environmental
- 8 Protection Agency.
- 9 MS. WAYLAND: Susan Wayland, Acting Assistant
- 10 Administrator, EPA.
- 11 MR. JOHNSON: Steve Johnson, Deputy Assistant
- 12 Administrator, EPA.
- 13 MS. MULKEY: Marcia Mulkey, Director of the
- 14 Pesticide Program, EPA.
- 15 MR. JONES: Jim Jones, the Director of the
- 16 Registration Division, EPA.
- MS. ROSSI: Lois Rossi, Director of the Special
- 18 Review and Reregistration Division, EPA.
- 19 MS. BRICKEY: Carolyn Brickey, National Campaign

- for Pesticide Policy Reform.
- 2 MR. ROSENBERG: Bob Rosenberg, National Pest
- 3 Management Association.
- 4 MR. SNETSINGER: Ed Snetsinger from the White Earth
- 5 Band, Minnesota.
- 6 MS. MOYA: Olga Moya, Environmental Law Professor.
- 7 MR. HEDBERG: Rob Hedberg, Weed Science Society of
- 8 America.
- 9 MR. RIGOLIZZO: John Rigolizzo, representing Jack
- 10 Laurie from the Farm Bureau.
- 11 MR. ORTMAN: Eldon Ortman, Agricultural Research.
- DR. AMADOR: Jose Amador, Director, Texas A&M
- 13 Research and Extension Center, Weslaco, Texas.
- MR. WHITACRE: Dave Whitacre, Novartis Crop
- 15 Protection.
- 16 MS. BAKER: Cindy Baker, Gowan Company.
- DR. BALLING: Steve Balling, Del Monte Foods.
- 18 MS. BOBO: Tanya Bobo, Makhteshim-Aghan of North
- 19 America, Inc.

- 1 MR. BOTTS: Dan Botts, Florida Fruit & Vegetable
- 2 Association.
- 3 MS. PELTIER: Jean-Mari Peltier, California Citrus
- 4 Quality Council.
- 5 MR. CARTER: Mike Carter from the Wisconsin Potato
- 6 & Vegetable Growers Association. I am here as an alternate
- for John Wallendal, who is a potato producer in Wisconsin.
- 8 DR. BERGER: Lori Berger, California Minor Crops
- 9 Council.
- 10 MR. WHALON: Mark Whalon, Michigan State
- 11 University.
- DR. SPITKO: Robin Spitko, National Alliance of
- 13 Independent Crop Consultants.
- DR. EWART: Wally Ewart, Northwest Horticulture
- 15 Council.
- MR. MILLER: Mark Miller, American Academy of
- 17 Pediatrics.
- 18 MR. KIEFER: Robert Kiefer, Chemical Specialties
- 19 Manufacturers Association.

- 1 MR. RUTZ: Steve Rutz, Florida Department of
- 2 Agriculture and Consumer Services.
- MR. HELLIKER: Paul Helliker, Director of the
- 4 California Department of Pesticide Regulation.
- 5 MS. LYNCH: Sarah Lynch, World Wildlife Fund.
- 6 MR. LOVELADY: Bill Lovelady, National Cotton
- 7 Council.
- 8 MR. OHMART: Cliff Ohmart, Lodi-Woodbridge
- 9 Winegrape Commission.
- 10 MR. VROOM: Jay Vroom, American Crop Protection
- 11 Association.
- MR. McGEEHIN: Mike McGeehin, Centers for Disease
- 13 Control and Prevention.
- DR. TROXELL: Terry Troxell, FDA Center for Food
- 15 Safety and Applied Nutrition.
- 16 MS. MURTAUGH: Therese Murtaugh, USDA, Office of
- 17 Pest Management Policy.
- MR. JENNINGS: Al Jennings, USDA.
- 19 MR. ROMINGER: Rich Rominger, Deputy Secretary,

- 1 USDA.
- 2 MR. EHRMANN: Dr. Wilson, do you want to introduce
- 3 yourself and then we'll turn back to Mr. Rominger.
- 4 DR. WILSON: Yes. I'm sorry to be late. I'm
- 5 Valerie Wilson. I'm from the Tulane Center for Environmental
- 6 Research in New Orleans.
- 7 MR. ROMINGER: Well, good morning, everyone. I
- 8 want to welcome all of you. I join Mike McCabe in welcoming
- 9 you here and having you all back to get to work today.
- I want to salute all of the work that all of you
- 11 have been doing on this task here. I think we've have an
- enormous job and you've put in a lot of time so far. I also
- want to welcome our two new members to the Advisory
- 14 Committee. They have introduced themselves. Robert Kiefer
- from the Chemical Specialties Manufacturers Association and
- 16 Dr. Cliff Ohmart from the Lodi-Woodbridge Winegrape
- 17 Commission. Welcome to the group.
- 18 We appreciate all the time and effort that you all
- 19 are putting into this effort. I think you can make a real

difference in ensuring that these meetings are productive,

that we get to the table all of the viewpoints and all the

stakeholder viewpoints. And that's the way that we can move

this process along, by having all of you participating.

You know, in some ways we're counting down. It's less than two years now of August of 2002, the next deadline for reassessing the next 3,000 tolerances. So that means that we share a full agenda that we have to tackle before then, including the cumulative assessment.

But before getting into some of those technicalities, I want to step back just a moment and make sure that we keep looking at the big picture. So let's always keep in front of us what we're about here. U.S. agriculture already produces the safest, most abundant food in the world. So our goal through FQPA is to make the best even better.

Keep in mind, too, that nothing we do in agriculture stands alone. President Clinton and the public have raised the bar on the nation's food safety goals. From

farm to table the subject and the science of food safety have been elevated and are being addressed by our top research and regulatory people in and out of government.

Starting at the beginning, of course, we've got the FQPA here, the critical point. You know, I think it's a good law, but it's also a tough law. USDA has committed to working closely with EPA and Mike McCabe to bring the agriculture viewpoint to the table. As you will remember, Vice President Gore has made it clear that this process has got to work for agriculture, now and in the long term.

Some of you go back with us to TRAC, so you know well that a reasonable transition period for producers of commodities at risk must figure into the process every step of the way. So we want to thank you for all your guidance in setting some priorities and stepping up to the plate here again in helping us work through this part of FQPA.

Pest management is a top priority at USDA. And that is reflected in some of the recent grant decisions that we just made emphasizing pest management research. We've got

a handout today that summarizes all the FY 2000 grants, and
we'll talk more about them later.

Because FQPA did impose so much uncertainty on agriculture, and because the schedule that it sets is so demanding, it is really critical that USDA and EPA work closely together in moving this forward in providing the cooperative work and leadership that is needed. It is critical that we coordinate between USDA staff and the land grant universities, the faculty there, that we work and collaborate at all levels. Thanks to all the good work that we've had here, I think we've already logged a good number of successes.

The public participation process has been working.

It's involving more and more growers and I think resulting in better decisions. This is the kind of input that we need if we are to do right by the risk assessment process. When required and when provided the opportunity, the agricultural community has moved quickly to help design some practical risk mitigation

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2 As a result of the accurate use information from 3 the land grants and from other stakeholders, we've been able 4 to take actions and reduce risk while still maintaining the critical uses. We've been through most of the organophosphates. I think the process generally has been a 7 success.

> I want to recognize the collaboration between the IR-4 program and the EPA Registration Division to ensure that we do get some new tools available for some of those minor IR-4 has embraced some newer and safer technology, and EPA has accelerated the registration of those minor crop pesticides.

> I want to thank Mike McCabe and EPA for their partnership. This three way collaboration and communication with USDA, EPA, the agriculture community and all of our stakeholders is essential. There is no question this is a tough process. Now I don't think we've probably seen a time when everyone is happy. But I guess we probably don't expect

1	that,	either,	because	this	transition	process	is	going	to	be
2	tough	and many	y times o	contro	oversial.					

But it is our goal to work so closely with you that folks across the country do feel represented and feel like they've been bona fide contributors to the process that affects all of them so deeply.

So this continues to be a work in progress. We're all learning and we greatly appreciate that you are all here and the work that you are doing. So thank you.

10 Mike?

MR. MCCABE: Well, thank you, Rich. I appreciate you being here and also the work that you've put into our partnership and the expertise that you bring to this issue and also to our implementation of FQPA.

It's a pleasure to be here. It's a pleasure to see such a good turnout for this meeting. I think that we've got a lot on our agenda, a lot to discuss, and I am hopeful that it will be a very productive meeting. As you, I am sure, have noted, it is a very full agenda. It's an agenda

designed to discuss not only progress, but our process as well.

I know that each one of you has made a commitment to working through this process. Each one of you brings a unique background, a unique perspective and a unique interest to the process. And this really is a forum for you. It's a chance to gain your insights so that FQPA can work better, so that it can be implemented better, and that we can do better from EPA's perspective and from USDA's perspective. So I think it is important for us to be as open and honest as we can be in this meeting and as forthright as possible, to discuss what is working and what is not.

But I also would like to emphasis that CARAT is not the only forum that we have. I have been impressed with the amount of activity that we have put together over the last couple of years, particularly in the period just since the last TRAC meeting. We've had 13 technical briefings or stakeholder meetings on organophosphates. We have four scheduled in the future.

We also have had meetings on production issues, on rodenticides and other issues. We've had 16 USDA/EPA conference calls on a number of pesticides. We have had numerous meetings on worker protection, on spray drift, on cumulative risk, on drinking water and the list goes on and on. We have a number of issues and meetings scheduled for the future.

We also have had just direct contact with individuals. Your ability to access our experts that are working on these issues, meetings that we have had together, have added to our ability to understand better how FQPA is being implemented and hopefully help you understand our role in all of this.

As you can see, with your help and through various stakeholder approaches, we have increased the transparency of our decisions, and we'll continue to do so. We are committed to doing that. We have expanded your role, the amount of work that you do in helping EPA and USDA make tough but responsible positions, on risky pesticides. And I think that

with your continued involvement, with your continued

cooperation, we are going to make better decisions and make

good decisions.

The reviews that we have -- the scientific reviews and the public comment process -- are really intended to help ensure that we have a very rigorous system, a rigorous scientific evaluation that is conducted on every pesticide, and one that both you and the public in general can have confidence in. We know that there are still outstanding concerns, but I think that if you look at our accomplishment, our track record, it tells a very positive story.

Let's look at the record. I just have a couple of points to make here. First, our decisions have been based on sound science. We have been refining the critical science policies on which we base our risk assessments. Science by its nature grows and evolves and new information is presented almost on a daily basis. And we will continue to ensure our decisions evolve as science evolves as we get more information.

1	We have created a transparent and open process.
2	We've been gathering all the critical information that we car
3	to help us refine our risk assessments, leading to what we
4	believe are the best decisions possible. We've been making
5	major decisions on major pesticides. We've been reducing
6	risks. And to my knowledge, the sky hasn't fallen yet.
7	Growers continue to have the chemical tools that they need.
8	American agriculture continues to lead the world in
9	productivity.
10	We're on track to complete our review of

We're on track to complete our review of organophosphates by the end of the year. CARAT, TRAC, PPDC and the SAP are risk assessment, public participation processes. And many other forums as the ones I mentioned earlier provide for you and members of the public to participate. We know that some of you would like more opportunity and more public participation, and we look forward to discussing that today. Clearly as we look out at this market, I can

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see a growing and burgeoning market for safer

1 products.

As many of you know, more than half of our new registrations are for safer chemicals. In fact, since 1996 EPA has registered a total of 105 new active ingredients, 66 of those have been for safer chemicals. Since FQPA, the registration of new pesticides and new uses of existing pesticides has given growers over 2,400 additional pesticide uses for minor crops. On Section 18 emergency exemptions in fiscal year 2000 alone, we issued 458 emergency exemptions.

Our work with the USDA has helped us move forward on FQPA. USDA has changed the way that we do business. Rich and his leadership, and USDA with their experts, have been involved in every major decision. USDA is providing more accurate data on what people eat, including the consumption by children. USDA is providing real world data on pesticides that growers use and how they are used. We work together to avoid taking away any critical uses. And that's just one of the ways that we're working together on the transition for growers.

But, as our agenda shows, over the next day and a
half we have a lot of work ahead of us. We must continue to
protect children. We must continue our focus on protecting
children. We have prioritized for review those pesticides
where children may be most exposed. We still need to do
better. We need to find more ways to increase the
availability of safer pesticides, which includes making
registration decisions faster and finding non-chemical
alternatives.

We need to start thinking long term to foster broad, public participation in the cumulative risk assessment process and to ensure timely completion of this scientific work. We need to focus on the implications of cumulative risk assessments and to plan for those upcoming assessments, and the difficulty that cumulative assessment represents. By early next year, we hope to have completed the scientific foundation necessary to conduct cumulative risk assessments.

We're making some progress on transition, but there is still much more work to be done. We must move away from

the most hazardous pesticides in a planned, organized fashion, while ensuring farmers have adequate pest controls and techniques in their toolbox. As pesticide problems are identified, we must act to protect public health and the environment, but be sure decisions are responsive to the needs of growers.

After the updates this morning, I look forward to listening to the real world stories on transition. I want to know what has worked in the field and what has not worked. I want to hear your ideas and suggestions on how we can move forward with the important work of transition.

As we work through the remaining tough issues -and these are tough issues -- we must not lose sight of the
tremendous accomplishment and change that FQPA has brought.

I know that each one of you is committed to seeing FQPA work
and work well. I know that with your different interests and
perspectives you bring a wealth of information to this
meeting and to EPA and USDA in implementing FQPA.

I want to thank you for the time that you have

taken today and tomorrow, but also the help, assistance and 1 2 time that you take throughout the year to help EPA implement 3 And I look forward to working with you in the future. 4

Thank you.

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Thank you both. Just a few comments MR. EHRMANN: about the way that the agenda has been structured. And as all of you know, we had the opportunity to distribute a draft agenda to all of you 10 days or so ago. We got some very good feedback on that agenda. The Department and the Agency have worked to be responsive to that feedback in terms of some modifications to the agenda, which are reflected in the document you have in front of you.

This morning, as the co-chairs have referenced, we're going to primarily spend time providing information, both about the current status of reassessment activities, registration activities, budget and a number of other important issues of concern to the Committee, such as cumulative risk, channels of trade and science policies.

So we've structured this morning to be a series of

presentations. As always, we want to provide an opportunity
for questions and responses with the presenters of that
information. And then we also have provided at the end of
the morning about 45 minutes for open discussion on any of
the issues that are raised this morning as we go through
those various update discussions.

So I both want to encourage your questions as people are going through their presentations. If you have a question of clarification, let's get those in during the flow. But we'll also have that opportunity at the end of the morning for a more open discussion on any of the issues that are of primary interest to you that you've heard through those updates.

This afternoon, as was mentioned, we have several presenters who are going to be providing information about their experiences relative to transition. The purpose of those presentations is not that those particular case examples are the only stories that are out there or are going to illustrate every possible scenario that might evolve

during transition. Obviously that wouldn't be possible.

But we have tried to select some presenters who can pinpoint some key issues. And then again on the agenda we have left a good chunk of time for open discussion to really try to distill out of those case examples, and all of your collective experiences, what are the key issues relative to the transition process that the Department and the Agency need to be focussing on, and ask all of your help for ways to address those issues that may be barriers or concerns or opportunities relative to transition.

So we really want to have hopefully a good working session among the entire Committee after we hear those presentations to really distill out those key issues and get your ideas about how the two agencies -- the Department and the Agency -- can be responsive to those issues going forward as the co-chairs have invited in their opening comments.

We'll do that for the remainder of the afternoon.

I would point out for the members of the public that we do
have a public comment period scheduled at 4:30. I'll do my

best to kind of give you a sense if I see that time changing at all. If you do wish to make public comment, I would ask you to register your name outside so that I can calibrate the time appropriately for the number of public comments that we will have in that period late this afternoon.

And we will adjourn, as it indicates, no later than
5:15.

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Tomorrow we'll start with a recap of key issues that we have drawn out of that transition discussion, if we haven't completed that this afternoon. And then turn to an update on the drinking water issues, as well as the public health pesticide activities, and then discuss the process of the Committee relative to issues that may be appropriate for work in between meetings of the CARAT.

And, again, have a public comment period at approximately 12:15. And as I will today, I'll give folks an idea of when that public comment will happen if we're going to be moving from that time. And we'll again adjourn no later than 1:15.

1	We may wish to visit later today the start time
2	tomorrow. There has been a suggestion that maybe we could
3	start a bit earlier. But let's see how the day runs today in
4	terms of working through the agenda, and then we'll calibrate
5	that time before we adjourn so you'll know when we'll be
6	starting tomorrow.

As always, I'm going to do my best to both recognize people who wish to make comments in the order that you ask to be recognized, but I also again want to provide some flexibility for people to respond to particular points. This is a big Committee. As you know, there are a lot of folks around the table, so it's impossible to optimize both of those objectives at the same time. But please bear with me and I'll do my best.

I don't believe we've had very many occasions in the history of this Committee or the TRAC where someone didn't have a chance to make a comment if they really wanted to make a comment. So bear with me if I don't get you in exactly the right order. But at times it may be useful to

have folks have a chance to respond to someone else's comment more directly to try to have more of a conversation. And obviously the co-chairs will be entering the conversation when they see fit in terms of helping to respond to your questions or give you their sense of an issue.

Let me just say a word about the issue of workgroups and group process. As most of you know, Meridian Institute, our organization, was asked at the conclusion of the TRAC to interview and talk to a number of the TRAC members and make some recommendations to the Department and the Agency about what kind of public involvement process would be appropriate going forward.

At that time our recommendation was that the Department and the Agency, in convening a new committee, approach it in the following way. And that is, if there are issues that arise during the discussion of the Committee that seem to be appropriate for stakeholder involvement, and those issues -- and there are not other fora involving stakeholders of this kind of diversity addressing those issues, that it

might be appropriate on an ad hoc basis to set up a workgroup to focus on a specific issue.

So our suggestion was based on the TRAC experience, based on the time and resources of the Department and the Agency, based on input from all of you, and the fact, as both co-chairs have indicated, there are a number of other fora who are addressing issues related to the work of the CARAT, that rather than having standing committees, it would be better to have committees that might focus on those specific issues, or arrange workshops or other opportunities for public interaction, such as was done following the first CARAT meeting with the technical workshop on cumulative risk in the risk assessment process.

So I just wanted to remind the Committee of that procedure. Obviously it's open to your input and exchange if you have a different view. But that was the advice that we imparted to the Department and the Agency based on a lot of discussions with many of you who participated in the previous committee.

1	And I know the co-chairs, from talking to them this
2	morning, want to maintain an open ear to those kinds of
3	issues. And before we close tomorrow, we'll make judgments
4	about where they think that kind of process might be helpful
5	to the Committee going forward.

And with that, I will cease my opening comments.

Wally has got his card up. If there are any other opening thoughts before we get into the various updates, let me know.

Wally?

DR. EWART: Yes, thank you. I just wanted to follow up on what Rich has said about the fact that we are here to advise and that we only have two years. It's a very limited -- or less than two years. A very limited amount of time to advise.

And our concern with the agenda that was initially put out, and even currently with the agenda we have, is our ability to advise, I think, is somewhat limited. And we are going to talk about workgroups later. But I would say that I think the ag community feels that the workgroups are a very

successful way to go into issues in the depth that is
necessary in order to find out what needs to be done and what
advice can be given.

And the reason I bring it up at the agenda level is that as we move forward through the issues in here, we have a lot of issues that we think should justify a workgroup and ad hoc, perhaps, on that particular issue. These include transition. We don't believe that it's sufficient to actually have a presentation here and a discussion in order to get the depths that we need. Cumulative is another one where we feel like the issues are really too complex to cover in this big of a working group to get to all the issues that are there.

Other issues that have come up that are extremely important that probably justify a workgroup would be in the drinking water area, in the residential area and in the occupational risk area. Those are all issues we think that would be better served with workgroup exposure, followed by bringing it back to this group, because in that way we

1	believe	that	advice	could	be	given.
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- We feel very strongly, as members of the ag

 community, that we are here to advise. We aren't here just

 to listen to the status, but we're here to advise. And so I

 would like to bring that up with the agenda in hopes that as

 these agenda items are presented that is really the intention

 of the presentation.
- 8 MR. EHRMANN: Thanks, Wally. Comments at this 9 point? Jose?
- DR. AMADOR: Yeah. We can follow what Wally said.

 I think it would also be important to consider a working

 group in education. I mean, how we're passing new technology

 to the farmers to substitute, you know, the product that is

 not available and the alternative to the farmer. I think we

 really need to look at that.
 - And I don't know if we are doing enough to explain what both the EPA and the Department are doing in this area. I'm not criticizing that we're not doing enough. But this is a critical issue that I think we need to take in mind.

1	MR. EHRMANN: Thank you. Any other thoughts? And,
2	again, I think to both issues, as I mentioned I think the co-
3	chairs want to keep all of those options open as we go
4	through this session. And we'll discuss them on a case by
5	case basis and be clear by the end of the meeting tomorrow
6	which kinds of issues might be appropriate for the process
7	that you suggest, Wally.

Okay. If there are no other kind of opening thoughts, let's then turn to the first item on the agenda, which is an update on reregistration and organophosphate reassessment process. And who else but Lois Rossi will provide us the update.

Lois?

MS. ROSSI: Thanks, John. I am once again coming to this advisory committee, as I did to its predecessor, to present the status and the progress of the Re-registration and Tolerance Reassessment Program, with particular emphasis on the organophosphates.

For almost two years we have been following a pilot

process that was discussed at the TRAC. I have a handout
that I think is probably not in your packet. It's on the
table. The first page is the status for organophosphates in
the pilot process. It's a chart. And this will be helpful
as we go through the remarks.

On this one page, we present the status of the organophosphates by the various phases that they're in the pilot process. I am pleased to report to you today at this meeting that all 39 organophosphates have entered the public process. The risk assessment for DDVP enters Phase 3, I think, officially today, making it the last organophosphate to enter the public process.

This represents about over 70 assessments that have been put in the public docket and on the Internet. Obviously many of the OPs have had two assessments, a preliminary and a refined. Hence you get to the number 70. Two organophosphates, diazinon and malathion, are in Phase 4 with technical briefings to begin Phase 5 in early to mid-November.

1	The majority of the Ops for which decisions haven't
2	been made are in Phase 6, the risk management phase. Twenty
3	to be exact, which we are currently working through. Of
4	particular note, you see listed under Phase 6 both azinphos-
5	methyl and methyl parathion, because while regulatory action
6	was taken on both a year ago, the full risk management
7	decisions have not been issued. The same is true for
8	chlorpyrifos, which is about to enter Phase 6 on the 16th of
9	this month.

We have issued decisions on 15 organophosphates altogether. The majority -- well, actually all but one have been done this fiscal year. We did sulfotepp last fiscal year. You see 13 listed either as I-REDs, TREDs or REDs, and two other decisions that were agreements to phase out the use of the chemicals are listed under cancellations.

The organophosphates for which decisions were made followed the pilot process, and the non-Ops -- five of them which we made decisions on this year -- followed for the first time an interim process designed to increase

transparency and public participation. They had a Phase 1, a

Phase 2 and a Phase 3.

Since this is the first time that we've been using the terms I-RED and TRED, let me take a moment to explain these acronyms as we move to the next page of the handout, which reviews the Reregistration and Tolerance Reassessment Program and gives definitions of RED, TRED and I-RED. We had to make these acronyms up because we were faced with different kinds of decisions as we were going through the tolerance reassessment process and the reregistration process.

And you'll see in a very neat little box there what a RED, a TRED and an I-RED are. We are using REDs. I think everybody is pretty familiar with that. They are decision documents for chemicals that are subject to reregistration, which is everything that was registered before 1984.

The interim REDs we are calling for pesticides that are subject to reregistration and also need a cumulative risk assessment because they are thought to have a common mode of

1	toxicity with other chemicals and we have not made the
2	cumulative determination yet. So they're interim
3	reregistration documents. They do everything a RED does in
4	the decision making, but they don't include that cumulative
5	assessment for the tolerances

And then we came up with the TRED, because we have some chemicals going through tolerance reassessment that aren't subject to reregistration. They're getting their tolerances reassessed under FQPA, but they were registered after 1984. Some chemicals also which have had REDs done prior to 1996 -- prior to FQPA -- also are in that position. We're not going to issue another RED on those, because the tolerances are really the only thing that needs to be reassessed.

So a confusing set of acronyms, but they do stand for the different status of the chemicals as we're putting them through this reregistration and tolerance reassessment process that is going hand in hand.

So what did we accomplish in FY 2000? We issued 19

1	decisions. We issued six REDs. The REDs and they're on
2	the second page of your handout. The REDs we issued were for
3	the following chemicals: diclofop methyl, a non-OP but in
4	tolerance group number one in the tolerance reassessment
5	schedule; ethyl parathion, a final decision, an OP for which
6	an agreement was reached to phase out the use of a fixed
7	amount of this active ingredient over the next three years or
8	as soon as the supply is used up; temephos, an OP non-food
9	use mosquito control agent; terrazole, a non-OP fungicide in
10	group one; triallate, a non-OP in group one, and vinclozolin,
11	a fungicide also representing a phase out of all domestic
12	food uses except canola over the next four years. Those are
13	our REDs.

We issued seven interim reregistration eligibility decisions -- I-REDs -- for the following six OPs: bensulide, ethion, phorate, profenofos, propetamphos and tribufos, and for one carbamate, oxamyl. These decisions are complete except for the cumulative risk assessment.

And we also issued six TREDs for cadusafos, which

was an OP import tolerance only for bananas; chlorethoxyfos, 1 which was registered post-1984, a corn insecticide; 2 3 coumaphos, which actually had a RED prior to the passage of 4 FOPA, but the tolerances needed to be reassessed so we went back and did that; fenitrothion, one import tolerance on 5 wheat glutton, also was a RED that was issued pre-FOPA and we 6 7 went back and did the tolerance; mevinphos, no domestic use -8 - the domestic use was canceled in 1991 due to worker concerns, but there are import tolerances -- and the last 9 one, phostebupirim, a corn insecticide registered after 1984. 10 So you can see in those TREDs they're post-84 or they've had 11 12 REDs previously issued prior to the passage of FQPA.

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The remaining pages of the handout provide a very, very brief summary of these decisions. They give the current uses, the risk areas of concern and the mitigation measures that are part of the risk management decisions.

Reading through these 19 decisions, the very brief summaries that we've presented on these next few pages, you will see a full range of concerns and mitigation measures

that we have had to deal with, reflecting certainly the

complexity of these decisions and the issues that are

associated with them. You will see risks of concern from

none to various dietary, occupational and ecological risks.

You will also see a full range of detailed risk mitigation

measures.

I would like to just highlight the full range of these measures. I didn't go through an exercise in counting them, because I tried and it's just too complicated. You will see requirements for increased personal protective equipment. You will see requirements for closed mixing and loading systems. You will see prohibition of various application methods. You'll see reductions in the number of applications. You will see elimination of uses for specific crop or residential uses.

You will see increased REIs. And I would like to acknowledge and state that the work done by the Health Effects Division in this area was an enormous effect to review and utilize the very latest data produced by the

1	Agricultural Reentry Task Force to give us the best
2	assessments based on the best available data. You will also
3	see buffer zones and you'll also see the phase out of a
4	chemical

All of the decisions are being processed right now for posting on the Internet and they'll be in the public docket. And also they're being printed and will be prepared for mailing to registrants.

As I said before, the pilot process was followed for the OPs and a modified process was followed for the non-OPs. This modified process, which I know has been a topic of concern, was designed to allow the non-OP decisions far along in the review process to reach a decision point so that we could still continue to issue decisions and yet increase public participation and transparency. Eventually all chemicals will be following this six phase process, and our goals will be able to be met as we move through time.

One important part of all of these decisions this year that can't be seen by just looking at a status table is

the additional outreach that EPA and USDA have adopted as standard procedures. I am referring to the conference calls that Mr. McCabe referenced in his opening remarks: calls with USDA, calls that USDA held by themselves, calls with EPA and USDA and closure conference calls. Many of these calls have had representation by all stakeholders.

In the last fiscal year, since last October we have had 13 technical briefings or stakeholder meetings on the various OPs in various places in the country. We have also held collectively with USDA actually far more than -- in excess of probably 30. On some of these chemicals, we've had several conference calls, and we also had closure conference calls on all 19 of the decisions made.

Can we do more to increase participation and transparency? Of course. But in the last two years, this process has opened up the dialogue in discussions with stakeholders that were never part of the reregistration risk management decisions. Some other items that we also did and that we have completed, we held a public meeting on the

1	concept of production caps, and we issued in final the PR
2	Notice for managing occupational risks for the
3	organophosphates.

With respect to our overall progress in reregistration and tolerance reassessment, for tolerance reassessment we completed 121 decisions, bringing the total to -- for those people who love numbers -- 3551 of our 9721 universe.

In reregistration we had another major milestone a couple of weeks ago. I signed the 200th reregistration eligibility decision. We have 177 to go. For those of you who have been following the reregistration program since 1988, you know we started with a universe of 612.

(END OF TAPE ONE, SIDE A)

MS. ROSSI: -- by the way at this point in time.

They will be counted in the reregistration pot when we do the cumulative.

18 What's next? Usually the first quarter of the
19 fiscal year is a slow quarter for us. It's not this year.

1	From now through the rest of the calendar year, we're working
2	on issuing individual I-REDs or TREDs on the remaining OPs
3	and holding technical briefings on diazinon and malathion in
4	mid-November.

Much work and process has taken place on many of these Ops that we're faced with making decisions in the next two months or three months. And you see them listed in your handout under Phase 6.

That concludes my remarks on the status of the program. I would be happy to answer any questions that you might have.

12 Thank you.

MR. EHRMANN: Cindy?

MS. BAKER: I just have one comment and then one question, Lois. The comment is that I think that if you look through -- and I didn't count them up, either. I just tried to look through what you have here. A lot of the risk mitigation is in the area of worker risk. And I think one of the topics that Wally mentioned, and one of the topics that

we've mentioned, I think, at the last CARAT meeting -- I know it was a topic during TRAC -- is this whole issue of worker risk.

I know the Agency is doing a lot in terms of review of the WPS right now. But I think specifically the issues of reentry and some of the PPE that goes into place for these worker risks is an area that people around this table could provide a lot of input on in terms of work we've done and experiences that I think the producers and others -- and I'm sure Shelley has input on this. You know, all of us have input, I think, in this particular area that would be valuable.

I would think this is a prime candidate for a workgroup type discussion, because I don't know that the specific issues are being addressed through existing committees. I also think that the crop profiles and the strategic pest management plans don't address reentry issues and worker issues. I think that they are becoming very relevant in some of these registration eligibility documents

1	that	take	place.	So I	would	propose	that I	I think	that's	one
2	area	that	really	could	benef	it from	a work	group t	уре	
3	activ	ity.								

I'm going to think hard for an acronym for D so

that we have I-REDs, TREDs and DREDs. So I'm going to think

about that over the next two days and I'll come back with

one.

(Laughter.)

9 MS. BAKER: My question --

10 JIM: Developmental.

11 MS. BAKER: Huh?

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JIM: Developmental.

MS. BAKER: There you go. See, I knew, Jim, you could come up with one.

15 (Laughter.)

MS. BAKER: With TREDs we have to have DREDs or something to go with that.

My question is, where is the Agency on probablistic assessments for workers? I know it's been talked about. Is

2	What is the status of that?
3	MS. ROSSI: I do know that the Health Effects
4	Division has looked at it. Margaret, would you care to
5	elaborate on that a little bit?
6	MARGARET: Yes, we are looking at it. We are
7	we've just actually completed a plan of looking at
8	improvements in our ORE risk assessments. We are examining
9	PHE database. And you will hear more about that from us.

that something that you guys are looking at and considering?

MS. BAKER: Thank you.

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MR. EHRMANN: Okay. Bill?

MR. LOVELADY: Just a little follow up, a question
I would like about something that Cindy mentioned, these
issues here, these mitigations. Many of these are things
that have to be done out in the field.

And I have a question. How do -- how does the Agency go about determining these things with input from the grower community or from the worker protection groups, etc.? What do you -- is there a process that you use to determine

1	that,	or	do	you	depend	on	USDA?	Can	you	expand	on	that?
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MS. ROSSI: Sure. I mean, when we're faced with making a decision -- and in this case worker risk -- I mean, we have a range of options. It's not an infinite range.

It's a finite range, actually. And we go through the assessment and look to see which ones are feasible and which ones would reduce the risk of concern.

And then all the outreach that we've been doing, these conference calls and then working with USDA, we present these type of mitigation measures and get an indication on how they work. We also use Kevin Keeney's branch, the worker protection branch, for help with these also.

But that is the major way we've gotten input on this. I mean, that's been the -- primarily the substance of these many conference calls that we've had.

MR. LOVELADY: Well, I would -- you know, I would suggest that probably we could do more to work -- as commodity groups to work with you. Because I know last fall where there was a particular harvest aid product that I think

1	that the Agency kind of had some misconceptions about, and we
2	sponsored a trip out to the field for them so they could see
3	how it was not the assumptions were not exactly right.

And I just wanted to know how we could possibly

work closer with commodity groups and with worker protection

groups.

MS. ROSSI: Well, with that particular chemical, I
think the Cotton Council worked very close with us on
tribufos.

MR. LOVELADY: Well, I would offer that we will continue to work with you on those things, and I hope that we can expand our relationship.

MR. EHRMANN: I think this has been an ongoing opportunity, if you will, for trying to figure out the best way for those interactions to happen for people to be aware of what's going on, so the Agency and the Department can get in contact with a range of folks who are aware of the various issues.

And it's one of the things I think we hope will

- also come out of our transition discussion this afternoon.
- What are the best methods for making sure the communication
- 3 is flowing in the best direction.
- 4 Steve, you were next.

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STEVE: Thanks, John. Lois, I've had the dubious

pleasure of participating in these conference calls in which

we endlessly discussed every different use of every compound.

But there have been a lot of, I think, important corrections

in the way in which products are used in those discussions.

And in fact, I think it's been very valuable for a lot of

those sitting in on the conference call.

Is there any way that those who have offered advice can find out if -- you know, get closure and find out that in fact that advice is being heeded and included in the assumptions?

MS. ROSSI: Well, my guess is maybe you can give us some feedback on this. That is the purpose of the closure conference call. At the closure conference call we present what is going to go in the document. And at that particular

1		2	L 2 2	_	L 1- 3 1-	7 -	1		L 12 L 2 L 2	2	1
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- into consideration. If that's not accomplishing that, then,
- 3 you know, feedback on that can help.
- 4 But that was the purpose of the closure conference
- 5 call.
- 6 STEVE: If further changes are proposed, do you get
- 7 back to the individuals who proposed them?
- 8 MS. ROSSI: Yes. I mean only on a couple have we
- 9 had open questions that came up at that closure conference
- 10 call, and we do close the loop on that.
- 11 STEVE: Okay. A second question --
- MS. ROSSI: But those are held very late in the
- process. I mean, like literally a day or two before
- 14 signature.
- 15 STEVE: It makes it tough to make any changes at
- that point, obviously.
- MS. ROSSI: That's right.
- 18 STEVE: My second question --
- MS. ROSSI: That's why it's a closure call. That's

4	
T	right.

2 (Laughter.)

STEVE: Second question, we've been looking at individual OPs doing the I-REDs. In many cases on these conference calls it's been discussed the fact that in terms of dietary risk there are no concerns, that largely it's a worker safety issue. So there isn't much discussion about refining the uses, the timing of applications and those kinds of things, yet that will become very important in cumulative risk assessment.

And I'm wondering how are we going to have a conference call on 37 different OPs and try to redefine and re-refine that kind of information if it isn't done on the individual?

So I guess maybe this is less a question and more a statement that it is very important that we get those first ones right, so that when the cumulative is done that we aren't using data that is insufficient.

MS. ROSSI: We do have a few Ops -- and one that I

1	know right off the bat is cadusafos, which was based on
2	tolerances of 100 percent crop treated. And that is bananas
3	so, I mean, that refinement will take place. And we
4	have said at these meetings that we realize some of the ones
5	that have passed the assessment at a lower tier tier one
6	tolerance field trials that fit into the individual cup
7	without needing a refined assessment or Monte Carlo or using
8	the PDP. We have said before cumulative we would have to go
9	back and refine them.
10	How we would have a conference call on 37 OPs, I don't
11	have the answer to that.
12	STEVE: Okay.
13	MR. EHRMANN: Okay. Let's go Jean-Mari, Shelley,
14	Bob and Jay.

MS. PELTIER: Thank you. My question is related to the one that Steve asked earlier. Lois, I would say that the conference calls, for my part, really I think have been a very effective way to try to get our message across and to help in refining the risk assessment based on our

1	understanding	of	the	way	the	product	is	actually	used	in	the
2	field.										

But I guess we have the same problem that Steve talked about, where we have thought that some of these that now I see are in Phase 6 were somewhere further back in the process. Questions that we thought were very much still open in the risk assessments, we now appear to have reached closure on.

So I guess my question is, when you do the closure conference call, is that somewhere after Phase 6?

MS. ROSSI: No, it's in Phase 6. The only ones that we've had closure conference calls on are the 19 decisions we've issued. If you're in Phase 6, we're still working on it. So on this sheet, the ones in Phase 6 that begin with acephate, those we're still working on. We have not had closure conference calls on those.

MS. PELTIER: Those that are in Phase 6, do we still have an opportunity to continue to refine the risk assessment and the assumptions made in it?

- 1 MS. ROSSI: We are constantly refining the risk
- 2 assessment, yes.
- 3 MS. PELTIER: Okay.
- 4 MS. ROSSI: So the conference -- the closure
- 5 conference calls are literally right before the document --
- 6 the decision gets signed.
- 7 MS. PELTIER: And all of the ones that are in Phase
- 8 6, did they actually go through a Phase 4?
- 9 MS. ROSSI: They did.
- 10 MS. PELTIER: So there were technical briefings on
- 11 all of those?
- MS. ROSSI: There were not technical briefings on
- all of them. We didn't do technical briefings on all of
- them, but I certainly could tell you which ones we did do
- 15 technical briefings on. But we have certainly had conference
- calls on all of them. We've had technical briefings on a lot
- of them.
- MR. EHRMANN: Okay. Shelley?
- 19 MS. DAVIS: Well, I want to commend EPA for opening

up the process to the extent that it has. And I think that
this is a very big improvement. But I think more improvement
needs to be made.

For example, I'm interested that these conference calls have been an opportunity to get input from the grower community. But given the number of active ingredients that involve significant worker risks, I feel compelled to wonder aloud why there haven't been comparable conference calls with workers.

Sometimes when I sit here, I do find that we are in the same world, but we seem to live in two different worlds. And one way that the experience is quite different is the way workers experience the risks they face on the job. And the practical realities of the risks workers face don't often enter into this process.

And, you know, although we try to comment and attend the technical briefings, etc., I feel oftentimes like we are left out of the key conversations. And the absence of calls with workers or worker representatives really to me

- highlight the fact that when push really comes to shove, the worker's voice is not heard.
- So this is, you know, yet another example to me of when the issue is risk mitigation of worker risks, you absolutely have to have workers in the mix.
- 6 MR. EHRMANN: Lois, comment?

MS. ROSSI: Well, I think Shelley's point is well taken. I think we -- I did say we could certainly do better in increasing public participation. We have included public interest groups and invited them to conference calls on many of the pesticides that -- the 19 that we made decisions so far. The ones that we haven't made decisions, there still is an opportunity. We have had participation by groups that are concerned.

Many of the mitigation measures, as someone else pointed out on these particular 19, have been for worker risk. And I think only in a couple of occasions do we have MOEs that are less than 100, and we strive for 100. So I think we could certainly work out a process. These

1	conference calls are pretty extensive and we certainly c	an
2	work on that.	

3 MR. EHRMANN: Bob?

BOB: Just two questions. And before I ask the questions, I've got to tell you how impressed I was that you gave that presentation without missing a beat despite having spilled water on your notes.

(Laughter.)

- 9 BOB: I could not have done that.
- MS. ROSSI: Most people did not know that, Bob.
- 11 Now I have it pointed out.

12 (Laughter.)

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- MR. EHRMANN: We're into transparency in this

 Committee.
- 15 (Laughter.)
- BOB: Besides the completion of the I-REDs for the remaining OPs, what else do you see happening next year?

 That's the first part of the question.
- MS. ROSSI: Okay. Probably for this quarter we

1	will only be doing I-REDs. I think that's it's a very
2	tall order to complete these decisions. And we will not be
3	issuing any non-Ops before the calendar year.

We have a number of carbamates in the queue, and we also have some of the carcinogens, again following the group one tolerance. We will most likely be putting out a list of our candidates. And they actually have gone out in our report. I think we put out the candidates for 2000 and 2001 in that report. So the ones that we haven't done in 2000 obviously fall into 2001. But it will focus largely on carbamates, the triazines and other carcinogens.

BOB: And then as far as the process -- I mean presumably the OPs will be done at some point?

(Laughter.)

BOB: I just sense your relief at that. The public participation process for the other compounds, I mean what is that? Is there going to be a four phase chart for everything else? How is that going to work?

MS. ROSSI: Well, we haven't issued the public

1	participation process in final yet, but we are about to. We
2	did put it out for comment last spring. We got some
3	comments. We looked at the comments and addressed them and
4	we will be putting that out.

What we're trying to do is start doing the six phase process for a lot of the chemicals that were -- that we'll be working on. It's an 11 month process, though, and what we're faced with is going through the full 11 month process. And that's if everything goes well in Phase 6. That's assuming Phase 6 is only 60 days, and Phase 6 has taken much longer than 60 days.

So for those chemicals that we have risk assessments now, for example, are most likely to start going through the 11 month process. But there will still be an interim process to still move decisions along and meet the reregistration goal. Eventually I think it will all be in that process.

BOB: So if something is not an OP, there is some public participation process that applies to it?

1	MS. ROSSI: Exactly. And the ones that we issued
2	this year, we did Phase 1, Phase 2 and Phase 3. It was sent
3	to the registrant, we looked at error and we put it out on
4	the Internet for public view. And we would minimally do
5	that.

MR. EHRMANN: Okay. Jay?

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MR. VROOM: I'm always fascinated by the experience of deadlines, especially the sound when they go whooshing by, and I'm reminded that I guess September 29th was the end of the fiscal 2000 year for the federal government. I'm trying to remember what was the identified RED goal for OPP for the fiscal year, and of the 19 REDs that have been issued, when do they issue for that total for fiscal 2000. And also when did the closure calls occur?

I'm just sort of trying to get a better understanding of, you know, how much grower and user community satisfaction, you know, relates to the participation in those closure calls. Just so we can understand a little bit more about how you're having to deal

- with deadline pressures and that kind of thing.
- MS. ROSSI: Well, I probably can answer the first
- 3 part. I think if you want grower input, I think maybe USDA
- 4 should answer that.
- 5 But our goal was 20 -- 20 decisions. Those are
- 6 still -- our accountability has not gotten sophisticated to
- 7 I-REDs, TREDs and REDs. It's still REDs. So we didn't issue
- 8 20 REDs. We issued 19 -- a mixture and that was our goal.
- 9 MR. VROOM: Okay.
- MS. ROSSI: And then, Al, do you want to say --
- MR. EHRMANN: Al, do you want to comment?
- MR. JENNINGS: Sure. If I understand your
- question, it's how did we or how extensive do we get?
- 14 MR. VROOM: What kind of grower and other user
- involvement occurred around these closure calls. And if
- there were 19 total, including the TREDs and the I-REDs, when
- 17 did those closure calls occur and when were the REDs made
- 18 final?
- 19 MR. JENNINGS: I quess within the last two weeks of

- the fiscal year we had a lot of the closure calls, but for
- 2 everyone of them there were earlier grower conference calls.
- 3 And the closure is the last phase after we've been through
- 4 the earlier ones.
- 5 Again, many of those happened in the last couple of
- 6 weeks. Lois, is that right?
- 7 MS. ROSSI: Closure calls did, yeah.
- 8 MR. JENNINGS: Closure calls did, but earlier
- 9 involvement was there.
- 10 MS. ROSSI: And many since the spring on many.
- 11 What Al and I have discussed quite a bit was USDA on their
- own had conference calls with their constituents, with their
- growers, on various chemicals. EPA did not participate in
- them. And then we would have conference calls that would be
- more open up.
- 16 But they weren't the first conference -- closure
- 17 conference calls aren't the first time that people are
- 18 getting together to discuss these chemicals.
- 19 MR. VROOM: I guess I was just thinking about the

- arbitrary end of the fiscal year happening to be in the fall
 when a lot of this activity is, you know, being pressured by
 deadlines, because the government fiscal year ending happens
 to correspond with the distraction of harvest for a lot of
 those in the grower community. And I would think that that
 might be something that from a processing --
- MS. ROSSI: Well, I can say that we have had to

 oftentimes extend the conference calls. We set them up for

 an hour and the dialogue clearly was not going to be finished

 in an hour. We extended them to an hour and a half. And on

 many of them, we had 25 to 30 lines filled, and we were

 always scrambling around to get other lines.
- MR. JENNINGS: And on more than one occasion we had farmers on their cell phones on their tractors.
- MR. VROOM: That's a good use of technology.
- MR. EHRMANN: Okay.
- 17 MR. VROOM: One other question. Lois, you
 18 mentioned in passing that, you know, it's sort of the caveat
 19 on some of the 19 because cumulatives have not been done.

1	And	Ι	think	we're	going	to	talk	in	detail	about	cumulative
2	late	r	in the	e morn	ing.						

But my understanding is that some SAP members recently expressed concerns about the use of certain data appropriate for making aggregate decisions is not appropriate for making cumulative decisions. And this is probably not the right time to get into that. But just because I heard the word cumulative, I wanted to at least register that footnote.

MR. EHRMANN: Why don't we flag that and come back to that when we talk about cumulatives.

Jim, you had a comment?

MR. AIDALA: Yeah, just to comment on the end of the fiscal year rush, if you will. And you're right about the power of deadlines which have good and bad about them.

First of all, it's nothing new to FQPA. But the other thing is certainly the public reassurance, that we actually about a month or so before look and see what is likely to be done. In other words, it's not just sort of a

numbers game. Let's make sure we hit that number or ta	arget
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- or thereby. What do we need? What looks like we are able to
- 3 come to closure on -- come to a decision on.
- 4 And if not, if there are some outstanding issues or we're
- 5 waiting for some more information, the Department has still
- got some work to do before they get back to us or something
- 7 or the other, we hold those off.
- 8 And we have that explicit discussion in the last,
- 9 you know, four to six weeks before the end of the year -- the
- 10 fiscal year -- in order to avoid any kind of we're just doing
- this to make sure we, you know, if you will, check the box
- before the end of the fiscal year. And that's an exercise we
- have that we normally go through -- that we did go through
- 14 for this.
- 15 MR. EHRMANN: I'm going to take Robert and Steve on
- hopefully quick points and then we'll move on to Jim Jones'
- 17 update.
- 18 ROBERT: Thanks. Lois, I had a quick question on
- 19 the public participatory process and your seeking different

1	participants in the closure conference calls. In the case of
2	chlorpyrifos, there was a voluntary agreement reached with
3	the active ingredient manufacturer.

And I know this can be a touchy subject, but to what extent has the Agency tried to outreach to the end use product formulators who are also subject to the decisions that are being made here?

Because the decision did come as a surprise to many, and since a decision had already been made, many of these manufacturers did not have any recourse in this. They've invested hundreds of thousands of dollars in ongoing research and studies, product research and development, state registrations, and now they're grappling with existing inventories of products that are being canceled.

Is there a way outside of -- I don't know if you're actually contacting the holders of these product registrations of the affected chemicals, or to what extent are you outreaching to these groups?

MS. ROSSI: Well, we are contacting them. We sent

- them letters telling them what they had to do to comply. So,
- I mean, there is an official process on that.
- ROBERT: Now is that to the active ingredient
- 4 registrants or to the end user as well?
- 5 MS. ROSSI: It's to the end users.
- 6 ROBERT: Okay.

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- 7 MS. ROSSI: It's a huge effort and we are doing 8 that. And we've taken a lot of, you know, phone calls and handled it that way. What we are thinking in the future, 9 should an agreement or something like this occur again, that 10 the technical registrants also have voiced an interest in 11 12 getting to their customers. So it might be a little bit more 13 up front. But after the decision, we had a mail out and we did a phone -- also did phone calls telling the end users 14 15 what needed to be done.
 - ROBERT: Yeah. And realize, of course, you know, some of this are business decisions. It's the economic realities and consequences that are being faced. Sometimes the end use formulators end up losing out in this regard.

And so we want to try to find a way to preserve some of these uses, you know, if it means to support some of the studies that need to be done. And, you know, maybe that needs to be talked about with some of the end use formulators and registrants.

MR. EHRMANN: Okay. Jim?

MR. AIDALA: Yeah, two things. Once again this is an issue that has dogged the program and again along with FQPA. But obviously since it's a proprietary business license of the registrant, end users -- basically it's a customer relationship between some of your end users and up the chain, and you need to rely on that.

Obviously you have a right also to call any of us at any time to say, if you will, basically is what I'm hearing from that chain the same information that others may give too. And I think that's been one check that we hear about is a good useful check in terms of, again, what's, quote, really going on versus not. But we have to respect that business license relationship we have as a regulator

- 1 with that regulated entity.
- The other thing that happens, too, in terms of 2 3 anyone that wants to pick up before something is even voluntarily canceled, in the '88 law they put in the 6F 4 5 notice, so that if somebody does want to pick up stuff, they It's unlikely, frankly, as a small end user that 6 could. 7 you're going to do that, but you have that right. It may be 8 a group that gets together, and usually that's more in the 9 agricultural arena more than in the structural stuff.
- MR. EHRMANN: Steve?
- DR. BALLING: Well, I apologize. I want to follow
 up on this closure call thing again. My brain must still be
 on California time. I'll try to jump start it with
 Starbucks, but it didn't work. But Lois is talking right
 now, so I'll wait.
- I'm sorry. This closure conference call, they've
 just been -- it sounds like they've just been occurring the
 last couple weeks of September primarily?
- 19 MS. ROSSI: Well, on the five that we were able to

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1	issue	in June	 pensuriae,	cadusalos,	chlorethoxyfos,

- 2 profenofos and one other one. On those we did the closure
- 3 conference.
- DR. BALLING: Okay.
- 5 MS. ROSSI: They're done before they get signed.
- 6 Now unfortunately we have -- we tend to bunch up at the end
- 7 of the fiscal year.
- 8 DR. BALLING: Now none of those that are currently
- 9 on this Phase 6 have had a closure?
- MS. ROSSI: No, because they're not closed.
- DR. BALLING: And those people who participated in
- the call, or had comments being made, would be invited?
- 13 MS. ROSSI: Right. That's what we typically use as
- our list. If you made a comment on the --
- DR. BALLING: And then you actually go through each
- individual use and the assumptions made on each use at that
- 17 time?
- MS. ROSSI: We go through the regulatory decision.
- DR. BALLING: Okay.

1	MS. ROSSI:	And, you know,	if there is nothing
2	being done to sugar	beets or sometl	hing, we just say, you
3	know, there is noth	ning being done.	

- 4 MR. EHRMANN: Dick? Oh, go ahead.
- DR. BALLING: But even if you aren't going to make
 any changes in the actual use on the sugar beets, there are
 certain assumptions that go into the risk assessment that
 might be altered based on actual usage, correct?
- 9 MS. ROSSI: Right. But that -- yeah. That

 10 actually should have been addressed in the comment on Phase

 11 5. I mean, these have already gone through.
- DR. BALLING: Okay.

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MS. ROSSI: These risk assessments have already gone through two public postings. And the ones that we had technical briefings on in the overview -- well, not just the ones we had technical briefings on. The overview had this chart that I -- you're probably talking to dietary risk. I mean, I called the Monte Carlo chart that has what we used, the percent crop treated and if we used D-TEX or whatever.

- 1 It's a table. And that is attached to the overview which is
- 2 posted in Phase 5.
- 3 DR. BALLING: Okay.
- 4 MS. ROSSI: And so we assume that unless we say
- 5 something has drastically changed that the Phase 5 risk
- 6 assessment is what's there.
- 7 DR. BALLING: But if there were comments provided,
- then you would specifically address those?
- 9 MS. ROSSI: Yes.
- 10 DR. BALLING: Okay.
- MR. EHRMANN: Okay. Let's go ahead and have Jim
- make the presentation on the update relative to registration
- 13 activities. And then I think we'll take -- let's take a
- break right after his presentation and we'll come back and
- 15 field any questions.
- 16 But let's go ahead and have the presentation before
- 17 the break. Jim?
- 18 MR. JONES: Good morning. I'm going to briefly
- 19 cover overall pesticide registration activity in OPP,

including antimicrobials and biopesticides, along with

synthetic chemicals, and then move on into some more detail

for the program area that I have responsibility for, which is

the registration of synthetic chemistries.

The Office of Pesticide Programs in fiscal year 2000 registered 22 new active ingredients. Two of them were antimicrobial products, nine of them were biopesticides and 11 of them were synthetic conventional pesticides. Of the 11 synthetic compounds, six of them were reduced risk and five were not reduced risk.

The new use picture, the Antimicrobials Division does not generally register too many new uses, but they had about a handful of them -- about five. The Biopesticides and Pollution Prevention Division registered about 121 new uses of already registered products. And the Registration Division registered 234 new uses of already registered products.

Those are sort of the -- excuse me for a second.

Broad numbers for the entire pesticide program -- I'm getting

more specifically to the Registration Division which has responsibility for synthetic conventional compounds. were two handouts that were provided in your packages that you received, I think by overnight mail. In our desire to give you some information prior to the meeting, we were somewhat in a crunch because the fiscal year ended on Friday. Well, for me it was Friday, frankly, the 29th of September. And we had these packages out to you on October the 3rd, so we did asterisk the FY 2000 numbers as our counts weren't official yet. But the numbers haven't changed that dramatically.

The first handout, which is CARAT document 2-1, basically gives you a sense of what our conventional new active ingredient registration productivity has been over the last four years. Basically we've picked the period right after FQPA. And as you can see, the 11 new active ingredients registered this year are in the range of the new chemical registration decision productivity of the last several years.

1	In terms of reduced risk versus non-reduced risk,
2	there is actually an error here. There were five
3	conventional non-reduced risk new active ingredient
4	registrations and six reduced risk. We actually this year
5	had an interesting situation where we revoked a reduced risk
6	candidate after we had completed the risk assessment. The
7	reduced risk determination was actually made based on a
8	presentation prior to our review of the data. In this one
9	situation, that reduced risk determination was revoked after
10	we had completed our risk assessment.

Thus we had six reduced risk new chemical active ingredients, which actually now we have the Registration Division has met its GPRA goal for 2002 of having half of our new active ingredients being reduced risk.

And as you can see, the turnaround time in terms of time to decision, the reduced risk time climbed a little bit and the conventional non-reduced risk dropped a little bit.

That's partially because of this decision we made that moved a reduced risk compound that had been expedited into the non-

reduced risk category. But as you can see, our overall
turnaround times have been basically steady in between 22 and
months from submission.

For new uses, the productivity picture is I think significantly brighter in terms of clear and consistent increase in the number of new uses that we have approved over the last four years. And actually if you compare the number of new use registrations we did in FY 2000, which the final number turns out to be 234 and not 225, it is significantly above what we were doing right after FQPA. But perhaps more importantly, it is significantly more than we were doing pre-FQPA. We were generally doing between 125 and 150 new uses before the Food Quality Protection Act, and we have managed to increase that rather dramatically.

Of the 225 new uses that we registered last year,

163 of them were reduced risk and 39 of them were OP

alternatives. Of the 234, 129 of them, or slightly over half

of them, were IR-4 submissions, which is a significant

increase in our historic completion for IR-4 submissions.

On the second page, you'll see the basic statistics for the Section 18 program. And for those of you who have been party to the CARAT and its predecessor the TRAC, you'll remember that at the beginning of the initial TRAC meetings there was a lot of focus on the Section 18 program and our ability to make rapid decisions for the Section 18's. These are emergency exemptions of critical needs.

And I think we basically got our arms around that in FY 98, but I think it's worth noting that in FY 2000 for the first time in the history of the Section 18 program, at least as long as it's been in EPA's program, we exceeded our internal goal of an average turnaround time of 50 days. We averaged 44 days for Section 18's in FY 2000. And also importantly, a total of 89 Section 18's that we received this year we will not expect to get next year, because we registered the use associated with that Section 18.

The second handout that you have, which should be marked CARAT 2-2, is something that you've seen before. It's basically just an update of our program in the Registration

L	Division to move onto the market as expeditiously as possible
2	OP alternatives. This has been updated since we last met, as
3	we've registered a number of OP new chemicals since the last
1	CARAT meeting, as well as OP new uses. The alternatives, I'm
5	sorry. Alternatives for the organophosphates.

As we have discussed before, we give a high degree of priority to organophosphate alternatives. We have somewhat of a process that needs to go -- that you need to go through for us to designate the compound as an OP alternative. The process is a little more detailed and information laden for a manufacturer than it would be for a grower. But we basically do rely on the outside parties indicating to EPA that they have an Op alternative.

We have denied OP alternative status to a couple of uses where although it may have been literally an OP alternative, we thought that there were compelling health or environmental reasons to not grant it OP alternative status.

We have since FQPA registered seven new active ingredients that are OP alternatives with dozens of uses, and

we currently have pending four new active ingredients that 1 are OP alternatives and about three dozen new uses. 2 For all 3 of those, both the new chemicals that have been granted OP 4 alternative status as well as the new uses, our plan is to complete them and bring them to decision making within the next 18 months. Over two thirds of them will likely be dealt 6 7 with in FY 2001 and the remaining one third will be early 8 2002.

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A couple of other things that we've pursued over the last year, one of them being something that has come out of meetings such of this and other fora, understanding the frustration in the user community with the lack of experimental use permits, we have put together a strong proposal that we're going to be floating in the next few months to stakeholders that will hopefully open that up a little bit.

Because we're basically doing EUPs with the food use -- meaning setting a tolerance and meeting the FOPA's safety finding involves trade offs that potentially

1	affect	new	uses	and	new	che	emicals		we're	going	to	propose
2	to pi	Lot s	somethi	ing '	that	is	rather	naı	rrow.			

It will be for already registered pesticides, so there is not going to be a lot of core data to review. And for compounds where we have already taken that compound through an FQPA assessment, there will not be a great assessment burden on us.

So we're hoping that if we pilot something like that, we may get to the point of easing some of the transition issues we've been hearing, not only at this meeting but other fora, for growers who are getting a new chemical with very little previous experience in the research and user community as to how that compound may work and how to actually make it work effectively.

So that is something that we'll be floating over the next few months, and it would certainly be useful to get some feedback as to what would be an appropriate -- what would be an appropriate fora to do that.

Another area that we have pursued is something that

1	we actually began when Jean-Mari was at CDPR, but have, I
2	think, brought it a little closer to fruition during Paul
3	Helliker's tenure. And that is CDPR providing the residue
4	reviews necessary to establish new uses. And we've basically
5	been working with CDPR, IR-4 and ourselves to identify IR-4
б	projects that CDPR can actually do the basic core data
7	necessary.

And we had our first pilot that we succeeded in FY 2000, and right now the current plan is for CDPR to take on another two dozen IR-4 uses in FY 2000, which is another way in which we can ultimately supplement our resources to deliver on the petitions that we've got in front of us.

(END OF TAPE ONE, SIDE B)

MR. EHRMANN: -- suggested and take the -- well, let me just see how many people want to make a comment. If you have a question or comment, we might be able to get them in. Just three?

All right. Well, let's go ahead and see if we can go through these, and then we'll take a break.

1 Carolyn and then Cindy a	and	Wally.
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- MS. BRICKEY: I have several questions, Jim. I

 don't understand what this pilot you were talking about will

 do. What is it for?
- MR. JONES: The frustration that we've been hearing is that because now we do not do petitions in front of us in the order in which they came to us. We do them in the order that our system -- our priority system designates, which is if it's a reduced risk or an OP alternative, they come first, or the methyl bromine alternative, and then company priorities.

And companies have been very reluctant to give a priority to EUPs that are not crop destruct, because they want to save their priorities for new chemicals and new uses. They're more valuable to them. So there have not been in the last three years many EUPs that are not crop destruct.

So what we've attempted to do -- and that's the feedback we've been getting over the last few years -- is to develop a proposal whereby we could not worry about there is

no priority given to them and be able to establish a tolerance for an EUP, limited to something in the range of 2,000 acres. But we want to limit it so that it doesn't open it up to EUPs where there is a tremendous amount of data necessary for us to review. Because if we're doing that, we are not doing new chemicals. We are not doing new uses, because the trade offs are directly against those kinds of resources.

So we came up with a proposal that we've yet to float that narrowly -- identifies a narrow -- a relatively narrow list of compounds that we've done a FQPA assessment on. There are no risk issues or environmental worker dietary -- when I say -- I mean there is nothing even close to being an issue for us that would allow us to go forward with establishing a tolerance with a very little amount of work.

Like basically do a dress run using the tolerance level and a percent crop treated, so that we don't end up doing 40 EUPs, but also losing 40 new uses. We could do 40 EUPs and maybe lose a couple of new uses in the process.

1	MS. BRICKEY: And what is the policy value of
2	doing increased numbers of EUPs?
3	MR. JONES: The user community, especially as it
4	relates to OP alternatives, have found that the OP didn't
5	and I'm going to be, I'm sure, over simplifying this
6	as a broad spectrum compound did not require a tremendous
7	amount of sophistication in using it. You sprayed it and
8	they died.
9	The newer compounds have a narrow spectrum and
10	timing can be critically important. And so they're finding
11	as users that when a new chemical comes on the market, they
12	don't know how to use it yet.
13	MS. BRICKEY: Okay.
14	MR. JONES: And it takes them a couple of years to
15	sort of figure it out. And the EUP hopefully will provide
16	that information phase.
17	MS. BRICKEY: The more field experience?
18	MR. JONES: More field experience.

MS. BRICKEY: Okay. On your list here on CARAT 2-

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- 2, it says how does EPA prioritize its registrations, and
- then you have this list. Where do OP alternatives fit on
- 3 this list? Is it the bottom one?
- 4 MR. JONES: No. It's a reduced risk conventional
- 5 pesticide. And if it's an OP alternative that is reduced
- f risk as well, it goes just above it. If it's an OP
- 7 alternative not reduced risk, it just goes -- it goes just
- 8 below it.
- 9 MS. BRICKEY: So that would be like the top of that
- 10 second category?
- 11 MR. JONES: That's right.
- MS. BRICKEY: And can you talk a little bit about
- alternatives to methyl bromine that you've registered? What
- 14 they're for?
- 15 MR. JONES: We're not having great success here,
- 16 largely because there have not been a great number of
- 17 alternatives identified. We have had a handful identified.
- 18 They are very challenging compounds. They include other well
- known soil fumigants, such as telone. We have one compound

1	that we're working with a potential registrant who may be
2	willing to support the data generation necessary for a
3	currently unregistered pesticide, but it is likely to be not
4	a real simple registration action.

So we have had a handful of expansions of labels involving some herbicides -- halasulftruan (phonetic) for one -- that have very narrow methyl bromide alternative potential. And we have NRQ, a telone label expansion for strawberries and tomatoes, and adazimet (phonetic). Adazimet breaks down to MITC, another challenging compound that we're going to be working on in 2001.

MS. BRICKEY: Okay.

MR. JONES: That's right. You've got two flumes of phosphene gas that was registered a year ago.

MS. BAKER: I have to say one quick thing of unrelated business. One thing that I have learned through this TRAC and through CARAT is that Robin Spitko and I have one thing in common, and that's that we both have only one child, a daughter, about the same age, both named Emily. And

- 1 Robin's Emily is here today and it's her birthday.
- 2 And so I just wanted to say happy birthday to
- 3 Emily. I think it's an unusual way to spend your birthday,
- 4 Emily.
- 5 (Laughter.)
- 6 MS. BAKER: You should go out and see some of the
- 7 museums or something.
- 8 (Applause.)
- 9 MS. BAKER: But it's good that she's here. Jim, I
- just had a couple of quick questions.
- On the Section 18's, how many of those are repeat?
- 12 Is that included in those numbers?
- 13 MR. JONES: No. The majority of them are repeat
- 14 Section 18's, probably in the range of two thirds.
- 15 MS. BAKER: But of the 400 and whatever it is, some
- of those are repeat?
- 17 MR. JONES: Absolutely.
- MS. BAKER: Okay.
- 19 MR. JONES: About two thirds of them we had last

1	year	
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MS. BAKER: Okay. And then on the California harmonization, I can't tell you how thrilled I am that that process is moving again. We actually had one of the first products registered through that harmonization program four years ago or whenever when it first started, and I think that's an excellent harmonization.

I know I've heard the agency talk about harmonization with Canada and their request for more petitions that way. I think if the California harmonization effort gets to the level that the Canadian harmonization level is, you'll see lots of petitions come in from registrants, because that's a high priority for us.

And then my last question I think probably -- I don't know if you want to answer it or if, Marcia, you do. But I'm just curious in listening to both Lois and Jim's presentation, what is the split out in resources in OPP now between registration and reregistration? What does it look like?

1	MR.	EHRMANN:	Steve	or	Marcia?
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- 2 MS. BAKER: I'm sorry. Steve?
- 3 MR. JOHNSON: Yeah. We're both scratching our
- 4 heads to try to recall the numbers. Yeah, we're conferring.
- 5 (Laughter.)
- 6 MR. JOHNSON: I don't remember.
- 7 MS. BAKER: You can come back to me later. I'll be
- 8 around.
- 9 MR. JOHNSON: Yeah, that would be better to give
- 10 you what the number is.
- 11 MS. MULKEY: Yeah. I have a sense of it.
- MS. BAKER: Okay.
- MS. MULKEY: But I want to be --
- MR. EHRMANN: We'll be coming back with their final
- answer.
- MS. BAKER: That's fine.
- MR. EHRMANN: Wally?
- MS. MULKEY: There's not that much --
- MR. EHRMANN: Oh, I'm sorry.

1 MS. MULKEY:	They're	close	enough	to	be	more	like
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- 2 50/50 than 75/25.
- MS. BAKER: Okay. That's what I was curious about.
- 4 MR. EHRMANN: Okay. Okay, good. Wally?
- DR. EWART: I did have a question about methyl
- 6 bromide, but that has really been answered. I appreciate
- 7 that.
- On the EUP process, what is the timing for being
- 9 able to have discussions on this?
- 10 MR. JONES: I mean, I think that we'll be ready to
- share it to the public between -- by Christmas time.
- DR. EWART: I shouldn't ask this, but could you
- tell me what year?
- 14 (Laughter.)
- 15 MR. EHRMANN: An even numbered year.
- 16 MR. JONES: Our plan isn't that long.
- 17 MR. EHRMANN: Jean-Mari, last question before the
- 18 break.
- 19 MS. PELTIER: Mine is a quick one and an easy one,

- I hope, too. On page two of CARAT 2-1 on the tallies of
- 2 Section 18's, is the section under Granted actually 389 and
- not 289? I can't make the numbers out on mine.
- 4 MR. JONES: Yeah. That would not -- that does not
- 5 compute. We'll have our final Section 18 numbers out. That
- 6 doesn't look like the right number of granted.
- 7 MS. PELTIER: It's a typo or something.
- 8 MR. JONES: Yeah.
- 9 MS. PELTIER: My follow up to that was, we had had
- pending, post-FQPA but also pre-FQPA, making some changes in
- 11 the way a Section 18 -- the justification for Section 18's,
- including reduced risk criteria or resistance management
- criteria, fitting into an IPM system.
- 14 Any further action expected from the Agency on that
- this year?
- 16 MR. JONES: I don't believe this year we're going
- 17 to have much on that front.
- MS. ROSSI: But I won't yell. We've been taking
- 19 deportment lessons.

Τ	(Haughter.)
2	MALE SPEAKER: Tax dollars at work.
3	MS. ROSSI: Yes. It's a shame it hasn't worked in
4	my case. We are actually, Jean-Mari, going to start working
5	in the new fiscal year on some of the other changes to the
6	Section 18 process that folks have been interested in. We
7	had a session actually I guess it was in '96 that RD
8	Jim's folks ran. And so we'll get back to working on that
9	in the new fiscal year.
L 0	MR. EHRMANN: Okay. Let's go ahead and take a 10
L1	minute break and we will reconvene. Thanks.
L 2	(Whereupon, a brief break was
L3	taken.)
L 4	MR. EHRMANN: To provide a status report on various
L 5	budget related items that have been of interest to the
L 6	Committee, we have several presenters to provide an overview
L7	of this material. And then we'll have time for a discussion
L 8	The first is Al Jennings from USDA. Al?
L9	MR. JENNINGS: Okay, thanks, John. At break I

handed out a piece of paper that summarizes the Department's grants that are pest management related for FY 2000. These are the ones that come through the Cooperative State Research Education and Extension Service or CSREES.

And I don't have a lot to say about this, other than I think it is a reasonably good summary of the grant activities. And for those of you who are trying to add up the columns, I did that last night and it's roughly 29 million dollars worth of pest management related grants summarized here.

The program is described at the left. There are several. The new ones in fiscal year 2000 are the CAR, RAMP and Methyl Bromide Programs. The others have been around for a while with the one exception, which is the IFAFS -- I F A F S -- or the Initiative for Future Agriculture and Food Systems, which was a one time program in FY 2000. It may be resurfacing in FY 2001. We hope so. Anyhow, a portion of that program was devoted to pest management and that is captured here.

The other thing I would point out is on the first
page, down near the bottom there are four under a program
called Centers. This is the old Pesticide Impact Assessment
Program that in FY 2000 our appropriation was changed from a
formula fund program with money going to each state to now
these regional centers, for which there are four.

They follow the old CSREES regional lines, which are west, north, central, northeast and south. Although the expectation and the requirement for the current centers is over the next two to three years to come back to us and tell us what is a more intelligent way of regionalizing this program, we're looking for anywhere from 10 to 12 regions in the future that will follow the agro/eco system. Not state lines, but production areas.

So the program will be evolving into something that makes a little bit more sense than the current geographic split.

I think that's about all I have to say, and I would encourage you to take a look at the programs that were funded. Generally I'm quite pleased with the way the grant

1	process functioned. I should point out that this year
2	relevancy was a key part of the grant consideration in
3	addition to the scientific quality. So hopefully we have
4	targeted crops and pests and management systems that are high
5	priority.

If you have questions or want to talk more about 7 this after you've had a chance to digest it, I'll be around. Of course you can ask questions now.

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MR. EHRMANN: Yeah, let's take questions now just on this part. Mark and then Carolyn.

MR. WHALON: Thanks, John. Al, I wonder about -- as I look at these numbers -- and I haven't had a chance to really put them away. But I'm wondering about if we looked back over a couple of years, say, the dollars allocated to pest management in USDA, say, pre-FQPA, and since your budgets are set, what, one or two years in advance? So we would be looking at '98 and '99 probably, or 199.

I'm wondering what -- if we had a comparison or a

1	regression of dollars spent on pest management pre-FQPA and
2	post-FQPA what they would look like. Do you have any
3	estimate or thought on that?

MR. JENNINGS: Mark, I don't have a good handle on the totals. Certainly contained within this budget are the new programs -- the CAR, the RAMP and the methyl bromide. CAR was funded at -- was that a million this year, 2000? Yeah, one million in 2000. And RAMP was funded at four million. And those are definitely new. And of course IFAFS in here is new compared to the past. It was not funded in previous years.

MR. PITTS: Mark, let me do this. I think that I can call back to our budget office and probably working off this cross cut at least get an aggregate number going back to '96 to where we are. I'll try and get that done today so I can give it to you tomorrow. Some of it just depends on how busy they are.

MR. WHALON: That would be good, and I think that would alleviate maybe or help point to some of the issues

1	that relate to the Agency's response to the need in minor
2	crops relative to change in the pest management picture.
3	The other thing that I was wondering about is the

- as the Agency looks at the impact of FQPA, how would you assess its prioritization of the importance of transition?

6 MR. JENNINGS: I'm not quite sure what your 7 question is, Mark.

MR. WHALON: Well, I mean among the priorities
-- among the priorities that USDA has, and what goals USDA
has, how would transition under FQPA shape up or compare?

MR. JENNINGS: To all the other funding?

MR. WHALON: Yeah.

MR. JENNINGS: Well, again, CAR and RAMP have been specifically targeted at developing new pest management systems, and to me it's a high priority. And I think if you look through the projects that are funded, they are moving us in that direction towards developing new management techniques and tools or better use of the ones we have.

MR. WHALON: Is that published anywhere or set out

anywhere	?
	anywhere

MR. JENNINGS: I think that we've tried to deal with that issue through the RFP process. I can't speak to whether or not the word transition is in there. But we've tried to always make it clear that what we're looking for are proposals that show that the particular commodity groups and researchers are looking down the road to where they want to be, and looking towards new tactics and new products and putting a priority to those kind of programs.

And, again, trying to work a lot with CSREES on the review panels and making sure that we've got sort of the breadth of representation there of folks that are bringing that into the discussion.

MR. WHALON: Yeah.

MR. JENNINGS: Again, I think if folks have any recommendations on how we handled the process this time and some things that would have been appropriate to have seen in the RFP or something as far as how the EUP panel process worked, I think we're certainly open to that. It's by no

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MR. WHALON: I think it would be good in the context of CARAT to see those priorities and where or how FQPA is being addressed and what role it plays among the many roles that USDA addresses.

My final question really relates to the panels themselves and the process set out by the panels and the role of crop profiles in that process. And my question is, did having a crop profile accomplished influence whether or not CAR or RAMP dollars were awarded to a particular program?

MR. JENNINGS: I think the crop profiles provided good background information for the panelists. What may have been more important is the availability of a pest management strategy. Certainly if you look at this, I think there were something like two million dollars here for carrots in Michigan, that the researcher there attributes directly to the development of that pest management strategic plan. So it did provide the groundwork for the proposal development.

MR. WHALON: Yeah. Well, I'm just -- as a follow

1	up to that and I think that's really good. One of the
2	things that the CARAT Committee may be interested in is the
3	actual criteria used in evaluating these. What are the five
4	criteria and how they were weighed relative to the CAR and
5	RAMP grants as an information item.

MR. JENNINGS: Yeah. Those are available in the
RFPs -- the weighing factors. So we can get you the RFPs
from last year, if that would help.

9 MR. EHRMANN: Maybe that could be distilled out and 10 made available to the Committee.

11 MR. WHALON: Yeah, I think that would be an appropriate thing to do.

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MR. EHRMANN: Sarah, on this point?

MS. LYNCH: Yeah, just on this point. Al, could you -- when you're doing that, would you also talk about the panel. I know there were two components. There was the science review part and then there was the relevancy. And there was quite a bit of discussion and debate at the start of those as to the weights that would be given to those two,

- and I would be interested in having that as well.
- 2 MR. JENNINGS: Okay. I will get those to you,
- along with the criteria, because the criteria do contain
- 4 weights as well.
- 5 MR. EHRMANN: Okay, great. Yeah, Jim?
- 6 MR. AIDALA: Yeah. Just a question for Mark or any
- 7 others familiar with or part of the land grant system. Are
- 8 you saying, you know, you start something in '96 or '97 and
- 9 the budget cycle -- what are you seeing as sort of the
- impact? And maybe even from the private sector side, from
- 11 the companies and all. You know, is there more of a focus on
- 12 FQPA and what it means and how to get there? You know, how
- does it affect your life in terms of somebody that is out
- there dialing for those dollars?
- 15 MR. WHALON: I think that from the standpoint of
- the land grants, I think there is a perception that it is too
- 17 little for the job to do -- for the job that needs to be
- 18 accomplished. And maybe that's always an issue there. I
- 19 think that the need for partnerships is accelerating and some

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From my particular view on what it takes to do

integrated science and get the fit of a system that works out

in the landscape, we're doing too little. And I would say

that as you look at -- as you talk to growers in particularly

and significantly affected commodities, there is kind of a

dull acceptance on their part as they move ahead and a talk

down resignation, if you would.

The issue of FQPA is not what it was 18 months ago in the grower community, I don't think. It's more of a this is happening to us and what are we going to do to survive.

MR. EHRMANN: Okay.

MR. WHALON: And that's probably not what you wanted to hear.

MR. EHRMANN: Well -- and again, we may come back to some of those issues when we get to this afternoon's discussion if there are other views in response to Jim's question.

Let me just say as it relates to the temperature in

- this room, we don't want you just talking about vegetables.
- We want you to feel like you're a vegetable.
- 3 (Laughter.)
- 4 MR. EHRMANN: But we're working on it. We're
- 5 working on it. Ms. Wayland?
- 6 MS. WAYLAND: This is just a comment.
- 7 MR. EHRMANN: Hang on folks. Hang on.
- 8 MS. WAYLAND: It's not a question.
- 9 MR. EHRMANN: Go ahead.
- 10 MS. WAYLAND: When I left the hill some years ago,
- I remember that we had 17 programs at USDA that dealt in one
- way or another with pesticides. And we were always talking
- about how we needed to get that number down. And now I think
- there is probably 40. And I think it makes it really hard to
- translate to the public what you're doing.
- 16 So rather than talk to you about, you know,
- 17 changing programs or anything like that, I would like to
- 18 emphasize the value of really distilling this information so
- 19 people can understand qualitatively what you're doing. I

1	mean, I think it's important to be accountable for the
2	numbers, and I think you are. But, you know, to understand
3	what these different programs do and how they interrelate and
4	how the overall goals are being met for the Department is
5	really hard to discern.

I'm not trying to get you to do 50 pages of paperwork. But just a little more editorial distillation up front would really help.

MALE SPEAKER: Yeah. I think maybe one thing we'll need to think about is reconvening folks and kind of going through all of this. You know, initially with TRAC we went through a very laborious process of explaining each one of these line by line. And I know we've got a lot of new folks around the table now.

So, again, I guess the other route that we need to deal with is these are sort of line items over time. They have evolved and taken a life of their own. And I think if you look at the Department and our FQPA implementation, those programs that we specifically are focussing on are going to

- be things like IR-4, which has done a major overhaul to
 support the FQPA.
- MS. WAYLAND: Yes, it really has.

MR. PITTS: Al's office. And then basically crops

at risk and RAMP are really going to be the two programs that

we've really put in place to deal with FQPA. And to some

extent, also these centers that we're getting set -- the

regional centers. That is, again,

re-tooling the old PIAP system. But, you know, it's

something that the Department is trying to do there as well.

MR. EHRMANN: Okay. Good suggestion. Robin?

MS. SPITKO: I hate to be controversial, especially

And then our data collection efforts.

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since I really do like USDA a lot and support you totally.

But a couple of years ago we talked about opening up this grant process. And I know some of these grant programs are open to the private sector. But I'm going through this list, page after page after page, and with the exception of Larry Elworth, there is not a single NGO funded on this.

1	MR. JENNINGS: Yeah, only PMAP Pest Management
2	Alternatives Program is the one that is open to the
3	private sector. Everything else is colleges and
4	universities.

5 MS. SPITKO: Yeah.

6 MR. JENNINGS: Fortunately or unfortunately. But
7 that's the constraint we work under from Congress.

MS. SPITKO: Yeah.

MR. JENNINGS: And again, let me just reiterate that through the RFP process, what we've tried to make clear is that we want to see proposals come in with grower groups involved or other NGOs. So that was -- part of the criteria was how open the proposal was to other stakeholders in the RFP process.

MS. SPITKO: I totally agree with that. But there is one inherent problem, I think, in the science review process for the grants. Most of the people sitting on those panels are land grant people doing the scientific review.

And I have some insight experience with that through the

1	National Alliance Independent Crop Consultants. And the
2	feeling is pretty strong that there is a prejudice against
3	grants for NGO people.

And I would just like to throw that out and let us see if we can improve that. Because there are a lot of good ideas in the private section, and often they are tied in more closely with the growers and the problems that they are actually experiencing.

So maybe we need more programs. You know, more funding is always excellent.

MR. PITTS: Can I throw out an idea? Something that we've toyed around with, but I can't recall if it happened with the 406 money this time around. But with things like Fund for Rural America and the initiative -- the IFAFS program -- what we have typically done there is put relevancy panels and science panels together in one mega panel. So there is a lot of dialogue going on in the group collectively and a decision is made, as opposed to a relevancy review and then it gets shipped off to another

1	black	box	and	something	gets	spit	out

I guess one thing, you know, that we're certainly contemplating and I think we would like to move forward with on the 406 money, which is the crops at risk and RAMP and methyl bromide, is perhaps doing that of mushing relevancy and science review panels together so there is an inner process going on.

So that's just something we put out there for people to consider and get back to us on.

MR. JENNINGS: Yeah. And if I could comment also.

Mark mentioned partnerships. And I think I would encourage

you and anybody else in the private section to try to partner

with the land grant system a little better. I think they are

probably more receptive in the area of pest management than

perhaps in other areas of basic research to getting that kind

of input.

Maybe Mark can speak to that or someone else from the land grants.

MR. WHALON: I never turn down an opportunity in

1	that way. I think partnerships are absolutely key. And I
2	think we've seen some in the impact that these partnerships,
3	like the programs that have been in place recently from World
4	Wildlife and from the Pue Charitable Fund are good examples.

But I think there is also a history of partnerships in the private sector, particularly with consultants. And maybe later in the presentations when these people who are really on the firing line make their transition presentations that question should come up, because I think you'll find that they have a very integrative look at how partnerships work and actually do it in the field.

MR. EHRMANN: Okay. Let's go to Eldon.

DR. ORTMAN: Earlier today we heard several people comment about new products, new tactics and new approaches in pest control. Much was talked about with regard to the need for those and that those are new technologies which require additional education information.

As I perused the USDA and EPA budgets, I notice significant increases in the regulatory process and virtually

zero or less than zero increases in education and pesticide
applicator training, for example. In some of the state
programs we recognize that the best regulatory approach is an educational approach.

And I guess I would like to hear a comment or an explanation of how the two federal agencies view this, and how they might further consider what can happen in that arena.

The second is a comment regarding partnerships.

Partnerships is recognized in the land grant system as an important vehicle for getting a lot of good work done. I just spent two days in Chicago in a partnership meeting with a soybean group to look at problems that they are facing that are new problems. We do this regularly in a fairly defined fashion, and I think it is the way to approach these problems.

But I'm very particularly interested in the pesticide applicator training and this kind of partnership development that doesn't seem to be seeing the investment

1 that the regulatory process has.

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2 MR. PITTS: The pesticide applicator training 3 program, I think we can walk through the budget in a little 4 bit here, which I'll do. But that has been a program that has been grossly under funded by the Department, and I think also by EPA as well, particularly as we move into these new 7 technologies that are going to be significantly more 8 complicated on top of an already complex system that folks are dealing with.

> We did attempt through our budget process, and have attempted to do that historically through USDA, by having a line item put in. We asked for one and a half million, knowing that's not adequate as well, but it's certainly at least trying to get things started.

We did get a couple of calls from the hill this time on it, and I think we were hopeful it was one of the things that was going to get funded. And it looks like that ultimately did not prevail. But let me also say that part of this whole FOPA effort for USDA has been kind of building on

what our successes are and going back and catching up on the things that didn't quite get funded, as well as we follow up.

We have got these grant programs in place, and we were very happy to see not only these grant programs sustained, but in most cases added on. In the next budget process, I'm certain what will be happening is, you know, we'll continue to try to increase funding for these competitive grants programs, but then also go back and revisit with additional focus on energy and those areas where we still need to build on.

And I can tell you from the Department's perspective two things that we really feel strongly that are going to need to be emphasized in this next budget process. It's going to be Al's office, getting it fully funded. We basically had more requests coming in to work on pest management strategic plans than we were able to do. We basically ran out of money and had to shut down travel and working with grower groups to do strategic plans, which I think was unfortunate, because it's critical to getting your

- foot in the door on these competitive grants.
- 2 And then the pesticide applicator training program.
- I think over the next couple of months we're going to want to
- do some intensive work on where we want to see this program
- 5 go and look at it being more than a one and a half million
- 6 dollar program.
- DR. ORTMAN: One comment to that. As you talk

 about working with grower groups and so on, I would suggest a
- 9 significant partnership with the land grant system. We have
- many grower group meetings in which we could partner and have
- 11 this as part of the topic. I think there is excellent
- opportunity to work collaboratively, and I would encourage
- that to continue to build.
- MS. MULKEY: Let me add a little bit to Keith's
- answer on certification and training.
- MR. EHRMANN: Sure.
- MS. MULKEY: It is true that the overwhelming bulk,
- if not all of the funding for that, has been through EPA's
- 19 budget, and that it has been a steady state.

1	There is a potential opportunity, because we have
2	completed the reassessment of the certification and training
3	program, and we have a number of very comprehensive,
4	sophisticated ideas that have come out of that. That was a
5	partnership reassessment that involved the states and USDA.
6	And that is completed and we're ready for the implementation
7	phase. And that offers opportunities not only to have a
8	dialogue within the Executive Branch and with the Congress
9	about funding, but other kinds of reforms and enhancements
10	and so forth that can make that a more effective program.
11	But I think we're increasingly aware that that is
12	now a mid-20th century program with 21st century needs.
13	DR. ORTMAN: When, where and how will that
14	information be made available to the system at large?
15	MS. MULKEY: Is the report public, Anne?
16	MS. LINDSAY: Yeah. There is already, actually,
17	information out about the recommendations from the assessment
18	group. It's on a web site whose address I cannot remember.
19	MR. EHRMANN: Maybe we can get that for folks.

1	MS.	LINDSAY:	Yes.
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- MS. MULKEY: Yeah, we can get that.
- MS. LINDSAY: And we would actually love to talk
- 4 with you about some of your thoughts.
- 5 MR. EHRMANN: Let me ask the folks who have their cards up. We've got two more presenters on these budget 6 7 issues to handle the broader kind of budget situations both 8 for USDA and EPA. So if your question goes to larger budget, 9 I would ask you to hold it until we have those two 10 presentations, because it may get answered. If it goes specifically to what Larry was describing in terms of the 11 12 grants program, let's take it now.
- Jay, is yours on --
- MR. VROOM: Yes.
- 15 MR. EHRMANN: Okay, go ahead and then Steve.
- MR. VROOM: In the context of partnership, both

 centrally here in Washington at USDA and then out among the

 land grants, how are we formally or informally networking

 with the registrant community? I'm thinking specifically

1	about the significant amount of research that private
2	companies fund at many land grant institutions, that which
3	has been destroyed by night garden or felons and otherwise

But have we looked at those kinds of partnerships and could we -- is there an opportunity for us to maybe gain some connectivity there with ongoing research that the private sector has at the land grants that could mesh with some of what you've got going on here or add to it?

MR. JENNINGS: Yeah. I think the partnership with the registrant community certainly is there, particularly when we're looking at new delivery tools. I think, again, we are not investing in the standard chemical efficacy and that sort of work that you folks have funded quite well for a number of years, but innovative use of the existing chemicals. I think this is high priority. And certainly as far as I can tell, you're there at that level.

MR. VROOM: Okay. So you don't think that we're missing any opportunities by not having some formal group of company representatives organized to do interface?

- 1 MR. JENNINGS: I think it may help to, you know,
- 2 sit down and talk about that.
- MR. VROOM: Okay.
- 4 MR. PITTS: In the spectrum of what's going on and
- 5 where everyone fits in. Certainly, I would be happy to do
- 6 that.
- 7 MR. VROOM: You know, I can think of some examples
- of where, you know, people in company headquarters don't know
- 9 that people in their regional organizations have funded
- 10 certain, you know, minor research activities with university
- 11 X or experiment station Y.
- 12 And so I'm sure that we're missing some
- opportunities there with the private sector support that is
- 14 already there at the land grants.
- 15 MR. PITTS: And I think you're probably right in
- that sense that in general we're all going through the effort
- of trying to figure out how to incorporate other stakeholders
- in general.
- MR. VROOM: Yeah, good.

1	MR. PITTS: And I think that we had made that
2	effort to make sure that industry, as well as grower groups
3	and NGOs, are part of the panel review process. I think also
4	part of what we're trying to do with this whole
5	regionalization effort is move some of the money out to those
6	regions and have grant decisions made out there. Hopefully
7	by moving it out from D.C., it helps bring in people from
8	those communities that are going to have a higher awareness
9	of what's going on in those regions.
10	So that's certainly part of the game plan.

MR. EHRMANN:

DR. BALLING: Well, Keith, I think you've just answered my question, which I'm very pleased to hear the answer. We've got about four million going to these regional pest management centers. Right now most of that money is oriented toward crop profiles and pest management strategic plans. And, you know, you still have another whatever million dollars of other programs.

And quickly, Steve, Dave and Robin.

You do, then, have a sense that the funding

1	decisions are going to be moving out toward those regional
2	and I assume the future is the agro ecological regions, that
3	the decision will be moving there? Because that's the way
4	you're going to get the partnerships and the value grassroots
5	approach.

MR. PITTS: And again, that's the intent. It's something you've got to move into. And I don't want to give anybody --

DR. BALLING: False hope.

MR. PITTS: -- false hopes about what we did with these regional centers. Again, it was not a new infusion of cash. It was basically capturing an existing pot of money and basically using it to get these centers set up. So basically that base funding that we've got there is going to sustain the system that Al has to depend on when he's asking for questions about a risk mitigation or a risk assessment issue.

But our hope is over time to take things like crops at risk and RAMP and move those out in the regions, and

1	hopefully	enhance	their	funding	as	well	and	let	more	of	the
2	work go or	n out the	ere.								

MALE SPEAKER: And certainly our goal is to get more money out to the regional centers.

MR. EHRMANN: Dave?

DR. WHITACRE: A perusal of the titles for the folks that have gotten grants indicates two things to me.

Number one, that the areas covered are probably areas where work is needed. And the other is that there are quite a few new types of activities under investigation compared to what you would have seen four or five years ago: new tools, new ways of thinking, new thoughts and new approaches.

The question is, I also see some old things on here. You can't tell much from the titles. But the question is, how vigorous is the challenge process during the deliberations as to what does and what does not get granted as to on the topic of projects that have gone on before and projects that are really unlikely to produce the results wanted?

1	in other words, methods that really have been done
2	before and tried and they're unlikely to produce results. Is
3	that challenge process vigorous, or how does it work? And a
4	short answer is fine.
5	(END OF TAPE TWO, SIDE A)
6	MR. JENNINGS: sure what goes on in those
7	individual discussions. Therese observed one of them, at

9 MS. MURTAUGH: If you notice that the first column
10 under program, if it's a congressional gift or
11 whatever --

12 MALE SPEAKER: Earmarked.

least. Maybe you can respond.

MS. MURTAUGH: Yeah, earmarked, excuse me. There is no challenge. However, for the other programs there was a relevancy review. And, sir, I believe that the relevancy was 25 out of 100 points. I think that's correct. Perhaps more. But it was a significant amount that if a program was not judged as being relevant, it was very difficult for it to get through the scientific evaluation with enough points to be

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And as Keith said, the discussions are going in the direction of increasing the number of producer representatives on the panels and having a single panel with more producer representatives, so that the relevancy and the need for the project gets higher consideration.

I think that there have been a number of changes that USDA believes are very needed, and you should see them with the next round of proposals.

MR. PITTS: And I was looking at -- with all of these grants with reporting requirements put in place and for the longer term ones, there is an evaluation process that goes with those grants, which is something that we've been working very closely with CSREES and reviewers to make sure there is follow up on getting those reports in and that some kind of an evaluation happens with them as well.

And I think to date, because these programs are so new, the only ones that we've really had a round of evaluation on on how these grants work are the PMAP programs.

- And I think if you want to get copies of some of those, we can certainly pull those together just to give you a sense.
- MS. MURTAUGH: Also, Dave, as more pest management
 strategic plans are developed, we're hoping to tie the grant
 programs into that planning effort, so that those plans can
 document the need.
- 7 MR. EHRMANN: Mark, did you --
- DR. WHITACRE: What I heard was that some are challenged vigorously and some aren't.
- 10 MR. EHRMANN: Can we move along? Did you want to
 11 make a comment on this, Mark?
- MR. WHALON: I just want to comment to Dave's thing.
- MR. EHRMANN: Okay.
- MR. WHALON: Having served on numerous regional IPM

 committees and on -- not on CAR or RAMP. But on other

 competitive grants within USDA panels and boards, etc., the

 thing that I can tell you is that the most significant

 scrutiny in the process are these relevance criteria. If you

1	don't meet one of those relevance criteria, you're out bef	ore
2	you're in. So the relevance criteria are crucial, and how	ī
3	they're weighted are crucial.	

And then the final cut -- and this is where the sting really is. You may have dollars to fund nine or 16 or 22 or whatever it is, and you might have 90 or 50. And more than half of those are relevant and targeted and appropriate, but for one reason -- a very small reason -- they're knocked out. And that's the truth of the competitive process.

MR. EHRMANN: Okay. There are some other issues I want to get through before lunch, so quickly Robin and Dan and then we're going to move on.

MS. SPITKO: Mine is just a really quick procedural question about the partnership process. The land grant -- when you partner with an NGO, the land grant still has to be the submitting organization, right? I mean, there is no way that the NGO can be the principal investigator, so that all the funds are still controlled and disbursed by the university system? Is that correct?

1	MR. JENNINGS: Right. The institution that wins
2	the grant is responsible for managing the money. But, again,
3	passthroughs and subcontracts are perfectly acceptable from
4	the federal level. It depends on your relationship with the
5	educational institution.

MS. SPITKO: But even if the program was -- and the grant was proposed by a private sector person and they were the primary person in the process, it would still -- the university person would win the grant and administrate it, right?

- MR. JENNINGS: Right.
- MS. SPITKO: Okay.

MR. EHRMANN: Okay, Dan?

MR. BOTTS: Just one quick comment that goes to

Dave's comment as well, and specifically on the methyl

bromide issues that are in there. Just to give you some

appreciation for the complexity behind what is listed in

there, there is a single project in there that we were

involved in in stimulating the process of putting the grant

1 proposal together.

We didn't put the grant proposal together. We brought the researchers together. It has one person's name on it and one person's title at the end, but that actually represents 11 different research projects in the state.

And as far as relevancy goes, we screened out about 20 other proposals before that project was ever put together. It goes into the mass at USDA where the review was. You see a big number over there, \$350,000 for that particular project. The initial request that went in, which we had cut to the bare bones, we thought, was \$520,000 to get those 11 projects done.

So you're sitting there starting off at the very front going back to those very same researchers, who had put together what they thought was a bare bones project, and saying, all right, you've got to take another 25 percent off the top. Can you do your project at those levels? And then there are some other issues relative to overhead being taken out and some other things and how that is calculated and

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1	otner	issues.

My comment relative to this is that this is a

little misleading. It looks like -- if you looked at these

numbers alone, it says there is \$350,000 on the ground in

research on methyl bromide in Florida on alternatives

relative to this funding level.

And we're appreciative of these dollars. It exactly translates to the direct cost of the research itself. About 10 to 20 percent of that is actual dollars hitting the ground to pay for the field level research. The rest of it is eaten up in overhead and salaries and those kind of things which are built into the process.

Now we've got to have it, but the numbers tend to be a little misleading as far as what actually translates to getting the information back that we can go out to the growers with and help solve the problems.

MR. EHRMANN: Okay. Let's go ahead and have Jim and Keith give some additional overall budget information and then we'll have time for a few more comments.

1	Jim	or	Keith?
4	0	\sim \pm	100 1011.

- 2 MR. PITTS: Okay. I'll tell you, let me just wrap
- 3 up here.
- 4 MR. EHRMANN: Why don't you go ahead. Yeah.
- 5 MR. PITTS: I think we've kind of touched on the
- 6 issues. I think if the folks have questions, this is a two
- 7 pager. It got thrown together last night by our budget
- 8 office. It's where we think we're coming out for the FY 2001
- 9 conference.
- 10 Let me just make a couple of edits here. On the
- 11 column that says 2000 Current Estimates, the first column on
- the first page, there are zeros across there. If you could
- put in 35.845. That's what that should add up to.
- Somebody's spreadsheet wasn't working well.
- 15 MR. EHRMANN: Say that again, Keith.
- MR. PITTS: 35.845.
- 17 MALE SPEAKER: That's the total at the bottom here
- 18 where there are all zeros.
- 19 MR. PITTS: And if you go to the second page, again

1	that first column, I was a little bit deflated when I saw
2	this as well. But the first column, 2000, that number should
3	not be 45.896. It should be 81.741. So basically what
4	looked like it was close to our doubling of an IPM budget
5	here, it's really about a 7.2 million dollar increase between
6	what our actual 2000 budget was and what it looks like we
7	have.

MR. EHRMANN: Okay.

MR. PITTS: Again, I don't want to de-emphasize our happiness about seeing some increases in critical programs. But again, it's not a doubling of our IPM research budget.

A couple of things that are non-research related are just we were able to get full funding for the pesticide data program, which is quite helpful. FSIS, our Food Safety Inspection Service, was also given some additional funding to help with meat samples, which will be sent into PDP for analysis.

We also did get an increase in the National

Agricultural Statistics Survey, and that increase mainly is

1	going to reflect adding some minor crops in existing fruit
2	and veggie surveys, and also putting nursery and greenhouse
3	- they're going to start nursery and greenhouse surveying.
4	That's going to help that program continue. So that was
5	another key add on.

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Another thing that is not reflected in this budget is the Initiative for Future Food and Agricultural Systems, a 120 million dollar program, which there has been some question about whether or not that would continue. In the conference that 120 million dollars is there, and again that's going to be an internal discussion within the Department and outreach on stakeholders about how that money should be spent. But I think considering where we are with FQPA and IPM related issues, you can anticipate seeing some of that funding wardened off for IFAFS as well.

And those of you that follow --

17 FEMALE SPEAKER: I'm not clear on that, Keith. Is
18 this 120 million in new money?

MR. PITTS: It's 120 million in addition to this.

The last time when we met we talked about the initiative for future food and agricultural systems, which is a competitive grants program that set up mandatory money. Not a discretionary account.

The appropriators in the past have tried to put a limitation on us using that money, and what they have done in the past two years is, quote/unquote, made a mistake and let us rollover a previous year's money into this year. So what we've been able to do is capture 120 million dollars in mandatory spending.

And this past year the Secretary, working with stakeholders and CSREES, cut out this 120 million dollars in the different categories. Some of it went for biotech type work. Some went for nutrition work. Some went for good agricultural practices for pathogens on crops. Some went to natural resources, with a component of that being IPM programs, some of which were funded in this chart here. So that money is also going to be available to the Department over the next fiscal year to get out, so there will be an RFP

process.

I should also just indicate to you that in the past
that has been a program that has been broadly available, even
to the private sector to apply, and it looks like there has
been a limitation put on it, that it's only available for
land grants this next fiscal year. So that is a giant change
in the program.

And I guess the other issue, those of you that follow the national resource initiative, that I think it took a little bit of a cut in the conference. I think we ended up at 106 million dollars for the next fiscal year, which is a 13 million dollar reduction of the FY 2000 level and 44 million dollars less than what the administration requested.

MR. EHRMANN: Okay. Sarah?

MS. LYNCH: Keith, in this -- do you have any information on the funding for organics in here? I mean, in terms of thinking about programs related to responsibilities -- USDA responsibilities under FQPA. And we're talking about alternatives to pesticides.

1	Wouldn't we want to be looking also, or thinking
2	about perhaps some relationships between that research and
3	how it might actually help provide some of these
4	alternatives? I mean, organic agriculture has demonstrated
5	pretty successfully that you can actually farm without
6	synthetic pesticides.
7	So there might be some solutions there?
8	MR. PITTS: Yeah. Again, we have other tools
9	available to us. And I think probably what we'll due for is
10	another workshop with USDA and stakeholders and talking about
11	where all these programs are and where they need to head.
12	That is something that I'll get set up.
13	And we were just talking, too, about pesticide
14	applicator training programs. We're committed to doing some
15	kind of workshop there within the next few months as well,
16	once we get these regional centers up and running.
17	But I agree with you. And again, this was a rush
18	job

MS. LYNCH: Sure.

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1	MR. PITTS: to just tease out some things. So
2	it doesn't fully reflect everything the Department has
3	available to it.
4	MR. EHRMANN: Okay. Jim, do you want to do the
5	EPA's?
6	MR. AIDALA: One clarification. Keith, is the 2001
7	budget the President's budget request? It's listed in the
8	second column.
9	MR. PITTS: Yes. That would be what we requested.
10	MR. AIDALA: Okay. And then just sort of a
11	conclusion, that means you requested 108 and appear to be
12	getting 89?
13	MR. PITTS: Correct.
14	MR. AIDALA: And then you can crosswalk just
15	what I'm doing. Cross walking those important two columns to
16	kind of indicate where, shall we say, congressional

along in the process. We hope to have a budget. We are

And with that segue, our budget is not as well

priorities lie.

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going to the Senate I believe this -- maybe this week, I'm told, just from reading the newspapers like everyone else.

But in our President's budget request we did request 121 million for the Office of Pesticide Programs, and that represents paying for 936 positions, just to give some sense of scale. About 75 million of that is for FQPA activities, and in that arena we did have an eight and a half million dollar increase in our request. Of the eight and a half million dollar request for, again, FQPA activities, that was about one million dollars for ag partnership initiatives, two million for the screening and testing program required in the FQPA for endocrine disrupters, an additional one million for registration of safer, reduced risk pesticides, an additional three and a half — or about three and a half million dollars for tolerance setting and reassessment under FQPA, and about almost a million dollars for the partnership environmental stewardship program and for IPM.

So basically the point is those are the activities that I just ticked off that were the ones that got some

increment within the President's budget, which, again, kind of -- it is this time of year where the President tends to get more of his way than other times of the year in the appropriations budget cycle. And we are told that we're doing pretty well, but, again, if we don't have it, we don't see it and obviously it's up to Congress at the end of the day to see what we have.

And that's about it on our budget per se. There are a couple of other issues sort of very related that I would like to raise. One is, again, we know an issue for many folks has been fee for service. We continue to have some discussion about fee for service with obviously the regulated community. Obviously with hopefully just a few days left in the session, it appears unlikely that anything is going to happen there this year.

Two issues that are more important. We do have any FQPA a requirement to issue a rule to recover all of our tolerance associated tolerance setting associated activities. That rule was proposed. We were prohibited by the

- 1 appropriations bill last year from making the rule final.
- We're riveted in the current CR. It appears likely we'll be
- 3 prohibited in the current fiscal year bill.

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4 Meanwhile, OMB has seen in its wisdom to set aside -- to offset our budget by seven million dollars in 5 anticipating some revenue stream from that source -- from the 6 7 rule on implementing the tolerance fee provisions of FOPA. 8 It's not clear what -- and we hope that has been taken care of again as we see the bill. But, again, otherwise that's a 9 seven million dollar shortfall in this program, which is 10 rather significant for these sets of activities. If we're 11 12 made whole, then obviously that's something that we would --13 that we are working toward and hopefully we'll get.

The other thing is that under current law the maintenance fees, which was set up originally in the 1988 amendments, is 18. Over time it's been 14 to 16 million dollars in maintenance fees. There is a revenue stream coming in to support review of older chemicals -- older pesticides. That authorization to collect that fee expires

1	at	the	end	of	2001		the	end	of	fiscal	year	2001.
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That shortfall represents what we use to pay about

200 to 220 positions in the program of, again, 930 or 940

4 positions. That is a significant shortfall. Obviously

5 that's something that we need to address as we go into the

6 next budget planning cycle. But that shortfall would be

7 critical if we ended up having to -- again, have to make up a

8 14 million dollar difference in this program.

That's it in terms of a quick summary.

10 MR. JOHNSON: Do you want to respond to some of the 11 EPA split?

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MR. EHRMANN: We have other information. Nothing like a break to get the real data about the question Cindy asked before.

MR. JOHNSON: Cindy, the split is, of the 936 FTEs or people that Jim referred to, about 60 percent are supporting reregistration and tolerance reassessment and about 40 percent are supporting registration.

19 With regard to the contract dollars, if you will,

1	contract and grant dollars of 121 million, taking off 13
2	million dollars for state grants, 10 million dollars for
3	certification and training, worker protection grant contract
4	activities, the pesticide and environmental stewardship
5	program and , some international work so basically taking
6	off somewhere between 25 or so million, the remainder of
7	that, the split, is 55 percent of those contract dollars are
8	going to reregistration and tolerance reassessment, and 45
9	percent to registration.

- MS. BAKER: Thank you.
- 11 MR. JOHNSON: So that will give you some sense.
- MR. EHRMANN: Thanks, Steve. Steve?
- 13 MR. RUTZ: Jim or Steve, just a quick question on 14 the state cooperative agreement funding. Can you briefly 15 outline what the 2000 budget had it in for state funding 16 versus what is requested in 2001?
- 17 MR. JOHNSON: Steve, it's a study state, so about 18 13 million.
- MR. EHRMANN: Okay. Any other questions for Keith

1	or Jim on the broader as you can tell, obviously the
2	numbers are fresh and evolving at this point. So at this
3	point, you know as much about the budget issues as anybody
4	else in terms of what is emerging from the congressional
5	process.

Shelley?

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MS. DAVIS: There was a recent GAO report -- I'm trying to remember the date, maybe July -- that was critical of the EPA's oversight of state enforcement of the worker protection standard, and money figured into that. And I was wondering if that report figured into your budgeting?

MALE SPEAKER: I'm glad you guys have that, because we were just looking at the letter writing to Congress about that just this morning.

MR. EHRMANN: Go ahead.

MS. MULKEY: Well, we have, as you probably saw immediately, answered that report in part by saying that we think it raises some issues that are legitimate and of real concern to us.

1	We had already announced that we had underway a
2	major reassessment of the worker protection rule and its
3	implementation. We're conducting it jointly with our Office
4	of Enforcement and Compliance, and that's proceeding this
5	year. Out of that reassessment may very well come budget
б	initiatives as well as other things.

But our short term focus in responding to that report, and of our own initiative, is to focus on understanding more fully what the implementation picture is like and where the issues are. Our Enforcement Office is conducting some very comprehensive looks at some selected states and regional approaches and so forth.

So we are in the beginning phases of responding to that report and to the issue.

MR. EHRMANN: Okay. Just in summary, it sounds like there were a number of, I think, very useful suggestions, particularly in response to Al's presentation about how to describe and package the information relative to all the various grant programs. It strikes me -- you know,

these descriptions obviously are kind of from the source of the money out. But for those who are receiving that information, it's still a lot of different subsets and units and categories and etc.

So I think Keith's offer to develop a workshop opportunity to kind of lay all of this out and maybe look at ways of organizing it would be very helpful, as well as kind of pulling all the pieces into that, as Sarah and others suggested, so people get an idea about the big picture in terms of all the different types of funding.

And we'll come back to that tomorrow in terms of specific follow up. But that's a suggestion that I get a sense people would find very helpful to have that kind of written information, but also an opportunity perhaps to have that kind of discussion in a group setting about all the various pieces. And by then, obviously, we'll have some more certainty as to these final numbers on both the USDA and EPA side.

Let's go on, then, to the updates that we've

2	issues that I know are of interest to the Committee. And
3	kind of keep track of the time. We may reserve one or two of
4	these until after lunch.
5	But let's go ahead with the cumulative risk
6	presentation. And Vicki, where are you?
7	MS. DOYLE: I'm
8	MR. EHRMANN: You're not Vicki.
9	MALE SPEAKER: Beth Doyle.
10	MR. EHRMANN: Beth Doyle is going to do it.
11	MS. DOYLE: Yeah. I'm filling in for Vicki

Dellarco today. We share joint responsibility for the

development of this paper. She was not able to come.

scheduled in the next part of the agenda relative to several

Okay. So I will quickly go through this update. I want to touch on three points. Where we are as far as developing our risk assessment methodology. I'm going to touch on the public comments that we've gotten on our draft guidance document, our September SAP meeting which just finished, in which we reviewed the hazard and dose response

1 portion of our upcoming case study, and our next steps.

Can I have the next slide, please. Okay. We issued an announcement of availability of our draft document on June 30th, and we asked for public comment about the content and approaches that were outlined in that particular paper. Ten commenters responded. There were a fairly varied number of other government agencies and some industry groups and public interest groups.

Next slide, please. The were a number of major points of agreement with us as far as what we had put in the document. Generally the comments indicated that we were following -- we were ready to take an important step forward, that we were following sound science principles in developing our approach, and that we needed to continue to consider this a work in progress. In other words, we think this will be developing for years to come as the science grows.

Next slide. The public comments that we got focussed on the need for greater discussion and clarification of the points that we tried to make in our document. A few

of them are highlighted on the slide. Generally we felt that
we had not explained adequately or clearly enough what
approaches we were using or how we planned to proceed.

Next slide. We sought public comment through this public participation process and also a formal peer review process.

Next slide. The public comments that we got from public interest groups urged us to move ahead. They felt that our process was developing rapidly, that we had sufficient data. They also urged us to be as inclusive as possible in all of our assessments.

Next slide, please. The industry comments tended to focus on other areas. They were concerned about lack of data. They had comments that, again, we had not adequately represented what our approach was intended to be, and they pointed to the need for a better developed case study that would allow them to understand how we planned to work with data. We plan to go forward with that case study in December to the SAP -- a completion of it -- so that they will have

1	that information available. They also agreed with us on a
2	number of points, that we should try to not mix highly
3	refined data with screening level data.

Next slide. Our next step forward in publicizing our process and in trying to seek peer review and public comment is to go to -- was to go to the SAP in September of this year with our pilot hazard assessment. We wanted to get feedback on our approach. We wanted to get feedback on our handling of data. And we were responding to the SAP's specific request that we come back with a more detailed case study, so that they could evaluate what our discussions -- our general discussions and our guidance document were describing.

So in that case, we went back with a 24 chemical OP assessment where we demonstrated how we would work with the existing data in order to get that feedback and to allow public comment.

Next slide. Generally the SAP felt that our approach was good. They were complimentary about our ways of

putting together data. They thought our criteria for working through the data were appropriate, and they agreed with much of what we proposed.

They did have suggestions -- a number of suggestions -- on how to tackle problems that we had been grappling with. We posed to them a number of questions and they were able to provide us with pointers which will help us to refine this case study before it goes final.

Next slide, please. One of the -- some of the specific cases that they pointed to, they offered suggestions on our modeling -- modeling of our dose response. They gave us improved ways to deal with the data. We are pursuing those now, although we have not yet completed our modifications.

They told us that they thought our use of our data should continue to be transparent and that we should deal with it carefully, but they actually encouraged us to go farther in using surrogate data. Where we had absence of data for one chemical, they thought that we should be able to

1	look across the class to extrapolate to others. And they
2	encouraged us to be more forthcoming with default assumptions
3	where we had a lack of data, as long as they were based upon
4	sound science and could be defended.

Next slide, please. As we go forward with trying to develop the document, as we go forward to take the rest of the case study forward to the SAP, we plan to take an exposure component in December. At that time we will respond to the SAP's request for a more detailed case study that was posed to us in December, and demonstrate how we will work with that, the residential and dietary components and water components of the data.

Then in early 2001, based upon feedback from both public comments and the SAP, we hope to go out with a revised quidance document or seek further comment as needed.

Thank you.

17 MR. EHRMANN: Comments? Questions? Cindy?

MS. BAKER: Beth, what exactly are you guys

19 planning to take in December? Is it a case study with the 24

1	OPs that have that you have PDP data for? What do you
2	have in your parameters for what you're going to take to the
3	SAP in December?

MS. DOYLE: We're going to use the same -- because we haven't finished addressing the September comments, we're going to work with the same hazard data set that we took in September. And then we will work with other data -- other exposure data, the monitoring data, for instance, residential exposure data, water data as it is available -- to demonstrate how we would approach using this information if we were going to do a cumulative assessment comprehensive.

MS. BAKER: And I know you guys are looking at several different models with Lifeline and Cares and Calindex. What are you taking to the SAP, all three of those? I mean, obviously all three are not in the same stage, so what method are you taking?

MS. DOYLE: In this particular case, we're planning to go forward with Calindex. We want to focus on the data, not on the models for this particular assessment. We are

1	trying	to	ask	the	SAP	to	comment	on	our	guidance	document	and
2	not th	e d	iffeı	cence	es be	etwe	en the	vari	ious	models.		

MS. BAKER: And then just kind of as a follow up,

what is the time line then for the Agency for this? I mean,

you take it in December to the SAP and then what?

MS. MULKEY: As you know, this is something that you -- we have been absolutely open about.

MS. BAKER: Right.

MS. MULKEY: And everything we know, you know. And obviously we now know -- have some sense of what we will do in December as a result of having gone through September. So we will have some much better sense of the next step as we prepare for and go through December.

MALE SPEAKER: Cindy, there is some fear that before the end of this administration we're going to pop out a cumulative use assessment --

MS. BAKER: I know you're not going to do that.

MALE SPEAKER: No, we're not going to do that.

19 (Laughter.)

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l MALE	SPEAKER:	So	lay	to	rest	any	concerns.
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MS. BAKER: Yes.

3 MR. EHRMANN: Jay and then Bill.

MR. VROOM: So is there any kind of range of idea

of where and how you would go about validating the various

computer software models? And would that be the same SAP

that had just met?

MS. DOYLE: Actually, one of the discussions we've had at several of these particular series of SAPs is that it's really not possible to validate in the strictest sense these models. They're too complex. There are too many inputs.

What we're actually thinking of doing is comparing them to bio monitoring data as it becomes available. And this is true for all of the models as we go forward and look at them. We will certainly compare them internally and see if they're giving us consistent answers. But in a larger sense, we're looking to processes such as N-Haines to give us a total exposure against which we compare.

- 1 MR. VROOM: Well, cumulative risk assessment,
- 2 exposure is only one component.
- MS. DOYLE: That's correct.
- MR. VROOM: I don't understand how you go back to one component to validate a very comprehensive cumulative risk assessment output. I don't understand that at all.
- 7 MS. DOYLE: For cumulative in particular?
- 8 MR. VROOM: Yeah.
- 9 MS. DOYLE: Again, as I said, you cannot truly
 10 validate these in the sense that you can never follow each
 11 piece through to its final completion. We can take pieces of
 12 them, look at those, and see how they reflect what we're
 13 finding.
- MR. VROOM: Yeah.
- MS. DOYLE: That includes the predictions about

 particular chemicals. Also we can look at incidence data.

 But our validation process will be piecemeal and indirect.
- We certainly can't do a comprehensive study.
- 19 MR. VROOM: Okay. And you said you would look at

1	the relative outcomes from two or more software models?
2	MS. DOYLE: Uh-huh.
3	MR. VROOM: I think you said internally. Does that
4	mean that that would not be revealed in a public forum?
5	MS. DOYLE: No. I meant actually that we were
6	planning to assign people to work on it. As far as the
7	outcome, no, there is no secret about it. We have worked
8	with all comers as they have approached us as far as
9	development of these products and also as far as our
10	evaluation of them, and we hope to continue that.
11	MR. VROOM: Okay. I had asked the question earlier
12	prematurely about my understanding that at the recent SAP
13	meeting that some of the members discussed concern about
14	certain data being useful and valid for aggregate risk
15	assessment, but not appropriate for the cumulative process.
16	Could you explain that a little further?
17	MS. DOYLE: Yeah. I heard that and I was puzzled,
18	and I had checked with a couple others. And I did not hear
19	that. That was not the sense that I got at the SAP at all.

1	So	I	really	can't	
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- MR. VROOM: Okay. Well, let me come back and see

 if I can give a little -- give you a little more detail

 about, you know, what the basis of my understanding on that

 was, and then we can talk off line about that.
- MS. DOYLE: Okay.
- 7 MR. VROOM: Great.
- 8 MS. DOYLE: Yeah. There's also the point that we 9 don't have a written report yet, so we don't know what the 10 formal deliberations will be.
- MR. VROOM: Okay, thanks.
- MR. EHRMANN: Okay. Bill?
- MR. LOVELADY: I'm not sure if my question is the

 same -- somewhat the same as Jay's. You went through this

 pretty fast, but I think there was one part in there that the

 SAP said default assumptions could and should be used if they

 could be defended as based on sound science.
- 18 Is that correct?
- MS. DOYLE: Yes.

1	MR	. L	OVELADY:	How	do	you	go	about	defending	an
2	assumption	on	something	lik	e t	his?				

MS. DOYLE: Well, I think you look at the source of the assumption, for instance. An assumption as we're using that term is information taken from the literature. It's taken from secondary sources that are not particularly chemical related. It's an assumption in the sense that we have culled through the literature or gone through what data we have in house and tried to come up with what we think is the best synthesis of that data.

So the extent that we can support based upon reference the source of that particular value, I think that's how we would defend it.

MR. LOVELADY: Of course as you well know, over the last couple of years one of the big controversies that we have grappled with as a committee is default assumptions, and by their very nature, it makes me very uncomfortable. I mean, who is making the default assumptions and what is the criteria for them?

1	MS. MULKEY: I may be helpful. I think that part
2	of the difficulty is that this term has a lot of baggage
3	around it. For example, in the dietary risk assessment that
4	you saw, we have however many it is, 3,000 different
5	consumption data points. We make an assumption that that is
6	representative of the entire population. So there are
7	assumptions necessary no matter how much data you have.

And I think the question here is, when is it okay to rely on the data we have. And the scientists use the term default assumption in a wide range of situations. So what you really have to ask is, in any given situation where we're drawing an inference, it's another way of saying we're drawing an inference from what we know to something we have not actually measured.

And sometimes we're drawing it from a very rich body of information, but you still have to make a leap to the universe, just like PDP data. We draw the inference that those data represent all of the samples that could have been taken. And we think of that as working from data and not

from assumptions, but there is an assumption inherent in that, too. So I think some of this is just the way the language is used.

And the real question is in any given situation, is it appropriate and scientifically sound to draw an inference from what we know and to use that inference to go to the next step.

MR. LOVELADY: Well, that is part of the scientific process, and I know that. It's just that it makes you very leery that unnecessarily conservative assumptions can be made when there really is no need for them to be.

MS. MULKEY: And that goes to the question of what is the reasonable and right inference. And one of the reasons why we're engaging with the scientific peer reviewers — and this was a very richly drawn together panel in terms of expertise — is to help us reach the judgment. Is this a situation where we can reasonably draw an assumption — or make an assumption and draw an inference from what we know, and then is the inference we've drawn to the assumption we've

1 made itself reasonable.

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- And that goes to the question is it overly

 conservative or is it insufficiently conservative. Are we

 putting at risk the public health because we're not

 conservative enough. I mean, you have to worry about both

 tails of that question, obviously.
- 7 MR. EHRMANN: Okay. David?
- DR. WHITACRE: Thanks, Beth, for the update. To me

 it's clear you've got some stakeholders saying that you need

 to move ahead and make decisions. You've got other

 stakeholders saying there is a lack of data and how can you

 come to conclusions. I mean, all right, that's unlikely to

 change.

But this cumulative risk thing -- and I've said this before others have said it -- is really complicated.

It's going to take longer than we originally thought to make it work. It's going to be an iterative process. As you begin to lay it out and test it, as you're talking about doing now on a continuous basis going back to the SAP in

December, as that happens and as certain ideas gain validity,
you're going to find out more and more that you need certain
kinds of data.

And we can conjure up now, even pretty clearly what some types of data are. But one of the problems we have is that the best data in the world that addresses the wrong question are not very useful. So I quest this is an appeal.

As soon as you can, point the direction toward the kinds of data you would like to see developed that you don't think you have. We've talked previously about DCIs. I mean, that's an old way of doing things. It worked very well.

Maybe there is not time for that, okay. Maybe there is, great.

But my appeal is, let's not wait for these differences just to keep resurfacing and resurfacing. As soon as EPA can give some guidance to the folks that generate the data, or need to generate the data, give that sheet. Give those ideas a direction and pin it down to the degree you can. And if it's not a data call in, give it what you

1	can, because people, I think, in the industry will develop
2	data, but they don't want to develop the wrong data for the
3	reasons that I said.

So help is needed here. It ain't easy, folks. I know that. We all know that. But if you can give us some directions and show where for either --

(END OF TAPE 2, SIDE B)

8 MR. EHRMANN: Okay. Erik?

MR. OLSON: I guess I wanted to follow up on a point that was asked about before. What does EPA view as sort of the next step? You'll go through this SAP review in December. You have something coming out shortly thereafter, I gather, in response in part.

But when do we get to a final cumulative risk assessment, and when would we then move from that to action?

MS. MULKEY: Well, as we take the tool or the approach through the science peer review, as soon as we feel that we have enough of a useable tool and have articulated it clearly enough, and have had it adequately reviewed, we can

1 then begin to use it.

And as you can see, it has matured very

significantly. We are through the hazard side of that and

have taken it twice to the SAP. We've gotten some feedback.

I think we think we have basically one more iteration of the

hazard side and that no further -- we're sort of ready to

finalize that.

The exposure side is lagging a little behind that.

This phase that we will take in December is very rich in exposure side information, and we believe it may be far enough along that we can combine them with a complete approach shortly after the December meeting.

But obviously as we prepare for it -- because we are working -- we are devoting enormous resources to this real time. And we're not ready to go to the December meeting this week. We hope to be ready in December. So as that matures, we are optimist that we will have a useable tool. It will still be an iterative process. It will still be something that can mature further. But we have something

- that can be used to conduct a risk assessment.
- Now you said final comprehensive. You know, those
- 3 are big, heavy handed words. It might be a preliminary risk
- 4 assessment. Undoubtedly it would be in the process sense.
- 5 It might be a partial risk assessment. But our hope and
- 6 expectation is that we'll have a tool that we can use in that
- 7 time frame.
- I don't know how to say it more specifically. We
- 9 don't have a hidden, you know, schedule that we're not
- telling you about. Any of you. You know everything we know
- about where we are in this process. We are completely
- transparent on this. We don't have any internal documents
- that are other than getting ready to be made public in the
- 14 near term.
- MR. EHRMANN: Okay.
- 16 MS. BAKER: John, can I follow up on that real
- 17 quick?
- MR. EHRMANN: Yes, sure.
- 19 MS. BAKER: Marcia, I think one of the big

1	quest	cions		and	I'm	not	try	/ing	to	push	you	guy	s t	to th	nis	at
2	all,	becau	se	I'm	not	in	any	huge	hu	ırry :	for	you	to	get	the	ere

(Laughter.)

MS. BAKER: But after you do this, you know, the real 64,000 dollar question is, okay now what. You have this preliminary cumulative risk assessment. Do we now go into a process like we've done with the individual chemicals where you have a cumulative technical briefing and we talk about — and I'm not being facetious. I'm being very serious. And we talk about, you know, where the uses are and where the drivers are, and then we have conference calls about risk mitigation.

I mean, do you see that similar kind of a process as taking place?

MS. MULKEY: We definitely envision a public process. And I think, you know, one of the open questions is, what form should that take. What kind of -- but it will be informed by everything we've learned through the individual chemicals. There are obviously some key

- differences. You don't send it out to a registrant for error correction, for example.
- 3 MS. BAKER: Right.
- 4 (Laughter.)
- MS. MULKEY: Sort of by definition. You know,

 short of sending it -- we could post it on the web for error

 correction, I suppose. And so forth. So there are a lot of

 dynamics like that that obviously will have to be different.
- 9 But I think that -- and again, that's something our thinking 10 is maturing on and there is an opportunity for input on.
- 11 MR. EHRMANN: Jim?
- MR. AIDALA: And the kind of things sort of your

 ideas are the same ones we're kicking around. I mean, how do

 you do it. What makes sense. Again, it's nonsensical to say

 there is a registrant only phase --
- MS. BAKER: Right.
- 17 MR. AIDALA: -- since there is not a registrant.
- 18 MS. BAKER: Right.
- 19 MR. AIDALA: Also, it depends on what the peer

1	review process says.	This is good. This is directionally
2	correct. This is bad	or whatever. I mean, that makes a
3	difference in how you	think you've got to address those
4	things.	

Also, what then -- assuming the process is all straightforward and the numbers are there, what are the numbers. For example, if the numbers are X versus Y versus 25X, that may make a different kind of calculation on that. I mean, that's all part of what -- you know, part of it depends that we have to have the approach before we can know exactly what some of the options are to do with it.

MR. EHRMANN: Robin, did you have your card up before? No?

14 MALE SPEAKER: I had mine up.

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MR. EHRMANN: Oh, it was you. I'm sorry.

MALE SPEAKER: And I put it down, because my
question was, when do we know when we've arrived. And it was
the same thing.

MR. EHRMANN: Okay. Rob?

1	MR. HEDBERG: Just more of a comment than a
2	question. But having been at the Science Advisory Panel, I
3	think that you're projections are maybe overly optimistic,
4	because I didn't hear a great deal of confidence in the
5	models. And where they are, I don't feel that the panel said
6	they had had an adequate opportunity to review the models,
7	and they were even talking about integrating some of the
8	three models together.
9	So I know that some people would like things to
LO	move fast, but I didn't have a high level of confidence that
L1	things can move that quickly based on what the panel said.
L2	MR. EHRMANN: Okay. Jean-Mari?
L3	MS. PELTIER: A follow up to the question that
L 4	Cindy raised and, Marcia, your response to it. I think that

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us away from lunch.

But I think that this issue is the most critical probably that the agencies face. And the implementation and the way we weave our way through implementation of this area

-- I know that we're sitting now and I'm talking and keeping

1	of	cumulativ	e risk	is	probably	one	of	the	most	critical	ones
2	tha	it you're	going t	to l	nave faced	i.					

areas, John, where you need to have a bookmark for us to set up a working group to talk about how we get everybody around the table to talk about implementation. How we talk about the impacts on the user community, and what all the rest of those questions might be. And you folks would be able to scope out those questions that maybe some of us could provide input on process wise.

So I would suggest that this is when we need to bookmark for a working group.

MR. EHRMANN: Okay. So flagged and we'll come back to that when we have that discussion.

Let's go ahead and have the presentation, if we can, on channels of trade, since we're not scheduled for lunch until 12:30, from Jack and Terry. And then we'll see how much discussion there is on that and decide whether we do the discussion before or after we take a lunch break.

1	But,	Jack,	why	don't	you	qo	ahead.

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MR. HOUSENGER: Okay. I thought before I gave the 3 update I would refresh everybody's mind as to what the 4 channels of trade provision is. When FOPA was passed in 1996, it contained a provision that basically required the Agency that whenever a pesticide registration on a food use 7 was canceled, that we would go ahead and revoke the tolerance, and that the revocation would occur within 180 days of the last legal application of the pesticide.

> Under another provision of FQPA -- and this is 408L5 in case you have a copy of FFDCA -- any food treated prior to the cancellation may continue to be marketed as long as the pesticide application was lawful. That is, as long as it was applied in accordance with the label and it occurred within the legal time frame.

This is referred to as the channels of trade provision or safe harbor provision.

FEMALE SPEAKER: Is there a document for this or 18 19 not?

1	MR. HOUSENGER: No. This is just an update. In
2	1999 all fruit uses and most vegetable uses of methyl
3	parathion were canceled because of dietary risks of concern
4	that the agency identified in its refined risk assessment
5	that was released as part of reregistration and tolerance
6	reassessment. It is one of the first chemicals pesticides
7	to go through to be subjected to the channels of trade
8	provision. The last date which methyl parathion could be
9	legally used was December 31, 1999.

In June of this year -- June 2nd -- we proposed to revoke the tolerances for the corresponding food uses with methyl parathion that we had canceled. The Agency had delayed issuing the proposed rule in order to coordinate the timing with the release by FDA of its guidance document on how the channels of trade provisions would be implemented.

The proposal to revoke tolerances allowed for a 60 day comment period on the proposed revocation, as well as sought comment on any alternative approaches for avoiding any potential problems to commerce or trade caused by the

1 revocation. We received no comments on the latter issue, and we received nine comments -- or nine commenters commented on 2 3 the first issue, including the Minor Crop Food Alliance, the 4 National Food Processors Association, California Pistachio Commission, El Fadichem (phonetic), Almond Haulers and Processors, the EU and Chemy Nova, a registrant of methyl 7 parathion.

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Many of the commenters raised similar issues. first was whether tolerance revocations for use is voluntarily canceled or subject to the same 180 day time frame as required for risk based cancellations. commenters argued that Congress did not intend for this provision to apply to voluntary cancellations.

A second issue was that not all uses contributed to the dietary risk in the same way and therefore only those that contributed heavily should be included in the revocation. For instance, the dietary risk resulting from some of the vegetable uses of methyl parathion were insignificant compared to the risk by some of the fruit uses,

1	and	cons	equent	ly	those	vegetab	le	tolerances	shouldn'	t	be
2	subj	ject	to the	re	evocati	ion.					

And finally, the European community requested that the timing be postponed -- the timing of the revocation be postponed until the JMPR CODEX review of methyl parathion, which was scheduled for the fall of 2000, in order not to give the appearance of an emergency action.

We're currently working to finalize our document and hope to have it ready for signature in the near future.

I'm going to turn it over to Dr. Terry Troxell of FDA to give an update of where they are in preparing their final guidance on the channels of trade provisions.

DR. TROXELL: Yeah. I'm from the FDA and we're here to help you, of course. Yeah, we have the task of enforcing the tolerances and also refereeing this channels of trade and pipeline issue.

We put out a guidance on June 2nd and had comments by August 1st. You know, the short of it is basically that the proposed guidance that perishable produce should be in

compliance with the revoked tolerances. You know, for example items such as lettuce. All other products, whether they're racks or processed, we would start the compliance by January 1st. It applies to imports and domestic equally.

Basically the problem in this situation is that frozen foods -- the pesticide degradation is kind of frozen in. It doesn't degrade, so you've got a problem there. We expected that generally the racks would be okay by January 1st of 2001.

Okay. Anyway, we got four comments: NFPA, Apple Processors, Nouse (phonetic) Foods and the American Frozen Food Institute. Several lines of comments were processors need more time than January 1st to compile records so they can provide that -- you know, that showing that the product was treated before the deadlines. Concern about the burden of proof of no residue for multi ingredient foods, such as the cranapple juice issue, where cranberries still have a tolerance and apples do not. They suggested the burden should be to establish a likely source of the methyl

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- 1	parathion.
_	paraciiroii.

They requested that FDA should specify the method.

Also a concern about retailers rejecting food residues and accepting the burden of proof. And several other similar types of comments.

We have heard the comments. And while we do not have a document that is in final clearance, since the time is drawing short, we do want to signal our intention to allow six additional months for processed foods only

-- not the racks, but for processed foods -- until July 1st.

We've hit a snag. We will not be publishing -- we do not anticipate publishing concurrent with EPA, because of the paperwork issue. A notice should be going out by OMB -- a second notice. We've already put one notice out, but apparently for some reason we need to do a second notice on collection of information notice. And, again, OMB will publish it. The comments will go to OMB. It's a 30 day comment period, and OMB will make a decision in another 30 days on allowing the paperwork. So that brings us to about

1	mid-December,	and we	e'll tr	ry to	finalize	the	guidance	ASAP
2	before the fi	rst of	the ye	ear.				

3 So basically that's where we're at.

4 MR. EHRMANN: Comments? Dan?

MR. BOTTS: As the signatory for the Minor Crop

Farmer Alliance comments on the methyl parathion tolerance
revocation issue, Terry, I thought we had submitted comments
as well to the FDA guidance document. I know they were
drafted. I signed them and they were submitted. I don't
know where they fell out in your process.

But you have heard our comments over and over and over again relative to the potential downside of having the type of tolerance revocation when uses have been out there where residues may pertain mainly from a burden of proof standpoint on the two prong test for the channels of trade requirement on the other side.

We still stand behind the comments that we've made in the past. I would reiterate, though, that one of our biggest concerns relative to the proposals both by the Agency

and by FDA are the precedents that they would appear to set
for other compounds other than methyl parathion. Not that
we're totally uncomfortable with the process you laid out or
the scheme that you laid out or the concerns that were raised
and how you address those for the specific compound methyl
parathion.

But if this becomes a process that every other compound has to follow in the identical manner as the precedent that has been set out, it's going to create tremendous problems in the use of products that would have been legal or the movement of products through trade channels, not only in this country but internationally.

DR. TROXELL: Well, I think it's pretty clear that

-- I mean, this guidance document is only for methyl
parathion. You know, we thought we might receive comments on
the general application of such a channels of trade. But as
far as my understanding is, it really has not addressed that,
and I don't believe we have a formula to deal with that in
general.

1	The food system obviously, as you know, is
2	extremely complex, and to try to march one's way through that
3	complexity in the channels of trade is extremely difficult.
4	And it's not going to be an easy situation if we get into a
5	situation where we need to basically say you've got to show
6	us. And that's basically what the law says. At some point
7	producers need to processors need to show us that the
8	pesticide was used in accordance with the registration before
9	the revocation.

So we're in a very difficult position of trying to do this. And it takes a lot of resources, I know, on the processors' and producers' side, but also consider that it takes tremendous resources on EPA's part to try to deal with this. And we haven't received additional resources to do pesticide work for years. And our staff continues to dwindle because of that.

So we really -- we're really hard pressed to deal with this kind of complicated channels of trade issue. So the next one that comes through, we'll try to deal with it as

1	best	we	can	and	see	if	we	can	find	some	general	workable
2	theme	e as	s we	go	down	the	ro	oad.				

MS. MULKEY: Dan, it might be helpful to note that this is not the first one, that we actually did this with propargite. We, you know, proposed a revocation. It was within the 180 days. We had worked with FDA. They articulated -- I can't remember exactly how. But they articulated the approach that they were going to take in terms of time lines.

Similar to methyl parathion, but it was particularized to the situation with propargite. We gave them information about what we thought was its shelf life. We worked with the registrant. So whatever worry you have about precedent, this is not the first one.

MR. BOTTS: I appreciate your comment, Marcia. But I also would say that in that case we weren't provided the notice that that had taken place or the conversation. And unless we participated on a conference call, I would assume on propargite where these things would have come up would

1 have been discussed and detail	1	have	been	discussed	and	detaile
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We did get a federal notice on methyl parathion and
had an opportunity to comment. And our comments went beyond
just methyl parathion. I think it still applies in
propargite, because you've got the same issues on
establishing that a product was used legally in a time frame
that was proposed by your -- by the rule.

And there's a two prong test that is almost impossible at the grower level to meet. And just for the regulatory agencies to ship that over and say well, the processors have to prove it to us, that doesn't make it any easier for us to deal with. And you're taking value out of a product that was legally used in a crop that was legally grown. Because what's going to happen is that product is not going to be able to be sold unless you have that proof.

MR. EHRMANN: Steve?

STEVE: Well, again, back to the general comments.

I reviewed both the Minor Crop Farmer Alliance and MFPA

comments, and they were intended to be general, precedent

1	setting	type	comments	not	specific	to	methyl	parathion.

But more importantly, I would like to know has FDA

changed its opinion on the cranberry/cranapple concept where

cranberry would still allow methyl parathion residues. Do

you still have to go back and try to prove that?

DR. TROXELL: No, we're making adjustments on that.

We'll also be specifying them at the -- okay. So we're

making adjustments.

9 STEVE: Okay, great.

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10 MR. EHRMANN: Wally, Erik and then we'll take our 11 break. Wally?

DR. EWART: One of the areas that I think is very important is the fact that we talked about different forms of a commodity as they are processed, having different retention times and half lives for the pesticides. And so both the crop and the pesticide have their particular residue profiles or curves of decay, and therefore it makes it very difficult when you -- you know, when there is generalization to actually have these things fit.

1	I mean the points Dan has raised, I agree with
2	completely, that the burden of proof is very difficult. But
3	then you get beyond that and it turns out that the burden of
4	proof is probably going to rest on a very few commodities and
5	the process by which you do that is difficult. Like the data
6	isn't there for every commodity, except that if you look in
7	PDP, for instance, and compared different commodities, you're
8	going to find the treated commodities, that might have had
9	the same treatment levels or even have the same tolerance,
10	have different residue levels after treatment.
11	And unfortunately, you know, that data isn't always
12	generated with a decay curve by the registrant, and the
13	commodities can't afford to go forth. And all the registered
14	materials we have are going to go through this process.
15	So I think it is really important that this
16	flexibility between products is looked at.

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Terry. At least as I understand what the law says, six

MR. OLSON: I guess I had a follow up question to

MR. EHRMANN: Okay. Erik?

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2	revocation has to be put into effect. Am I right about that
3	DR. TROXELL: Right.
4	MR. OLSON: And then after that, according to the
5	channels of trade provision, it must be shown to the
6	Secretary that to the Secretary's satisfaction that the
7	residue was present as a result of a lawful application and
8	so on.

months after the agency cancels a chemical, the tolerance

And what I hear you saying -- am I correct to hear you say that you're now saying that a year and a half after the cancellation you will still be just assuming up front that it was a lawful application for processed foods if you find parathion in it?

DR. TROXELL: Yes, for processed foods.

MR. OLSON: And that is without any individual showing? It would simply be assumed by FDA without any specific showing?

DR. TROXELL: If it was packed prior to July 1, we're basically saying for a matter of practicality, we are

expecting that -- we're assuming that it was in compliance
with the requirements. There is no way for us to
realistically referee this complex system of commerce.

You just think about the problem you have. You have thousands of foods at different stages of the system. And while industry has a lot of paper and is moving to electronic methods to keep track of what came from where and possibly could determine when the pesticide was applied, the fact is the foods get commingled in production and there isn't any realistic way to crisply separate these out.

So we're trying to make a practical cut. Processed foods will be -- frozen foods, to my understanding, will be in commerce four or more years after the last use of the pesticide under the legitimate registration. We're basically taking care of the overwhelming usage that would show up in the raw agricultural commodities within the first year within perhaps two months of the cancellation of the tolerance.

Now we're allowing a little additional time for the little remaining that might occur. Basically your cooked

1	foods are not going to have anything in them. And it's your
2	frozen foods that will trap the residues and that's where
3	it's possible that there could be some difference between
4	you know, you could have something from this summer's crop
5	showing up next spring.

But that's the situation. There's no way for us -if we're going to utilize our resources, there's no way for
us to practically deal with this unfortunate problem.

MR. OLSON: So it's sort of a default assumption that it was applied legally. There's no -- I guess I wonder whether that is really consistent with what the statute envisions, which is a showing to the Secretary's satisfaction, but perhaps we can debate that at a later point. I don't want to stand between us and lunch.

MR. EHRMANN: Okay. Let me just summarize in terms of our time frame. Let's take an hour for lunch. We'll come back, pick up the science policy update and then move to the transition presentations and discussion, or if there are any other overall just comments on this morning's discussion.

1	There is a list of local restaurants out on the
2	table if you want to pick one up. You can also consult with
3	folks downstairs. There is a restaurant here in the hotel.
4	Thank you.
5	(Whereupon, a lunch recess was
6	taken.)
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6 AFTERNOON SESSION

MR. EHRMANN: Okay, let's get started, please. We
have one item that we did not get to from this morning's
agenda that I would like to start with. And that's the
update on the -- we had the update on the cumulative policy,
but there are other science policies working their way
through the system that Bill Jordan will provide us an update
with.

We'll take any questions and comments on that, and then I will introduce to you the way we want to structure the afternoon agenda and introduce the various presenters who have been kind enough to join us for this afternoon.

But first, Bill, science policies.

19 MR. JORDAN: Thank you. I'll be talking from a

1	document	that	was	mailed	out	to	folks.	It's	labelled	CARAT
	ac camer	0110.0	*** 0. 0		~~~	\sim	T O T 1 T D .	- C	- 42 C C 4	O 1 1 1 1 1 1

- 2 2-4 and it looks like this as you flip through your paper.
- While you're looking for it, I'll tell you that
- 4 some of us were puzzling over another policy question. And
- 5 that is, whether Robin Spitko's daughter would be celebrating
- 6 her birthday with a carrot cake.
- 7 (Laughter.)
- 8 MS. SPITKO: Can I say that five minutes in here
- 9 was enough for her.
- 10 (Laughter.)
- MR. EHRMANN: Notice she's not here any more.
- MS. BAKER: Could you hold up again what 2-4 looks
- 13 like? Okay, thank you. I think we're missing the first
- page.
- 15 MR. JORDAN: You may be missing the first page. I
- 16 think there are extra copies around out on the table.
- MS. BAKER: I think only that one page.
- MR. JORDAN: Okay. It's two pages and, Cindy,
- we'll get an extra one for you.

1	We've already heard about some of the reasons why
2	today is special. I want to offer another reason. About two
3	years ago when TRAC gave a recommendation for EPA to become
4	more transparent about its science policies, the TRAC
5	identified a number of different topics on which we should
6	issue papers, take public comment and then revise our
7	policies in light of the comment.

And today -- there were 19 of those papers. And today the last two of those 19 were issued for public comment. So the document that you have taken out indicates papers number 18 and 19 are expected in mid-October, and you can now change that to issued on October 11th.

So that completes the original 19 papers, issuing them for comment. And like the rest of the papers, these will be open for public comment for 60 days. And at the end of that time period, we will be working to review the comments and issue the papers in revised form for your edification

We've done a lot more, though, than just issue 19

1	papers and get comments on them. We have actually, I think,
2	for ourselves here at EPA, found it a very, very useful
3	process. In the course of reviewing comments, we have gotten
4	a lot of helpful input from the broad range of stakeholders
5	who have taken time to comment on this.

And we have finalized eight of the 19 papers, including some fairly difficult complex science issues, including the policy for nondetects. How we'll handle those data points. Threshold of regulation. How we'll deal with data relating to cholinesterase inhibition by organophosphates and carbamate pesticides, our 99.9 policy.

All of these things are things that I think the science policy documents that have come out are much better for having gone through the public comment process. And at least the sense I get, is that while everybody may not exactly agree with where EPA has come out, they think that EPA's policy positions are clearly articulated. They're rationale. They're defensible. They're grounded in sound science.

And when we've had to deal with issues that are
beyond the ability of science to answer the questions
definitively, we've been clear about why we've done what
we've done. And I think that's credit to the many topnotch
scientists in EPA who have been working on these things, and
also a credit to the value of the public comment process.

The document that you have in front of you lists the expected dates for the rest of the papers. And the rest of this year is going to be a busy one. There are eight more papers that are scheduled to be out. Two in October dealing with what we call de-compositing or pesticide data plan,

Monte Carlo. In November we'll have, we hope, four more papers, two of which will deal with our application of the FQPA safety factor or 10X as it is sometimes called, and two papers dealing with aggregate. And then in December to close out the year, we've got underway a lot of work on the residential papers, two of them, again, and we hope to have those out in December.

With those eight papers issued, we will have done

substantially all of the science policy documents in just

about two and a quarter years. It will leave the two that

are being announced today, which deal with drinking water

issues -- and I don't want to say they're unimportant, but

they are less important than what we have dealt with in the

other papers -- and the cumulative.

So by the time that we get around to revising the cumulative risk assessment guidance, we will have in place, we hope and expect, the full range of the science policy papers that the cumulative paper builds on.

In addition to that we have, as I've said before, found the process so valuable that we've chosen to put additional papers through the science policy process. And on the second page, you'll notice that there is paper number 22 relating to how EPA uses use related data in its risk assessment and risk management decisions. That paper, too, is being issued today in its revised form, and the announcement appears in the Federal Register. It will be up on the web site either already or very shortly.

1	We're working also the remainder of this year to
2	issue the last two papers listed there, number 25 and number
3	26, relating to drinking water. These are very significant
4	papers, I think, in that they are going to represent the next
5	step forward in how our risk assessments will deal with
6	estimating residue concentrations in people's drinking water.
7	And you'll hear some about that tomorrow when Denise Keehner
8	and folks from the U.S. Geological Survey, USDA and the
9	Environmental Affects Divisions make presentations about our
10	drinking water.

And having read drafts of those papers, I can tell you that it represents some really significant and important scientific advances and will, I think, bring a new level of refinement and understanding to our ability to estimate both aggregate and cumulative exposure, and therefore the risk assessments.

I need to say one more word about paper number 21.

It is listed there. This is the early assessment policy for organophosphate pesticides to be determined. As we've

struggled with trying to figure out what our policy is here,

it's proven to be a challenge. And we've tried various ways

of sorting things out.

And my hunch is that this one is going to get rolled into and thought about as we look at the public comments on the cumulative risk assessment guidance, since in effect what this is doing is trying to figure out a way to sort out those uses which are relatively speaking less significant contributors to the overall risk assessment. And therefore we can fairly, easily and quickly -- well, it won't be easy. But it will fairly straightforwardly identify which ones we can say are not going to be a significant influence on the size of the overall risk, and therefore we can treat probably and approach differently from a risk management point of view.

So look for the cumulative risk assessment guidance, as Beth Doyle indicated, sometime early next year. We got, as she said, about ten sets of comments. We've already started to analyze those. We have a finite amount of

resources to deal with, both review of public comments and to do the preparation and work for the Scientific Advisory Panel meeting in December. But to the extent that we can continue to make progress on that, I think we will be in good shape to have something the early part of next year in the form of revised risk assessment guidance.

(END OF TAPE THREE, SIDE A)

MALE SPEAKER: Bill, are any of the other science policy papers expected to go back to the SAP for review? I believe it's being planned that the residential SOPs were supposed to go back in December. I wanted to know if that was going to happen or if that's going to be maybe early next year.

MR. JORDAN: We've continued to take pieces of our work to the Scientific Advisory Panel. For example, last month we took to them the technical part of the drinking water treatment paper, and we'll be talking to the SAP in December about the cumulative risk assessment and particularly the exposure piece. The feedback that we get

from the SAP there will certainly influence how we write the cumulative risk assessment.

As part of that, we're going to be talking about the residential use of pesticides and the contribution that that use makes to the overall cumulative exposure. So I fully expect that the Panel will have comments on a residential assessment that is likely to influence both cumulative risk assessment guidance and it may also affect the residential risk assessment standard operating procedures, although I'm hoping that we'll be well along the road to having wrapped up that in light of the public comments and it will really be more focussed for the cumulative.

I don't know of any other plans at this point for taking materials to the SAP, but I'm sure that this list of issues is so broad that some of these things will come before the SAP again.

18 MR. EHRMANN: Steve:

19 STEVE: Bill, is anything else anticipated from a

1	science	paper	perspective	in	the	occupational	area	dealing
2	with exp	posure	assessment?					

MR. JORDAN: So far I have not heard that we made a commitment to do that. And I've heard people ask for us to do that, but I don't think that we made such a choice yet.

MR. EHRMANN: Okay. Yeah, Marcia?

MS. MULKEY: You heard Margaret mention briefly when she answered a question this morning that this is an area where we're doing a considerable amount of work on refinement. We're looking into what kind of public process we need to engage, whether some kind of workshop or whether some kind of dialogue with relevant stakeholders.

And obviously a science policy paper is a possibility. So when Bill said we didn't have one planned, it's true. We don't have a science policy paper planned. But we do have significant work in this area and process in mind.

MR. EHRMANN: Okay. Any other comments about science policy paper status or content?

1	Okay. Any other comments reflecting on anything
2	from this morning's updates that you didn't get a chance to
3	ask because we were kind of moving up against lunch there?
4	Okay. And as always, if issues we always try to
5	reserve some time near the end of the overall agenda if other
6	questions come up. So if you have other thoughts overnight
7	about any of the issues related to the updates that you've
8	heard up to this point, you know, we'll provide an
9	opportunity to table those tomorrow if there are any.
10	Yeah?
11	MR. MILLER: Mark Miller from American Academy of
12	Pediatrics.
13	MR. EHRMANN: Yes.
14	MR. MILLER: I know when I go back to my
15	environmental health committee this weekend and report on
16	what's going on here that the question will come up, well,
17	how is this all being implemented for protection of children.

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And I would like to have an update of the status of how often

an FQPA factor is being actually implemented and what is the

1	status	of	developmental	neurotoxicity	testing	to	date.
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I recently saw a presentation that Sue Makris (phonetic) gave and looked at the first ten chemicals that had the full developmental neurotoxicity testing done, of which six or 60 percent found new most sensitive endpoints which were essentially qualitatively different than would have been predicted by testing on adult animals.

And with such a small number of compounds tested, to have 60 percent of them, you know, change the picture entirely, it doesn't leave me with a great deal of -- it leaves me with some concern.

So what is happening with developmental neurotoxicity testing at this point?

MS. MULKEY: I think in order to provide the kind of updates that you've been receiving on these other topics, we would need some lead time to plan for that and that might be a good suggestion for an agenda item for the next meeting.

What we can do is look to see whether we have some

- 1 useful accessible written materials already in hand that we
- 2 could share. We might even be able to do that overnight. If
- 3 not, we might could do a mailing on that.
- 4 MR. MILLER: Yeah. It might be interesting to have
- 5 Sue's presentation available.
- 6 MS. MULKEY: Well, I'll look into what the sort of
- form is. We have done a number of reports about the safety
- 8 factor, about the developmental neurotoxicity data call in
- 9 and other things. So we'll see if we can provide something
- that is of any use to you overnight. But if not, I recommend
- 11 we take this as input on agenda planning.
- MR. EHRMANN: Okay. Oh, yeah, Bob?
- 13 BOB: Is this the part of the agenda called CARAT
- 14 feedback and discussion?
- 15 MR. EHRMANN: Yes. That's what I said. Anybody
- 16 else who has any comments about this morning.
- BOB: Got you. Well, I'm going to regret saying
- this, and this probably isn't the right time.
- 19 MR. EHRMANN: It's a good time, Bob.

1	BOB: Let me just start out by saying let me
2	start out by saying that this morning and I mean this as
3	sincerely as I know to say it everything I heard was
4	useful and informative. Much of it was challenging. Much of
5	it was provocative. And almost none of it is why I agreed to
6	serve on this panel.

And I had understood this process to be one of stakeholders coming together and advising the agencies on the things that we think are problematic for us. There are a couple of issues which are extremely problematic for the folks that I represent, and I'm sure there are others at the table who would feel the same way. I know that this morning Wally had mentioned workgroups, and maybe we'll have a discussion of workgroups.

We had a discussion of workgroups at the tail end of the last meeting. And I had sort of understood that between that meeting and this meeting, we would actually -- perhaps that would evolve into some kind of a plan.

I have the sense that we're getting another update

1	and not really interacting, and I guess I'm bothered by that.
2	And I think that for me, at least, it would be very useful to
3	somewhere, whether it's now, later today or tomorrow, to have
4	a discussion about this process and how this process ought to
5	best work to address the concerns and needs of the
6	stakeholders and the agencies. And I don't feel that that's
7	happening.

MR. EHRMANN: In terms of how the agenda is laid out, that item is at 11:45 tomorrow morning. But as Wally has already, I think, appropriately noted, there has been an ongoing interest in determining whether issues would be best and most appropriately dealt with by workgroups.

And when we had our briefing this morning before we sat down here with the co-chairs, they assured me they're going to be listening carefully for those issues and want to bring that discussion to bear tomorrow in that time frame specifically about which topics and how that process should proceed.

So that's what I'm understanding from the

1	co-chai	irs at	this	poin	t.	At	least	maybe	e th	hat	goes	in	part	to
2	answer	your	questi	on,	but	let	ask	them t	.0 0	comm	nent.			

3 Mike?

MR. MCCABE: Yeah. I think, too -- I mean the agenda has been developed in a way so that we are going to have, and we have had, some discussion and updates on some topics that we found people constantly come back to us on. You know, the cumulative risk, channels of trade and the registration or organophosphates schedule. I mean, these were all things that people said that they wanted to hear about and talk about. And I think that we have had some discussion.

That doesn't mean that we've touched on everything that people wanted to bring up and that we can't do that certainly in the segments of the agenda either later today or tomorrow when we have time for that or, you know, in side bar conversations, too.

BOB: Well, my only response to that would be this.

And I won't even mention the word residential exposure.

1 (Laughter.)

BOB: Unless you're from New York and you run your words on like I do. Something like cumulative exposure, I really got to believe it warrants more than a 15 minute discussion. You know, my personal experience is this. I've sat through a lot of TRAC meetings, PPDC meetings and now two CARAT meetings. They've been useful. I think they have accomplished a lot. I think the Agency has accomplished a lot. No question about it.

I think the hallmark of what the Agency accomplished in the TRAC process was (a) the development of a process and (b) the development of science policies, both of which, I think, advanced the implementation of FQPA immensely. Both of those were the byproduct of workgroups and not just open discussion amongst an awful lot of people without adequate time to really get into the topic.

And, again, I appreciate the opportunity to be a part of it. I appreciate the discussion that has taken place. I just doubt that 15 minutes on, you know, cumulative

1	risk	assessment	is	an	adequate	forum	for	that	topic

MR. MCCABE: I would agree. And, you know, we have other mechanisms in place, whether we need something else, or whether we need something that is a workgroup or looks like a workgroup, or whether we need, you know, additional CARAT meetings structured in some different way. I mean, that's open and we can certainly talk about that.

BOB: I appreciate that.

MR. MCCABE: And I think that part of the advantage of holding it off until a little bit later in the processes - - I mean, I've already written notes down on what I've heard people say as things that they want identified in workgroups. And I've got five things right now that people said, and I'm not sure that we need five workgroups. But let's see what else comes up over the course of the discussions that we're having.

MR. EHRMANN: Dan?

MR. BOTTS: Yeah. This goes back to a couple of items that were discussed earlier this morning, and I belayed

in raising my card late enough this morning not to fit into
the break. And one of the questions is relative to the

public process that was discussed at length relative to the
reregistration process and some other things.

Recognizing the conference calls and those activities have represented a significant resource drain. Not necessarily resource drain, but resource allocation from the people in the Agency. I would like to say we really appreciate the effort and where that has taken us. Those were developed almost as an interim process as we went through.

Has there been any thought to stepping back and looking at the type of input those conference calls have generated? Is there a better way than having the process be almost an ad hoc, even though it's a more formal ad hoc than it was when it first started, so that we don't get surprised or get calls the day before a conference call or a closure conference call is scheduled to try to arrange?

I think the mere comment that we got 30 telephone

1	lines coming in, I would argue that on a lot of these calls,
2	if everybody knew that the call was taking place, you would
3	need a lot more than 30 calls or lines that come in. I
4	think that's an indication that there is a real desire to be
5	involved. A real desire to formalize a process in a little
5	more detail.

There was a notice of rule making or proposed rule making on the public comment participation process. I might have missed something, but has that -- have the responses or the comments been collected on that and compiled, and is there a projection for when that particular notice is going to be responded to formally by the Agency for us to look at?

That's the first question. I don't know who needs to answer that.

MS. MULKEY: Well, I'll take a crack at it in Lois' absence. She could have handled it. And she can supplement it.

Basically one of the lessons we learned from the OPP process is that people were generally not taking much

1	advantage of the public comment, the Phase 3 and the Phase 5
2	With 60 days, people were not engaging, and they were really
3	waiting until these conference calls that we were conducting
4	which was late in the process. So one of the lessons we
5	learned is we needed to do these conference calls earlier in

the process.

So the proposal that you're discussing on public process that we put out did contemplate more discussion of that type earlier in the process during Phase 5 -- at the beginning of Phase 5 -- and those kind of things.

So, yes, we are learning lessons from them and trying to work into an earlier, more useful engagement. And that was in the proposal. Lois said it. You may just not have heard it. We have received all the comments on that process. We have addressed them and we're very close to being ready to formalize that process.

MR. BOTTS: But it will be formalized and published in the Federal Register?

MS. MULKEY: That's the process. That's correct.

1	MR.	BOTTS:	Okay.
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- MS. MULKEY: It's not a rule, but, yes.
- MR. BOTTS: As a process. That's the part I missed
- 4 this morning.

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- 5 MS. MULKEY: Right.
- 6 MR. BOTTS: And I apologize. The other issue goes
 7 to the occupational issue. I appreciate you all are working
 8 internally on the process and the procedures and some other
 9 recommendations relative to how to do the risk -- the
 10 occupational risk assessment.

Having been on the receiving end of what we loosely termed black box science to get to the numbers that were showing up in some of the technical briefings relative to MOEs even with protective clothing and other engineering control equipment, we requested the ability to come in to the Agency, and for one particular compound walk through the decision process of how the numbers were actually started from ground zero through to the end of the process.

19 Unfortunately I had to leave in the middle of the

1	presentation. It went on for a little more than the two
2	hours we had scheduled. That would be that type of
3	presentation would be of tremendous benefit to a workgroup
4	that is looking at addressing how this risk assessment takes
5	place and how this process could be better refined to really
6	get to the level of a probablistic risk exposure, rather than
7	being a tiered analysis which is currently on the table.

And I would suggest that if we do go to a workgroup format, that would be a very good starting point to take one of the products that has already been through the technical review and walk through that process where everybody sees how the decisions have been made.

MR. EHRMANN: Okay. Bill?

MR. LOVELADY: Yes. So just -- I agree with some of the things that Bob said, that there has been some very good information imparted this morning. And we certainly appreciate it.

But I think that -- I think we would be remiss in not saying that there are a number of us who felt like when

1	we saw the agenda that it was more of an update type of
2	agenda. And we feel like that if we do get to the it's
3	going to take some workgroup participation to get to the real
4	nuts and bolts of some of these issues.

So I think Bob is absolutely right. We have good - good update information is being given to us. But we're
somewhat missing what we all felt like that we were supposed
to be doing, which was advising the Agency and the
Department.

MR. EHRMANN: Jay?

MR. VROOM: Yeah. I would like to agree with what Bob said, and the way he said it I thought was very clear. And as I went back and looked at the ten pages of single spaced notes and summary from our June 22 and 23 meeting, it really jumped out at me, because there is only one place that I could find in those ten pages of even a passing kind of obtuse reference to the fact that CARAT members were in the room.

Which, again, is not to say that the information

that was provided was bad. But we just didn't have the kind of interaction that I believe, as Bob referenced, going back in time that we experienced over two or three TRAC meetings. And that had to do with when the Agency and the Department were, you know, bold enough to say, you know, that TRAC members needed to step up and take some responsibility of doing some homework in advance.

And we did. And it wasn't just, you know, a single member of TRAC taking an assignment. But, you know, we volunteered and we had a small group that took on sometimes an overnight assignment, you know, that we would come back and try to bring two different points of view forward and have some contrast. And that helped the debate.

So I don't think this is a message -- and, Bob, I don't intend to speak for you or further interpret your comments. But I don't think this is a -- you know, you're doing the job the wrong way. It's just you've got to share the burden with us, and I think that makes for a richer kind of process that, you know, ultimately the Agency and the

1	Department may choose to accept or accept partly or totally
2	ignore. Fine. But that part of the process, I think as we
3	have moved forward in the last few months, has been lost.

One question I wanted to ask specifically back to Mike's opening remarks. You referred to the CSFII as an example of the success. And we agree. That's the food consumption study. But I believe that has been de-funded or eliminated at USDA and you're looking to transition that or merge it into the N-Haines process.

So I wondered if at some point we could come back to that.

MR. MCCABE: Yeah, we can come back to that. It is not being dismantled. We are joining forces with N-Haines as a cost saving, because we did not get funding for a stand alone survey.

MR. VROOM: Yeah. Is there anything we could do to fix that at this point in terms of those of us who are outside of government and can legally lobby the Congress before the appropriations process is finished?

1	MR. MCCABE: Well, I think the commitment is there
2	to join forces with N-Haines, simply because it makes more
3	sense to consolidate federal efforts. And it will provide
4	more information in terms of the relationship of diet and
5	health. I guess the question is getting enough money into
6	the consumption part of that

- 7 N-Haines survey now to get the information we need.
- 8 MR. VROOM: Okay.

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- 9 MR. MCCABE: So any amount helps.
- MR. VROOM: Right. Back to the first point. As an example, as I understand the next presentations are going to be on some transition examples of crop specific perspectives and experiences. And I think that's a good example of the way to handle this, and I look forward to those presentations.

But from the agenda and the advance materials I assumed that the government -- you know, either EPA or USDA -- were making those presentations. And so my expectation -- and I may be wrong -- is that these presentations will be

1	more one dimensional than if you had reached out and tapped
2	maybe a cross section of folks on the CARAT to at least feed
3	into what the presentation will be or give a different view
4	or whatever.

So just a different way of adding a little more texture to those approaches for advance participation and put the burden on us. That's all.

MR. EHRMANN: And let me just note that we do have time on the agenda tomorrow to continue this discussion about the process. And actually we do have some folks who have come for that presentation you just referred to, Jay.

So I want to take the cards that are up, but try to summarize this and then get to that part. And then, again, we'll come back to these issues about moving forward in the kind of ways that have been suggested.

Bob and Cindy?

BOB: Okay, thanks. I, too, had jotted down some comments from the presentations this morning that I wanted to follow up with.

1	During Beth's presentation there was, I guess, some
2	comments on the cumulative. There was some concern raised
3	about mixing highly refined data with screening level data.
4	And this does get to that residential exposure issue.

One of the questions I have as we've gone through the aggregate so far, is how are the residential portions of the aggregate exposure assessment currently being handled in the absence of chemical specific data. My concern here is that the Agency has been using the default assumptions found in the residential SOPs instead of actual data that is basically intended for screening level assessments, but they're being used in some of these risk mitigation decisions.

I thought the intent of the SOPs was to use them as screening level and then to determine whether more data or higher tier exposure assessments are needed. But it seems to be that they are actually being used in some of the decision making.

I noted in the chlorpyrifos technical briefing that

1	the residential SOPs were used to assess seven of the nine
2	homeowner handler scenarios and used to assess five of the
3	nine post-application scenarios. There were some studies
4	nine chemical specific exposure studies submitted from the
5	registrant, but they were used to assess one out of the nine
6	homeowner scenarios and four out of the nine post-application
7	scenarios.

So the question is, many of these scenarios resulted in margins of exposure that were unacceptable. And I'm going, unacceptable based on what, actual data or conservative assumptions? And, you know, where is there opportunity to provide this missing data, so that we can have a more refined risk assessment in this process?

MR. EHRMANN: Marcia?

MS. MULKEY: Well, the residential exposure analysis for chlorpyrifos was highly refined. And while there was use of the SOPs, there was a lot of refinement within that analysis. And frankly, there are a lot of places where we moved from an earlier more conservative approach to

one that's -- I think you could debate about whether it was sufficiently conservative in a lot of instances.

So I think if we drill down into the details of that analysis, you will not see a highly conservative analysis that was relied on for that. And in fact, there was a great deal of engagement with the registrant and others.

And that is the only situation to date where we've relied on an analysis for a final regulatory decision. So I think our expectation is that when we are dealing with risks of concern for residential exposure, we will refine to the maximum extent practicable.

The registrant for that compound had apparently believed for a long time that it was appropriate and necessary to generate a lot of data about the residential exposure, and indeed did do so. And that option, of course, is available to any and all registrants with residential compounds. And that registrant clearly made a choice to generate a great deal of data, and they made choices, I guess, about places not to do so.

1	I will tell you that the chemical specific data
2	they generated did not in every instance reveal significantly
3	lower exposures than other methods of analyzing the exposure.
4	And in fact, in some cases I think it went the other
5	direction, that it turned out to be higher exposures than our
6	process would have estimated.
7	So I just don't think that serves as an example of
8	a crude, over conservative residential risk assessment.
9	We're all concerned about what we do if we
10	you know, the weaker our data are and we appear to have a
11	problem. But I just don't think we have any experience to
12	date that is evidence of, you know, reliance on overly
13	conservative assumptions in making regulatory decisions.
14	BOB: A related question. We've had the emphasis

still a missing piece.

I had brought this up during the TRAC meeting about

on the conservative -- or not conservative. On the default

assumptions. Yet providing registrants with validated test

methods and guidance to develop some of this data, that's

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1	the Series 875 Group B post-application exposure monitoring
2	test guidelines. That's still a draft guideline, and that's
3	what the registrants are supposed to be using to help
4	generate some of this necessary data.

Is there any indication when this may become finalized and publicly released?

MR. JORDAN: I have some information that you asked about on the break and I was able to talk with folks in the Health Effects Division to get some further insight and where things stand.

For the last year or two our resources in the area of residential risk assessment have been focussed on the residential standard operating procedures and dealing with those -- as you know, we've been to the SAP several times on that subject -- and working through the large amount of information that we've been getting on individual chemicals, as well as working with task forces that have been generating data such as the Indoor Residential Joint Venture, the Agricultural Reentry Task Force, which also has some data

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2 So we haven't worked on those guidelines, as you 3 But this year's work plan for the Health Effects 4 Division does include that as one of the priority work 5 projects. They are meeting to see how information from the resources going on by our Office of Research and Development 6 7 on exposure methodology could be used in improving that. 8 We're also planning to get together with experts in trade 9 associations who are familiar with it to see how that can 10 play out.

And when those meetings are complete, we'll have a better sense of what kind of schedule is realistic for getting the guidelines developed. But it's definitely an important priority for this year and we'll move ahead.

MR. EHRMANN: Thank you. Cindy?

MS. BAKER: I'll try to make mine quick, since you reminded us that we have this on the agenda tomorrow. But I didn't want to lose the thought that I think that Bob raised.

The difference for me in the way that the

workgroups worked during the TRAC process versus what we're doing now in the CARAT process, is we were actually able to dialogue with one another, rather than just getting, you know, an update from you and responding to that update, unusually in a small amount of time. You know, we got the information a couple days before the meeting. We looked at it. We listened to the update. We tried to respond.

But in the workgroups, I think we actually reached consensus on some ideas that I wasn't sure it was possible that we could reach consensus on. And I think that dynamic may play out in a group like this. At least there was benefit from all of us hearing our different perspectives and discussions about where those issues are.

I think it would be -- it would reduce the workload on both USDA and EPA to have those workgroups go forward, because rather than you guys -- I know there is a tremendous amount of resources that you guys expend putting together all this information for us and presenting it, and other stuff isn't getting done while you do this, which is not in any of

our interest in that respect.

essentially report out to the full committee, similar to the way that we did in CARAT, I think it's a more efficient use of our knowledge base. I mean, all of us have different experiences through FQPA implementation that I think are valuable to share amongst each other as well as with you guys. So I think there are benefits that way.

And my last comment just is to this public process question that Dan raised and, Marcia, that you responded to. I think that a lot of the reasons that people didn't participate in Phase 3 and probably still don't is that the risk assessments have changed dramatically from when that process was started. Early on they were very much preliminary risk assessments. There wasn't a clear opportunity for people to comment and a specific opportunity to comment.

And I think now the things that are coming out are much more refined when they come out, and it's clearer what

kinds of comments that you need and in what areas. I mean, I think we've all learned through that process.

And so I think the desire has probably increased on the part of stakeholders in participating in that process now that they have a better understanding of how they participate and in what areas they can actually contribute information that does make a difference in how the risk assessment goes forward.

MR. EHRMANN: Okay. And again, we will pick up on these issues specifically about the process of the CARAT's workings tomorrow when we come to that item on the agenda. If you have other thoughts overnight, obviously you'll have a chance to share those in the morning as well.

Let me turn to the afternoon agenda item, which is kind of divided into several pieces, and introduce to you how this is going to run. The Department and the Agency have spent a lot of time leading up to this meeting talking to some of the CARAT participants, as well as outside folks that they interact with around these transition issues, and have

asked some folks to come in and make some presentations about
the current experiences as it relates to transition issues to
try to put some case example reality to this discussion.

And I'll introduce those folks in a second who are going to do that. What we're going to do is have two kind of types of discussions. The first is going to deal with wine grapes. The second with peaches. We have a variety of presenters who are going to talk about a range of experiences with peaches.

Then following those two sets of presentations, I'm going to ask a couple of the CARAT members, Sarah and Steve Balling, to say a few words from their perspective about kind of how they see this and try to help tee up a discussion for the full CARAT relative to what are really the cross cutting kinds of policy issues and management issues that the Agency and the Department could use guidance on and some fresh creative thinking about how to address.

So the idea here is let's hear about some specific examples. As I said this morning, that doesn't mean these

cover the waterfront in terms of everyone's experience. They
were picked by talking to a lot of folks who have been
working on these issues. Listen carefully to the kinds of
issues that you hear raised in these presentations that might
be generalized to other scenarios.

Then we'll have a more general discussion about what some of those themes and opportunities are, so hopefully the CARAT as a whole can provide some advice to the Department and the Agency about how to address those issues that may be problematic, or those opportunities that aren't being fully explored that might be based on these experiences.

This discussion will take us through the rest of the afternoon. To the extent we don't get finished with the open discussion part, you'll see we have reserved an hour first thing tomorrow morning to come to these issues. So even though we're running a little behind, I think we'll have time for these presentations, some discussion and then we can have more discussion in the morning, which I would probably

1	anticipate.
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- 2 The first presenter is our new Committee member, 3 Cliff Ohmart, from Lodi-Woodbridge Winegrapes. Cliff is 4 going to walk through this case study as it relates to 5 Then we'll take some questions of clarification or grapes. comments. Try to reserve your broader based comments until 6 7 we hear all the presentations. But any clarification we'll 8 take, and then we'll move to a series of presenters on 9 peaches, who I'll introduce when we get to that part of the 10 agenda.
- MR. MCCABE: John?
- MR. EHRMANN: Yes, Mike?
- MR. MCCABE: Would you tell the presenter that it's
- customary to provide samples of whatever --
- 15 (Laughter.)
- 16 FEMALE SPEAKER: Yeah, yeah.
- MR. EHRMANN: Pre-processed or post-processed?
- 18 MR. OHMART Sarah can tell you about that.
- MS. LYNCH: Yes, yes.

Now this is a whole other issue, but it's involved with he	w
you ship wine around the country, and there's a lot of wor	îk
4 to be done there, too. So I was not able to bring any	
5 because of the laws and whatever.	
6 (Laughter.)	
7 MALE SPEAKER: I'll talk to our transportation	
8 department about that.	
9 (Laughter.)	
MR. OHMART: Well, we're definitely shifting gear	s
now, especially after listening to the previous discussion	ıs.
So using an automotive metaphor, I will try to use the cl	ıtch

MR. OHMART: At the last meeting I brought samples.

Being new to some of you, I thought I ought to give a little bit of a background of myself, just so that you won't say things like how can he stand up and say things like that.

To start off with, I did my graduate work at

Berkeley and I was fortunate to be trained by some of the

properly so I don't grind too many gears.

people that helped develop the IPM concept, like Messenger
and Huffica (phonetic) and Robert Vaninbosh (phonetic) and

Cal Tech Reony (phonetic). And then I went off and I
actually worked as a research scientist for CSIR in Australia
for about 13 years doing a lot of basic insect and plant
interaction research. So I sort of did the publish and
parish routine.

And then I came back and worked with some colleagues in an IPM company in Chico, California, where we worked developing IPM programs for growers of walnuts, almonds, pistachios, prunes and a little bit of citrus. We worked with some apples in central Washington. The company oversaw about 30,000 acres of orchards.

And going through that was a real eye opener to me, especially knowing somebody like Robert Vaninbosh. If anybody had a chance to cross paths with him, I was pretty amazed at what I saw when I actually started working with growers. And so that's one of the things that has really made a big impression on me.

1	And so I want to start with just a couple of
2	thoughts. Now this is not meant to be provocative. It's
3	more I don't know how many of you that are interested in
4	IPM implementation, but an article was written recently by
5	Les Ale and Dale Batrell (phonetic) called the Illusion of
6	Integrated Pest Management. And basically and it was in
7	an on-line journal, Issues in Science and Technology.

And I've been waiting for someone to actually come up with something that I felt for a long time. And that is the level of IPM implementation as envisioned by the original proponents is not practiced very widely. And all I'm saying that for is that these are the things that I think about all the time. Why aren't we seeing more of what maybe should be happening out in the field.

And that's really at issue in terms of our program at Lodi. Because I think some of the reasons that I've seen is, for one thing, I don't we necessarily need a better mousetrap for everything. What I see us doing, at least -- and this is strictly at the growers I work with. But what I

1	see out there is we're still playing catch up. We're trying
2	to get growers to try things that we've known about for 20
3	years. And so we don't necessarily need new things in every
4	system.

The other thing is I think one of the keys. And I use the word implementation. We don't use the word transition at Lodi. But I think one of the keys is how we deliver that information to growers and how we interact with growers. And I think we've all done a really poor job of getting that information out to growers for the last 50 years.

And then also I think we need to -- at least I personally feel when I work with growers that unfortunately IPM is not as much related to science and technology as it is to human behavior. I would like to say that IPM is not integrated pest management. It's more like integrated people management.

And so I think to develop more successful programs, we need to keep some of these things in mind. So very

1 quickly I want to run through what we've been doing at Lodi.

2 And Lodi is starting to get quite a reputation for its

3 program, and I don't think it's really related to as much

4 what we're doing as how we're doing it. And so I'm not going

to be talking a lot about what we're doing, but how we're

doing it, and I think you'll see what I mean as I go through

7 this very quickly.

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To do this, I need to tell you, if you're not familiar with the Winegrape Commission, what is it, because it has a lot to do with the success of the program. Well, it's a local marketing order where California is divided up into crush districts to keep track of the grape crop.

And our district is Crush District 11. And back in 1991 the growers got together and said we want to form a local marketing order. And once it was formed, everybody that grows winegrapes in the district has to be a member. So it's democratic to start with, but after that it's autocratic? I don't know. But then every five years, the growers vote to continue.

The funds for the Commission come from assessment of the grape crop, and it's about 80,000 acres of winegrapes. And for those of you that -- you know, everybody hears about Napa and Sonoma, but Lodi is the largest winegrape growing district in North America. We are the leading producers of these varieties that you see here. It's a farm gate value of about 250 million dollars. So there are a lot of grapes there, and I can see why you're wondering why I didn't bring any with me.

(Laughter.)

So what are the primary goals of the Commission?

To me, it's a perfect example of growers saying, you know,

we're going to control our own destiny. We want to drive the

bus. We don't want to be at the back of the bus or actually

waiting on the curb.

And so these growers decided we have to market our grapes. We've got to show people that we're different from Napa and Sonoma. How do we do that? We'll form a Commission. So the prime function of the Commission is

1 promoting the district to winegrape buyers in particular.

But they also felt like some of the research that was being done was not meeting their local needs, so they decided to fund some of their own research. And then lastly, which is what I'm going to talk about, some of the more progressive growers said, you know, we can see these regulations coming down the road. We want to be ahead of the curve rather than behind the curve, so they decided to form the program.

So I like to look at the IPM program as a series of stages, and this is sort of I, personally, what I go through when I think about how to craft what we're doing there. And the first stage is grower outreach, which is primarily education. So in other words, we're trying to get information out to growers.

And then the second stage is what I term field implementation, where we're actually working with individual growers out in the field one on one. I think this is one of the -- I like to say the --

1 (END OF TAPE THREE, SIDE B)

MR. OHMART: -- the average grower to do some of these things to be moving down the road transitioning, if you will. And this is a tremendous challenge. And we've developed a tool that we've just finished working on called the Lodi Winegrowers Workbook, which I'll talk about.

Of course you need to evaluate -- particularly if like us; we've been successful in getting some outside grant money -- how are you doing with your programs. So we do it in various ways. I don't have time to go into it. But we've got detailed analyses of some of the field implementation projects. We've got 60 vineyards we monitor, which I'll mention.

Also, we've done a district wide grower survey in 1998 that was -- it was accurate within plus or minus 5 percent of the whole Commission. So we can actually look at growers' attitudes. And of course there are problems with surveys, but if you don't do it, you'll never know anything. Also, it looks at the practices they're doing out in the

field. And then finally this Lodi winegrowers workbook is actually an evaluation tool in itself.

So the characteristics of the grower outreach program, one of the problems I see with working with growers — a group of growers — is you're working with a whole continuum. And so our outreach program is directed at the entire membership, and it's to try to appeal to everyone, both conventional growers and very progressive growers and everybody in between. And that's a real problem, because it's like developing one thing that everybody is going to like. There is no way you're going to do it, but you've got to think about that.

Also, we emphasis farmer to farmer education. If you ask a grower what is the most important source of information, they're not going to say -- well, our survey anyway said -- other farmers. That's their first important source of information, so we try to take advantage of that as well.

Another one is getting farmers together just to

1	talk and really improve things. So one of the things we do
2	for our grower outreach, we're a pretty elaborate program.
3	We have monthly breakfast meetings, where we have people come
4	and speak about integrated farming topics, and half day
5	research seminars twice a year, where we have about five or

six speakers and then you talk about wine.

One of the things about working with wine is what do you do to get people to come to the seminars? Offer food and wine. And it's great. Two hundred people in a room drinking and eating, it's really fun.

Field days. Growers like to get their hands on things and see things happening. So we have a couple of those a year. We get very good turn outs to these. I think, again, part of it is related to this framework of the Winegrape Commission. We'll get two to 250 people at a field day. Two hundred and fifty growers. Monthly breakfast meetings we'll get 80 to 90 growers.

And then this program which I can't go into, but it was a lot of fun literally going around, getting growers to

- invite their neighbors. Five or six of them that come over.
- We sit down and talk about well, what is this thing called
- 3 IPM, anyway.
- 4 And then we have a newsletter. In the survey, 94
- 5 percent of the growers read the newsletter. And of course
- the newsletter is geared toward integrated farming topics.
- 7 It's a very powerful tool.
- And not to be outdone, we have our own web site.
- 9 We actually post some pest numbers on a weekly basis that
- we've monitored to what is actually happening out in the
- 11 field.
- Okay. So what is the demonstration, the field
- implementation part of it? If you want to know what this
- fellow is doing, he's actually -- it's actually an amazing
- 15 slide. He's doing leaf pulling. And you can't see it from
- 16 where you are, but the leaf is actually in the midair. The
- 17 guy I work with works for a long time to capture this on
- 18 film. A very important part of winegrape growing is doing
- 19 leaf pulling.

1	So one of the focuses of the field implementation
2	is to work one on one with growers and pest control advisors.
3	In California our consultants have to be licensed and they're
4	called PCA's, which I was for seven years. Well, I still am
5	one.

And implementing specific strategies. And these areas provide what's called lighthouse vineyards, where people can come and say oh, well, that's what you were doing. Well, what did the wine taste like after you did that. That kind of thing.

And of course documenting inputs, which I clicked obviously too fast. Very quickly, we have 43 growers involved in this part of our program. They manage about 40 percent of all the acreage in the district. So we're really reaching out to a fairly large number of acres.

But we're not working with just big growers. We've got a whole range in there from someone with six acres of grapes to somebody with about 8,000. Sixteen PCAs consult with those 43 growers, so, again, we're involved with them

very intensely. And there are 60 vineyards in the program, about 2,300 acres.

We look at 12 month management plans. We do weekly monitoring of pest numbers. This is my big thing. If I when I die see every grower actually writing the numbers down of the pests in their fields, I'll die happy, because they don't do that. And everything is data driven nowadays, but unfortunately pest management out in the field, as far as I am concerned, is not data driven and we really need to do something about that. So we make a big effort providing an example program of what growers can do. And then of course tracking everything that happens in those vineyards.

Just to give you an idea of what we talk about when we talked about IPM, weekly vineyard monitoring. Now I'm not talking about satellites up in space, and I'm not talking about airplanes and things. I'm talking about getting out of your pickup truck and going out and saying, ho ho, there we go. And that is very important. As a personal -- my experience with working with growers is that that just didn't

1 happen out there, and we need to really stress that.

Coupled with that is when do I do something. We have a very poor handle, in my opinion, knowing when to do something out there. Now certain pests we have a very good idea, but a lot of them we don't. And so again I think it's very important. Of course, we do see the use of high risk chemicals. Cubacoping (phonetic) is a big thing we recommend.

Leaf pulling? What that's all about is you literally are taking leafs from around the bunch and that has a multitude of effects. It's an ideal IPM technique. It improves wine quality -- winegrape quality. It improves the atmosphere in the canopy, so there is less likelihood of fungal outbreaks. They've got great data to show leaf pulling is as effective as any fungicide application, and it also reduces leaf harbor mite numbers as well.

Using beneficial arthropods, adding compost -- because we're not only focussing on pest management, but input reduction. Things like making sure when you do add

- fertilizers that you need to. Come on.
- 2 Pre-emergent herbicide use is our big challenge.
- We're not using organophosphates on grapes. But pre-emergent
- 4 herbicide is something that we really have to do some work
- on, because it's a very standard practice. Things like
- 6 simazine.
- 7 Drip irrigation is important for reducing inputs.
- 8 Also it's very important for getting high quality winegrapes.
- 9 And using a party mildew bottle, and of course you can't
- 10 forget the Owl boxes, predator control of some of the
- 11 vertebrate pests we have.
- So let's very quickly now get to my last component,
- which is the Lodi winegrowers workbook. How do you go from a
- core group of growers to working with everyone? And I think
- that's a very big challenge, as I mentioned already.
- 16 You've got to have something that appeals to a
- whole range of growers. Of course we need to encourage
- sustainability. We need to provide educational information.
- 19 Growers are hungry for information. They really are. And so

1	when	you	do	something,	you	need	to	satisfy	that	hunger.
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I think we need to challenge and stimulate growers.

They're not just open vessels to pour information in. They are people that really want to be stimulated. And I think once they are, they get really involved.

We need to address the whole farming system. One of the things I think we have such interest in our winegrowers workbook is its not just looking at pest management. It's looking at what they're doing, which is growing quality winegrapes. And pest management comes along with that. You know, we as pest management people think that people live and die with pest management. They don't. Most growers wish that pests would just go away so they could focus on growing good quality crops. And with winegrapes it's really what counts.

We need to be able to measure what we're doing out there, and we also need to provide possibly a certification system. There was a little bit of talk this morning about well, how do we verify who did what. This is going to become

1	more and more important when it comes to using pesticides ou
2	in the field, I think. So we need to have some kind of a
3	certification system.

We also need to help growers provide recognition for themselves in the market place. Growers are going broke.

And how can we help that? We can help them go directly to the marketplace.

So now you're probably expecting superman to come flying through that door saying I will solve all this. And actually I think this winegrowers workbook -- I actually have a copy here, if people are interested in looking at it. That, I hope, addresses not some -- if not some of these issues, all of them.

So very quickly in my last few minutes -- well, first I need to tell you in terms of partnerships, this project was funded by several sources. U.S. EPA Region 9 was a very big supporter. The California Delta program, which a lot of you may know about in terms of the water issues in California, they also funded some of this. The Pesticide

Environmental Stewardship Program funded it. And, of course, the Lodi Winegrape Commission's funds also helped pay.

So how do we go about developing this program? One of the things that was important is to have growers be in charge. So we met with -- the growers met and developed the goals and principles for the workbook. We created a technical advisory committee to write the workbook and hear some of the people that we partner with that were on the Committee.

And then of course once we wrote the workbook, we had two pilot workshops. The growers actually went and filled out the workbook. And we're not talking about five minutes sitting down and sort of checking boxes. It takes about four hours to go through this. And of course, again, it helps to bring wine and sandwiches. But we have them go through it. And we came up with all the feedback something called Lodi Winegrowers workbook, a self assessment of integrated farming practices.

So what does a self assessment accomplish? Well,

1	it helps growers literally assess their integrated farming
2	practices in specific fields on their farms. What is more
3	important, it helps identify areas that they need to do some
4	work. And one way to describe this is I think all of use
5	realize we have problems in agriculture, but we don't really
6	want to admit it's happening on our farm.

This workbook -- this approach I think helps growers realize, oh, gosh, I didn't know I did that. You know, maybe I should do some work on that. And so that's the next step, is it helps growers develop a plan of action to solve those very specific problems, and then finally it gives them a timetable.

So now the next few slides, you're not going to be able to read it, but I just wanted to show the general physical outline of the book. Well, no, I'm not quite there yet.

So what does the book look like? As I mentioned, is a whole farming system book, so it deals with viticulture, soil management, water management, pest management and

1	habitat,	а	very	big	issue	with	winegrapes	in	California
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know people are upset.

People, the public, are very upset about the conversion of oak wood lands to vineyards. I mean really upset about it to the point of civil disobedience. They are starting to talk about civil disobedience. And when that word comes up, you

Human resources -- the worker -- and wine quality, which has to be a part of it. If you don't produce good winegrapes, you're going to go broke. And then these action plans and a glossary.

So what does the workbook look like and how does it work? Now for those of you in the back, you won't be able to read it. But very quickly, in all of those areas we've divided up growing winegrapes into 105 very important issues. And the issues are very specific. This is just an example.

If my pointer works here, this issue is vineyard monitoring for insect and mite pests. So the grower reads these four categories, and it goes from ideal to less than ideal. We don't use the word bad. You know, from ideal to

less than ideal. So in this case, the ideal situation for
this kind of monitoring is that the grower or PCA monitors at
least weekly and they keep a written record. And down here
it's like they would never even get out of their house,
little alone their pickup truck.

Once they've done that, then they have an evaluation sheet for each issue and they make a check mark as to what one best describes what they do. Now you can't see it much here, but the column number one is in red. And the reason it's in red is that's the thing you need to be worried about. So this grower said, you know, I almost never get out of my house, little alone my pickup truck, so I'm a number one.

Now once you fill out this book after three hours, unfortunately your job is only beginning, because then you have to go through the evaluation sheets and say, okay, which one of those can I work on and am I willing to work on. We don't tell them what to work on. They decide for themselves. And the idea behind that is maybe the grower actually knows

that they can do as opposed to gee, it would be nice to do it, but I don't think I ever will.

And so, again, looking at this specific example, this grower doesn't monitor their vineyard, and so they literally said I'm going to start monitoring every two weeks and I'm going to start it next growing season. And so they literally set up an action plan. And they only maybe picked two or three things to start with, but it gets them to actually physically do something.

So I think because of the time, I've got some example pages. The other thing that is interesting is we've got this book, Chalk a Block, with information about how to do some of these things. This is the first sheet in the book and it's about leaf removal. And right down below here is a box that says, well, this is how you do leaf removal.

And I think -- because of the time, I think I'll quit there, and if you're really interested about this, we can talk about it later. But how we're going to implement tests? We're going to follow our neighborhood grower meeting

1	model, and we're going to get about five growers at a time,
2	and we're going to sit down and actually help them fill this
3	out. And then we'll follow up with them one on one on their
4	action plans.

We've done 45 growers so far. And in terms of evaluation, actually somebody has reviewed this in Fruit Grower Magazine, and I brought these along. It's the review to pass out. There are not enough for everybody, but it gives you an idea of what the industry is thinking about. I didn't write that. I wish I did, but I didn't. In fact, you would think they would pay me to write that. I paid them.

But it gives you an idea of, well, what does the winegrape industry think about this. And so over the next two years, our goal is to go through 200 growers with this workbook.

And with that, I think I've got -- my 20 minutes is up.

MR. EHRMANN: Thank you very much.

(Applause.)

1	MR. EHRMANN: Again, what I would like to do is
2	just take questions of clarification. I know this springs a
3	lot of broader issues to mind and other examples that people
4	have, etc., and I would like to reserve that for our later
5	discussion. But if just questions for clarification, how
6	many of this or what about that ir clarify this, that's what
7	we would like to take at this point.

Cindy?

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MS. BAKER: That was a very informative 10 presentation. Thank you. I've heard about what you guys 11 have done up there. I've never actually seen the whole 12 presentation. I just had a couple of questions of 13 clarification.

> You put together this workgroup and this plan -- I mean this workbook and this plan. How many growers have you actually gone through this with so far, roughly?

17 MR. OHMART: Yeah. We've just finished the book in 18 April.

19 MS. BAKER: Right.

1	MR. OHMART: And we've actually held five
2	workshops, 45 growers. But we're merely getting started.
3	This next year is when we're really going to get going. And
4	I'm really excited about the workbook. I mean, the feedback
5	I've never worked on a project like this where everybody
6	is so excited.
7	But talk to me five years from now, because if this
8	doesn't actually change growers' practices, as far as I'm
9	concerned, it will be a failure. And I don't know what's
10	going to happen.
11	MS. BAKER: And of those 45 growers, are people
12	actually implementing this stuff now, or are you still in the
13	process where you're educating people? I mean, where are you
14	kind of with that?
15	MR. OHMART: The first five workshops were just to
16	sort of get a feel of how it was going. What we really
17	didn't do was help them write action plans, and that's really
18	where the action is going to be.

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MS. BAKER: Okay.

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_	int ominate into be welle going to really bears
2	that this winter and literally follow up. Do the workshop
3	and then go to the grower's farm and say, okay, let's write
4	an action plan and then help them implement that if they need
5	help.
6	MS. BAKER: And are there specific goals, like a
7	certain percent reduction? I mean, I'm thinking of Sarah
8	what you did, Sarah, before when you had specific things.
9	Are there those types of things, too?
10	MR. OHMART: We have not done that.
11	MS. BAKER: Okay.

MR. OHMART: And so we're going to really start

MR. OHMART: And I think those are very important to do. In one of my work plans to one of the agencies, I mentioned a certain percentage of simazine use reduction.

But I think we probably should this winter set some goals like that, but we have not yet.

17 MR. EHRMANN: Bill and then Rob.

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18 MR. LOVELADY: Yeah, just for clarification. I
19 didn't quite understand. You said that it was not data

1	driven	 the	insect	numbers	were	not	data	driven.	Do	you

2 mean they're not scaling, or what do you mean?

MR. OHMART: Yeah. My experience -- and I keep

waiting to be proven wrong. Every time I go to a new crop, I

don't see growers writing numbers down, and I don't see

consultants writing numbers down. I know some people do

somewhere, but I just don't see it myself.

And that's what I meant by -- so an example might be in our situation with grape leaf hopper, which is not a direct pest on a fruit, but people spray for it. And I keep thinking, well, that's a great place to try to reduce pesticide use. Growers just don't keep numbers and neither do consultants.

MR. LOVELADY: Well, if their neighbor sprays, they spray.

MR. OHMART: No. It's more like -- as a pest control advisor, it's amazing what you can carry around in your head. I mean, I couldn't believe it myself. I can still remember five years ago what I saw on such and such a

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But the problem is if you don't really known what

your threshold is, there is no way you can say, well, gee, I

sprayed at this level last year. Was that level 15 or was it

12. And I think having hard data is going to really help

actually move down the road about developing real good action

thresholds.

So that's what I meant by that kind of statement.

9 MR. LOVELADY: We can have some of our cotton 10 farmers to help your grape growers.

MR. OHMART: Well, I know. And like I said, I keep hearing this.

MR. LOVELADY: Well, if you were making \$3,100 an acre, maybe you wouldn't care as much, either.

(Laughter.)

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MR. LOVELADY: How much -- on that example, the pest you just cited, how much would one treatment cost?

MR. OHMART: For the leaf hopper? Oh, probably about 30 or 40 bucks an acre.

1 MR.	LOVELADY:	So out	of	\$3	,100,	right?
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2 MR. OHMART: Yeah. But I've worked with almonds 3 and walnuts and -- I guess another way to put this, is I'm 4 really -- I'm into using computers out in the field. been using them for 10 years. And if you look at all of the software companies that sell software to growers, in 7 California, you know, there is full pesticide use reporting. Those companies -- there is software out there for growers to buy to keep track of everything on the farm, except pest 10 numbers.

> There is nothing out there that I've seen, and the reason I know is because I keep thinking I'm going to go into business and sell the software, because I have it. But that to me indicates that there is not enough market out there for people to sell. They have everything but keeping track of pest numbers.

So I keep -- you know, I keep hearing. I know there are some people that track coddling moth. They've got to have this kind of thing. But -- well, I could keep going.

1	MR. EHRMANN: Okay. Rob and then Jean-Mari.
2	MR. HEDBERG: I just had a question. You said, I
3	think, that weed control is your biggest challenge?
4	MR. OHMART: Yeah.
5	MR. HEDBERG: And that for many IPM programs you
6	have all the tools. It's just getting them implemented.
7	Relative to weeds, do you have the solutions? Do you have
8	the alternatives, or do you need to research some new ones?
9	MR. OHMART: What we I'm a very pragmatic
LO	person. What I'm going to really go far is things like,
L1	well, let's reduce simazine by 50 percent. I'm going to
L2	start there as opposed to saying, okay, I'm going to get
L3	every grower to go totally non-chemical weed management.
L 4	There aren't any good alternatives. At Lodi they've looked
L5	at a whole bunch: mow and blow and flaming and all this kind
L6	of thing. They don't use it, because it's just not economic.
L7	
L8	So I guess the answer is, we need alternatives.
L9	But in the meantime, we're going to really just try to how

1	can we reduce our herbicide use without alternatives for now
2	and hopefully something economic will come along. So weed
3	management is a big issue, because there isn't anything
4	economic out there at the moment.

5 MR. EHRMANN: Okay. Jean-Mari and then Wally and 6 then we'll move along.

MS. PELTIER: Cliff, what percentage of your budget comes from the growers, and then how much comes from grants? And then a follow up question to that, what is the money in the budget used for? Are there actual -- is it a direct transfer through to growers, or is the money used for research?

MR. OHMART: The IPM budget is pretty much totally grant funded. Pretty much from the start of the Commission, they said let's try to leverage what we have. That's the IPM program. Everything else is strictly for grower assessment. And so all the marketing and all the research, all of that, are growers' dollars that come straight to the Commission and then back out.

1 MS. PELTIER: So the money for IPM implementation,	1	MS.	PELTIER:	So	the	money	for	IPM	implementation,
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- 2 how does that -- what is that used for? How are you using
- 3 money to get guys to implement IPM systems?
- 4 MR. OHMART: It's used for people. The money is
- 5 used for people.
- 6 STEVE: For Cliff's salary.
- 7 MS. PELTIER: Outside of Cliff's salary, Steve.
- 8 (Laughter.)
- 9 MR. OHMART: It's for my salary.
- 10 MS. PELTIER: No, but I mean guys going out and
- 11 monitoring?
- MR. OHMART: That's a very good question.
- 13 MS. PELTIER: Is it paying for the guys out in the
- 14 field? Are they in the field? Is that what you're paying
- 15 for?
- MR. OHMART: Say that again?
- MS. PELTIER: Is it for guys to do the field
- 18 monitoring?
- 19 MR. OHMART: I do the field monitoring. I'm a big

1	believer in despite. You know, my salary and my Ph.D and
2	stuff, I'm the one that should be doing the monitoring. I
3	interact with growers all the time by doing that. I also
4	have someone that also helps me, but his salary also.

my writing grants at the moment. But the Commission has always said, you know, if they dry up, we will keep you on. So the IPM is -- from that angle the IPM supports itself, but the rest of the Commission is all grower money.

I'm sort of like the university people. I'm driven

MR. EHRMANN: So it sounds like it's the --

MR. OHMART: I'm a busy guy. That's why my hair is turning gray.

MR. EHRMANN: It's the funding for him and the other folks who are doing the direct, kind of hands on in terms of developing the workbook and that kind of stuff.

Everything in terms of the actual implementation is paid for by the industry fund.

MR. OHMART: Well, yeah, but growers are doing
-- the growers are doing -- whatever they do, they do

1	themselves.
	CTICINSCT ACS *

- 2 MS. PELTIER: But the grower's cost of IPM is zero
 3 in your system? It's paid for by somebody else picking up
 4 the tab?
- MR. OHMART: Well, I'm basically a facilitator, and so that is paid. They're not paying for that, because I've been able to get grants. I'm a facilitator. In terms of the implementation, they do that themselves.
- You know, an example might be the Lion Twins Farms.

 They are really into permanent native grass cover crops.

 They've paid for all of that themselves for the last eight

 years, and they do a lot of work to find out, you know, does

 this effect the wine. I mean, all of that is paid for. The

 grower decides I'm going to do it, and then they do it.
- The Commission doesn't subsidize anything. But

 what they do, is they provide a facilitator like me, which is

 really what I am.
- MR. EHRMANN: Okay, one more. Wally?
- DR. EWART: In terms of moving forward in doing

1	these programs, are you going to have control, farmers versus
2	this program, to get to the bottom line economics to, you
3	know, find out what the difference is in the program that
4	you're moving toward versus the program that a conventional
5	farmer who isn't in the program would do under the same
6	farming conditions?

MR. OHMART: No. And I -- I'm don't -- I don't like -- the idea of having an IPM vineyard versus a non-IPM vineyard and looking for the bottom line, so to speak, what's cheaper, I personally feel that I don't want to go in that direction. And that's because IPM is -- well, what is IPM?

So and so over here is growing permanent native grass cover crop and they're using only glyphosate. They're not using premaderb (phonetic) herbicide. And they're monitoring and they're doing this and that. But somebody else over here is just doing cover crop, but you can't say that this is IPM and that's not.

So, you know, it's such a hairy issue and hard to define, I think, to try to do the side by side. I personally

1	would	rather	invest	my	time	in	other	things.	And	that's
2	strict	cly a pe	ersonal	vie	ew.					

3 Does that answer your question, Wally?

DR. EWART: Well, it does answer the question.

It's just that in the IPM programs, in apples it's a very

different situation. It's been very necessary to have that

control to show the differences. And in fact in terms of

implementation, I think you're missing the buck.

MR. OHMART: Well, I think in our case, if we had some really night and day issues that we were dealing with, it would be really worth doing that. I think ours is not quite night and day that way. And so like I say, then you're caught with saying, okay, well, what is IPM. Is it all these things? Is it five out of ten? And so that means do you have a five out of ten, and then you have a control and you have a ten out of ten. So it's difficult.

And we've done -- there have been economic studies done at Lodi that came out with mixed results. We actually had an economist from U.C. Davis look at it. So I think it

- depends on the situation and what you're looking at.
- MR. EHRMANN: Okay. Thank you, Cliff, very much.
- 3 Let's turn then to a series of presentations on peaches. And
- 4 we'll just introduce each presenter as we go.
- 5 Larry Gutt is the first presenter from Michigan
- 6 State. Larry?
- 7 MR. GUTT: Gutt.
- 8 MR. EHRMANN: Gutt, I'm sorry.
- 9 MR. GUTT: Okay. I'm the first presenter on peach.
- 10 A couple of things as an introduction. I am a tree fruit
- 11 entomologist at Michigan State University. As we look at
- 12 Cliff's presentation and his first slide, and you compare on
- my first slide and introduction to his, it kind of summarizes
- how different my talk will be than his.
- 15 His had a nice pretty picture of grapes and mine
- has a bunch of ugly pests.
- 17 (Laughter.)
- But you get the idea of where we're going here.
- 19 The other thing I noticed in this room is that there are two

2	there are two speakers. And I guess we could make a lot of
3	inferences about that, where we're coming from and stuff, but
4	I can't speak for the other speaker.
5	But I can speak for myself. The reason is because
6	since I've moved to Michigan, I've put on a lot of weight and
7	I can't fit in any of my suits any more.
8	(Laughter.)
9	STEVE: And they don't pay you enough to buy one.
10	(Laughter.)

of us, I think, of the men that don't have suits on, and

13 (Laughter.)

you.

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MR. EHRMANN: Steve is everybody's friend.

MR. GUTT: Okay. So when I was asked to present here, there wasn't really a lot of direction on what to present and I was left wide open. So whatever I present is my responsibility. I picked out one part one way that I wanted to present it, and that's what I'm going to do.

MR. GUTT: Yeah, I wasn't going to say that.

1	This is what I'm going to talk about today. I'll
2	outline my presentation very briefly. I'm going to talk
3	about the challenge in peaches. I'll tell you very quickly
4	about fruit production in Michigan to get you on the same
5	page. Then I'm going to talk about peach IPM and the absence
6	of OPs.

And I'm talking about that in part, because I'm in kind of a unique position in Michigan in the sense that Gerber Baby Foods is there and they have not allowed OPs for quite some time. So I've been working in these systems.

And then I'm going to talk about what I have labelled some broader challenges to implementing IPM in fruit crops. And I just picked two, again, because I think there are two that my position puts me -- I'm sort of in a unique position in that I think my experience has been around those two issues. So I want to say something about them.

And then I'm going to talk about meeting the challenge. I'm not going to talk about implementing programs by meeting the challenge. I mean that I have been involved

in three strategic planning workgroups with growers and other industry people in cherries, peaches and applies. And I'm going to try to summarize in three slides kind of what the consistencies are that you hear from those meetings.

Well, the first thing is Michigan's tree fruit production, we have it scattered all over the state, but most of the production is right along Lake Michigan, which will be here. And we have five main growing regions, but only three of them really produce peaches. Up here in the northwest, it's almost all cherries.

We have a region here, Oceana Mason County, mostly processing peaches. Down in the southwest, mostly fresh market peaches. And over here north of Detroit, Michigan, we have a lot of direct market peaches and some other things.

All of those areas also have apples. The main apple growing area is here, and there are not very many peaches grown there.

There are about 5,000 acres of peaches in the state, about a 11.5 million dollar value. And another unique

thing I want to put in here about Michigan, it is the home of Gerber products, which is located essentially here and gets about 35 to 40 percent of its peaches for baby food from this region of its national use. And it makes 72 percent of the baby food market.

So I didn't want to come here and have withdrawal symptoms. I am a land grant university researcher, so I don't want to bore you with a lot of data, but I had to put some in there. I thought I would get a little shaky during my talk. So I don't have a lot of data. And I tried to make it very general kinds of data so you don't have to study these. They all make a simple point that I'll tell you about.

I came to Michigan in 1997. And the first thing when I got there, Gerber's had gotten an environmental stewardship grant just starting, so I jumped right in and said yeah, I would like to be involved in that. So we had a partnership with Gerber's and MSU and with -- this is a private pest consulting group that worked on this project.

And it ended in over a three year process with about 520 acres of Clingstone peaches that Gerber's would buy.

There were 27 growers in the project. Gerber's provided the funds to use pheromone as a major control for OFM in this project, with some assistance from that grant. And also Gerber's pays for this scouting firm to scout all the growers' farms, and they still do even after this project.

This is a summary of kind of how it worked in general in the orchards that I got involved in to monitor to see how it's working. You can follow this pretty simply. I don't know. I'm not going to describe in detail how pheromone has worked that much. But we use insect pheromones to try to get control.

And you can see in the red, this would show you the population of oriental fruit moth, the main pest, in comparison orchards to the Gerber project orchards that are owned by other growers that aren't Gerber growers and are running a program that included OPs. So that's the OFM

1	population	in	those	blocks,	and	there	were	ten	of	them	that
2	we monitore	ed.									

This is OFM in the box that were getting pheromone. And this is also one that was getting pheromone that basically was failing. This is about what we saw in the project, somewhere around 5 to 10 percent or the orchards we would not get the control we wanted. So that's one thing.

The other thing over here is that the insecticide use in all these blocks, these are means. I'm not talking fast enough, I guess. These are mean number of applications in all these farms. This would be in the ones that correspond to this, and this is in the ones that correspond to this. So these are the Gerber farms.

And reducing insecticide use -- but I really put this up for another point, which is that using pheromone, they still are putting insecticides in there. And I'm going to hammer on that a little later.

So I need to say something about pheromone and using mating disruption, because I think it's really

1	important. It's not some magic thing. This is what I've
2	been doing for 10 or 15 years, so I wanted to give a
3	perspective of this group, because it's one of the kinds of
4	alternatives that people really hold up high and say, wow,
5	this is great.

Well, it's got some problems in peaches that we need to address and that I wanted to share with you. One is that if you put a product out there, this is a product that is used to get successful mating disruption control. It's got insect sex hormone in it. You put it out and you disrupt their mating.

Well, if you put it in Michigan peaches about here, you get about 95 days and then it's empty. And that is okay if you're growing peaches for Gerber and you're going to sell them to the processing market, because they're probably harvested right here. In Michigan you've got at least another 35 days for most of the fresh market peaches, so it's not going to make it through the year. You're going to have to do something else. It's going to fail at that point.

1	If you're in California, Steve Balling would tell
2	you you're going to be way out here. They've got more blips
3	and it keeps going way out there. So they have even a more
4	serious problem. So that's a big limitation.

And this is the one I talked about before, but I really want to really make a point of this. This is the peach situation where you're still using pheromones, and some of these are still controlling oriental fruit moth. Mating disruption is not a stand alone in almost all situations.

And I want to emphasize this with data from a very famous, area wide management program. This is the Coddling Moth Area Wide Management Program in the western United States. I came from there. I was involved in starting this project in the early '90's.

And if you look at what's going on, the 10,000 acres that are being treated with pheromone there, only 14 percent in this 1997 data set survey used pheromone alone for Cauly moth control, and 86 percent of them used one, two or more than two covers. So it's really a combination program.

1 It's not a stand alone program and it won't be.

If it's a stand alone program, I'm going to go back to OFM now. We have a very serious issue out there, because there are no new chemistries that work on oriental fruit moth. We have lots of different moths out there. We've got Coddling moth, which is the famous worm in the apple. We've got all these other worms out there, and new chemistries seem to be okay on most of those pests. They're okay.

The one worm pest that stands out in fruit production is oriental fruit moth. When we do repeated trials of efficacy, this is the untreated checks. And we look at one new product, Easteem, which you saw in the list today. Pyriproxyfen has got registration. If you look at indoxacarb -- this is spelled wrong. This is spintor (phonetic) or spinosad. And these are two insect growth regulators that are now registered.

You can see that in no cases do you get the kind of control you need of oriental fruit moth. These are the best new chemistries that are out there. This pest is not

controlled by these. So we're struggling. Not only that,

but when you start to disrupt -- with mating disruption for

one pest, you end up with all these other pests.

And in peaches, we have a situation where many of the other pests belong to this group, which I've tagged as beetles, bugs and flies. And I call them beetles, bugs and flies because the pesticide that is used to control them historically has been different than the ones that you use against these other pests.

If you're looking at moths and soft bodied and mites and things, especially soft bodied and moths, these insects tend to feed on the foliage and the crop and that sort of thing. So they take up the pesticide. And you can get them to get a dose. These things you have to kill. They're big old adults, and you have to kill the adults and they're very hard to kill.

And all of the new chemistries that are coming out now, all of them basically have no contact activity. They all have to be consumed. So all these things that run around

and need contact activity, we're having trouble controlling.

And not only that, but they're not really on the label. I

mean, companies don't put a big effort into testing them.

So if you look at what's out there, if you take an IR-4 list or whatever of all the new alternatives that are out there, and what the companies are trying to target and spending money to target, only 8 percent of them target this group -- beetles, bugs and flies. We've got bunker culeo. The Japanese beetle you'll hear about from some other people today. And ligus (phonetic). I'm going to talk about one right here called rose chafer. So you've got all these pests in peaches. You've got no new chemistries that are targeted for them.

Here's the one that I'm going to tell you about.

And believe me, I'm going to run out of data slides pretty soon. But I wanted to show you one more, for sure. This is rose chafer. It's a big beetle. And this is what it does to the fruit. They come into peaches from the outside and basically they head to the fruit. They mate and they feed

all at the same time, and they're like piranhas. This is a good fruit.

(Laughter.)

I think Hiter (phonetic) Shears is going to show you some where you'll have 15 or 20 of these on your fruit and all that is left is a seed. So this is not cosmetic damage. You probably won't pick this up in the store.

(Laughter.)

So these things really go after it. Well, they're a big pest in Michigan. So here's all your new -- here are your new chemistries. And I'm doing this in cooperation with Gerber's and with some funding from the State of Michigan and all kinds of sources, because the companies that are out there that manufacture these materials don't provide any funding to do research on peach. That's like no market.

So most of the data on these chemistries is on apples, so we're kind of saying, well, we've got to look on peach. So we find some other sources and we bootleg it and

1	we try to look at it. The only thing that has killed rose
2	chafer in the past was methyl parathion. That's not
3	available to these growers any more, so they're struggling to
4	find something to kill it.

so the only option they have conventionally is either carbaryl or pyrethroids -- esonder (phonetic), espandolarat (phonetic). And that looks about like carbaryl. You can see in this study these are loud bioassays where we make the beetles contact this material. And this is one day residue, three day residue, seven day residue. So this is what happens over time. It basically disappears.

And the best you're getting with a registered material -- and most of the compounds that are coming up that could be alternatives, this is octara (phonetic) thiamethoxam and doxicarbonagan (phonetic). This is a clay material.

These are some alternatives. We've got nee (phonetic) mix in here. We've got pepper and capsaicin. I mean, we're going for everything.

And none of them work essentially. Fifty percent

1	is about the best you can get to kill these beetles, and they
2	fade very quickly. So really we're having trouble trying to
3	find some.

Again, I'm talking to slow, I guess. So what happens in Michigan peach orchards? So I've worked in these 500 orchards, and I tried to monitor as many as I could over three years. Actually a couple of years in detail. And here's what we found.

Well, first these beetles come from the outside, so this is what peach orchards look like in Michigan in this region where Gerber's buys its fruit. They're on this kind of sandy soil and these grass fields are all around them and these woodlands, and the larva of these beetles -- they feed on grasses -- on the roots of grasses -- and they come in every year from everywhere and then they leave. So if you kill them in your orchard, they're coming back anyway.

Anyway, they come in from here. And this is just to give you an idea of how many are in Michigan. This is a summary of all the beetle trapping I did. And this would be

way out in the field, and then coming this direction, this zero means that's at the edge of the field and then moving into the orchard. So when we're trapping, on average out in these fields we're catching 5,000 beetles per trap. So there are a lot of beetles out there.

And what happens? Well, we get fruit injury in every orchard that I tested. So I looked in these orchards, and I can tell you, all 500 acres have rose chafer eating fruit. So it's everywhere. And the mean damage is about 4 percent and three locations out of 18 had 10 percent. And working with Gerber's, we estimate this is about -- if you culled 4 percent on average, it's about \$100 per acre or about half a million dollars probably lost last year.

We're not done with all of our pests. We have another group of pests in peaches called borers. These things feed on the wood, and a trunk spray of chlorpyrifos has really been the best control on these things. And we can continue to do that, but we would like to not. The growers really would like to not do this. They would like to find an

1	alternative.	It's	not	а	fun	thing	to	do

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2 And so we've been working on alternatives, and 3 here's what I can tell you in summary. We can use 4 pheromones. I call it here disruption for our borers. 5 One is called the lessor and one is we have two borers. called the greater. And in order to get control, you have to 6 7 use two products. One product won't get them both. 8 very good control of one of them called lessor and the other 9 one is marginal or greater. So one of them is hard to control and one is easy with pheromones. So it's getting 10 complicated. 11

Then you've got another one in there called the American Plum Borer. And we don't have any work on pheromone, so we don't know what it's going to do. And it's in there, too. So even if you disrupted the other two, you've got to spray for the third one. So it's a difficult issue.

I threw this one in here. This one is another borer, the fourth one. This one is an apple called the

1	Dogwood Borer. You get no control with pheromone and you
2	can't use chlorpyrifos any more. So this borer, there are no
3	controls for apple growers.

Okay. Now I'm going to go on to the second part of my things, which are some broader considerations. And I picked two. The first one I picked I called Regional Considerations. And I picked this because in 1991 I was a fruit entomologist in Washington and worked in the west coast complex of pests. And then I came to Michigan in '97. So I really have worked in both systems. I know a lot about both of them, and I think I can really comment on this issue, because it's a critical one.

There are some big differences in regions around particular areas, but I'm just going to talk about west and east and that we need to consider these when we're deciding on research and all these kinds of things, because they're very different.

One is that the pest complex in the east, and you all -- probably a lot of you know this and probably heard it.

1	It's much more complicated and OPs are required for a whole
2	group of pests. In fruit production in the west, really OPs
3	are targeted for two or three pests, so it's a very different
4	system.

Even probably more important is that there are other regional considerations that we often don't pay attention to that play into this implementation thing. If you implement something in the west as a model, it basically is not going to have any bearing on what's happening in the east. It's so different. And I'm finding every year that the differences are greater and greater and I didn't even expect to see them.

So what are some of the other differences that I didn't pay attention to? One is rain. So we have some fancy new controls out there. One of them is this Kaolin clay. This tree has been treated with a clay to try to prevent insects from feeding on it. And it's a new novel control.

Well, it's showing promise out west and there is a

1	lot of work going on on it. And in fact, the company comes
2	from here and does all their work over here. Well, we
3	finally got them to work in the eastern part of Michigan, and
4	what do you think happens? It all washes off. You can't
5	keep it on. So you have to spray this stuff like every three
6	days in order to keep it coated. And it's just a very
7	difficult issue. So we need to work on keeping it on the
8	tree.

The same thing happens with pheromone. We've had limited use in the east and lots of use in the west. And there are two things associated with this. One is, of course, that big pest complex makes it hard to use to pheromone for one pest. That's obvious. The other one I'm noticing is, I'm very interested in pheromones that can be sprayed through a sprayer rather than put up with little hand applicators.

When you put sprayable formyl out, it turns out in every study for the last four years that it works great in the west and fails in the east. So now we're finding out

1	that the moisture and the conditions out in the east really
2	are breaking down these sprayable formyl capsules, so now we
3	need to work on, well, how can we have that not happen. We
4	really need research to figure out how we can prevent that,
5	because we need them badly.

And then finally, everybody probably knows there is a lot of moisture over here, and so there is much more disease pressure in the east than in the west.

And finally, the second one I wanted to comment on that I haven't heard too much about, although we did talk about it at lunch -- my group anyway -- is meeting market demands. And this is a big one. And I'm bringing this up because it has hit home with me this year. And so I have two examples from this year and that's probably why I put it on here.

I put an international one on here. And again, these are not peaches, but I think they're important. The international one is just to illustrate that we have these zero tolerances for some pests -- in this case apple maggot --

- and really it's meeting this market that drives the program
 for growers.

But more importantly on the national level, we have a zero tolerance for worms in fruit. And what does that mean? it's meant a lot this year, so I wanted to share that with you.

(END OF TAPE 4, SIDE A)

MR. GUTT: -- detected in a load of apples means that you get rejection. And so far about 25 to 30 percent of the loads coming in in Michigan are being rejected because of one worm. So the semi truck has to leave. You lose the whole crop. The same thing in cherries. One curculio worm detected in a load on each of 12 farms this year resulted in dumping 500,000 pounds of cherries.

So growers have to deal with this, and I think somehow we have to address this when we're doing implementation. It's another area that we're not really paying attention to that could help us. Can we ease that up. Can we do something. Can we help people.

L	So finally I have three slides to talk about
2	implementation and meeting the challenges, and these three
3	slides are a summary of the highlights kind of from various
1	strategic planning meetings that I've been in so far that are
5	associated with things you've heard about here.

The first one I have -- and when we did these plans, we divided them into regulatory, educational and research critical needs. So out of the regulatory comes two that everybody seems to have some consensus on. One is -- and these are growers. These aren't mine. I didn't make these up. One is slow down the FQPA process and speed up review of new controls to afford producers an opportunity to implement sound IPM. And growers all want this word profitable in there, obviously.

And associated with this, I put this little figure in here, because I looked at the IR-4 information for this year, and IR-4 is critical to industries like peach. We really need help and IR-4 is it. The companies aren't doing it.

So what's happened with IR-4 this year is we had
many packages submitted. There were probably 35 percent of
those that were out for IR-4 were completed. There are still
these that need to be worked on by IR-4. And we had about 36
percent that are rescheduled. So we need to really make IR-4
get all of this work done. It needs some funding, and it's
really critical.

And then this one was talked about today. This is really essential. We need to develop and implement a program that will allow researchers, growers and other people to do on-farm work with new materials prior to registration. The reason pheromones have been so successful is right just about from the get go there was a special use permit that 250 acres you could treat with having this tolerance. You had sort of a general tolerance.

So we could test all kinds of things and get them implemented. That's what's made that alternative really go at the pace it's going. We need the same thing for these new chemistries, because they suffer from the same limitations of

pheromone in that you need to work on big areas to see how they're going to work.

We have research challenges. The obvious one is new insecticides and novel controls. But growers love onfarm research, and I'm biased, too. So we need some sort of national program to support on-farm research. This is not well supported, and I am a real proponent of on-farm research.

This is the number one educational tool in IPM, as far as I'm concerned. This is how education in IPM gets done. I should say on-farm implementation. And that's really how IPM evolves and really gets going.

And finally education. We talked about educational needs. And the number one for all growers in Michigan -- and this is in every strategic meeting we had -- is new training programs, and more important funds to support the development of qualified pest management consultants. We just don't have anybody that can do this consulting. It's really a major issue.

1	And finally we need to expand these implementation
2	projects. We have several going on here. I'm involved in
3	three projects in Michigan that I'm not going to talk about.
4	And I had a few things that I think are important. They need
5	to be well funded and long term, like four to six years.
6	They need land grant universities as chief partners.

And I had this in there before any of this discussion, and I don't have it there, because I'm biased and want a bunch of money. I put it in there because I've been involved in three on-farm implementation projects, and I've been to lots of meetings where people present stuff.

I've been involved in the famous project out west, the Camp Project, which I got started with several other people. One in Michigan that we called the Michigan Apple IPM Project and then this Gerber's project. In every case, the partnership with land grants has been really key to getting this thing going and really making it work.

And I also want to share that it's not because of money. I've been involved in three big implementation

1	projects with multi million dollars, and I haven't gotten one
2	dollar from any of them. All I do is help them get it going.
3	No money from the Gerber project. No money from Michigan
4	Apple IPM. That's a million dollars working with various
5	NGOs and stuff, and we sent all the money to a private
6	organization to completely run. And all we do is help them
7	get it going and consult. So it's not a money issue.
8	And that's it. This is my main help.

Thank you.

(Applause.)

MR. EHRMANN:

MR. EHRMANN: Let me ask, just on a process point.

There are a number of other -- four other presenters who were going to say some things about peaches, but we don't have enough time to have the same length of presentation we just had or that's all we're going to talk about.

So I need to ask Peter and Dean and Paul and Genne,
I think, to either compress what you were going to say or in
some way, you know, skip over things that may reinforce
points that Larry already made, etc. Or otherwise we're

1	going	to)	we'	re	not	going	to	have	time	for	other	things	we
2	need	to	acco	omp]	lish	on	the a	geno	da.					

So let's take a couple more and then we'll take a break somewhere in there. But why don't we go ahead with Peter Scheer from Rutgers. And if you could help us out with that way of managing your time, that would be very helpful.

MR. SCHEER: Hi, everybody. I'm Peter Scheer. I'm with Rutgers University in New Jersey. Just a little bit of a background. I was born and raised in New Jersey and left there in the mid-70's and went west. And in those years intervening, I have worked with orchard crops exclusively in California, Oregon, Washington and macadamia nuts in Hawaii. And during all those years, one thing that I missed, besides New Jersey tomatoes, was the peaches. So it's nice to be able to come back and help the peach growers with their commodity.

It's amazing for such a small state that the value of New Jersey's peaches ranks second in the country. It's all fresh market. There are about 9,000 acres of fresh

market peaches and nectarines in the state. It's worth about
30 to 34 million dollars, depending upon the year. If the
south freezes out, then, you know, we usually make a little
bit more. But essentially our prices are dictated by the
quality that we produce and being close to so many areas to
sell our crop.

A couple of pertinent facts about peaches -- or fresh market peaches -- is that they're very labor intensive. We hand prune them. We hand thin them. We hand pick them. And there is lots and lots of spraying going on out there. As Dr. Gutt indicated, tremendous pest pressure from diseases and from insects, so we're spraying five, seven, ten, 14 day intervals, depending upon the time of the year.

One of the more disconcerting things I came across when I first started my job there five seasons ago was this, quote, 1994 USDA document that talked about where peaches ranked in the implementation of IPM programs. It's near the bottom of the list. Peaches are just such a commodity, at least in the east, where we have to spray. Again, it's

extremely perishable. You get an insect bite, you get a

little bit of rain, you get some brown rot, that peach will

melt right on the tree. It's a fresh market. It has a high

value. Thus we can't have any defects.

And then again we have this overlap of pests. If we're spraying for oriental fruit moth, we're probably getting plum curculeo and some other insects as well. More importantly is to explain why we're spraying a lot. I guess because we don't have treatment thresholds. Now I say treatment thresholds versus economic thresholds. The whole concept of economic thresholds doesn't work for tree fruit, especially when the grower doesn't know how much that crop is worth until he picks it, or it's been in his cold storage for two or three weeks while he's trying to sell it.

Traditionally, economic thresholds, they know how much that crop is worth. They know how much their control measure is going to cost them to do it, so they factor this in. Well, we don't know how much our crops are, like I said, until after they're harvested.

Then there is export concerns. We can't have any worms in our fruit. And also peaches are kind of at the bottom of the list as far as funding goes from various sources when it comes time to researching this commodity.

Now our tree fruit growers for years have been doing without specialists through retirements in New Jersey. So they went to the State legislature and got a tree fruit initiative, where they hired three new specialists to deal with the production and the cultural aspects and the diseases and the insects, plus people to work in the IPM program that Dean Folk will talk about. So our growers are pretty politically active.

Here is just a short list of some of the direct pests that attack peaches. And I say direct pests. These are the ones that actually take a bite out of the fruit. And I've marked with an arrow the various pests that we're using organophosphorus insecticides against. And these would include the oriental fruit moth, the plum curculeo and the various bugs that Dr. Gutt was talking about: stink bugs,

- tars plant bugs. The tars plant bug causes a lot of damage.
- 2 The various beetles.

Now fortunately here are some examples where you

had some recent additions to products to control these pests.

The green pea chafer. New Jersey had a Section 18 for

pervado (phonetic) and that provided excellent control of

this pest. Spintor or Spinosad worked really well against

thrips and the tufted apple bud moor.

Now there is a whole another list of pests that attack the trunks, the twigs, the leaves, the roots. And here again, these are products where we're using our OPs to control these things.

The oriental fruit moth is our most major pest there. It attacks both the shoots, the growing tips, and also the fruit. It will leave a worm hole right through the fruit. It's becoming a really major pest of apples now. For the past four or five years, we've lost a lot of apple fruit in the eastern regions from oriental fruit moth becoming a pest in our apples as well. We have to deal with four to

five generations a year. The latter half of the season there are moths out there laying eggs. And we were still trapping moths last Monday in our orchards.

The primary control measures were organophosphorus compounds. Very little carbamates are used to control this pest. But if we are using carbamates for other pests like tufted apple bud moth, then we won't spray for oriental fruit moth. Our growers are really savvy. They don't like to use pyrethroids, because they know that that's going to flare mites. So we have really well educated growers. And they don't like to use pyrethroids, but are willing to do it if we lose our OPs.

And we've had some success with mating disruption for the oriental fruit moth. It's effective, but it's selective. And as Larry indicated, you have all those other pests that you're going to have to deal with anyway.

Here is a little data slide. Some new products.

You know, anywhere from three to four applications -- five applications. Compared to emamectin or S-envalorate

1	(phonetic) or sauna, nothing compares to our standards. And
2	these products the one product that looks like it's
3	working is this methoxyfenozide or intrepid. You know, it's
4	an equivalent control to phosmet, but that's all it gets.
5	It's not going to get the bugs or the plum curculeo, so you
6	have to put something else in your tank to control those
7	insects.

Paul Gilibo is going to talk about plum curculeo.

We're in the same boat now as in the south where now we have two generations per year to deal with. Just a little data slide there. This is a test that was put out for green peach aphid, which is at the same timing for some of our earlier plum curculeo, 90 percent damage with these new products. We don't have effective materials for peaches yet to deal with plum curculeo.

The Japanese beetle. Piranhas. This is a Japanese beetle ball. You get one Japanese beetle come in there and it calls all its friends and buddies, and they have a mating frenzy, a feeding frenzy and if you're lucky you get a few

bites out of it. But still that fruit is going to rot off
the tree and get some brown rot on there. Quite frequently
this is what you'll see after they're done. It's the pits,
let me tell you.

(Laughter.)

We've done quite a bit these last five years on some integrated research for peach production, and a lot of it has to do with ground cover management. We had a project for a year, a multi state project, using different ground covers in peach orchards to reduce bug problems. Then we took that data and got some funding from a PMAP to combine that with mating disruption.

Then we had such success after a year of that, that we're telling our growers about it. They're getting excited. They say, well, Pete -- or Dr. Pete, they say -- how much does it cost. So we're doing the same thing essentially in this project, where we're combining mating disruption and ground cover management, to reduce our damage and our pesticide use, and we're also bringing in an economist to

1 tell them how much it costs.

Then there is another multi state project, where we're looking at the biology management of the oriental fruit moth, because it is our major pest in apple and peaches now in the east.

And just a little bit on this clay -- this

K-adin clay. It doesn't work. I've looked at that for four

years. The only time we get it to work is when we're out

there with handgun applications putting this stuff on. Fifty

to 100 pounds per acre with a handgun. When we're doing it

with a speed sprayer, real life equipment -- you know, real

equipment -- not.

I was amazed at how weedy a lot of these orchards were when I moved to New Jersey. And if you know anything about the insect and weed interactions in orchard crops, lots of times there are pests that are associated with these weeds. And these are all major pests that attack peaches. So my belief if that they are building up in the ground cover. If the ground cover dries up, they move up and damage

1 the tree.

So we got some funding to look at this. And just quickly some of the problems with these weedy orchards is they harbor insects and nematodes and viruses. If you have weeds out there that are blooming when you're spraying insecticides, you can get bee kills. So we're telling growers to clean up their act and get rid of those weeds, either planting seeds or using herbicides or even disking. But if you use disking, then you're destroying your organic matter content. You get erosion of the soil. So we're getting growers to plant sods in their orchards and maintaining mice weed strips.

And in some experiments where we had weeds and clover, we had a lot more tarnish plant bug, which is a major pest, compared to where we had, you know, sod or we kept the weeks out by other methods. Two years in a row weeds and clover were bad to have in the orchards.

We worked this out in grower orchards as well, where we had -- oh, just to show you that the damage

corresponds with the abundance, too. Where we had clover and weeds, we had a lot more damage. And this is definitely compared to where we didn't have any weeds in our other kinds of ground cover management.

Our growers got involved in large blocks. They divided these blocks of peaches up into thirds, where they maintained their natural vegetation -- weeds. They cleaned and cultivated periodically and then also planted sod. Then they came along and sprayed everything the same. So the other thing that was different their orchards was the orchard floor. So any difference that we see in pests is because of the orchard floor management.

This is cat facing damage caused by a complex of pests. Where we had weeds, we had the damage compared to our sod in both years. Now growers will disk periodically. And we showed them after that first year, if you disk a little bit more, by getting rid of the weeds, you're going to reduce your damage.

It's not all gravy, though. You know, we did some

nematode counts out there, and some of fescues that we're promoting, like the hard fescue, which is a really nice turf for these orchards, well, that's also going to build up some nematodes. So there are still a few things we have to work out on this system.

We combined mating disruption with ground cover management, and the intent was to reduce our insecticide use. What we have, this bottom line here, is abundance of these tarnish plant bugs in our reduced risk peach block. For two years in a row now we delayed the appearance of these pests into the orchard, because they come from the outside. We couldn't detect them for a month after they started showing up in the conventional orchards that were right next door.

Damage. It looks pretty good. We had no difference in oriental fruit moth damage using mating disruption compared to our conventional methods in both years. Again, we have less cat facing damage where we have our ground covers versus the weeds.

And scale is now starting to show up. Here's the

1	scale. This is the first time we've seen white peach scale
2	in New Jersey orchards. Normally it's a southern pest. Here
3	is a picture of it on the fruit. Here is it on the trunk.
4	And this is San Jose scale. And I wiped off too much of the
5	clay, but that's a K-adin clay treated peach filled with San
6	Jose scale.

We're also seeing other pests now in these orchards that before they weren't a problem, of leek manner leaf roller. And this will enter the fruit. Mating disruption with these twist ties can also damage the trees. You can see this girdling here, and the branch can snap off. You can walk along and see these different colored limbs in the orchard where these things have girdled the trees. And I think Larry is right, that the sprayables are the way to go, if we can get them to work.

But this is the nice part that I think some people in this particular meeting like to see, is that we've reduced the number of applications in our reduced risk program compared to the convention programs, and also the pounds of

1	active ingredient. So here we are still spraying, and we're
2	spraying early season. We're delaying when we put our mating
3	disruption out for the second float of the oriental fruit
4	moth, because we have other early pests that imadan will take
5	care of.

This is another grant that we're looking at resistance to this pest and new ways to control it and time it. And this is a multi state activity which I won't dwell on, because we just started that this year.

So just a few comments on OP use. Some of our bigger growers used to use methyl parathion. But New Jersey had a special restricted label, where we could not apply if there were any flowering weeds, period. So our growers are really savvy about methyl parathion use or Pen Cap use, because they didn't want to kill bees. And we haven't really used it for about two years now, and we are starting to see more and more scale.

Following the loss of Pen Cap, our growers -- a lot of them -- switched to gluthion (phonetic) or maintained

their use of gluthion until their reentry interval was lengthened to 14 days for hand thinning. So then they switched to phosmet or imadan. This is a product that on an A-I basis is not as effective as azinphos methyl. So growers are now putting more total poundage out in their orchards and spraying more. And it's also not as rain fast. And we had a lot of rain this past year, so growers are reapplying it more so than if they were using azinphos methyl.

Peach borer control. Again, lorsban is our most effective control measure. If we don't have control of these boors, we won't have peach trees. You know, it's as simple as that. They kill it.

A few other problems that are facing the eastern peach growers -- I don't want to be exclusive; New Jersey shares some common problems with some other groups -- is market prices. We have some -- a lot of complaints from the growers is that California is dumping fruit. How can they grow and sell and ship peaches for \$5.00 a box, when the box costs \$1.50 and shipping costs \$2.00.

1	So there is a lot of concern that California is
2	dictating the price, and until they run out of peaches, we
3	can't sell our fruit. And that's a common concern that our
4	growers have. Plus they also yell, well, they can ship them
5	here, but we can't ship them there. Well, I try to explain
6	it's because California is a big ag state.

Labor. Labor shortages are common. And if there is a shortage of labor, as there usually is, they would rather have their labor prune the trees, thin the fruit and pick the fruit than hang up these mating disruption dispensers. This is, again, why we have to have some other technologies to deal with mating disruption.

Then there is the plum pox virus. This is a new virus -- or it's an old virus, but it's just been discovered last year in Pennsylvania. It's a quarantine issue now. Now they're finding it up in Canada. They're in an eradication mode. Pennsylvania has already lost about 800 acres of peaches. They're just cutting them down and burning the trees.

1	If this virus gets established, it's really going
2	to have an impact on peaches, California almonds and stone
3	fruit in general. So this is an area where we need some
4	research to come up with some resistant varieties.

I put this slide in. I have -- since I've been working in the soft programs in the east, I've pulled more ticks off of me than I ever have in my life. Fortunately, they weren't deer ticks. But New Jersey has some deer populations that over 100 deer per square mile. And that's one reason why we have these high automobile insurance rates, because of all the collisions with cars and deer.

But I predict, or I expect, that this lime disease is going to take off in our farmworker community and our grower community, because if you're out there spraying some broad spectrum things, you're getting those ticks. And I don't -- you know, I don't like going out there and having to check my body. So if you have some person who can't read some literature about deer ticks or lime disease, and these things are microscopic, smaller than my freckles, you know,

1 they're hard to find.

Okay. Two more slides. These are some needs for eastern peach producers, and these are some needs that some growers have expressed to me. Most importantly, they need to make a living. They have to be able to have products that they can sell at a price that they can pay off their yearly debts and have an income.

They feel, like I said before, that they're at a disadvantage to California, because California appears to be dictating market prices. They need effective alternatives before the standards are removed or their uses are altered. They say that they're losing -- and I believe them. That they're losing products and uses before there are replacements.

They want the reentry intervals to be realistic.

If they're spraying five, seven, 10 or 14 day intervals and there is a 14 day reentry interval on a product, there is no way that they can get their commodity thinned unless they switch to some more disruptive materials like pyrethroids.

They need the tools to do the job. Growers say we need the OPs. They won't want to go to pyrethroids. They don't want to spray more for mites. And also that these pest management programs that I'm supposed to be developing is cost effective and that they work. And they also urge that we keep lorsban or chlorpyrifos for boor control.

And as far as the needs that I think that the academic or the research community needs, we need some more incentives to test some of these products. Right now I do efficacy testing. I get products from companies, spray them out in the field or apply them to the trees, and then I make comparisons with standard products, see whether this stuff works or not.

Being a peach researcher, I get those things last, you know, compared with apples. There are products that are being registered in apples before I even get to look at them, because the chemical companies, or the agro business industry, you know, they have to make their dollars. And they would rather make it on some commodities where they're

going to make their money first, so let's do peaches last.

I was at a meeting last week, and here's all these lists of when these products are going to be submitted and, you know, when they're going to help to get the registrations. Well, peaches weren't even on the lists.

When are they coming? Oh, maybe 2003 or 2004. So peaches are a minor, minor crop that don't get much consideration.

And then we need some more funding to look for these alternatives. And if we do get some funding, I think that our pie in the east has to be bigger than the pie in the west. If we get five or six or seven states on the east coast together to research a problem, by the time we split up that pie, our piece is smaller than those two states out west.

And so when you think about all the universities get a proportion of that money, 19 to 25 to 56 percent, you know, every institution is losing money. So like we had this \$150,000 grant for two years for four institutions. It comes down to less than \$20,000 per investigator per year. That's

1 two	summer	help.
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- 2 MR. EHRMANN: Okay.
- MR. SCHEER: And then one more thing. We
- 4 definitely need more time to do the research, to validate
- 5 this research and then to implement it.
- 6 Thank you.
- 7 MR. EHRMANN: Thank you very much.

8 (Applause.)

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Having just heard a number of the Committee members talk about how you want more time for Committee discussion, I'm a bit in the pickle here in terms of having three more presenters on this one topic before we get to the two other presenters that we were going to have before the end of the day, and also have time for discussion.

So I'm going to suggest that we -- if I could beg the indulgence of Dean and Paul and Genine, that we ask the CARAT members who were going to make a few comments to make those comments and then ask the other presenters to kind of be part of the conversation. Come up to the table and be

1 part of the conversation.

I just don't know how I can -- unless we can reduce those presentations to literally one slide, there is just no way we're going to be able to encourage the kind of Committee discussion that I know you were all just telling me you wanted to have more of. So if somebody has another view, feel free to express it, as always, obviously. But three more presentations, 20 minutes each, and the day is done.

And the information, obviously, is very important, but I just want to figure out an efficient way to get it in.

The only other thing I can think of is if we take like a five minute break and ask the other three presenters literally just to do their summary to make sure we get those points into the discussion. That's another option. Pat, I guess I would -- as the one who helped coordinate this -- ask you what your thought would be in terms of how to -- I don't want to be rude to the folks who came here, but I also want to respect the Committee's desire for discussion time.

PAT: In (inaudible) discussion with the rest of

- the people, you need (inaudible).
- MR. EHRMANN: Well, let's do this. First of
- 3 all --

- DR. BALLING: Well, John -- John?
- 5 MR. EHRMANN: I'm sorry.
- DR. BALLING: You know, they have come a long way, and maybe the timing isn't real good. But I can't imagine

that they can't summarize. Leave their slides alone and

- 9 summarize in three to five minutes what they wanted to say.
- MR. EHRMANN: Well, that's what I was going to

 suggest. If they need a break to do that, we can take a five

 minute break to put their heads together and do that, or we
- can just start doing that if Dean's ready to do that kind of
- on the fly.
- DR. BALLING: And also I would add, I didn't even
- know I was supposed to follow up Sarah's presentation. Sarah
- can just say whatever she wants.
- MR. EHRMANN: Well, let's do this.
- 19 MR. WHALON: This is historic. Balling has

I IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	⊥	nothing? I can't be	ııeve	lt.
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- DR. BALLING: Well, don't worry. I've already been
- 3 picky about comments.
- 4 MALE SPEAKER: Can you believe it, Mark? You don't
- 5 believe it, do you?
- 6 DR. BALLING: You should talk, Whalon, of all
- 7 people here.
- 8 MR. EHRMANN: Let's take a five minute break. Go
- 9 out and grab a soda. I would ask Dean and Paul and Genine to
- 10 come up here so we can quickly figure out a way to get a few
- 11 more points made before we move to the next part of the
- 12 agenda.
- 13 (Whereupon, a brief break was
- 14 taken.)
- 15 MR. EHRMANN: Okay, here's what we're going to do.
- 16 First of all, take your seats, please. I have spoken with
- our three presenters, and I've threatened them that if they
- don't make this concise, they're going to have to come to the
- 19 next meeting of this group.

2	assured me they're going to keep their presentations to three
3	to five minutes, just to kind of hit the key points. And
4	then we will turn to Steve, who won't have anything to say, I
5	understand, and Sarah.
6	FEMALE SPEAKER: Who always has something to say.
7	MR. EHRMANN: Who always has something to say.
8	DR. BALLING: No, a peach thing. I talk peaches.
9	MR. EHRMANN: Just to give a sense of kind of the
LO	generic issues that arise from the presentations we've had,
L1	we'll have some time for discussion to start a discussion
L2	today. I need to leave a little time for public comment, if

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indicated.

Dean Folk is going to go next. The folks have

So, again, I think the information that has been presented by Larry and Peter is extremely valuable. It's just unfortunate that given the number of things on the Committee's agenda, it's hard for us to go into that level of

anyone has signed up for public comment, and then we will

return to this discussion in the morning as the agenda

- detail on all of these presentations.
- 2 So I appreciate Dean and Paul and Genine's

mean I can tell time, but I'm watching it.

- 3 flexibility in summarizing their comments.
- 4 Paul -- or Dean? Excuse me.

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- MR. FOLK: Thanks. Just by way -- by the way, I have my watch here, so I'm watching the time. It doesn't
- A little bit of background, like the others did.

 We have a unique situation in New Jersey. I'm a County

 Agent, but I have State wide responsibility. So I'm a State

 wide Agricultural Agent and have responsibilities just for
 - And I've been doing this in New Jersey for about 20 years now. Before that I was an agriculture consultant in Washington state, where I worked on some similar crops, and I had done my graduate work just previous to that.

coordinating integrated pest management programs for fruit.

So with that, the first slide, talking about peach integrated pest management. What I want to do is talk to you about how we conduct an integrated pest management program

with our growers in New Jersey. So what the other presenters
have said previously, could be said about grapes and applies
here. What the other two speakers said about peaches also
applies here. So I took some of those slides out.

Our program delivery is State wide. We have an agent who coordinates the program. That's myself. We have the County Agents and the specialists who contribute to the program with research, as Peter would, and County Agents who answer questions and get into the fertility end of it. We have full time staff, a program associate stationed in various counties throughout the State. We hire summer scouts which the growers pay for. The little orange disks are the growers. So this is the rough organization of the program.

This program we operate in peaches, apples and blueberries. We work with -- of the total peach acreage in the State, the growers we work with produce about 60 percent of the acreage or the production in the State. The program - the whole program in itself costs about \$350,000 a year to run, of which the growers contribute about \$60,000 per year,

outside grant funds contribute about \$50,000 a year, and the balance is paid for through State IPM funds and some federal funds.

I talked about the funding. The purpose is to educate and promote the total IPM program. We group our participants into our primary participants who are scouted and they pay a scouting fee, and secondary participants or other growers who get information -- IPM information -- through newsletters, meetings or they might scout themselves.

Part of our information transmittal, so to speak, is very one on one, very on-farm. This just shows a picture of the data. We are a data intensive program, which is a little different than Cliff was talking about. We do hire our scouts. The growers don't gather this data. We gather it and they pay us to do it. That little yellow is the report form. And we have an example of on-farm charts which track some of the pheromone trap counts. And we have to keep data in some form, and that's just an example of a close up of a data sheet.

It relies on intensive scouting. That's just an
example of scouting the ground cover in weedy orchard. And
we try to get the growers to use multiple practices, using
information, adherence to the recommendations, looking at
threshold levels when we have them or action levels, getting
them to use alternate middle spraying, a biological control
of mites, reducing the rates, using selective materials,
degree day models, adherence to fertilizer in the Maddaside
(phonetic) recommendations. We try to go for the whole ball
of wax, because that's what growers are interested in.

This is just a pest complex, which you've already seen. But I did want to throw out the fact that there are some diseases. I know we're talking about insects, but I'm going to show you a couple of these diseases, because they do effect insecticide use. We cannot separate them.

Now oriental fruit moth is the main pest. We do use a model for that. We've shown that in the mid-80's we tried to insert the model for first generation, and we were able to reduce insecticide use by 40 percent for the first

generation. So we did insert that into our program, but we would like to see the model used for succeeding generations.

Cat facing damage, which is those true bugs. Those stinging, piercing, sucking mouth part bugs: the ligus bug, tarnish plant bug and stink bugs. This is the type of damage they cause. Obviously you wouldn't see those type of peaches in the store. You wouldn't buy them if you saw them. Those are the critters that do the damage. We also have green pea chafers. These are some of the key pests that mating disruption does not control. Tufted apple bud moth. Just some examples of the damage that would occur.

Diseases. There are many diseases. I just put a couple in here to show you some of the things that growers are up against. This is peach scab. You probably won't find a peach like this in the store. Obviously peach production, like other fruit production, is a competitive business, because growers need quality. And everything the growers do is done to get the best quality fruit. Brown rot. There are thousands and thousands of spores on this fruit. You won't

find this in the store, obviously.

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One of the things we do is we do a post-harvest

analysis every year. We sample. In 100 fruit samples, we

might take 500 samples per year. So we're looking at

anywhere from 50,000 fruit to 70,000 fruit individually at

the end of each harvest to analyze the type of damage that is

present.

And this is just data from several years, '95, '96,

'97 and '98. We can show growers what are the principal

pests. And as you see here, we talked about oriental fruit

moth -- this is the third from the left -- as a primary

target for mating disruption which had been a primary target

with OP use.

But you see the San Jose scale there was a big bar in '98. And I don't have '99 and 2000 data up here yet. But you would see a big bar up to there. You also see cat facing damage on the left -- big bars. They are principal pests and it's very hard to control those without OPs.

Some pesticide survey work. We do a pesticide

survey every year. We take growers' spray records and calculate them backwards and put them into a database, which we've put together to keep a record for grower pesticide use, in-season pest levels and fruit quality. All the data that we gather in our IPM program goes into an access database.

This is A-I applied taken from '92. And what I want to point out here is that you see the largest number is total acreage treated, and you'll see in the next slide it's presented a little differently. Azinphos methyl was the king here, but methyl parathion at eight, two thirds of the way down, was also fairly large. So methyl parathion was heavily used, but not the principal one back then. The other thing you'll see here is that permethrin down at the bottom was 110 acres. Not very big. And that was the -- and S-envalorate (phonetic) up at 881. Those are the pyrethroids.

In 1999 we do this, look at asauna. This is presented a little bit differently. This is a total of 21 growers with 2,960 acres, where we got some spray records from. Asauna at 905 acres, almost a third of the acres, now

have pyrethroids. A big increase from the early '90's.

You also see as you go through the slides that Pen Cap has disappeared. Azinphos methyl is very big in terms of -- you'll see azinphos and guthion up there. And emamectin is also a very large number. But mostly you'll see it in azinphos methyl.

So to take home from these pesticide slides is that we have an increased use of pyrethroids as opposed to the early '90's, and that's a partial result of this transition phase and growers not having many alternatives to go to. You also see more use of ambush pounce in here as a pyrethroid, and that's just a trend. Growers don't want to, but they are.

The other take home from pesticide use, this is a slide from grower codes on the left, pounds of formulated insecticide or pesticide per acre and dollar amounts per acre. And you'll see, if you can read this, you'll have some very large numbers of some growers spending over \$360 per acre and some growers barely hitting \$100 per acre. And if

1	you were to put a column of percent clean fruit there, yo
2	would see that it does not match up to the grower that ha
3	the most expenditures per acre.

And we use this as a teaching tool. We show growers what they use -- and some growers don't know what they use per acre. We show them what they use per acre, what they spend and what their clean fruit was as an educational tool. Because we put them all in the same room and if, you know, grower A over here spent \$400 an acre for fruit and got 80 percent, and grower B over here spent \$200 and he got 90 percent clean fruit, you know, this guy is going to want to know what this guy did. And so that's our teaching tool.

A little bit about -- I'm going to skip that in the interest of time.

MR. EHRMANN: Yeah, let's keep moving.

MR. FOLK: But one thing that was said about mating disruption and that we still have to use pesticides. Mating disruption currently for the hand ties cost about anywhere from 45 to 60 dollars an acre, depending on the type you're

using. That means you're going to have to save at least that
much from an economic viewpoint from the growers' point of
view.

And this shows a grower and a variety -- comparing like varieties where we had split farms. This is from last year, where the same variety had some under mating disruption and some under standard spray practices. And the next column is the cost difference or the amount of insecticide cost we saved by using mating disruption and then the percent dollar change.

And you'll see that even the highest one is around 31 or 32 dollars an acre. Well, that's good, because the growers got the dispensers for free, but that's not good enough. We have to save more money. We have to get the system down. And these are from growers having various types of ground covers: weedy, grass and so forth. So we have to hone the system down a little better.

MR. EHRMANN: Can you just go to your -- you're going to have to go to your summary.

1	MR.	FOLK:	And	in	summary,	that	is	it.
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- MR. EHRMANN: Oh, hey, what good timing. Thank you
- 3 very much.
- 4 (Applause.)
- MR. EHRMANN: Okay, Paul? Paul has dispensed with
- 6 his slides, he tells me.
- 7 MR. GILIBO: I'm not our peach specialist, who is
- 8 Dan Horton. But he and I were discussing who should come to
- 9 this kind of meeting, and I said Dan -- I said I was in EPA
- for five years. I have a lot higher threshold for crushing
- boredom, so let me go.
- 12 (Laughter.)
- This morning I was awake and sitting up in my seat
- for two consecutive hours at one point.
- 15 (Laughter.)
- No. I think this meeting has been real useful.
- 17 And I will cut right to the chase.
- 18 The southeastern peach industry includes about 11
- 19 states, and we have about 40 percent of the U.S. fresh peach

acreage. It's about 100 million dollars or more per year, so it's a big deal.

Almost all of our peaches are sold as fresh wholesale. And that's also a key point, which means we load these things up on trucks and we ship them to supermarkets in places across the United States. These truck loads are worth about \$17,000 apiece. If the trucks get there and there are even a few wormy peaches in there, the buyer will not accept them. There is no secondary market, so the grower has lost his entire seasonal investment, the transportation cost and ironically even has to pay to get rid of them.

And you might say, well, why, you know, can't we have some kind of educational program or some kind of regulation, you know, to make the supermarkets lower their threshold a little bit. Well, who's driving that? Well, we're driving it. You know, even if a like group like this, if you go to Kroeger or Public's or Safeway or whatever your favorite supermarket is, and you buy a wormy peach there one time, you might forgive them.

1	But if you go there twice in a row and you buy
2	wormy peaches, you might never shop in that store again, and
3	you certainly won't buy their peaches. Most people would not
4	only not go back to that store, but they might be on the
5	phone with their attorney. So that's why the threshold is
б	so, so low.

Another point that I want to make here is our situation is not exactly like the other region. Our big pest is plum curculeo. It's the one that produces those wormy fruits. We have to be able to control that pest or we cannot stay in business. We have to.

Organophosphates are the insecticide of choice, because they're very effective against that plum curculeo. They also suppress a number of secondary pests, as other speakers have eluded to. In 45 years of use in peaches, we have not had any resistance problems with organophosphates and plum curculeo. And that's a big, big point.

And finally, and not necessarily least important, organophosphates are relatively inexpensive. When I finished

my undergraduate degree, I went and talked to a group, you
know, about sustainable ag. And, you know, I really thought
I knew it all. An older gentleman got up at the end and he
said, son. He said do you know what sustainable agriculture
is? He said that's agriculture that makes money. And I have
never forgotten that, because they are -- that's their job,
just like your job.

Another thing to keep in mind, growers invest more than \$2,400 per acre before they harvest a single peach.

Peach tree borers and scale insects that the other speakers have talked about, they kill peach trees. So you have to control those. That's the other big place where we use an organophosphate. Virtually every acre in the southeast is sprayed one time post-season with chlorpyrifos to control borers.

Now to -- we have some opportunities to reduce our dependence on organophosphates, and this is what it will take. To reduce our reliance on phosmet, which is what we use to control plum curculeo, we need a consistent way to

predict when the curculeo is going to be there. And that
means we've got to come up with an accurate model. A second
thing is we need some insecticide or some other method to
control a plum curculeo that does not exacerbate secondary
pests.

Since the 80's we've started introducing some pyrethroids into our system. Now we have problems with scale insects that we used to never have to spray for. It's because that pyrethroid is not controlling that secondary pest like the organophosphates did.

To get away from chlorpyrifos to control peach tree borer, there are some mating disruption chemicals available, and some of the speakers talked about that. One big problem is the price for the twist on tie dispensing of the pheromones. A hundred dollars per acre. If you have a thousand acre peach orchard, it's \$100,000. Chlorpyrifos costs \$25 an acre. Pretty easy to see which one you would choose. And chlorpyrifos is very effective against peach tree borer.

1	The spraying pheromone is less expensive, but in a	Э
2	limited test so far, we couldn't prove that it was going t	C
3	work. And we need to be able to prove that kind of stuff.	

In summary, with the new tools that we have and the progress that we're making with modeling, we think we really do have an opportunity to reduce our reliance on organophosphates. We are going to need time. We're thinking that a realistic time frame is maybe five or six years if we have adequate funding.

We need to keep in mind that right now peach producers have great confidence in what we say, because we have not steered them wrong. We say, hey, spray this, they spray it. We say you don't need to spray this, they won't spray it. We cannot afford to jeopardize that relationship by bringing new things forward that we have not tested adequately. We have to know for sure that they're going to work before we recommend them.

Finally, we talked about a number of new compounds that are coming onto the market. And we are aggressively

1	testing these things. One big unknown is we do not know how
2	these new materials are going to control secondary pests.
3	Keep in mind that organophosphates are gang busters on a wide
4	variety of pests. And so in a lot of cases we're controlling
5	things that we don't know we're controlling. And
6	organophosphates have been used in peaches in the southeast
7	for so long, we have hardly anybody that even remembers a
8	production system that did not rely on organophosphates.
9	Like I said, we introduced pyrethroids, and low and
10	behold, we have a new problem we have to treat for. We may
11	find another pesticide effective against plum curculeo, and
12	it may bring up another problem.
13	So just keep in mind this is going to be an ongoing
14	thing. There is never going to be an end and say, okay, we

17 That's all I have to say.

to be a continuous process.

MR. EHRMANN: Thank you very much, Paul.

19 (Applause.)

15

16

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have arrived. This is where we're going to be. It's going

Genine -- is it Gettle? -- from EPA

2	Region 4 is going to make some comments about funding
3	opportunities.
4	MS. GETTLE: And I have to confess that my
5	presentation was going to be short all along.
6	(Laughter.)
7	So I can do this pretty quickly. I wanted to talk
8	just a couple of minutes about a couple of projects that

MR. EHRMANN:

we have available to us at EPA.

We have funded two different activities at different times. We funded originally in 1998 an activity which looked at -- and I have to read this. They sprayed alternate row middles. That was the name of it. It was the Arm project.

Region 4 had implemented using various grant mechanisms that

And basically what they were looking at there was a mechanism to apply less pesticide. They didn't spray the entire grove. They sprayed alternate rows in the middle of the grove, and they found that to be just as effective as if

1 they had sprayed the entire grove.

Now unfortunately this project was conducted with some products that are no longer available to us. But one of the challenges that we have in the region, and that we're looking at in the region and at EPA, is trying to take this technology and look at it and offer opportunities for people to expand upon it so that we can use that technology and reduce the pesticide use in the groves.

The second project is a project that we're funding this year. And we're using agricultural initiative money to fund a project that will do a systematic evaluation of low risk insecticides to control the pests that we have in the southeastern region in the United States.

We think that this is very promising. We anticipate field trials to begin very soon. Dan Horton, who Paul Gilibo mentioned, is the person who is doing this research, and we anticipate that the field trials will begin probably in South Carolina. And he will systematically go through a number of different pesticides and evaluate their

1	low risk probability and efficacy. And then we will evaluate
2	after the first two years of the project and come back and
3	determine if we need to do some additional work or put some
4	additional money into this activity.

These activities have been funded using PESP grants, which we work with OPP on, or ag initiative money. The challenge that we have in the region is that we always have more grant proposals and more requests for money than we have available to give out. We have to evaluate and make decisions and make cuts and decide what we can fund and what we can't fund, and come up with proposals that we think will move the process forward with the money that we have available.

14 And that's all I have to say.

MR. EHRMANN: Thank you very much.

16 (Applause.)

MR. EHRMANN: Again, on behalf of the Committee, let me both thank and apologize to particularly the last three presenters of terms of the need to abbreviate your

1	comments.	But	Ι	think	that	will	help	us	all	have	more
2	opportunity	/ foi	<u> </u>	discuss	sion.						

We've asked, as I mentioned earlier, one presenter who knew she was going to do this, and one presenter who just found out he was going to do this, as CARAT members to reflect a bit upon some of the issues, both based on what we've heard in these presentations and their own experience.

And Sarah, who has spoken to the Committee before about some of the issues and the projects that she's engaged in, is going to highlight some of those issues, as well as some of her other thoughts.

Sarah?

MS. LYNCH: Yeah. The good news for all of you is although I am a very talkative person, I've got to be out of here at 5 o'clock to get home in time to relieve the babysitter. So if I start talking way to fast, because there is a good amount to cover, slow me down. But I do want to make sure I get out of here and you're all out of here by five.

1	I think this is a perfect time for me to remind
2	folks or to tell folks about a workshop that was held last
3	summer, because we've heard some of the stories of
4	individuals trying out in the field level to bring about
5	transition. And what I think we're trying to do right now is
6	step back and look at what are some of what we call the
7	critical elements in transitioning to biologically based pest
8	management systems.

And this was actually the focus of a workshop that took place -- actually two of them that took place last summer as we began to think, or wanting to think, about transition issues.

Now the workshop was co-sponsored by a bunch of people: the World Wildlife Fund, Gerber, Del Monte, Lodi-Woodbridge, the collaboration that is the WWF/WPVG/AUW collaboration with World Wildlife Fund, Wisconsin Potato and Vegetable Growers Association, the University of Wisconsin and the West Central Michigan Crop Management Association. And then there was a follow on workshop that

1 was co-sponsored by USDA.

And I want to focus a bit on this notion of co-sponsors, because we've talked about partnerships. We've talked about sort of stakeholders. And I think it's important to think -- to see that we have a private -- the public interest groups. We have the food processors, the commodity associations, university and ag business, as well as the Department of Agriculture. And we have a lot of participation from USDA.

All of these entities have something to say. For better or for worse, the decisions that are being made on farms have an impact on a much broader community, and therefore there are more people who have an interest in and a different perspective on what the outcome needs to be.

And I think what's interesting in looking at this is that with the diversity of interests, we're still able to come together on particular sets of issues on the need to transition and that we didn't all agree on every aspect. We don't agree on a lot of things, in fact. But at least there

1	is a core bit in terms of the importance of working in a more
2	collaborative fashion to transition to more biologically
3	based pest management systems.

The purpose was at that time to increase the attention given to transition issues. It was also a need -- a recognition that while the focus, of course, right now is the Food Quality Protection Act and the requirements that are going to be -- or, you know, the registration and reregistration of products, etc., and the need to respond to that law.

But actually the pressure is facing growers. And you've heard that from the previous presentations. In fact, I never thought that I should probably put California as one of the major factors of change, too, in terms of forcing change in other states.

But you have the Food Quality Protection Act, consumer preferences, pest resistance, farmworker safety, food processor contracts and even credit systems. All of these things are putting pressure on growers. So I think not

to look just at the pest management systems. That's why I
think it's much more important to be looking at a broader,
sort of crop management system as opposed to just trying to
respond today to the Food Quality Protection Act, when
tomorrow there are other issues that we're going to have to
be looking at. So we should be thinking about the totality
now.

In your handout there is some information on what we came up with in terms of -- and this was over the course of these two meetings with a broad array of stakeholders -- what are the critical elements in transitionally to more biologically based pest management systems. What do you have to have in place, because it's not just flip the switch and it all happens. It's a much more complex array.

So we identified six things -- six sort of broad categories of elements that needed to be in place in order for a comprehensive transition strategy to be implementable, so to speak. Not all of these have equal importance in different cropping systems at different times, different

places. It's sort of a different array or different emphasis
on some of those different categories. But we need to be
thinking about all of these issues.

I won't go into them for the interest of time, because there is a bit of a description in a handout that you've got that has more of those issues discussed and what we meant by them. But obviously we all understand that there are -- the importance of each of these working together.

One of the things that I would say is some of you may be saying, yes, we know all that. We know that you need to have, you know, buy in. You have to have research and extension. That's all that many of the people have talked about. I would say that one of the things that is missing from what I've heard, though, is a vision.

And that comes to the measurable goals and timetables. Where do you see 21st century agriculture going for your particular commodity? What is the vision? What are you communicating in terms of where growers need to be in order to be competitive? And that, I think, gets to the

1 measurable goals and timetables.

I wanted to just now step back now from sort of that generic description of what the transition critical elements are to elaborate on just two points that I think are important that we've eluded to earlier today. And that is this sort of stakeholder process in setting targets and timetables that are clear and transparent to not to the growers and to the agricultural community, but to the community at large.

As some of you know, World Wildlife Fund and the Wisconsin Potato and Vegetable Growers have been in a collaboration where we had established certain goals in terms of pesticide -- reducing pesticide use, risk and reliance, adoption of a bio intensive IPM, wildlife and ecosystem conservation, figuring out ways to reward progress for meeting those goals, and developing and field testing measurement methods. Now part of that measurement methods comes to setting and articulating goals and timetables.

Now why is that important? Well, here we have a

situation where over the last -- by setting those goals and timetables, one, three and five year goals, and figuring out a way that we both all could agree on to measure that, you have a situation where a great accomplishment has been achieved. As others have said, there has been significant progress being made in reducing reliance on pesticides -- high risk pesticides.

Here is a situation where because you had other stakeholders involved -- not just the land grant university system and the affected community, the grower community, but other stakeholders -- you have the success not only being talked about by the WPVG, but you have other stakeholders coming in and being able to acclaim the progress that's being made. So, again, you have brought other people into the process who can then comment on and bring to the public attention the real successes that are being made in terms of risk reduction.

The other thing is, so it's not only just being able to articulate to the broader community, to the public,

to taxpayers, to your neighbors and to the consumers in the
supermarket. But there is another benefit that being able to
say specifically what you want -- what needs to be done in
terms of target and timetables, and figuring out a way to
measure this kind of progress, is here is some research or
some data from

-- as you know we set -- worked out a measure for looking at risk reduction. And using this method, we're able to track reductions over time.

We're also able to look at -- and in our case we call it toxicity units, but it's really -- it's a way of looking at pesticide use converted into our risk factor. But this is data for all farms on a one acre basis. What is their toxicity unit for that particular acre, looking at approximately 90 growers. And you can see, you get this distribution of use, which means that there are some growers, who on a per acre basis for the same crop in the same year and oftentimes in the same region, are using a lot less -- a lot fewer pesticides. Some using a lot more in terms of

1 pesticide risk.

And what we've now done with resources from grant money that we've received from the American Farm Land Trust and the EPA, we have hired that one person, that outreach coordinator, who is now able to work on an individual basis with growers. And you can see that you can convert that goal, that ability to measure, and you can take it right to the farm level. Those arrows now represent individual farmers using their data, understanding where they are on the continuum, being able to work at their farm table to help them identify and adopt alternative practices that will reduce their reliance on specific chemicals and, you know, in terms of different cropping systems or practices.

So I just offer that as a way of, again, trying to link up why it's so important to have that vision of where you're trying to go, not only to communicate it to the public at large, which I think is an important part of what needs to happen, but also because somehow we have to be able to work much more closely with the growers to pull them along to let

them know about these alternatives that in some cases are
available. Some cases are not. And that's where the
research needs to go. But clearly there is the need to be
able to work and to work with them.

Now one thing also that came out of our workshop — and this is a bit of self promotion, I suppose. But was the need to highlight some of the success stories of transition. So hot off the press is Lessons from the Farm. Eight successful partnerships that protect diversity through reducing risk from pesticides. This is only eight of the stories. There are other great stories that are happening in the field.

We heard earlier about the Pew Charitable Trust efforts. There are others going on with the transition strategies that USDA is working on. So right now it's just the first version, and I'm hoping that over time there will be more. But I think that there are stories out there that can -- and experience that can really shape and inform all of those who want to address this issue.

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MR. EHRMANN: Thank you, Sarah.

3 (Applause.)

4 MR. EHRMANN: John, a question or a comment?

5 MR. RIGOLIZZO: I have a comment and then I've got

6 a train to catch. I'm a fruit and vegetable grower from New

7 Jersey. I got a lot out of what was said here today. I

really did. I know Peter and Dean Folk personally. They do

9 a lot of work in our state.

I just wanted to reflect what I got out of this before I run out of here. And I do apologize for having to leave early. Somebody said that on-farm research and implementation is the best thing for IPM. And as an IPM cooperator, I do it for fruit and vegetables and I pay both ways. That's the absolute truth.

If you want IPM to be a success, you've got to get it out on the farm. You've got to get these things out there and let growers play with them, because growers are always the ones that make this stuff work. You know, as good as the

1	companies are and the scientists are, it's the growers who
2	use it and the growers that make it work and make it
3	profitable.

I really have a problem with transition. This whole concept of transition, because for us in the peach industry especially -- and in the vegetable industry -- this transition is costing me money. It's costing us a lot of money as growers. Because what transition means to me is that there is a change -- a process of change -- and we've always been told about the hope for something better.

Until we get something better, we had things taken away. And some of those tools -- like for us in peaches, I could tell you that we used to use parathion. And it was relatively inexpensive, and it was very effective, and we sprayed a lot less. And now we have the IPM and we do azinphos methyl or emamectin. And for me, it means spraying twice as much material at four times the cost.

So I'm not getting the dollars back in this business -- in this fruit business -- that we used to get 20

1	years ago. This is a difficult problem, and I'm afraid that
2	as we go through this transition process, if we keep
3	eliminating without having some alternative, or until we do
4	have an effective alternative, you're transitioning us out of
5	business. That's the problem that I have representing
6	farmers in my area.

And somebody else said about the time line for this transition, that it probably should be five years, with funding, politics, government and everything else, I would make a small prediction that 10 years would be more realistic. And I would hope that with all the good stuff that we're doing in this effort, and the farmers, not only in New Jersey but all around this country are very accepting of new technology, would love to use it all to the best advantage of the people that buy our products.

But if you're costing us more money today than it was five or ten years ago in an effort to help the people of this country and you're going to put us out of business, that means they're going to buy it from some place else -- some

- other country -- who is really not doing what we're doing
- 2 here. It's a problem for me.
- 3 So I just wanted to emphasize those couple of
- 4 points, and I do appreciate the opportunity. Next time
- 5 probably Mr. Laurie will be here. He's probably more
- 6 eloquent than I am.
- 7 MR. EHRMANN: Well, we appreciate your comments.
- 8 I'm glad you got them in before you had to take off.
- 9 MR. RIGOLIZZO: Thank you.
- MR. EHRMANN: Steve, some thoughts?
- 11 DR. BALLING: Del Monte has been involved in trying
- to implement IPM, at least since I've been there for 13
- 13 years. And I really liked Cliff's comment that IPM turns out
- to be integrated people management more than integrated pest
- management.
- We've tried a lot of different models. A lot of
- different attempts to try to move integrated pest management
- in different ways. Oddly enough, one of our most successful
- was the Randall Island IPM in the pear program that Jean-Mari

1	and I worked on back in the early '90's. And I don't know if
2	we learned as much as we could have from that, because that
3	program really worked well.

One of the reasons that we had this transition

meeting -- and since then transition has become a dirty word.

It wasn't at the time. In fact, it was meant to say, how in

the hell are we going to transition. As we lose all these

chemicals, what are we going to do. Whatever the term is

appropriate now, the fact is, what we're trying to find is

models for helping us develop a stable pest management system

so we don't have the rug yanked out from under us and so that

we're competitive.

I apologize to the easterners on peaches, but California is quite a bit more competitive. I now see more than ever why we grow our peaches in California. And I'll skip the rest of my peach talk. We can do that later.

(Laughter.)

So there are two things that we have found that are critical to implementing IPM. One is motivation. EPA is

- doing a fine job of motivating us.
- 2 (Laughter.)
- 3 MR. EHRMANN: Thank you, Steve.
- DR. BALLING: And two is the people management
- part. And that's one of the things we're struggling with.
- 6 And in deference -- since I forgot my ties and I had to wear
- 7 Larry Elworth's tie today, I'll speak for him. One of the
- 8 things that he is working on that we've been involved in and
- 9 am very excited about is some implementation projects through
- 10 the pest management strategic plan effort that are very
- 11 similar to what
- 12 Lodi-Woodbridge is trying to do and what we did at Randall
- 13 Island. And I think that's a very exciting opportunity for
- us. It really involves on-farm working with the consultants.
- 15 Hands on kind of efforts that if you look at Gerber's
- programs, Campbell Soup's programs and our successful ones,
- 17 that's what is involved.
- MR. EHRMANN: Great. Do you want to add to that,
- 19 Jean-Mari?

1	MS. PELTIER: If I can just follow up a second on
2	what Steve said. In the area of people management and
3	Secretary Rominger, this is probably most directed to USDA.
4	I think that in this round of farm bill negotiations, we need
5	to really take a look at our delivery system that we have as
6	we're trying to move into IPM implementation.

I think that in the case of Randall Island certainly, and I think also one of the precipitating actions at Lodi-Woodbridge -- I could be wrong -- was the fact that the traditional system of using county extension agents -- of using what we call in California farm advisors -- fell apart.

We had the biggest pear producing district in the state, which translates to the biggest pear producing county in the United States, I think. And the farm advisor for pears was moved out right at the time we were doing Randall Island. So there was no extension. There was the university. And there were individual private chemical company PCAs who were involved.

And I think that one of the critical elements that
we had that made Randall Island work was the fact that we had
PCAs by the end of the system. So when growers went to the
coffee shop, they were getting the same story from the PCAs
as they would have if they had been talking to a farm
advisor. And so I think when we're dealing with these
systems that are information management intensive, we've got
to take a new look at the way we deliver that information out
to the field.

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And that's why I was probing, Cliff, in your questions about where does the money on IPM go. If what it's going to is delivery system to the grower, that's a really critical element. Part of one of the critical elements in Randall Island was also offsetting the cost of the pesticide, because the cost of using the pheromone was tremendously more expensive than using the OP. And so until we got to the point where the use of the pheromone about equalized over time, you know, it took some seed money to make that happen. But even more critical is the delivery system, I think.

1	MR. EHRMANN: Okay. Let me just in terms of our
2	time management for the rest of the afternoon, we've got
3	about 20 or 25 minutes left until we were scheduled
4	about 20 minutes left until we were scheduled to adjourn
5	at 5:15.
6	So what I would like to do is have discussion for
7	the next 15 minutes or so. I've got several people
8	the sign up sheet just said public sign up sheet. So I'm
9	not sure
10	(END OF TAPE FIVE, SIDE A)
11	MR. EHRMANN: public comment versus who thought
12	they were just signing in. Creseda Silvers?
13	MS. SILVERS: Creseda.
14	MR. EHRMANN: Creseda. You want to make a public
15	comment? Okay, that's one. Jim Craney?
16	FEMALE SPEAKER: He's over there.
17	MR. EHRMANN: Do you have a comment? Okay.
18	Frederick Betts?

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MR. BETTS: Yes.

19

1		MR. E	HRMANN:	Okay.	And	Linda	Green?	No?	Is	
2	there a	anybody	else who	wanted	to	make a	public	comme	nt that	I
3	missed?	? Yes,	sir?							

4 MR. WILSON: Jeff Wilson.

MR. EHRMANN: Jeff Wilson, okay. Okay, so four people. Okay, great. Let's go on with discussion. Again, what I'm going to do overnight is there were a number of issues made in Sarah's presentation and the other presenters of kind of key factors, elements of success, challenges, etc. We'll try to summarize those overnight, obviously adding to that what's coming out of this discussion in the next 15 minutes, and come in with a slide or two to kind of start that discussion with just to give you something to react to.

Again, not to get a consensus of a formal process, but just to say here are the kinds of issues that need to be considered, here is the challenges and here is the opportunities to help structure that discussion in the morning.

- 5

I guess the other thing I would ask while I have

- the floor is that we had talked with the co-chairs this
- 2 morning about the possibility of starting at 8:30. I don't
- 3 know if it's -- I know, Rich, you're not going to be able to
- 4 be here that early.
- 5 MR. ROMINGER: But I think you should start at
- 6 8:30.
- 7 MR. EHRMANN: Start at 8:30. Okay. Is that all
- 8 right with you, Mike?
- 9 MR. MCCABE: Yes.
- 10 MR. EHRMANN: Okay. So we will -- let's plan to
- start, if we can, at 8:30 in the morning, and that will give
- us a little extra time for that discussion. Because I know
- by 1 o'clock -- even though the agenda says 1:15, I'm sure by
- 14 1 o'clock people are going to start edging toward their plane
- 15 ticket. So let's agree to start at 8:30, if we could.
- 16 Cindy, thanks for being patience.
- 17 MS. BAKER: Not a problem. And I'll make my
- comment short, because I see we have this topic on the agenda
- 19 also for tomorrow. But I didn't know if all the presenters

1	who presented would be here tomorrow. And I wanted to thank
2	all of them. I think that Cliff and Peter and Paul and Larry
3	and Dean are all living real life what we're talking about
4	when we talk about transition.

And I think what became really apparent to me in listening to all their different presentations and the topics that they had there that this is -- and I sound like a broken record -- but another prime candidate for a workgroup type discussion. Because what I think came out loud and clear is that not every situation and not every crop and not every area of the country is the same when you start talking about transition and all the different complex issues that come in.

And so I would propose that we add this to the list of potential workgroup topics and that be one of transition.

MR. EHRMANN: Okay. Cliff?

MR. OHMART: Just a specific follow up to what

Jean-Mari said. I think a lot of what she said is true. But

I did want to point out that at least in our area one of the

reasons our program has been so successful is because the

1	University Cooperative Extension Farm Advisor, Paul Virdegaul
2	(phonetic), is one of the best in the state, and we've had
3	incredible cooperation.

But personally what I see, I see a serious issue with the Cooperative Extension in California, and I'm pretty sure some of it is related to more local politics of the University of California than maybe at the national level, even though the money comes from there. I've been trying to figure it out myself. There are some serious political things going on and the system is eroding.

Take the Department of Entomology, for example.

You see Davis is that very top department, but they're
literally forced to be going towards things like genomics,
because if not, they're not going to get any money. They're
not going to be promoted to the university. In fact, the
department chair a couple of years ago said if they did more
practical based research, they would be out of business in a
couple of years.

So, you know, it's very complicated. But I think

1	some of the things farmers really need, the University of
2	California is less and less able to deliver it for various
3	reasons. And it's serious.

MR. EHRMANN: Okay. Wally?

DR. EWART: One of the issues that I think was brought up by the presenters, and that is very important, is marketability. And that has to do with quality. That has to do with many factors. And so for process foods you have certain standards. For fresh foods, you have certain standards.

But one of the issues we didn't talk about very
much was the export market and the fact that a lot of these
crops are dependent upon exports and also dependent upon
having tolerances in those countries where those exports go.
And right now we have what we consider to be a looming
problem and a problem that has already started with the new
materials not having registrations in the countries we export
to, and not having the CODEX tolerances.

And so that's an issue that needs to be put into

1	the scheme. The transition or pest management systems have
2	to address the fact that we have to be able to market the
3	crop, and if the crop is something that goes abroad, it has
4	to have the regulations in those countries that will allow it
5	to be exported.

MR. EHRMANN: Other comments on issues or challenges or opportunities that came to your mind as you were listening to the various presentations?

Mike?

MR. CARTER: Yeah. Actually I would like to reinforce some of the things that Sarah said. Again, I represent the Wisconsin Potato and Vegetable Growers

Association, which is the group that has partnered with the World Wildlife Fund. And I wanted to give a little bit of a perspective from the growers' angle on this project. I think Sarah did an outstanding job of relaying to you some of the issues that we face.

I wanted to talk quickly a little bit about some of the grower buy-in issues that we have. When we went out and

1	we tried to sell this program, there were some very distinct
2	things that the growers needed to get out of the program to
3	make it worth their while. And she hit on some of those,
4	things like public recognition, which obviously we've gotten

Help direct public policy. That's -- you know, I'm sitting here, so I guess we're -- you know, we're doing pretty well in that respect. Public investment. We're getting better at that. It's the right thing to do and probably is the most important.

And in saying that, I recognize that what I look like probably to many of my agricultural brethren is the goody two shoes. And I remember how goody two shoes were treated back in school.

(Laughter.)

And it may or it may not explain why I ate lunch by myself today.

(Laughter.)

At any rate, the point isn't to say this is how you

1	should do it. The point is to say that we are making an
2	attempt to address the challenges of FQPA. And we don't have
3	it completely figured out by a long shot. But we are making
4	that attempt, and I know that that will probably receive a
5	certain amount of criticism.

On the other hand, I think Sarah may have received some criticism from some of the folks in her world or universe by allowing a group like ours to actually have three and five year goals and not have that immediate reduction in the use of certain pesticides.

What I'm saying is, is that by partnering -- and there are a lot of different sort of partnerships and Sarah mentioned this as well. The partnerships that we have forged, I think, is very unique, but it demonstrates that the partnerships don't have to be grower group and university. But they can be grower group and environmental organization or any other number of ways. You know, your creativity is only what limits you there.

And I have some other points, and maybe I can make

1	them later tomorrow. I know that we're running short or
2	time. I do have actually one quick question for Cliff,
3	though.

You mentioned something that you didn't really have any economic data on certain IPM measures. For us that's actually a very important part, and I'm a little bit curious. How do you determine what the thresholds are of certain pests if you don't use economic data? I didn't completely understand that.

MR. OHMART: Well, we do have economic data. But in the things we've been concentrating on, especially spider mites and leaf hoppers which we really concentrate on, the thresholds that people use are all over the map. And so we're trying to refine things.

But there have been economic studies done. Part of the problem with winegrapes, is you've got a varying anywhere from \$200 a ton to \$2,000 a ton in the same region, so quality is what counts. And so it makes the economics even more complicated. But what people have looked at is the

economics of cover cropping, the economics of weed management systems and that kind of thing. And the numbers are there, but they're just very difficult to deal with because of this variation of people doing a whole different range of levels of things.

MR. CARTER: Yeah, thanks. And the reason I bring that up is because economics is an incredibly important part of our program. If it's not economically feasible -- if we get a lower or a reduced risk chemical in place to take an OP's place, for example, there isn't a whole lot we can do to promote it other than say it's safer and it's better and those sort of things.

The problem is -- and I know this has been said by other folks. The problem is that all of these things will be driven at the farm level. And unless you know what those economic thresholds are -- and I understand the challenges that you face there -- you're going to have one heck of a time getting producers to implement some of these things, because to them, this is their business. This is their

livelihood.	And if the	y don't know	what it's	going to	cost
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2 they probably won't do it because it's just too vague of a

3 gamble. The unknowns are just too great to take a chance.

4 So with that I'll shut up for the day.

MR. EHRMANN: Okay. Erik?

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MR. OLSON: Yeah. First of all, I want to apologize, because I may not be here tomorrow. I've got a little crisis brewing, or a big one. So I wanted to just first of all thank the presenters on the transition issues, because I thought there were some excellent presentations and certainly thought provoking. And in particular, I think some of the lessons that all of them seem to have learned from their experience was useful to me.

I spent several weeks this summer travelling throughout the midwest, visiting with both organic and conventional growers and talking to them about these issues. And a lot of the same lessons that I heard them speak about, I heard more about today.

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I wanted to also just share one thought.

1	heard several times people suggesting that maybe we need
2	workgroups to address certain issues that have come up. I
3	think obviously many of the issues virtually all the
4	issues we've talked about could use more discussion.

I wonder -- in fact, I think it would be a mistake for us to start proliferating a whole bunch of new workgroups. I tend to think that some of the issues we've discussed might benefit from perhaps a workshop where some of these issues could be discussed.

But I'm concerned that going into -- spinning off into a whole bunch of new workgroups may siphon away the energies of members of this Committee and of the agency's, and that it will be difficult to, at least in my mind, justify a whole new additional set of processes to go in that direction. So, you know, I do think it might be worthwhile for us to have maybe a workshop at which some of these key issues are discussed.

But having standing committees, I just question whether, you know, it's likely we'll have adequate

1	participation	or	that	it	might	end	up	siphoning	a	lot	of
2	EPA's and USDA	\'s	resou	ırce	es.						

MR. EHRMANN: Yeah, Steve?

MR. RUTZ: Yeah. I'm very interested in, of course, the state level compliance issues associated with any sort of transitional process like this, especially when you're talking about large educational challenges and cost differentials in terms of old versus new technologies.

But I'm also particularly interested in what the transition implications are relative to the Section 18 process. You know, thinking back to the peach situation there, if there are OPs that are no longer available and growers feel as though the new technologies are not yet ready for use, what does that do in terms of the consideration of OPs in terms of Section 18 options.

So I'd like to throw that out for consideration.

MR. EHRMANN: Okay. Do you want to comment?

MS. MULKEY: Well, that's not an easy one. The

issuance -- if an OP is -- let's say the tolerance has been

revoked. And then if a Section 18 were issued, there would have to be a tolerance issued, which would mean that the safety finding would have to be made -- the FQPA safety finding.

Now it's possible that as we manage the risks of the OPs to and through the cumulative assessment that one of the things we can do is leave room in the cup, if you will, for emergency authorizations. That is certainly a possible scenario.

And I think it is worth mentioning that some of these cups we've been talking about are kid's foods which tend to have residues, which makes it harder to save enough room in the cup. But maybe some of them have less residues than others, or some use patterns that have less residues than others. So that is a possible scenario.

But, of course, the presumption of your scenario was that that pesticide combination had been revoked. If it had been revoked, it was probably revoked for a reason that had to do with exposure and residues. So it makes it less

- 1 likely that we would be able to save enough room.
- 2 But that's the kind of thing that could be
- 3 contemplated as part of a management system.
- MR. RUTZ: Just to make one comment there. I think
 also a key part of that, of course, is the implementation
 process in terms of what choices are made in the whole
 communication scenario that occurs there, too. So hopefully
 the best choices will be made up front when those selections
 are made.
- MS. MULKEY: Well, you certainly -- one strives for that every day in every way.
- 12 MR. EHRMANN: Steve?

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DR. BALLING: One quick comment. I was just trying to think about sort of how to piece all of this together that we've discussed this afternoon. And I think one of the issues that we're seeing is right now the reduction in available compounds is dropping off at a fairly gentle slope. I think everyone has done a great job of really trying to be as refined and narrow as possible in trying to absolutely

1 maximize the number of available uses that we maintain.

But I don't think anyone here has any expectation that once we hit cumulative that there won't be a fairly precipitous drop in available uses of a fair number of currently used compounds. So a lot of this discussion about transition is really in anticipation of the cumulative issue for OPs, carbamates, especially.

And I think one of the things that I guess -- I guess the take home message from this afternoon is that the rate of increase of available alternatives -- be they new chemical alternatives, be they cultural or whatever, IPM type alternatives -- has got to increase at a rate that's going to meet that time period, whatever number of years that is away. I hope it's years away, Marcia.

So for that reason, that is, I think, the emphasis to USDA from a research and implementation perspective, and EPA from a registration perspective, that we need a ramp up on that end to help us try to get through this process. And then it's incumbent on us in the ag community to find ways to

make it work, to use our models that we've been trying to propose and those kinds of things.

MR. EHRMANN: Okay. Again, we'll be coming back to these issues in the morning. Let me just quickly review the morning agenda the way I think it now sits, which is we will start at 8:30 with these kind of key points drawn from this discussion on transition related issues.

We'll have that discussion for an hour or so and then move to the presentation on drinking water. And there is both presentation and obviously discussion time for the drinking water issues. Then the public health pesticide activities, and then an explicit discussion about workgroups and committee process. And we may move that last item up a little bit, depending on the schedule of the co-chairs, because I want to make sure they're both here for that discussion.

And, Erik, your thoughts and the thoughts we heard earlier, you know, will kind of lay all of that on the table and the co-chairs will want to discuss with you some of their

1	ideas specifically about how to proceed and reflect the
2	desires of the Committee as it relates to how the Committee's
3	work should be conducted, both during the meetings and
4	between meetings, etc. So we've heard those comments
5	throughout the day and have been noting that, as we've
6	mentioned.

Let me now turn to public comment. I guess there are four presenters that I heard. I would like to give each presenter two minutes for your comments. If you have written comments, please submit those to Margie Fehrenbach, our designated federal official, and she'll make sure they get in the docket if you don't have time to communicate all of your thoughts in that two minute period.

14 And let's start first with -- how do you say it,
15 again?

MS. SILVERS: Creseda.

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17 MR. EHRMANN: Creseda.

MS. SILVERS: As I already mentioned, my name is

Creseda Silvers, and I'm a research associate with the

National Center for Food and Agricultural Policy. We're a
nonprofit organization here in Washington, D.C. We research
agricultural issues, particularly those pertaining to pest
management, and we analyze the impacts that they may have on
American farmers.

The National Center is currently embarked on a study co-authored by Leonard Gionese and myself of economic impacts of recent EPA regulatory decisions regarding agricultural pesticides. Some of the decisions we're looking at are directly related to FQPA and some are not. They include actions or delayed actions on new registrations, reregistrations and Section 18 emergency exemptions.

In the past, analysis of the benefits of a pesticide active ingredient, and the cost to growers if it were to be lost, would have been part of the decision making process itself. Currently it's not. No agency, governmental or nongovernmental, is assessing the cost of these regulatory actions to growers. The decisions are entirely risk driven.

By ignoring the benefits of active ingredients

under review, it is implied that there are no benefits, and
therefore it is implied that there would be no cost if their
uses were lost to growers. But in fact, loses are being
incurred to growers -- to American growers -- as a result of
the recent regulatory decisions, and that should be
acknowledged. And some stakeholders here today have made
reference to that.

And, of course, we realize efforts are being made to prevent farmers from being stranded with no pesticide -- with no pest management choices. The agency is working for speedy registration of OP alternatives, and workgroups are developing transition strategies for specific crops. And we commend you all for these efforts and other efforts as well.

But the practical and the economic consequences of these shifts in transition are not being assessed. For instance, one OP alternative costs the same per use as the OP. Will it be as effective or will it require more applications? Will it have the same range of activity targeting the same pests, or will it need to be complimented

with additional pesticides? And what does all of this mean
for the growers' return, especially with crop prices

currently as low as they are.

So in our study we try to address these types of questions for specific crops and pest systems, exploring changes to pesticide use, production cost and crop yields that are direct results of some of the regulated changes made since 1996.

I have with me today a summary of seven of the cases that we've already investigated. While these represent instances in which the regulatory decisions have had a negative economic impact on growers, we're also investigating decisions that have had minimal impacts because, for example, economically viable alternatives were readily available. So, of course, we intend to include those successes in our final study as well.

As I mentioned, the preliminary study that I have with me today is a summary. Eventually we'll release a full report in which we elaborate on these seven cases and add to

them with detailed accounts of others.

Ideally, such analysis, we believe, should be made available during the regulatory decision making in order to better inform the process. While we weren't quite able to do that with this current study since it focuses on decisions already made from 1996 up to the present, we hope to be able to produce subsequent reports on a yearly basis and thereby provide more timely analysis of the decisions as they're being made.

So we have more copies of our preliminary study out in the hallway, and people are welcome to contact me for additional copies.

Thanks for your attention.

committee members.

MR. EHRMANN: Thank you very much. Jim Craney?

MR. CRANEY: Thanks a lot. My name is Jim Craney.

I'm from the U.S. Apple Association, and I'm also Secretary

of the Minor Crop Farmer Alliance. And I just wanted to make

a very quick clarification for the benefit of the advisory

In the discussion this morning about the channels
of trade and the methyl parathion tolerance revocation, it
was noted that the Minor Crop Farmer Alliance submitted
comments to EPA and FDA. And that's true. But I also wanted
to let everyone know that those comments were consisted of
comments that represent the concerns of, and comments of
approximately 100 fresh fruit and vegetable grower
organizations from across the country.

So the point is that those comments represent the vast majority of fruit and vegetable production in the United States and also a wide geographic region in the United States. So I wanted to make that quick point.

And secondly, Marcia Mulkey, I believe, made a comment this morning drawing some similarities between the methyl parathion tolerance revocation and the process that was used to revoke the tolerance for propargite. While I would agree with Marcia that there are some similarities, I also wanted to point out that on methyl parathion that process took approximately four years to remove the tolerance

1	for	certain	crops	for	methyl	parathion		for	propargite
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2 But I don't believe that's what is being proposed under FQPA

3 for methyl parathion and also for other chemicals as they

4 come down the road.

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I just wanted to make that distinction. Thank you.

MR. EHRMANN: Thank you. Frederick Betts?

7 MR. BETTS: Good afternoon. My name is Fred Betts.

I'm the Director of Regulatory Affairs for Eaton (phonetic)

9 Bioscience. But this afternoon I'm pleased to make some

comments on behalf of the Biopesticide Industry Alliance.

11 This is a newly formed group. The Alliance has about 22

member companies. All the companies are in the business of

discovering, developing and commercializing biologically

based pesticides, or biopesticides, such as biochemicals and

15 microbial pesticides.

16 The goals of the Alliance are primarily twofold.

17 First we seek to certify and to communicate the quality and

the effectiveness of biological pesticides, and secondly we

19 seek to work with regulatory agencies to refine and improve

the regulatory process for biopesticides on all levels,

state, national and international.

Our message today and the comments I would offer today are simply that we believe biopesticides have some significant solutions to offer. Not the only solution, but some practical solutions to offer to the issues that you all are addressing in the area of transition and reassessment.

For example, biopesticides are typically low risk alternatives to many of the conventional products. Most of them enjoy an exemption from the requirement of a tolerance. Many of these products have established themselves as useful tools in integrated pest management programs, resistance management programs, as well as utility as methyl bromide alternatives or partial methyl bromide alternatives. So there are a number of opportunities for these kinds of products.

So in conclusion, I appreciate the opportunity to comment. We look forward to being able to contribute in any way appropriate to the work of this Committee and your

1 associated stakeholders.

- 2 Thanks very much.
- MR. EHRMANN: Thank you. Jeff Wilson?

MR. WILSON: Good afternoon. I'm a small fruit and
vegetable farmer from Ontario, Canada. I chaired the Crop
Plant Protection and Environment Committee for Canadian
Horticultural Council. We're also members of the Minor Crop
Farmers Alliance.

Some quick points and questions based on some of today's activities. On IPM I think we have to accept that some of the goals of IPM tend to get skewed towards reductionism. And to make a long story short, it's an easy sell. Environmental groups can sell reductionism to the public and farmers save some pesticide application and related costs.

What happens when we approach the point -- call it economic thresholds, call it when the challenge really occurs -- and someone mentioned three to five years down the road -- where we have to match up the real economic needs of the

1	farmers	with	the	continual	drive	to	reduce	those	very	uses
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The second point on that is, are consumers in sync in
matching the concept of pesticide or risk reduction with the
demand for quality that they've made a very clear indication

they go for at the grocery counter.

those decision documents.

The second question on a comment on the status of the OPs -- and I'll try to put this constructively. But it sounds like the lion share of the results came out in the final two weeks before the end of the fiscal year. That was probably done by a number of people, but would be reviewed on our side by probably a single person or a single entity. It puts quite a burden to do that amount of reviewing for all

If there is a better way, I don't think I'm speaking alone in saying that I think we would like to explore that, so that we can get some meaningful dialogue back and forth on some of these things.

Channels of trade. A question -- and I put this out there because I am from Canada. Is it a potential where

1	a use is de-listed or de-registered for a crop, the
2	subsequent MRL is dropped, but now we're down to point of
3	detection or level of detection?
4	If we use part per billion, is there a potential or
5	perennial crops that for a period of two or three years
6	following we could have in fact a level of detection of a
7	product that is no longer registered here in the United
8	States?
9	That's an issue to us in Canada. If there are
10	answers, fair enough. I'll be here tomorrow and may have
11	some comments at the end of tomorrow. Thank you.
12	MR. EHRMANN: Thank you. Any other public
13	comments? Did I miss anybody? Okay.
14	Again, I would like to thank our presenters
15	oops. Marcia is okay. That's right. I would like to
16	thank our presenters for your time in coming to
17	MALE SPEAKER: It's safe to read out loud.
18	MR. EHRMANN: It says don't call on Balling again.
19	(Laughter.)

1		MR.	EHR	MANN:	Marcia	wou	ld	like	а	minute	to	clarify
2	an earli	er -	- a	commen	t made	in a	ın	earli	er	presen	tat	ion.

3 Marcia?

MS. MULKEY: A small but important correction. As

Lois said when she presented the description of all the risk

management things that we've done for the completed

decisions, they were very brief in summary. Well, the one on

ethyl parathion, which is one that is being phased out

completely, was probably a little too brief in summary and it

may have created a misleading impression.

It says that the registration is canceled immediately. And that is true for the technical grade product. But the registrations for the end use products run out another couple of years, so that they occur basically at about the same time frame as the use restrictions and the existing stock is used up.

That does not mean any more of the product can be produced, because the technical grade is stopped and no more of it is available. It just means that that's the way we run

- 1 the remaining product through the chain.
- Thanks.
- MR. EHRMANN: Okay. Rob, a question on that?
- 4 MR. HEDBERG: No, a different question.
- 5 MR. EHRMANN: Okay.
- MR. HEDBERG: This morning we talked about the

 worker protection standard. My understanding is that there

 are two workshops which are going to be held here in the next

 six months or so, one in California and one in Florida. I

 think it might be good to get the dates for the people who

 are here, so we know when those are going to be.
- MS. MULKEY: Okay. We'll be glad to do that.

 These are on the reassessment of the implementation of the

 worker protection standard. And that's great. I think

 that's yet another opportunity for some -- and they are open

 discussion. I mean they are definitely feedback. In fact,

 that's the primary purpose, to obtain feedback.
- 18 MR. EHRMANN: Okay. Let me turn to the co-chairs for any closing comments. Rich?

1	MR. ROMINGER: I want to thank everybody for being
2	here today and for participating in the good discussions
3	we've had. We've heard a lot of concerns, as well as some
4	stories of what has really been happening out there.

I'm looking forward to the discussion tomorrow and figuring out how we're going to be able to get the input that all of you would like to get in to make sure that it gets considered and the process that we'll use to do that. I think there are probably a number of ways that we can do that. So we'll have that discussion tomorrow morning and make some decisions on how to proceed.

MR. MCCABE: I would just echo Rich's comments. I want to thank everybody for being here. I look forward to seeing you tomorrow. I'm sorry that we didn't get to that bigger chunk of time this afternoon for some freewheeling discussion. Hopefully we will have some of that tomorrow. I suspect that we will, if I know this group. But I look forward to that. I think that it will be very valuable.

And I think despite some of the concerns Bob

1	raised, and some others echoed it, about this not being as
2	conducive a forum to advice as you may think. I think that
3	just the discussion that we've had about a couple of these
4	topics and some of the issues that have been raised has
5	provided us with a perspective and overview of some of your
6	concerns that has provided us with some advice.
7	I think we can look for ways to structure it even
8	better. But we are looking to you to make this forum work
9	for you as well as make it work for us. So tomorrow we will
LO	join together again and I will see you then.
L1	MR. EHRMANN: Thank you all very much. Have a good
L 2	evening. See you at 8:30.
L3	(Whereupon, the meeting was
L 4	adjourned.)
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L 6	
L7	DAY TWO
L8	OCTOBER 12, 2000
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2 MR. EHRMANN: Good morning. Let me just make a few 3 comments about the agenda and then turn it over to Mr. McCabe 4 for some opening comments.

Our agenda today calls for us to adjourn no later than 1:15, and we'll stick with that schedule and kind of calibrate our time, as always, as we get closer to that. For the members of the public who are here, if you wish to make public comment as part of this federal advisory committee process, please sign up for that outside, so that I can gauge how much time we need to allow for public comment at the end of the morning.

And we're going to structure the first part of the conversation to talk about some of the transition issues, and then move to drinking water and public health issues, and then discussion of the CARAT process, workgroups and those issues, as is indicated on the agenda before we adjourn this morning.

I know Mr. Rominger will be joining us in about 35

1 0	r 40	minutes.	Mike	, comments?

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I look forward to the 2 MR. MCCABE: Yeah. 3 discussion that we're going to have today, particularly the 4 discussion about transition issues. I think that yesterday's 5 presentations -- even though they came at a time in our agenda where I think many of us wanted to move to some other 6 7 issues and have a broader discussion 8 -- were very informative because they talked about the scope 9 of some of the challenges faced in the transition. We're putting -- we're going to distribute now a summary of 10 some of the key issues. And as you'll see, it's two pages. 11 12 There are many issues that came up in the transition 13 discussion that we've been talking about and that you've been talking about. I think it will be helpful to use this as the 14 basis for discussion. 15 16

This is not an official document. This really is meant to be a tool to help the discussion in this area. And it's one that we find is very important and one that needs more discussion. And I think that as we talk about next

1	steps, we ought to be talking about next steps in transition
2	and how CARAT can help in that process. So I look forward to
3	that.

MR. EHRMANN: Sarah is passing around this summary.

As Mike said, let me just reinforce the fact that this is a set of items that we distilled out of yesterday's presentations and other similar discussions on transition issues. It's certainly not exhaustive. It doesn't cover every issue. And it is the product of some of the staff who were listening to the conversation yesterday and those of us who did the typing last night.

So everything here is our responsibility, and it's meant to kind of help frame our discussion this morning.

It's not meant, you know, to be a formal statement of the Committee, or we're not going to look for a formal consensus that everybody agrees with everything on this piece of paper.

But because we did have a wide range of information presented yesterday, we thought it would be helpful to have kind of a structure to lead us through the discussion that we

want to have today on these issues for the next hour or so.

And I think the best way to approach this would be to kind of use this flow in terms of the issues and see if there are major kinds of points or concerns or opportunities or challenges related to transition that you do not see captured here that should be noted, again, without worrying about the precise wording. And what we'll do is incorporate the discussion into this and circulate it after the meeting is concluded to folks, again, just as a record of this part of the discussion.

I'm sure both the Department and the Agency will then use this information to help structure their next steps as they proceed and all of you proceed in various transition related activities as Mike has indicated. So let me kind of -- I don't necessarily want to take this just one item at a time, because there may be interplay between the items. And, again, I don't want to necessarily get to an editing kind of level on this.

But as you -- why don't you just take a minute and

1	kind of scan the document, since obviously you've just gotten
2	it. And then let's discuss the major kinds of issues,
3	themes, concerns or opportunities that you heard or you're
4	aware of that you don't see reflected here, or things that
5	you think are here that are just really not appropriately
6	stated or, you know, shouldn't be on the list of important
7	issues. And I think that will give us an opportunity for a
8	good discussion for the next period of time.

So as soon as somebody has a thought, feel free to put up your card.

Yeah. Let me also say that I have invited the presenters -- I have invited the presenters from yesterday, who as you know we had to truncate several of their presentations, also to join in this discussion, if they wish. So I'll be looking for their hands and trying to make sure they can blend into this conversation along with the Committee members to the extent we have time to do that.

18 Mark?

MR. MILLER: Well, in difference to Steve I would

really like to take the opportunity to say that yesterday,

particularly the discussions -- or the presentations that we

had were excellent, and the time that we gave to them maybe

reflects where the rubber hits the road.

And I would like to throw my hat in the ring and say that workshops or some sort of workgroup on the area of transition is essential, because I think that's where the real issues and the real impact of FQPA and the juggernaut that FQPA represents hits the road.

And so I would like to today in some sort of structured process address that. Address that in a more real way. Address that in a way that we can get our hands around, in a way that we can actually provide some advice to both agencies.

In addition to that, I think that when we look at transition, the people who are really being transitioned upon are not here. We have one, Mike. And the people who are being transitioned upon are almost voiceless in this process.

And so maybe in a workgroup process or some other process we

1	can	get	more	input	from	those	folks.
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MR. EHRMANN: Let me just add that we are going to

discuss explicitly the several different ideas for

workgroups, workshops, etc., that the Agency and the

Department discussed overnight and this morning. So there

will be a specific discussion and certainly transition is one

of those issues that folks have on that list. So we will

come back to that.

9 FEMALE SPEAKER: We're not supposed to talk about 10 that now?

MR. EHRMANN: Yeah. I would rather talk about the substance of what's on the paper and then the process -- I mean, obviously you can say whatever you want. But we will have an explicit discussion about that. I think at this point I would really like to get feedback on this -- on these themes and these issues. Are these right? Are these wrong? What's missing? Tear this up and start over or whatever.

And then we'll come to -- but I think Mark has put a useful placeholder on that issue for us for when we come to

that discussion, probably after the brea
--

2 Bill?

MR. LOVELADY: I thought that the -- as regards to

the paper here, I thought that the presentations that we had

yesterday were excellent, and I think that they show

something that is in this document. I don't have any problem

-- and bear in mind, don't hold me to this, because I haven't

studied this in depth.

MR. EHRMANN: I understand.

MR. LOVELADY: But there is nothing in here that I think is something that farmers don't agree with. They agree with alternatives. They agree with IPM. They agree with talking to their neighbors. They agree with the workshops. All of these things. We do these things. I don't know how many people are aware of the fact that we do do these things.

IPM has been around a long time and, you know, we've had some discussion in the national debate about play as is. Well, we've also had some discussion through the years about what is IPM. Farmers do not want to have to use

any more inputs than they have to. They need to optimize their operations.

And I think that these things right here that we have on this paper, the things that I see, look good. But when you relate what's on this to what we saw yesterday, the figures that we saw yesterday, the absolute need for something more than just timing — timing is extremely important. We all know that from farming when we use any kind of input, whether it's a fertilizer, whether it's water or whether it's a pesticide of some sort.

But I think it came out very clearly yesterday from people who I think were fairly objective that you just can't rely on alternatives all the time, that we do have to have some time. You can't rush into transition. You have to -- we all want the safest possible products out there that we can get. And there's nothing in here that contradicts that.

But I think that the reality that we saw yesterday shows that when you use documents like this, you have to bear in mind that the reality of it is that we still need time to

1	find al	ternativ	es. And	you	can't ti	ransition	to	something
2	until y	ou have	something	g to	transiti	ion to.		

And so I compliment the presenters, and I complement whoever compiled this list. I don't have any problem with that. I just want to read this in the context of the figures that we saw yesterday.

MR. EHRMANN: Okay, good. Wally?

DR. EWART: I agree with both of the comments that have been made, and I won't use the word workshop after this comment. But I think this document explains why we need to go into depth on certain issues, and transition is definitely one of those that we need to go into depth.

And the fact that you could bring a group of people after the meeting together to get this document, I think that's great and it gives us something to look at. But for us, again, to advise you, we need a discussion within the group here, and as Mark said, probably bringing other people in and having more time to go over that.

And I agree with Mark. We're talking about people

1	who are being transitioned in the process and, you know, most
2	of us want to make sure that transition isn't out of
3	business. And I'm representing growers. You know, that's
4	certainly a possibility that that's what transition means to
5	them.

And, again, I applaud the people who presented yesterday. I think we needed more time. We need more in depth discussion and give and take. But I do want to say that I appreciate your putting this together. I think this is a good example of why we need more time on it.

MR. EHRMANN: Okay, thanks, Wally. Steve?

DR. BALLING: Yeah. Just a short, but I think sort of significant point, at least from my perspective. It sort of follows up on Dr. Ortman's comments yesterday about the pesticide applicators and the importance of having them trained as a very critical link in the chain of what we're trying to do.

And I would just perhaps suggest that under the education, training and outreach section down there at some

1	point t	he	process		the	importa	ince	of	the	training	for	the
2	pestici	de	applicat	cors	sho	ould be	reco	gni	zed.			

3 MR. EHRMANN: Okay. Eldon?

DR. ORTMAN: I would compliment the group for putting this document together. And again I would second what several others have said. I think this just illustrates why we need a working group on transition.

A quick read of this document, I in general agree with it. However, I have one major area which I would call to your attention. On the first page under Models for Pest Management Systems, number one, I do concur with the first part of that sentence. However, I take serious exception to the last part of that. You don't necessarily need a better mousetrap.

And I base that comment on what we heard about peaches. It may be true in grapes that you have all the information that you need. But peaches is one very excellent example of what is in the pest management community: a dire need and an opportunity to develop new technology and to test

1	that new technology. Or	ne of the interestin	g technologies
2	that could be available	to us is embodied i	n the plant
3	pesticide rule and what	we might see with t	hat development

Question: what is the status of the plant pesticide rule? I understand it has moved forward. Can we have some information on that as part of this discussion?

MR. EHRMANN: Comments on that?

MR. MCCABE: I mean, the plant pesticide rule has moved forward. It is being considered now in the interagency process at OMB. It is, as you know, a rule that has been worked on for what, almost 12 years now. It's a complicated rule made more complex by the issues that we confront every day and the public perception of how we deal with particularly the genetically modified products.

I can't tell you exactly what the schedule is going to be. We hope to have this in proposal form by the end of this administration. But it is -- I'm sorry. Final. That's right.

DR. ORTMAN: When you say in --

1	MR. MCCABE: I just want to amplify that. Susan?
2	MS. WAYLAND: We are hoping that at least part of
3	this rule will be put into final. And we will probably ask
4	for additional comments on other parts of the rule, but that
5	will be dependent upon what happens in the interagency review
6	process.
7	DR. ORTMAN: So you are saying that there will be
8	additional opportunity for comment on the revised rule?
9	MS. WAYLAND: On parts of the revised rule.
10	DR. ORTMAN: Okay.
11	MR. EHRMANN: Okay. Cliff, you wanted to make a
12	comment?
13	DR. OHMART: Just to clear the record. We don't
14	have all the answers in winegrapes, that's for sure. I don't
15	want people to run away thinking that we've gone all soft.
16	That's the danger of making a statement like that.
17	Transition is tough no matter what.
18	The point I was trying to make, and I've seen

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professionally over and over, for especially indirect pests

1	that don't directly attack the fruit, we've got pesticides
2	being applied that aren't necessary.

And so one of the problems with talking about

alternatives all the time, is you're talking about product

replacement. And there are certain parts of pest management

systems that we really -- product replacement is not the

answer. It's to reduce the use of certain things. It's only

for certain pests.

But that was the point I was trying to make. We do have a lot of unanswered questions and big challenges in winegrapes.

MR. EHRMANN: Sarah, Cindy and Steve.

MALE SPEAKER: All at once?

14 (Laughter.)

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MS. LYNCH: Hey, that would be great, wouldn't it.

Yeah, I, too, want to join in congratulating and thanking the folks that came in to give those presentations, because I thought they were really informative. And it was unfortunate that they were cut off, because I'm sure that as IPM

1	entomologists they also would have wanted to stress some of
2	the good things that do happen when you stop using
3	organophosphates in terms of beneficials returning to the
4	fields, the reemergence of microorganisms in the soil that
5	help make plants healthier to begin with, and better able to
6	withstand disease and pest pressures and things such as that

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And that's a whole other part of the complex that would be equally exciting and perhaps some equally beautiful pictures of those good, you know, earthworms and other types of under the soil helpers to food production. So maybe we could have another go around of those presentations and be able to look at some of those things.

I wanted to respond, though, to something that Bill had mentioned, too, about we have to have something -alternatives to transition too. I think that before we have that, we need to have a vision of what we're trying to get people -- you know, where are we trying to go in 21st century agriculture.

And I think, Keith and Al and Therese, you remember

when we had that meeting last August talking about sort of

where the Department of Agriculture needed to be going and

whatnot. We talked about needing to have that vision, so

that we could communicate to growers clearly what that vision

is.

What are the needs and the kinds of confluences of issues that are going to be confronting, are confronting and have confronted agriculture that they need to be responding to to answer that very question of where are we trying to get them to.

The Food Quality Protection Act is one, but there are others, too, and I think we need to figure out a way to inform them about that.

The other thing that I just wanted to say is that part of what that vision gets to and the whole concept of the partnerships and the stakeholder involvement is that the Food Quality Protection Act is only, as I said, one issue. And within this issue of pesticides, the organophosphates and carbamates are only one. There is a zoonomy in the -- you

- 1 know, brewing perhaps offshore, which are the endocrine
- disrupting chemicals as well. And that's a very
- 3 controversial issue. The science is evolving.
- 4 But I think that unless we can develop a dialogue
- 5 so that we can begin to see these issues way off in the
- distance to be able to prepare for them, so that we don't
- 7 have to have these sort of rug pulling out of your -- you
- 8 know, under your feet kind of a sense, when that really isn't
- 9 the case. Some of these things are viewed in the distance,
- 10 so we can see them and begin planning for them earlier.
- 11 Hence the real advantage of dialogue.
- MR. EHRMANN: Thanks. Cindy?
- 13 MS. BAKER: You scared Steve away.
- MR. EHRMANN: I guess. He doesn't like being in
- 15 line.
- 16 MS. BAKER: I said he agrees with everything Sarah
- said. He put his card down, so that's good.
- 18 I, too, would like to thank Sarah and Cliff and
- 19 Dean and Peter and Larry and Paul -- it sounds like a band --

1	that made their presentations yesterday. Because I think the
2	more we hear about the realities of what people are dealing
3	with, we see that people are in fact trying to implement
4	transition, whether it be proactive or in response to changes
5	that have taken place in the dynamics of what they have. I
6	think it's good to hear how that happens.

7 One of the things -- I thought about this last 8 night, since you told us to think about it all night. I did. 9 And one of the things I remembered was that in the CARAT -- I mean in the TRAC process, we had a committee 10 -- I think it was the Risk Mitigation Workgroup -- that dealt 11 12 with transition. And we actually came up with a definition 13 for transition. I didn't bring it with me to this meeting. I forgot about it until last night. 14

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But a lot of us worked together on it, and it was one of the things that we were able to come out of there with some consensus on. I remember Marian and Bill Spencer. Both of -- all of us signed that, which was, I thought, a real historic moment, to get us all to agree to that. And it

might be beneficial to bring that definition back. I can get it if you can't get it. I kept everything from TRAC, so we have that.

But I think this concept of a vision is a really good one. And I think that it has to be put together by the people who are impacted by transition. And that's growers. That's, you know, activist groups. That's residential people. I mean we have to remember that when we talk about transition, we're not just talking about agriculture. And to bring those stakeholders together and I think define that is a real large task.

I think the things that you put in here get at a lot of the things that we talked about. They flush out a lot of the issues that need to be dealt with. Just two comments on the measurable goals. I think that when we talk about transition, we have to keep in mind that this is an evolutionary process, that just like the science it's an evolving process. Not every case is the same, as we heard in winegrapes, and what they've done in Wisconsin and what

1	they're	trying	to do	in	peaches.	Every	circumstance	may	be
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just a little bit different. And so I think it warrants

discussion of that dynamic.

I think under the area of Research, that last

5 number four point about the effectiveness of alternatives,

6 really is the effect of alternatives on secondary pests. Is

it that you, you know, have an increase in secondary, or you

8 control them or you don't. So it's really the effect on the

whole pest management system, I think, that has to be looked

10 at when you talk about transition.

MR. EHRMANN: Good, thanks. Jean-Mari? Steve, are

12 you truly not going to say anything?

DR. BALLING: I concur with Eldon and Cliff.

MS. BAKER: Oh, not Sarah and Cindy?

DR. BALLING: And Sarah and Cindy.

16 (Laughter.)

MS. LYNCH: Hey, Steve.

DR. BALLING: And Jean-Mari even before she says

19 it.

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1	MS.	PELTIER:	Oh,	wow.
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- DR. BALLING: I'm very agreeable today.
- MS. PELTIER: I'm going to say something political
- 4 then, Steve.

5 (Laughter.)

- 6 FEMALE SPEAKER: Go, Jean-Mari.
- 7 MALE SPEAKER: Well, we commit the processing
- 8 industry to a couple hundred million to establish transition
- 9 systems.
- 10 MR. EHRMANN: The Michigan State Center for
- 11 whatever.
- 12 (Laughter.)
- 13 MALE SPEAKER: The Del Monte Center.
- 14 (Laughter.)
- MR. EHRMANN: Jean-Mari, please pardon your
- 16 colleagues. Go right ahead.
- MS. PELTIER: It's okay. I'm used to it. I want
- to join the love-fest about yesterday's program, too. I
- thought it was particularly helpful. I know some people may

have been turned off by the slides of bugs and nasty looking fruit. But I think it was important to bring it back to the issue of why growers use pesticides. It's not about using pesticides. It's about controlling pests. And it's important for us to bear in mind that the decisions that we make have an impact on the grower's ability to control those things that make the peaches look so very, very pretty.

I think that this is a really good document. I think it outlines things. There is a couple of points -- or there is a point I would like to make about the issue of people issues. Sometimes when you say something out loud it sounds okay, and when you see it on paper it kind of breaks.

And I've got to say that the tone in the people issue sounds to me -- and I know I'm probably hypercritical or hypersensitive. But it sounds like those pesky farmers, if we just could get them to go along it's okay. And, you know, engaging growers in IPM is critical. You know, growers are engaged in IPM. Making them part of the solution is important. But just the tone of that section kind of grates

on me.

The other one point that isn't in here, that I think each of the people who are actually out in the field doing research made again and again and again, is that retention of some uses of OPs is important and that OPs in an integrated pest management program may have a niche and should have a niche.

And there are some things that we've glossed over in our rush to move through the risk assessments on these OPs, where we've lost tools that could be very important in an integrated pest management system, notably something like methyl parathion and the roles that it played in some systems because of the negatively correlated resistance of methyl parathion and azinphos methyl. And a discussion of that at that kind of a level never took place when we made the decision on methyl parathion.

And, you know, we got it. We've talked many times about the P word -- about prescriptive use -- and it was raised again yesterday. And I think this document gets to

the point that I raised in our first CARAT meeting, which is
to suggest that this assumes that there aren't going to be
any OPs for anything. That's what this document says. I
mean, it only talks about alternatives, transitioning to
alternatives, alternatives, and it doesn't
leave any room in the use pattern for OPs.

And somehow it seems to me that that thing that each one of those people said, at least certainly Larry said it and Paul said it, I think needs to be reflected in this statement.

MR. AIDALA: A couple of things on that. One is there are lots of things that I had said in terms of this sort of, you know, quick summary of some of the discussions yesterday in terms of our reading.

But an example of one of the things just specifically about whether it implies that all OPs are gone is actually, I think given these kind of discussions we've all had -- most of you have been with the first TRAC in '97. The first whatever it was called in '97 and the TRAC and then

- son of TRAC and, you know, forbearer of TRAC and whatever.
- 2 TRAC, the next generation.

3 (Laughter.)

And basically throughout that, for example, before we did the individual OP assessments, I think there was a lot of fear that, gee, each individual assessment is going to result in all or certainly a significant number of uses dropping -- ag uses dropping. And frankly that's a pattern I've not seen. That's not to say there aren't ups and downs in individual assessments and stuff.

Now we're at the point where, again, as we approach cumulative, does it mean all OPs will go. We certainly can't say that with any degree of certainty in terms of, quote, all OPs. And, again, as we found out in the individual assessments -- and this is just sort of a -- call it a professional speculation at this point. You're going to find where the drivers are and other things that aren't. If you've got a bunch of nondetects on a crop that aren't heavily consumed by certain, you know, sensitive sub-

populations, you're probably going to make it, quote/unquote.

There are other issues, and this is where other meetings of this kind of group, and again its forbearers have talked about, whether or not there is -- is the registrant nonetheless, if they lose a certain crop or two, going to still maintain the product line as a whole, etc., etc., etc. And again we talked as a group about all of those issues over the years.

One other thing is not here, too, in terms of -because obviously if you talk about the mother transition, if
you will, kind of dynamic, there are other things that aren't
here also, which is, if nothing else, a simple statement of
comply with the law. The law says the numbers must be safe.

So did we think about methyl parathion and its cross resistance? Absolutely. How do you think about it in terms of an 880 percent risk cup being full? You think that, gee, it may be a little tough to maintain that use. So I mean that's basically the dynamic about what happened with

methyl parathion. Given the high risks, you didn't have that kind of opportunity.

Now fortunately we're not seeing those kind of hot spots, if you will, across the board as we complete the individual assessments. Cumulative will be -- you know, we'll see. Again, I think off the top, though, I have not heard anything from anybody inside the program that sort of implies -- even implies, if you will -- that, quote, all OPs must go. They're going to be hot spots, we think. We'll see what the science tells us about that. We'll get the data, you know, to sort of assess which ones that are and are not. And it's hard to know a priority, again until the science is all in and the data are all looked at, to kind of make those kind of broad predictions across the board.

Again, the broadest predictions were started in the hallway on August 3, 1996, when you started seeing where, quote, well, gee, this means that we're going to have to move away from certain classes of, you know, whatever else. And frankly even those haven't come true over the years.

1			But	we'll	see.	Ιf	you	want	to	predic	ct	that	all	OPs
2	must	go	undei	r FOPA	, we'll	a	sseri	t tha	t's	your	cla	aim.		

MS. PELTIER: Jim, just a point of clarification.

My point is only that that was reflected in the presentations

that were made yesterday and it's not reflected in this

piece.

MR. AIDALA: And again, we do have this problem.

We've talked about this at these groups other times, too, and we say there is -- one of the safest reducer criteria is an OP alternative. Does that imply all OPs are bad? No, it doesn't. But we're trying to sort of do this push and pull of anticipating what might happen, so that growers aren't left in the lurch, and so that we don't just see an assessment when we say, oh, by the way, now you can't use it, and now by the way, you know, Dave's company gets to start an RND program three years from now that might get us a product that takes two years to review.

So that's basically part of this push and pull that we've all dealt with in these meetings in the past

- 1 -- again, its forbearers since early '97.
- 2 MR. EHRMANN: Carolyn and Jay.

MS. BRICKEY: The first meeting we had, whatever
that first incantation was, I think I said that we needed to
get down to the hard cases and find out where the problems
were and try to identify them. And I think there has been
some work done through these groups to try to identify some
of those places, and certainly some of the presenters pointed
to that yesterday, which I think is really useful.

And I think where we really need to know this information is not only for individual farmers who want to start making decisions now about what kinds of alternatives they would like to go to. But also in terms of assessing what to do at the point where we have a cumulative assessment. You know, we'll have that kind of information hopefully available to look at and understand kind of how to fit the mosaic together and know where there are certain uses of OPs that EPA and USDA and the other folks involved, including the stakeholders, believe need to be preserved.

1	So I think, you know, every time we talk about
2	transition, we get a little more engaged. As far as I am
3	concerned, we could have a day and a half meeting just about
4	transition. That would be very good from the perspective
5	that I have and also from our community.

But I have to say a word about workgroups, because I've heard that word about 68 times since I've been here.

And that is that I feel like, you know, when we did these workgroups in one of our earlier advisory committees, it's sort of like we all went to the same party, but I was probably one of the people who didn't have a great time.

I felt like it took a lot of telephone calls and work. I thought it was confusing. We don't have a deep bench in our community to do this kind of work, you know.

And I think I was on three workgroups. I honestly don't think we produced any work product that ultimately went into any final document anywhere. I think maybe people felt good about interacting, which is fine.

But I think at this point what we need to do is

1	focus on a couple of issues that really need to galvanize our
2	efforts. And one of them is what we're going to do with
3	cumulative assessment. How that's going to work. And the
4	other is to keep engaging on transition. And as far as I'm
5	concerned this forum is fine to do that in

6 MR. EHRMANN: Okay. And again, we'll come back to
7 those workgroup issues later on. Jay?

MR. VROOM: I could say workgroups a couple more times to get you to a round number here, Carolyn.

(Laughter.)

Thank you. I also thought the presentations yesterday were spectacular and unfortunately too short in some context. I wish that Sarah had more time to give us an update on the Wisconsin potato project, because I think there are some lessons that are still evolving out of that. Cliff, I'm sure there will be more lessons that come out of the Lodi effort, which has got a great start.

And all of that, plus the peach stories that were so dramatic that we heard yesterday, I think reinforces one

additional word that needs to be in this transition sheet.

2 And that is flexibility, so that we aren't just looking

forward all the time, but looking over our shoulder on

4 occasion to see what just happened. What just happened in

5 the context of a little longer view of history, because none

of these things are absolute. This is a journey and not a

7 destination.

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And someone said a moment ago that we need to try to preserve as many uses as possible, even if they are riskier than we would like as a society. Constrain them, but not just throw them away, because there may come a pest, or a reoccurrence of a pest, that needs, you know, some tough medicine on a very targeted basis.

That's all part of what I think, you know, is a robust IPM looking forward opportunity that we need to employ. And I think that will also give growers a lot more confidence that we have a flexible approach that will allow them to reach back and use some old tools on a limited basis on occasion.

I think we also saw yesterday that, you know, there are some crops like peaches that are incredibly fragile and, you know, they are special cases, and we need to keep working harding in some of those areas. The companies I represent admittedly can't afford to invest a lot in research and development for new products or defending old products that might be safe, but they just can't afford to do the work because it's such a small crop and represents the kind of residue potential that it does and so on.

One thing about using vision as the first topic on this page. If there is a vision thing around this, I would argue that it be on the page ahead of this, which would accompany this page, summarizing discussions yesterday and today on transition, accompanied by a parallel page on reassessment. Because, folks, we are not done with that. We heard about that a lot yesterday, also, and I don't want to lose sight of the fact that there is still a lot of work to be done on reassessment. The science policies that Bill reviewed for us yesterday are still works in progress. He

1 emphasized that and we can't lose sight of that.

So flexibility, reassessment. I think Eldon's point is absolutely correct that if we are ready to give up on building a better mousetrap, then I know a lot of companies that I represent won't want to continue to pay me to sit here. Their vision is looking forward and looking for better mousetraps. And we're excited about that and we think there is a future for better mousetraps.

Lastly, I thought -- just again returning to the peach examples yesterday, I was reminded of the story about how you don't need the second parachute if the first one doesn't work. You know, there are a lot of crops where if you don't have pest management that is effective, the second round or the second shot doesn't matter, because it won't be there.

And the vision of that one peach pit hanging there on the limb was profound. And so I thought that was a very important visual that I came away with from yesterday's discussions.

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Thanks, Jay. There have been a 2 MR. EHRMANN: 3 number of very helpful comments in terms of the language 4 I think your point about flexibility relates to the earlier part about an evolutionary kind of process. Mari, your comments about the tone of some of the language, 7 any suggestions you have would be very helpful, because I 8 actually had some of the same -- when I re-read it this morning, I had some of the same reactions.

> So I think, you know, this again is a work in progress just to give us something to kind of be a placeholder for this part of the discussion. obviously doesn't mean these are the only issues on the table for the CARAT, but these are very helpful comments.

15 Rob?

> MR. HEDBERG: I guess what I would like to do, is when we talk about vision I've been giving it some thought. And I would sort of like to throw out my ideas on this as a starting point. I think it has to be something in the nature

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I think here it's this group. We've got the responsibility, the task and the charge to do three things. And that would be to protect the people, and to include the FQPA charge, children, workers and consumers simultaneously. We've got to protect the environment. That's our FIFRA charge. And we have to do that both here in this country and around the world. And the third one is the policy charge that we heard of some yesterday. We've got to protect the farms.

We've got to keep the production here, rather than as Sarah just used the word offshore. I'm very leery about exporting our production and our problems offshore, where they're out of sight and out of mind. I think we have an opportunity and a responsibility with all the resources we have in this country to solve the problems here.

That then takes us to the issue of resources. And I'm encouraged to see a million and a half more in the USDA budget. A million and a half dollars is a scratch on the

surface, a drop in the bucket. We're going to have to start
talking about an order of magnitude of more money, much as is
being done when you talked about funding for the NIH, the
National Science Foundation. People are talking about
doubling the budget.

We saw yesterday how difficult in one small crop, maybe a hundred million dollar crop of peaches, the problems are. The zoonomy waiting for us is when we try to take this into the 60 to 80 billion dollar agricultural industry across this country with the major crops. We're going to need an awful lot more than a million and a half dollars to solve these kind of problems.

One other thing on resources. On the list here that I don't see, which I think we do have to address, is the resources within the Agency for dealing with all of the IR-4 submissions, the ADGEVENT and inert ingredient issues. The resources aren't there is develop the products that we're going to need as alternatives in this transition process.

MR. EHRMANN: Thanks. Dave and then Mark.

1	DR. WHITACRE: The presentations yesterday
2	crystallized out a couple of very important things that had
3	been talked about. One thing, John, that was not captured in
4	the verbiage, although the point has been made, is that
5	transition has to take place on the farm or at the user
6	level. That's an important thing that I hadn't quite thought
7	of in those terms, but I think it's absolutely true. And a
8	lot of this down here on the first side of the page of notes
9	that you handed out captures that, but it's not crystallized
10	out in one term.

But that then tees up a second thing in my mind which has to do with this constraint of resources which is inevitable, of course, and then maybe a question to USDA folks and to all of the folks on the state's side.

And that is, I also had the impression from looking at the research list yesterday, and from knowing a little bit about, you know, how many entities there are that are asking for resources, is there a way to try to reinforce the partnering that is going to go on and be placed against some of the most

difficult problems?

The sense I have is that some of these problems are being pelted with popcorn as opposed to being hit with a mallet. And can the state folks in the future find ways to set priorities with the federal folks together on some of these areas and utilize resources better for the top things which unavoidably results in having to take some of the things off the bottom of the list. And I guess, if you'll excuse me, I'm thinking also as a taxpayer. I have the fear that there is going to be so many things pursued with insufficient resources that none of them are going to come to fruition.

A second point -- going to a second thing -- on measurable goals. The one thing that has occurred to me after remembering what has happened in CARAT, which really went rather well, is that after -- in thinking about the pacing of how the meetings are going to go forward in CARAT, it is likely that there is going to be little more than a year left by the time the next meeting rolls around for

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2 And I would like to suggest strongly to EPA that 3 they really try to pull together the most critical things 4 that want to see covered, and USDA, in partnership with EPA, 5 the most critical things that need to be covered in CARAT, so that those items -- those must do topics -- must cover topics 6 7 -- are included before the end of the two year CARAT process. 8 So not only having the goals and the right goals, but make 9 sure the priorities are such that you can hit the important 10 ones.

One final thing. I still get the sense from hearing John -- and I don't recall his last name. The grower from New Jersey that was here yesterday.

FEMALE SPEAKER: Rigolizzo.

DR. WHITACRE: Rigolizzo. Thank you. Saying, you know, that he's in trouble. And the illusions that we heard from some of the presenters yesterday is that there are real problems out there. I'm thinking that it will take a long time to go through to finish the risk assessments and work on

1 these other items.

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Of course we're going to be talking about transitions. But when cumulative -- the cumulative policy 3 4 really kicks in, there is going to be a potential emergency. And any effort to try to build a ramp up, that there are contingencies to be able to deal with that and not just the 7 routine talking about transition and how we can do it. 8 earlier that's done, the better off folks may feel in a couple of years.

That's just another thought. Thanks.

(END OF TAPE ONE, SIDE A)

MR. WHALON: -- to say something again. But the real focus of what we heard yesterday is not a small crop. It's not an issue of keeping OPs alive forever. It's really an issue of where IPM and transition are impacting. IPM is a site specific issue. It's a block by block, field by field, issue, and you can't implement it from Washington. people that presented yesterday are in the field on the ground.

1	And one of the real frustrations I have is that
2	we're in some ways applying a California model that's a
3	potentiation word or phrase to the whole U.S. And what
4	I'm seeing from my perspective is that the mechanism to do it
5	the mechanism to accomplish transition is dying on the
6	vine. Really. Literally. Extension, the land grants,
7	they're transitioning away.

I think Cliff's comments relative to the land grants are a foresight to what is happening nationally. And how we as a group address that, and how it relates to transition, is a crucial issue for the rest of the country.

And I just throw that out on the table, because I think that that's one of the major issues that FQPA is impacting long term. Long term. And I'm waiting for Mike's comments, because he's the only grower here relative to transitioned upon.

The other thing I would like to say is that -- FEMALE SPEAKER: Don't forget Bill, Mark.

19 MALE SPEAKER: Bill.

1 MR	. WHALON:	Oh, Bill.	That's right.	Okay.
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2 Sorry. Actually I have -- I don't want to tell you about my acreage.

The other thing I wanted to say was to build a little bit on what Sarah's comment was relative to the endocrine issue and the eco issue, and how that's coming down and what this group is going to do about that. I don't know that we can do much about it.

But Dan Botts said yesterday that -- and I don't know if it was in the context of this group or in a smaller context. He said that that's the major issue, long term, for all these compounds. And the thing that I come back to on that arena is that a lot of the new alternatives have eco impacts. And those eco impacts are not measured, and we haven't set up any kind of system really to address those.

And so I'm wondering about as we transition growers to these new things, what are the unseen, and unmeasurable at this point, impacts that we're going to lasso those guys with in the future.

1	So when we talk about transition, I agree with the
2	issue of transition being an evolutionary process. And I
3	agree with the idea that it's site specific and people
4	intensive. And I'm reminded also that the things that we
5	heard yesterday, I heard in 1982 in the Huff Acre project,
6	and I heard in 1986 in the Atkinson project. And yet we
7	haven't learned from previous experience in this whole arena.
8	And the end issue is growers on the farm, and
9	they're the people who are receiving all of this stuff. And
LO	I think they're largely unrepresented. Largely unrepresented
L1	in this context and we need their input. And that's why I
L2	think that workgroups are important and why we need to pull
L3	in some other resources for those workgroups.
L4	MR. EHRMANN: Larry, did you have a comment? Okay,
L5	go ahead, whichever one of you wants to go first. Just get
L6	to the mike. That would be great.
L7	MALE SPEAKER: Yeah. Can I wear bib overalls next
L8	time?

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(Laughter.)

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1	MR. EHRMANN: That wouldn't make us feel better.
2	MALE SPEAKER: I think you need to grow cotton in
3	Michigan, Bill.
4	MALE SPEAKER: Better get the patent up there in
5	Michigan.
6	MR. ELWORTH: Well, I appreciate being able to be
7	part of this conversation. I wanted to say three things.
8	I've been involved in three IPM implementation programs,
9	still two of them going on now, which have had some successes
10	which weren't what I was talking about yesterday. And in
11	that, there are a couple of things that I've learned that I
12	think are very important to making a successful
13	implementation program. And probably the most important
14	thing, I was also at both of the workshops that Sarah was
15	talking about, where growers and everybody were talking about

One thing that's not in here that we spent a lot of time on at that meeting that to me is the most important part of a successful program is that you work with the

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transition.

1	infrastructure that's there. The word infrastructure got
2	battered around a lot in those meetings and it's not in here
3	And what that means to me, and what has made those three
4	programs go, is we didn't invent a whole new system for

delivering information in doing IPM.

If you do that, it won't work. It will be a disaster, because the system that is there already will work against you, definitely. So, for example, in the IPM program in Michigan apples, we go in there and we work with the ag chemical distributors, with the extension people, with the private consultants. And we bring them into the program and we use the system that is already there.

This is the most important thing to having a successful program. If you don't do that, it's going to fail. It can't succeed and I don't see that in here. So I think it's really important.

The other one is this issue of measurable goals always comes up. And in all three of those grants and projects, you have to have measurable goals, I guess because

1	it's a grant. And what always happens is the measurable
2	goals are the easiest things that you can put numbers to, so
3	it's always like how many acres are going to be there. How
4	is pesticide reduction. How many growers are involved.
5	Those are measurable things, so I guess that's good to have
6	in a grant.

But I want to emphasize that the most important measurable goal in any of these projects is profitability. It basically comes down that the goal for every project is the same. The overriding goal is that we're trying to develop new programs that are profitable. New pest management programs that are profitable. That is the goal. That has to be the goal.

And the third thing is, in reading through this document I could make lots of editorial changes and things.

But there is one that I think is really important, at least to me. On the first page in three different instances the word alternatives is used as part of the discussion. I think it should be replaced with new pest management programs.

1	For example, in measurable goals you need to be
2	able to measure and understand the economic implications of
3	new IPM programs, not alternatives, because that's what's
4	being implemented. And the same thing on the next one down
5	Resources are needed for research, field testing,
6	implementation and evaluation of pest management programs,
7	not new alternatives.
8	And again, the last well, if you keep going down
9	there, it says make better use of what we have as
10	alternatives. It's really make better use of the IPM
11	strategies and pest control tactics that we have. It's not
12	make better use of alternatives.
13	Thank you.
14	MR. EHRMANN: Okay, thank you.
15	MALE SPEAKER: Thanks very much. I think this is a
16	good document. I would like to add a couple of things, and
17	in doing so just go off of the basis of what some other
18	people have already said.

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Sarah said we need to look at where we are trying

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1	to go. And I just want to say that so often farmers view
2	where they're trying to go is simply to stay in business next
3	year. Larry talked about the profitability. But when a
4	farmer when you ask a farmer where you're going, they're
5	going to say, well, I want to be in business next year and
6	pay off my debts.

And, you know, we charge for our program. Growers participate in our program. They support the program monetarily. But sometimes it's hard for them to do that, yet they still do it and they still keep coming back to do that.

all their crop out there in the field. Their crop is at risk. And pesticides are low risk, because it's an old technology. They know what to do with it. They know if they spray something, it's going to decrease their risks. And if you come at them with a new technology, that is often viewed as a higher risk. And so farmers are low risk. New technology is often viewed as a higher risk.

And one of the things that is not in here is a

1	heading about risks and incentives to help growers adopt
2	those new risks. And perhaps if you go into a working group
3	stage looking at this type of discussion, you want to place a
4	section about talking about incentives. What kind of
5	incentives can you put in place to help growers adapt these
6	new risks. If we have all the research, if we have all the
7	resources, what can we do for them.

And that's what I wanted to say about incentives.

Thanks.

MR. EHRMANN: Thank you. Cliff?

DR. OHMART: Yeah. Again, I actually didn't think that I said much controversially yesterday, but hearing a few comments, maybe I did. And I want to specifically respond to this idea that Jean-Mari mentioned about integrated people management, and hopefully it was a misinterpretation, because I really wasn't referring to growers.

I had a slide that I did not show that involved all the different groups that farmers deal with and then farmers as well. And so I was referring to the ag chemical industry.

I was referring to state and federal agencies. I was
referring to environmental groups. I was referring to
lawyers. And I have this great diagram that has arrows going
all over the place, and just a few go out to the growers. So
that was really -- the people I was interested in managing
weren't the farmers.

And then the second thing, again I think what's valuable about a panel like this is we all bring our biases and things we feel passionately about. And so I'm hoping I can contribute to that. One of the things is that in working with a lot of growers and a lot of different crops, not all growers are engaged in IPM. And if we think they are, and if they think they are, we're kidding ourselves and they're kidding themselves.

So our challenge, and my challenge, is to make growers realize, well, you may think you're an IPM grower, but you're not. I mean, it's the idea of we need to lift our game. So I think these words are important, because if we go on assuming all growers are engaged in IPM, we're going to

1	fail,	because	they'	re	not.	And	this	is	all	part	of	this
2	educat	tion.										

And then also to touch on what Mark mentioned.

There is no question, the way things are going that I can

see, that we are heading toward privatized extension. And if

you look at Australia and New Zealand, they've already

privatized their extension. And I would hate to see that

happen in the U.S.

But right now if we don't address the issues about land grants and what they're doing, we -- I mean the Winegrape Commission is proof that growers said, you know, we've got to solve our own problems. We're going to form a group. And I would hate to see it go that way. Maybe we can't stop it. But I just wanted to emphasize what Mark said.

MR. EHRMANN: Okay. What I would like to do is take the cards that are up on this topic, and then we'll summarize a bit and -- I was going to say transition to the drinking water issue. But move onto the drinking water

discussion.

So, Shelley, you're next.

MS. DAVIS: Well, I found yesterday's discussion

very enlightening, also. I don't want to repeat, you know,

lots of things that people have been saying. But it's clear

that education is a key component of this, and a tremendous

amount of resources are going to go -- need to go into

educating growers on the ground about the value of this

transition.

But one thing that I found lacking in yesterday's conversation -- and I forget which speaker said kind of at the end, you know, as we're transitioning, remember -- you know, don't have an REI that's 14 days, if we need to harvest or spray every five days. And what struck me about it was, gee, this person really doesn't know -- doesn't think REIs are particularly valuable. They're just kind of a pain in the neck.

And that's one of these nagging problems that gets lost, you know, as we focus on the need to transition and

different pest control strategies. I like that idea. We
still also have to sell the idea that this is really safer.

That safety is important. That there are real health risks
at stake and this isn't a frill.

The other part of it, which I also -- you know, just to reiterate what somebody else has said, you know, we can't get people to buy into safety if it means that they're going to go bankrupt and their kids aren't going to eat. So I really do think that we have to build in incentives -- marketing incentives -- to make it safer or better -- better for them, not just better for us. Because if it's better for them, they'll do it and then people will benefit.

And the final thing that I just want to say is that I really do think that our group needs to focus its energies -- you know, five or six or 10 or a million ideas got thrown out for workgroups. We're not going to accomplish that. I really do think we should focus on being a group as a whole, take one or two, or three at the most, key issues and actually dig in together and work on them.

1	MR. EHRMANN: Mike? Thanks, Shelley. Mike?
2	MR. CARTER: First of all, I think I need to
3	clarify something, Mark. Actually I'm not a producer, so,
4	Bill, you stand alone.
5	(Laughter.)
6	I'm sorry if I gave you that impression.
7	MR. AIDALA: But we're all going to wear overalls
8	next time.
9	MALE SPEAKER: Well, Bill, you're it.
10	MR. CARTER: So I hope that doesn't do anything to
11	any shred of credibility that I may have had.
12	(Laughter.)
13	But I am honored, though, that you did mistake me
14	for a grower. And I say that because I represent about 200
15	of them. So I just want to comment on a couple of things.
16	First of all, one of the things that we've haven't
17	really talked about a whole lot in this group and I
18	apologize. At times I feel like everybody here knows
19	everybody else, and this is obviously something that's been

going on for a long time. And I'm trying to, you know,
getting on the train at the last minute here.

And one of the things that I think is absolutely critical is resistance management. And we haven't really talked about that at all. When I have discussions with our researchers back at the University of Wisconsin, our potato guys, it's absolutely imperative in their mind that we don't lose certain tools. And perhaps the tools -- the way we use the tools becomes a little bit different.

But it is important that we don't burnout some of the new materials like quadrus (phonetic), which is a exozystrubin (phonetic), or spinosad, or frofil (phonetic) or any of these things, because they are wonderful. But if we don't use them properly, what we're going to do, is we're going to be back at square one.

I think that that topic deserves at least a certain amount of discussion or attention. And perhaps it has, and I apologize if that's something that you all have already been talking about in previous meetings. But as an outsider, I

1	guess, as	it were, t	to me	it looks	s like	one of	the more	
2	important	topics and	d one	that des	serves	a certa	ain amount	of
3	attention.							

guess, that's going on in this room. But I will say that as an outsider, it seems to me that workshops or workgroups would be a good idea. And, you know, I hope

-- I hope we as a group continue to focus in that area. And the reason, in my view anyway, that they seem like they would be a great option is because I think this is a pretty big forum to talk about some of the more detailed issues that need to be talked about, specifically in IPM.

Another thing, I don't know all of the politics, I

I think we had some fantastic presentations

yesterday. I think one of the things that we learned is that
there is a lot of information out there. And I'm not so sure
that a group of this size -- I think a group of this size
definitely has limitations, and I think one of those
limitations is that you can't get into the specifics, like I
think perhaps we needed to a little bit more yesterday as it

1	would	relate	to	the	peach	issue.
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It looked to me like we had speakers that were

trying to make points and would have loved to have more time,

but, you know, we ran into time constraints. I think that's

a perfect example of how maybe the smaller groups could maybe

get a little bit further on down the line than this

particular group.

MR. EHRMANN: Good, thanks. Sarah and then Lori
and Dan.

MS. LYNCH: I would like to pick up on some comments that Jean-Mari and actually Wally said, because I think this issue of grower sustainability -- grower profitability -- is incredibly important. And it's a reason why I've been personally so focussed on this transition issue.

Because I think as somebody who likes to eat -- I like to have food -- and as somebody who works for an organization whose mission is the protection of bio diversity, you think about where that open space is and who

manages it, and what an important partner they could be in working and identifying ways to work more collaboratively to preserve that bio diversity in terms of protection of streams and open spaces, nesting sites, migratory flyaways. All those kinds of value added or additional product in addition to food and fiber that farms can produce. I'm very, very concerned about creating or participating and/or contributing to some kind of more sustainable farming system.

But on the other hand, I don't think we can lose sight of the fact that there is a real public health and ecological health concern about the use of pesticides. So before we start talking about prescriptive uses, etc., etc., etc., I would like to hear about the plans -- the transition plans -- that agriculture would like to put forth.

For example, I heard yesterday, and I've heard it in other forums, that there is sort of a sigh of relief in the countryside that FQPA is not going to, you know, be much of an issue. People are waiting for the election hoping that, you know, pressure will back off. Keith told us

1	yesterday that there is about 98 million dollars or, you
2	know, thereabouts that the Department sort of adds up in
3	terms of contribution to FOPA.

Isn't that what you're -- 89 million dollars. And the ARS budget is what, about one billion dollars. So we hear that some in the -- that in the land grant university system that, you know, there is some focus, but not too much.

So I'm wondering how patient do we have to be before -- or how much do we have to be considering all these other, you know, needs for delay or concerns about do people have enough time to transition, when it doesn't sound like people are taking it all that seriously just yet.

So before we get to that, I would really like to see that. I would like to hear the commodity groups come forward and talk to us about how they are -- the vision that they have and how they're moving their groups forward to think through these issues, because it is incredibly critical.

1	The one last thing I would like to say is that I
2	don't think transition just happens on the farm. I think it
3	also has to happen at the consumers and taxpayers and that we
4	all do have a stake in this. We have an important stake, not
5	only because we like to eat food, but because we care about
6	the environment. And not trying to bring in those other
7	folks that also need to transition in their thinking about
8	the value of supporting these kinds of initiatives has to
9	happen.
10	MR. EHRMANN: Okay. Dan, actually I think I said -
11	- you were actually first before Lori, if you want to go
12	ahead, and then Lori.
13	MR. BOTTS: Whichever way you would like to run it
14	is fine with me. Looking around the room and going back,
15	historically Carolyn well, she's gone. But

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September 26th of 1997 -- '96 -- when the Food Safety

Advisory Committee first met, I think there three of us that

MR. BOTTS: I know she'll be back. Going back to

FEMALE SPEAKER: She'll be back.

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- are sitting in this room that were sitting around that table.
- John, you were one of them.
- MR. EHRMANN: Yeah.

MR. BOTTS: And Carolyn and myself as official

members of the committee. There were a lot of other people

in the room, especially staff people and other people. And I

would like to kind of characterize a little as we get into a

transition discussion how I've seen this process evolve since

that time to where we are now.

And I'll go back to a comment I made at that meeting, which was 10 years from now as a group we can collectively stand up and be real proud of creating a regulatory system that worked, that was protective of the people that the Food Quality Protection Act said it needed to be protective of, or else we could sit back and be extremely ashamed of letting that opportunity pass and having a regulatory system that in the minds of a lot of people was suspect as anything in this town.

I think we've made a lot of progress toward

creating, at least in the dietary aspects of the analysis in the risk process for the safety aspects of pesticides in relation to their use on food in this country, miserable steps forward in being able to say we do have a way to measure and assess and create that knowledge that what we're doing is right from a regulatory sense.

I will also say that having sat through a whole universe of technical briefings on other issues, I'm not as sure that we're to that level of assessment in other areas that are just as important, whether it's ecological fate, whether it's occupational health and safety, or whether it's those issues.

I don't disagree with Shelley. We need to be protective of the workers in the field. But we need to be protective in a manner that is really protective rather than using a worse case, worse case, worse case, to describe all conditions across the country in all applications, because there are differences, even with this ecological folio residues and the rest of the stuff that drive those issues.

1	And	right	now	we're	not	at	that	level	of	sophistication.
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Sarah, I agree with you. We have been pushing the growers at our level. And I am a grower representative.

Contrary to popular belief, I was a grower.

(Laughter.)

I think that's because I have been in Washington more than I've been in Florida for the past five years as a result of these committees. But the people who tell me what to do and who I have to answer to are people who grow crops in Florida.

And the first words out of their mouth when I go back to them and tell them, well, it looks like you're going to have to do this, this, this and this, the very first word is why. These are products that we have been using for the past 20 or 30 years because a regulatory agency said they could be used in the manner that we're using them. We haven't seen an indication that there is a problem.

My response is, the standards have changed. We're looking at a different criteria safety, and we need to work

together to get to the point where we know exactly what that
risk is. And there has not been a single case where I have
gone back to them and said this is the risk that is there, it
appears to be real, that they haven't stepped forward and
said, we'll fix it and we'll do something about it.

But until they understand why they're being asked to do this, you can go out there with all the programs and incentives and everything under the sun, human nature is such that they're not going to change unless it's a regulatory gun to their head. And in a lot of cases, that's been what has pushed the trigger in some of the issues we have in front of us.

The transition discussion yesterday was great.

This is a good start. But this is geared toward organophosphates alone. FQPA deals with every single pesticide that has been registered in this country prior to 1996. There is a whole universe of other transition issues that need to be looked at and considered before we come out with this model or a specific plan.

1	And I don't think you do that in a group this big.
2	I'm sorry. I just don't think you can. We tried. We've
3	been trying for the past five years. Every meeting we talk
4	about transition and we don't get very much further down the
5	road than we started from.

I think we can get there, but it's going to take a focus. It's going to take the Agency telling us these are the things that we absolutely have to have out of this group to answer the questions we need answered. And then we're going to have to be given a charge to move forward and do something.

12 Thank you.

MR. EHRMANN: Thanks, Dan. Lori?

DR. BERGER: My name is Lori Berger, and I'm new to this group. I'm not a veteran of TRAC or a lot of the other groups that have been meeting for the many years that Dan just referred to.

I represent a coalition of growers and commodity groups in California that ranges from stone fruit to citrus

1	to strawberries to avocados. And I'm really proud of a lot
2	of the work that's going on in California. The presentations
3	yesterday focussed on peaches. We're doing a lot of the same
4	things.

And we have 250 varieties plus in peaches, and I can tell you that there are some wonderful things going on in IPM in California. And the grower groups that I'm representing are actively participating. We've come a long way. We have a long way to go.

So as far as this process, Robert after lunch yesterday kind of crystallized my thoughts. This group up until yesterday afternoon was really not what I thought it was going to be. It was pretty much a classroom exercise. And because I'm new, I really appreciated all of the information being provided to us on the different risk assessment technologies and idea. But there really had not been that much exchange until yesterday afternoon.

And so I'm feeling better. I guess I'm from

California. I should be feeling something.

1	(Laughter.)

So I am, and so I'm really encouraged about that.

But I'm also from Missouri. You've got to show me. And as far as risk assessments, I would really benefit if we could walk through a risk assessment. I think it would be a great exercise for everyone, no matter what side of the table that they're sitting on. Let's look at these -- let's look at a product or some products and really pick apart the inherent risk in the chemistry. The inherent risk in the field worker issues.

Let's look at that and talk about it and have exchange. There are a lot of people that are new, like myself. I haven't heard their voices. And I would like to, because I know that they were asked to be a part of this process so that we could gain from where they're coming from.

Finally, as far as this process, one of the things as a person that is coming from California, I have seen the erosion of our cooperative extension system. We have some

L	super people out in California, but their numbers are
2	dwindling. And I really see, whether it's California or
3	Michigan or Texas or Florida, whatever we come up with to
1	transition to, we are going to need people to take that
5	message forward.

And if our infrastructure is not there, whether it's beefing up our universities and cooperative extension, whether it is equipping the private sector to deliver this information, now is the time we need to really take the long view of that system.

So those are my comments, and thanks very much.

MR. EHRMANN: Thank you. We will, as I mentioned earlier, take all the very good suggestions that have been made about this document just as a way of capturing this discussion and organizing it. And my guess is either in whatever interim process is set up or in future discussions of this Committee, I think this gives us a good list of issues to be working from.

And that's really what we wanted to get out of this

1	discussion yesterday and today. So I appreciate your input
2	on that. If you do have other comments on it tone,
3	editorial or additional items that you've been jotting notes
4	if you can get us that information, that would be very
5	helpful as well.

Mike, do you want to summarize?

MR. MCCABE: Yeah. I think what this discussion has shown, and what the document underscores, is that there are a lot of issues relating to transition that need to be addressed. And whether the CARAT format as it is currently structured is the best vehicle for that is something that needs to be discussed.

I've heard workshops. I've heard workgroups. I think that we've also talked about the advantage of having a smaller group with more interaction. I am going to spend some time during the break to talk to my colleagues from the USDA -- I'm glad to see Rich is here -- about what format we might look at to focus better on these transition issues, because it's clear that they need to be focused on.

The issue then becomes what is the charge of
whatever the group is that we put together and what are we
looking to achieve by putting that together. And just as you
look through the list, I mean, you could have 15 of these
groups each dealing with a different issue. And we can't
afford to do that. So we need to have some discussions, and
I think that we can tee something up perhaps for discussion
later in the day on where we move on this.

б

But clearly transition and the issues that have been brought up in the last day, this morning and prior to this meeting is something that needs more of our attention. How best to do that is what we've got to talk about a little later in the day.

MR. EHRMANN: Thanks, Mike. We could either take a break at this point or go ahead with the drinking water presentation as it is listed on the agenda. I would suggest we -- I would lean toward the latter. Since we're going to go to about 1 o'clock, the break would be a little more in the middle of the morning. If we go ahead and have the

1	presentation portion of the drinking water, then we'll take a
2	break and then come back for discussion on that, as the
3	agenda calls for.

Is that okay with folks to go with that plan? And with that, let me turn it to Susan Wayland to introduce our presenter. Susan?

MS. WAYLAND: Thanks, John. I wanted to have an opportunity to introduce Denise Keehner to you this morning. I guess I should say to reintroduce Denise. Many of you have met her before in this forum. She has been dealing with environmental fate and ecological issues, which she is about to talk about, in fact.

But I wanted to let you know that Denise has been just selected as newest member of the Senior executive Service and Division Director in the Office of Pesticide Programs. She will be the Director of the Biological and Economic -- what is it?

18 MS. KEEHNER: Analysis.

19 MS. WAYLAND: Analysis. Thank you. I say BEAD all

1	the time. Analysis Division. This is a very critical
2	division. It's one of our biggest links to the agricultural
3	community. They do all of the economic impact assessments
4	for the decisions that we make at EPA in the pesticides
5	world, and they also manage our two pesticide laboratories.

Denise has had a very long and distinguished career at EPA. She's been in the pesticide area earlier in her career and now later in her career. She's been in our toxic substances program and she's also been in EPA's solid waste program. So she brings a real variety of experience and a lot of skill and information to this job.

And I wanted to let you know that she is our newest division director. She will be continuing to work on some of the issues that she's been involved in, such as the one she's about to talk about, for continuity, because we don't want to lose her expertise in that area as well.

So I introduce to you Denise Keehner.

MS. KEEHNER: Thank you, Susan. Just a few comments on my move to the Biological and Economic Analysis

1	Division. Although I have really very much enjoyed my tenure
2	in the Environmental Fate and Effects Division, working on
3	drinking water issues and working on ecological risk
4	assessment methods and improvements in that area, I am very
5	much looking forward to the move to BEAD. I expect that to
6	occur around the first week in November.
7	Susan mentioned my career at EPA. Even though I
8	have a very youthful appearance, I have been with the Agency
9	
10	(Laughter.)
10 11	(Laughter.) I've been with the agency for 23 years, actually.
11	I've been with the agency for 23 years, actually.
11 12	I've been with the agency for 23 years, actually. And I've spent
11 12 13	I've been with the agency for 23 years, actually. And I've spent MALE SPEAKER: You started when you were 12,
11 12 13 14	I've been with the agency for 23 years, actually. And I've spent MALE SPEAKER: You started when you were 12, though.
11 12 13 14 15	I've been with the agency for 23 years, actually. And I've spent MALE SPEAKER: You started when you were 12, though. MS. KEEHNER: Right.

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(Laughter.)

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(END OF TAPE ONE, SIDE B)

MS. KEEHNER: -- five years I've been the acting

Director of EFED. I don't have a lot of specific plans for

what I'm going to do or what I'm going to try to do in terms

of leadership of BEAD yet. I'm smart enough to know that you

don't come into a new organization and have a list of things

-- specifics -- that you're trying to accomplish.

But I do know that there are some important things that need to occur, both in the day to day activities of the program to support registration and reregistration, and also there is a need to increase, I believe, our investment in the development of improved methods and tools that BEAD uses as it supports the program activities.

In terms of my leadership style, I'm very much someone who believes in bringing people into the process. I spent my career -- and if you follow my career and the things that I've done and the different programs that I've worked in, I do have a pattern of bringing people into the process,

of opening up processes, of making things more transparent,

of getting opinions and views of other people in making that

part of the process.

I also believe very much and very sincerely in the need for collaboration, particularly when you are trying to launch new efforts to develop improved methods. You still have the day to day work that needs to be done in order to accomplish improvements and methods and approaches. You have to partner, because the resources really are not there to do both at the same time. Partnering is an essential part of making progress in some of these areas.

I'm also very much a believer in objectivity, honesty and straightforwardness in my dealings and my assessments and how I approach the science of whatever it is that I'm involved in.

And finally, just to reemphasize, I do see the mission of any science division within the Office of Pesticide Programs as twofold. One is to provide the input on the individual decisions that are going through, but also

1	a respons	sibility t	to	forward	and	advance	the	science	and	the
2	methods o	of assessr	men	nt.						

So I look forward to working with you when I move into my new position. And as Susan mentioned, I'll still be involved in the drinking water arena, at least for the near term and midterm.

So why don't we move over into the drinking water arena now. We are very much happy to be here this morning to share with the CARAT Committee what we're doing in the drinking water assessment world and why, how the process is working for us, and where we are going to be going with improvements over the course of the next several years.

We have improved our methods fairly significantly recently, particularly over the past few years. We are bringing better science to bear on the assessment process in the drinking water arena. We are

-- our methods are better able than they have been to reflect real world circumstances and conditions. And we are working in a very collaborative way with the U.S. Geological Survey,

1 USDA and others to make even more progress as we move into 2 this upcoming fiscal year.

I think that having this presentation as a foundation should set the stage pretty well for discussions that this group might want to have about some of the public policy issues that are associated with drinking water assessment and drinking water risk management.

The people who are responsible for conducting and developing -- conducting drinking water assessments and for developing new methods and approaches are scientists. And if you know anything about scientists -- particularly I have many, many Ph.D level scientists within the Environmental Fate and Effects Division.

If you know anything about scientists, they really want to understand. Their fundamental desire is to try to understand what is going on in the environment. And in this case as far as drinking water is concerned, what is happening when pesticides are used, where do the pesticides go with regard to drinking water sources, what are the

1 concentrations, etc.

The only other agenda that is at play is sort of a management agenda. And that management agenda revolves around trying to complete these assessments in the most efficient and effective manner possible using a scientifically sound process.

The fact of the matter is, we do not have infinite resources, and we have to have a system or a process that allows us to quickly and easily identify compounds and uses that are not likely to pose a problem in drinking water, so that we can focus most of our efforts on those pesticides and uses and locations that do.

In very broad terms, when we complete a drinking water assessment under the Food Quality Protection Act, what we are trying to do is to understand the occurrence of pesticides in the water that people drink, or trying to understand the risk that is associated with that occurrence. And we're trying to understand the factors that influence the occurrence of pesticides in water.

It's very important to the risk management side of the program for us to be able to know who is going to be exposed, how many people are going to be exposed, to what concentrations, for how long, geographically where those higher levels might be. Risk managers are also very interested in understanding what can be done to mitigate or reduce levels that are above human health levels of concern.

Actions such as reduced application rates, geographic restrictions, buffer strips to mitigate runoff, and adjustments to application methods within the spray drift arena are the kinds of things that have some potential in certain circumstances to reduce the concentrations of pesticides reaching water. And the risk management side of the programs asks us if we do this, what will happen. What do you anticipate will occur in terms of the concentrations.

Our role as a division is really twofold. We do have the responsibility for developing the methods and approaches and the system for assessing drinking water occurrence of pesticides. But we also, as I mentioned in the

BEAD case, have this responsibility of developing the day to day assessments for individual pesticides.

We have to use a cost effective process to get there. It's really not good enough for us to be able to do a topnotch assessment of the occurrence of a particular pesticide in drinking water, because we really can't afford to do an area by area, pesticide by pesticide, full blown assessment in every case. We have to have the ability to easily identify those compounds that are not of a concern so that we can focus our resources on those that are of a concern.

Once we finish with our characterization and our assessment of the occurrence of the pesticide in drinking water, we turn that assessment over to the Health Effects Division, and the Health Effects Division takes that and uses it in its human health risk assessment process.

In a few minutes Dr. Bill Wilbur from the U.S.

Geological Survey, Nelson Thurman from EFED, Dr. Ron Parker

from EFED, and Dr. Rudy Pisigan from EFED will provide you

with an overview of where we are and where we're going with our drinking water assessments.

But before Dr. Wilbur gives his presentation and we start the technical presentations, I want to highlight just a few things. First, it's very important for everyone to understand that drinking water is fundamentally different from food in some very key ways that affect how you assess risk and also how you manage risk.

People -- other than people who take their drinking water from bottled water, people generally get their drinking water locally. Food, on the other hand, is nationally distributed. What's in your drinking water is very much impacted by what is occurring in proximity to your drinking water source. That's another important difference. When you go to a grocery store, what's in or on your food at the grocery store generally has a little to do with what's occurring in terms of local circumstances.

Also, for an adult if you assume two liters of water ingested per day, there is no other single commodity

that comes close, at least in my understanding of it, to

water in terms of the amount consumed and the frequency of

consumption. You have daily consumption, and you're talking

about ingestion of two liters of that material give or take

per day.

The second thing is that even though most surface water based community water systems do use some form of treatment, based on the available information that we've been able to pull together in consultation with many experts in the field, including a recent Scientific Advisory Panel meeting, it appears as though that conventional water treatment, which is the predominant form of water treatment in the United States, is not really all that effective in most cases in reducing the risk associated with the occurrence of pesticides in raw water.

There are technologies, such as granulated activated carbon, that do have some effectiveness for some classes of pesticides and generally much more effective in reducing concentrations, but they aren't -- that type of

system is not the predominant form of treatment in the United

States. In fact, less than 5 percent, I believe, of the

systems use granulated activated carbon.

The third point that I wanted to highlight is that the reality is that certain pesticides in certain locations are going to be an issue. The name of our game in the assessment business is to figure out which pesticides, and where, are going to be of concern, and to do that as efficiently and effectively as possible.

We don't think that all pesticides in all locations are a significant drinking water concern within EFED. My scientists believe that certain pesticides in certain locations are, and we're trying to figure out which they are and where those are.

This all leads up to sort of a summary, to me, of what constitutes an effective drinking water assessment process under the Food Quality Protection Act. And I see that there are at least two elements that are important in an effective process.

1	The first is to have a reliable, cheap, effective
2	screening device that allows us in a scientifically
3	defensible manner to identify pesticides that we don't need
4	to worry about from a drinking water perspective. We do want
5	that system to err on the side of protection, but we don't
6	want it to err too much. Otherwise, we're wasting resources
7	doing more refined assessments for compounds that don't
8	really need a refined assessment.

My scientists called it the Goldie Locks principal the other day. Our screening method can't be too hot or too cold. It's got to be just right. We want it to do the job that needs to be done.

The second major component in the drinking water assessment process is having a sound predictive tool. Something that allows you to go to the next level of refinement to have confidence in your estimates of pesticide concentrations at individual drinking water intakes in particular localities and particular locations.

It's very important, I think, for all of us to

recognize that we really cannot rely on drinking water

monitoring alone as the basis for Food Quality Protection Act

risk assessments. Drinking water, as I've mentioned several

times, is a local issue. Pesticide use is variable season to

season, year to year and location to location. Monitoring is

very expensive.

Companies that are involved in individual monitoring programs for individual pesticides will tell you we're talking several million dollars for a compound that has any type of a broad use in order to adequately capture the use area of the compound with the number of samples that are needed to really reflect the variability in pesticide concentrations over time.

And the other thing that is important to recognize is monitoring by definition is after the fact. When we're dealing with new compounds coming into the process, we want to be able to have a method that is in fact able to predict with an adequate level of confidence what those concentrations are going to be at particular intakes, so that

we can take actions to prevent contamination rather than
dealing with clean up after the fact.

We have made a lot of strides since 1996 in improving our drinking water assessment process. We've improved our screens. We're making appropriate use of all available monitoring data from all the sources that we were able to tap into. We're bringing GIS related information and tools to bear to help us to better characterize the occurrence of pesticides in water.

We've worked with the U.S. Geological Survey on a pilot reservoir monitoring study, and we're just beginning to see preliminary results. They're undergoing QAQC and peer review right now. But we're beginning to get some of that data and be able to take a peek at it, anyway. And we have been working with the U.S. Geological Survey on the development of this more refined predictive tool.

We've done all of this work in a very open manner. We sought and obtained external scientific peer review throughout the process. We've had three LC workshops and

seven scientific advisory panel meetings since 1997. All of those efforts have been focused on making our assessment process better and also on improving the ability of our process to reflect the real world.

As we enter 2001 EFED -- in the drinking water arena, our primary focus is going to be on advancing the development of these better predictive tools and to work in a very collaborative way with USGS and USDA to organize any monitoring efforts around the objective of advancing as quickly as possible the development of these more refined predictive tools.

I would like to now turn the floor over to Bill Wilbur from the U.S. Geological Survey, and Nelson Thurman, who will be providing you with sort of an overview of what we know generally about the occurrence of pesticides in water and drinking water. Then Nelson is going to walk through our current assessment process and methods and provide you with some perspectives -- or some statistics on what's working and how it's working for us, and where we're going generally.

Τ	Dr. Ron Parker is going to do a quick presentation
2	on our work to develop this more sophisticated predictive
3	model. And then Rudy Pisigan will touch on what we know
4	about treatment. Because we just got out of a scientific
5	advisory panel meeting, and I think the basic conclusions
6	coming out of that meeting are going to have some bearing on
7	where we go in the future.
8	And then I'm going to ask Al Jennings at the end to
9	briefly discuss the recent formation and mission of an EPA,
10	USDA and USGS interagency steering committee on drinking
11	water assessment.
12	Dr. Wilbur?
13	DR. WILBUR: Can everybody hear me okay in the
14	back?

MALE SPEAKER: You have to use the microphone.

MR. EHRMANN: You need the mike.

15

DR. WILBUR: Let's go ahead and have the first

18 -- yeah. That's not it. It just says Pesticides in the

Nation's Water Resources. Keep going. Good.

1	Well, good morning and thank you. This morning
2	what I would like to do is provide you with a brief overview
3	of what we've learned about the occurrence and distribution
4	of pesticides in streams and ground water of the United
5	States. It's part of the first phase of the U.S. Geological
5	Survey's national water quality assessment program.

The goals of the NWQA program, as we refer to it, are to provide nationally consistent descriptions of current water quality conditions, how they're changing, and as Denise pointed out, from a scientific point of view to really provide an understanding of the major factors that effect water quality conditions and those changes, and provide those explanations to others.

To meet the goals of the program, we're sampling a very extensive list of physical, chemical and biological perimeters, including a wide array of volatile organic compounds, nutritions --

FEMALE SPEAKER: Excuse me. Do we have this one?

I have a bunch of them, but I don't have this one.

1	DR.	WILBUR:	You	should	have	а	light	blue	sheet.
<u> </u>	DIC •	WIDOK	1 O u	BIIOUIU	II a v C	а	T T 911 C	$D \pm u \subset$	DIICCC.

- MS. KEEHNER: Right, the blue one pager.
- 3 MR. EHRMANN: It was on the table this morning, I
- 4 think.
- DR. WILBUR: Right.
- 6 FEMALE SPEAKER: It's not that.
- 7 MR. EHRMANN: It's not that.
- 8 DR. WILBUR: No.
- 9 FEMALE SPEAKER: Okay.
- DR. WILBUR: No, you won't have copies of the
- 11 slides.
- 12 FEMALE SPEAKER: Thank you.
- 13 MS. KEEHNER: You have a lot of them, but not that
- one.
- MR. EHRMANN: It says USGS.
- DR. WILBUR: We're different. We're sampling for a
- wider range of various measures -- physical, chemical and
- biological perimeters. And included amongst those are 80 of
- the 120 most commonly used pesticides in agriculture and in

1 urban and suburban settings.

One of the comments that I'll make is many of the analyses that we perform are at the part per billion level, substantially below many of the current criteria and standards. The reason we do that is because of the objectives. We need to actually have actual measurements of concentrations, so we can see how concentrations vary both in space and time, and to look at how these contaminants are actually transported through the environment.

The findings that I'm going to present this morning are based on an analyses of about 5,000 water samples of streams and ground water, and about 500 samples of stream bed sediments and fish. Seventy six currently used pesticides were analyzed in water and account for about 75 percent of the pesticides that are used in both agriculture and, of course, urban and suburban uses as well.

One of the goals of the program, which is really fundamental to the mission of the Geological Survey, is to provide unbiased scientific information to others, and

especially those that are responsible for the management of earth resources, regulation and for policy decisions. And so we're very pleased to have had over the last few years a very strong and collaborative relationship with EPA, and especially with the Office of Pesticide Programs. And you're going to hear more about some of those collaborative activities both later on in this presentation and also subsequently by other presentations as well.

Okay. Well, the question is, are pesticides in water? And the short answer is yes. They are much more widespread, both geographically and year around, than we initially believed they would be. What this slide shows is that almost every stream sample that we collected, and about half of the samples from wells, contained at least one of the pesticides that we measured for.

Ground water samples frequently -- or less frequently contain detectible pesticides, because there's much more opportunity for retention of these compounds on soil as water moves from the land surface to ground water,

and because the travel times from the land surface to the aquifers are much longer than, of course, for streams.

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Most commonly found pesticides in water are four of the most commonly used herbicides on crop land for the herbicides with the greatest use in urban areas and other nonagricultural applications, and four insecticides that have both agricultural and urban uses. Some of these pesticides are household words in many parts of the country: atrazine, metelochlor, 2,4-D and diazinon.

Some of them are less frequently well known: deethyl atrazine, adegraday (phonetic) of atrazine, which we find very frequently and almost always with its parent compound, atrazine, promotoan (phonetic), a herbicide with no registered agricultural uses, but extensive use in urban areas and for control of vegetation along road sides and construction sites.

One of the most significant findings was the very frequent and prevalent occurrence of pesticides, especially

insecticides, in urban streams. It likely results from the combination of intensive use on lawns and gardens combined with intensive irrigation or little irrigation during the growing season and the efficient flow pathways that occur, especially in urban areas with the impervious roads, and storm drains.

Well, the significance of pesticides in water resources really cannot be adequately understood by national comparisons and statistics. Each region in the watershed has its own characteristics and influences: soils, climate, dominant crops and most prevalent pests. They all vary. In fact, at the heart of the NWQA design are individual and tailored studies of specific geographic areas so we can examine how these various differences play out on the occurrence of distribution of pesticides.

This is an example that puts some of our results in a geographic context, and it illustrates the simple relationship between chemical concentrations and pesticide uses. What this particular graph shows is the relatively

1	high concentrations of herbicides, particularly in the corn
2	and soybean belt in the middle part of the country, where
3	they do have relatively high pesticide application rates.
4	But it also shows relatively high concentrations in the
5	Willamette Basin up in Oregon, and in the San Joaquin Valley
б	in California, and the Trinity River Basin down in Texas as
7	well.

As I pointed out a moment ago, another significant finding that has surprised many is that almost every urban stream ranked among the highest in concentrations of insecticides. And those concentrations frequently exceeded aquatic life guidelines.

The urban areas that we studied span a wide range of climatic and cultural settings. And these results suggest that pesticides may be a very significant concern to aquatic life in urban streams throughout the country.

Should we be concerned? The significance of pesticides in potential drinking water sources seems to be low when compared to current drinking water standards and

guidelines. And this is good news. Only a small percentage of the streams that we sampled had average concentrations greater than drinking water standards, and none of the sites that we sampled where those concentrations were exceeded are actually used as a source of drinking water supply. In ground water, few wells, even in very shallow retard zones, had concentrations greater than a standard.

Well, the difficulty we have in concluding that we shouldn't be concerned is that few of these pesticides actually have standards or guidelines, and the existing standards and guidelines have not been designed to account for actual patterns of pesticide exposure, largely because the science wasn't ready to do that.

Thus the reason for any concern for our nation's drinking water supply is not the certain knowledge that problems will occur, but the uncertainty that they won't.

For example, drinking water standards are based on long term average exposure to single compounds, whereas water sources are most likely going to contain complex mixtures of parent

1	compounds and their metabolites and usually have seasonal
2	patterns with much greater where concentrations may be
3	much larger than average concentrations.

And I'll show you some examples of those in a moment. For aquatic life, based on current guidelines there is more evidence for concern. More than 70 percent of the urban sites that we sampled had diazinon concentrations that exceeded a U.S. or a Canadian guideline, followed closely by chlorpyrifos and malathion. But you'll also note that atrazine also exceeded its Canadian guideline at almost 40 percent of the agricultural screens that we sampled. Many of the exceedences were only one or two samples, but sustained periods of time with exceedences were common for atrazine and diazinon at some sites.

As with drinking water, aquatic life guidelines have been established for only a limited number of the compounds that we're looking for.

Okay. This slide may be a little complex, but I think it's worth the effort, if you bear with it. I

mentioned a moment ago the complicating factors of mixtures, including breakdown products of metabolites and the effects of seasonality. And I want to show you some examples.

This first slide shows that pesticides almost always occur as mixtures of several compounds rather than individually. For example, about 80 percent of the samples from urban and mixed land use streams -- that's the red and blue lines up top -- for mixed land use contained about four pesticides, compared to about 50 percent of the samples from agricultural streams. And in contrast, if you'll look down in the right hand corner, about 15 percent of all the stream samples contained 10 or more pesticides.

The second complexity that I mentioned which adds to the mixtures problem is the role of pesticide breakdown products or metabolites. And this is an example of herbicides measured in the Iowa River, where the total herbicide breakdown products were frequently found in more than 10 times the concentration of the parent compounds over a two year period. And one of the things you might want to

notice here, is on that Y axis, that's a log rhythmic scale, so those units go up in magnitudes of ten each time.

even more important in ground water and they often are more toxic than their parent. In both the second and third groups of the study and investigations that we've taken on, we've increased on our emphasis on measuring metabolites, because of these early findings and because of the results of others, that have really shown the importance of these metabolites to the overall pesticide occurrence picture.

Okay. Finally, pesticides in streams almost always follow strong seasonal patterns rather than remaining constant throughout the year. And the same seasonal patterns seem to repeat or generally occur year after year.

This is an example of an Ohio stream -- an agricultural stream -- draining corn and soybeans. It's an example of a data set that was compiled by Heidelberg

College, one of the few long term data sets that exists. And one of the things you'll notice is that although the MCL is

substantially exceeded for a period of time each year, the mean concentrations never exceed the standard. And this is the type of exposure patterns that we typically see.

Well, NWQA's primary objective has been to assess ambient water quality, and thus we've had limited ability to really address specific drinking water issues. However, beginning in 1999, as Denise mentioned, we began a pilot monitoring effort with EPA's Office of Pesticide Programs in the Office of Ground Water and Drinking Water to determine the occurrence of pesticides in drinking water and to document some of the effects of treatment on pesticide concentrations.

The study focused on 12 water supplier -- public supply reservoirs that were selected to represent different land and pesticide use areas within watersheds that varied with their soil and runoff characteristics. Water samples were collected at both the intakes and at the finished water at least 11 times, including quarterly samples throughout the year and biweekly samples during the period of pesticide

application and greatest runoff. Thus what we're developing
is a very substantial data set of water samples in both raw
and finished water.

Now the data from the first year of this effort are going through the final stages of quality assurance and quality control, and we believe that a lot of that information will be available right after the first of the year.

Some of the preliminary examination of the data that we've seen so far confirm what we've seen in ambient streams, and thus there are pesticides in raw waters used as sources of drinking water supply. And at some sites, we're actually seeing measurable concentrations in the finished water as well. And again, as I mentioned, these data sets will be available right after the first of the year.

Well, finally, the NWQA program is collaborating very closely with EPA on a number of issues that will lead hopefully to better information and reduction of uncertainty on exposure and estimating risk. We're now working with the

1	data sets. This is only from 20 study units that were
2	sampled beginning back in 1993, and we're now starting to
3	work with data sets that were developed beginning in 1996.
4	And after the end of this coming fiscal year, we'll have a
5	third data set.

So we'll have on the order of about 59 areas, probably almost three times the amount of information that we have to date, on the occurrence and distribution of pesticides and other physical and biological perimeters. And this will greatly improve our ability to look at the occurrence and distribution of pesticides and metabolites and mixtures, their seasonal patterns and so forth.

We're working to develop predictive models, so we can extrapolate our understanding to areas that haven't been sampled but have similar physical and chemical characteristics, and also to areas that have some numbers of samples. And we're, of course, working very closely with the Office of Pesticide Programs on this effort. You'll hear about that effort in a moment.

1	And finally, we need improved assessments of
2	drinking water sources and supplies. You've heard about one
3	example very briefly, this pilot effort on water supply
4	reservoirs. We're also working with EPA to design a national
5	scale drinking water monitoring program that will assist will
6	model development and risk assessments by expanding the
7	current understanding of exposure.
8	So with that, I'll close and turn the platform over
9	to Nelson.
10	MR. EHRMANN: Bill, I think what we'll do is
11	probably let's go ahead and take a short break at this
12	point.
13	MR. WILBUR: Okay, that's fine.
14	MR. EHRMANN: Just in terms of sticking to our
15	schedule, and then we'll come back for the remaining
16	presenters, if that's okay.
17	So let's take 10 minutes and then we'll reconvene
18	for the other presenters.

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(Whereupon, a brief break was

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1	taken.)
	taken.

MR. EHRMANN: Because Mr. Rominger has to leave in about 45 minutes, I would like to kind of interrupt the flow of our drinking water presentations to address the issue of the Committee's work process, etc., because I think it's important that both co-chairs be here for that discussion. And they have spoken and the staffs have talked, and Mike is going to lay out a suggestion about how we proceed in that area.

So let me turn it over to Mike for those comments.

I'll go out in the hall and make sure everybody else knows
they ought to be in here.

MR. MCCABE: I think that as part of our discussions the emphasis on workgroups really is aimed at trying to see how we can most productively use this group or some variation of it to address outstanding issues and to address issues that we're not able to deal with in the depth that we would like to in the CARAT structure and the CARAT format.

1	And we're struggling with this, because workgroups
2	are very labor intensive. They are labor intensive from our
3	standpoint. They're labor intensive from your standpoint.
4	They also don't always lend themselves to the resources of
5	some of the people here. Not everybody has a Washington
6	office. Not everybody has the kind of resources or personnel
7	that can attend these workgroups and can participate fully.
8	So we are aware of those limitations. And in fact, that was
9	part of the reason that we haven't jumped at putting together
10	workgroups.

However, I think that on a couple of issues that we see coming up, workgroups or some format similar to that could be very useful in terms of getting into more depth, pursuing more of the peripheral issues, but also core issues, relating to some of these areas.

And I think that what we would like to propose, without having every i dotted and t crossed on this understanding, is a workgroup -- two workgroups. One would be on transition. I think that this morning's discussion

1	clearly indicated that we need to have that. But we
2	need to narrow down the focus of what that is in transition
3	I mean, it cannot be all of the dozen things that were on
4	that list, but there are some key areas that I think
5	everybody pretty well agrees on that we could have some
6	beneficial dialogue and recommendations on that.

Transition issues -- I mean, you know, it could be research and funding issues. The whole issue of the farmer buy in. You know, how do you get the agricultural community -- the farmers -- to really participate in IPM and what are the impacts on the farmer. What are the ongoing impacts, some of which were graphically illustrated yesterday in terms of the transition problems. Also, how do we measure. How do we evaluate what is happening during the transition.

So I think that we can put together a workgroup on transition. That would be one. Also not just in yesterday's discussion, but also in some side discussions, the issue of cumulative risk. This could be integrated into transition, but I think it also needs some separate attention.

The workshop that we had was very effective in
terms of teeing up some of the issues. But I think that as
we work through the cumulative risk issue, as we move towards
developing the methodology, we need to have a better idea of
what the public participation is and what the process is for
the cumulative risk issue.

We also -- there are also other issues that could be addressed, probably initially better through workshops, and I think drinking water is one of them. Also the occupational issues, the worker exposure issues. And we may find that we need to devote more to those issues after the workshop. But let's not jump right into a workgroup, because we do have limited resources. We do have limited staff time.

And as I think that you can see from the accomplishments that we've already achieved, this staff is working overtime. They are putting a tremendous amount of effort into making FQPA work, and to getting the reassessments done, and to having the outreach that we mentioned in detail yesterday. And we don't want to get them

1	off track on that, but at the same time, I think that if we
2	are able to target some issue areas, we could actually
3	hopefully help not only staff, but all of us in moving
4	forward in this area.

In addition, we should talk about another CARAT meeting, and I think that the CARAT meeting is something that in all likelihood could not occur before February. I mean, if you look at what is going to happen in a month, no matter who wins, there will be a new administration. And the new administration will bring in new people. There also are the holidays, and in this town, as I'm sure many towns, things slow down.

But the transition and holidays and just all of the end of the year work that we have to do, I think says that February is the earliest that we could have a CARAT meeting. That doesn't mean that we shouldn't initiate some of these other things, and I think that we should, because we need to start the information flowing on that.

As far as agenda items, we can decide that in the

1	future. But a couple of agenda items that have come up:
2	children protection, the whole issue of what we're trying to
3	achieve there and what the issues are with that, and
4	nonagricultural pest control issues. I think that those are
5	areas where if we could have more discussion, if we could
6	have some presentations, it might help all of us in looking
7	at areas beyond just the OP pesticide issues that we've
8	focused on in the last two meetings.

I'll turn it over to Rich. We've had some discussions during the break. Jim and others -- Jim, Keith and others have been talking about trying to put some meat on the bones of this. But that's the general proposal that we have.

MR. ROMINGER: Thank you, Mike. I think Mike has outlined a good process for moving forward. Certainly the major issue of transition, as we heard yesterday from peaches and winegrapes, there's going to be a lot of work needed there. So that's a good subject for a workgroup. Certainly if we do the cumulative risk that's going to drive what we

1	need	to	do	in	transition	in	а	lot	of	ways.	So	those	will	be
2	very	hel	lpfı	ıl.										

And then to hold some workshops as well on some of
the other issues. I think the worker issues and the drinking
water issue -- another workshop on those would be helpful in
getting us more information and giving you a chance to talk
more in depth about those issues.

I think it sounds like the way to proceed. I agree with Mike that February is the earliest. I would think that's very optimistic that the next administration would get things together in February. It might more likely be March before we get around to the next CARAT meeting.

But in the meantime, these workgroups could be doing some very productive work. So we would like to hear your comments on those suggestions.

MR. MCCABE: So it's unanimous, okay?

17 (Laughter.)

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Thank you.

MR. EHRMANN: Bob?

1	MR.	ROSENBERG	You	know,	I	do	this	so	reluctantly
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2 I always sound so negative.

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3 MR. EHRMANN: We don't see it that way, Bob.

4 MR. ROSENBERG: Well, I appreciate that. I think this is an important step and a good step. There is a whole 5 range of issues that you did sort of address. The one that 6 7 obviously I care the most about is the ones associated with 8 residential exposure assessments. I think there are other people in the room that probably share that concern. 9 I think even the ag community will increasingly share that concern as 10 you go forward with aggregate and cumulative risk 11 12 assessments, and residential risks will be eating up big 13 chunks of risk cups that would have been otherwise devoted to commodities and other ag uses. 14

I think that the thing which the TRAC process did best was to de-mystify the way the agency does dietary exposure risk assessments and has built, I think, a fair amount of confidence amongst people within the ag community. You know, the folks I represent have always said -- and I

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believe this to be true -- that if they have confidence in

this process, and if at the end of the process there is a

showing that a product poses an unacceptable risk, that we

would walk away from that product. And I believe that in my

heart to be true.

The problem is, because so little public attention has been paid to the data being used for residential risk assessments, the methodology, the default assumptions or even the process, I think that confidence does not exist amongst pest control operators, lawn care guys, tree care guys and golf care guys.

And I do think that whether it's through a workshop or through a workgroup, it would be extremely useful to give some consideration to trying to shed a little bit more light on those kinds of issues like residential exposure or worker exposure.

This, I think, may be a topic for a workshop. I don't think it quite rises to the workgroup level. But I'll let Marcia --

1	MS. MULKEY: Well, I wanted to just mention that a
2	number of you who are also on the PPDC, which, as you know,
3	is the Pesticide Programs Dialogue Committee, an advisory
4	committee which has been operating for some time now, it has
5	two workgroups active maybe three. But two that come to
5	mind are rodenticides and inert disclosure issues.

We do have a meeting now scheduled for basically the turn of November and December. And that is another forum where it's entirely possible to take especially some of these issues like occupational, which are really not reassessments — you know, they're FIFRA issues, basically. We've talked before about other forums, so that is another possibility for some of these issues.

It is clear that the number of issues you're interested in and we're engaged in exceeds the practical list of anything. But I thought it was at least worth mentioning that that's another important and near term forum where there is an opportunity for some of these things.

MR. ROMINGER: We want you to have confidence in

1	the process, and we think that the best way to do that is for
2	you to have input into the process. So that's what we're
3	going to try and do.

- 4 MR. ROSENBERG: I appreciate it.
- 5 MR. EHRMANN: Cindy?

MS. BAKER: I just want to say thank you, and I

appreciate the proposal that you would put forth workgroups.

I am a believer that I think we can do some very productive

things in the area of transition and cumulative with those

workgroups. I know it's a huge drain on both USDA and EPA

resources.

I don't have a wealth of people behind me, so it's a drain on myself to get here. But I would be more than willing to do it on those two issues which I think are fundamental to what this Committee is about and how this Committee has pulled together to advise. And I think the interactions that can take place, at least the examples that we've seen -- the PPDC workgroups, I think, have been extremely successful in moving issues forward and coming to

1 consensus and talking about things.

- And I think the same would be true of these. So I
 know it's a sacrifice on both your parts to come forward and
 offer that. And I appreciate it and I think it will be
 valuable.
 - MR. AIDALA: One thing, if I can jump in for a second, just in thinking aloud about this again. You've seen some real time decisions this morning about the things that Mike and Rich have both said.

As people comment, I think one thing we will also like feedback on is size. The last time -- again, the good workgroups end up -- everybody wants to show up. So is it -- and it's not to say, you know, I would like to or -- obviously you can make those testimonials. But also the general size that you think might be a good working group. And obviously we'll have to have balance and all the other things that are essential to make the process work.

But just so, again, if there is buy in, then everyone is nodding their head that workgroups are a great

1	thing. Well, again, a workgroup of 35 people becomes another
2	CARAT meeting. But, again, literally at the last during
3	TRAC workgroups, you know, the really good meetings, everyone
4	wanted to show up. And so obviously then we have just
5	another CARAT meeting.

And the suggestion is in light of that, that you think that we can be more efficient in some way. So just if people could respond to that, that would be useful.

MS. BAKER: I think -- I mean just to respond a little bit to that, Jim. I think some of it is the size. And you're right, a lot of those meetings got very big and it got difficult. But the other thing is the process by which those went. Those were different than what we've been doing here.

I mean, I think we came with specific topics that we came prepared to talk about. We had more lead time in terms of the issues that we brought forward. I think we had a lot more exchange between people. And those are the things that I think were the critical elements that made some of

1 those things successful

2 How about 15. Is that how I get into it?

3 (Laughter.)

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I can see you growling at Mike, again.

5 MR. AIDALA: We seek your input, I mean, on that. 6 And the other thing is, I think another thing that helped is

sort of narrowing what the issues are in general, but then

8 also that particular session.

So, for example, as Mike said, you know, on cumulative it isn't like all of cumulative or the science of cumulative and all that, because this is not a scientific body, but rather, you know, what is that process we're going to use around that. And obviously it may take some briefings on what the science currently is saying and things, but this is not a science group and all of that.

So what are the points that are appropriate in terms of agenda things. That's some of what was already mentioned that we will be further ferreting out as we go forward with workgroups.

1	MR. MCCABE: I think also, Cindy, as you said, it
2	would be more productive if you have some specific topics and
3	you're prepared.

- 4 MS. BAKER: Right.
- MR. MCCABE: So maybe we can get enough information out ahead of time so that you do have some homework to do beforehand.
- 8 MS. BAKER: Right.
- 9 MR. EHRMANN: Good. Sarah?
- I would like to get a little bit of an 10 MS. LYNCH: idea of the difference between a workgroup and a workshop, 11 12 because here is my -- and what -- it seems like the workgroup is CARAT folks. And if the idea is to stimulate a dialogue 13 into great -- and to preserve in that dialogue the diverse 14 15 voices at the table, then to be really honest, there are real 16 constraints to the amount of time I know I could, or probably 17 some of the others in the public interest community could put into workgroups. 18
- 19 And that's what we want to do, is create that dialogue

between us, which I think is incredibly important.

One way to do that, perhaps, would be at the CARAT meetings to have breakout groups, where instead of -- in addition the members of the CARAT team could go into these different groups and chew over specific, in depth smaller group questions, issues, etc., so that it would be more in the agenda of the CARAT meetings than outside of the CARAT meetings.

That would be my suggestion, because I think that there is a real time constraint that some of us have in terms of how we can participate in these very important issues.

The other thing that I would say on this issue of a workshop, I think transition is incredibly important. And I think it would be great if CARAT could talk about it.

However, I agree with all of the -- some of the other comments that some of the very important people who need to be here to talk about that aren't here.

And so, therefore, I would think that transition would be a better thing for a workshop, especially if you

1	could bring in and February would be a good time, because
2	that's generally speaking not a harvest time, although for
3	some I know it is. To bring in the very people that are
4	engaged in transition efforts across the country. And it
5	would be great to inform all of us about the pluses and
5	minuses or, you know, the hardships.

But also I think sort of another very useful purpose -- we've heard from all the IPM practitioners that growers learn best from each other. And it would be an opportunity for those folks that are really trying to push the envelope of transition to communicate amongst themselves as well.

MR. MCCABE: Sarah, I think that that's a good point and an important point, and it was illustrated yesterday by the presentations that we had. Those folks were involved in transition, and we saw some of the concerns that were raised and we could identify with them much more directly.

Having a workgroup does not mean that you don't --

1	that you can't invite those people in, that you can't have
2	them as part of that. And I think that that may be something
3	that the workgroup would discuss. And if it was seen that a
4	workshop type format or, you know, maybe even a conference
5	would be something that would help bring the agricultural
5	community more into a discussion of these issues, that might
7	be something to look at in the future, too.

I don't know whether you were in the room, but the problem with our CARAT schedule is that at the very earliest the next CARAT meeting would be February. And as Rich said, that's probably very optimistic. So I think that, you know, these issues do need to be addressed and addressed before that.

MR. EHRMANN: Bill?

MR. LOVELADY: Well, I would certainly like to thank the chairs for making this announcement. And I think it goes -- I certainly sympathize with everyone's concern about lack of resources and another meeting, because I am a farmer. And I'm not a large corporate farmer. I manage my

own farm. And I have to get here from almost the Pacific

Ocean. So it really is -- it's not easy to do. But it is

something that I think is so important that I'm going to make

every attempt to be here when I'm needed to be here.

And so I certainly thank you for making this announcement about some working groups. I think it will go a long way towards solving some of the problems that we see in the future. And certainly transition and cumulative risk are right at the top of the list. I know there are other issues that may become part of the discussion.

But I am thankful that you saw fit to do this, and
I think it's a positive move.

MR. EHRMANN: Let me just ask. There are a number of cards up, obviously, and I want to give everyone an opportunity to speak. If we can keep the comments -- if you could follow Dr. Balling's precedent from this morning and just say I agree with X or whatever. But let's try to move through these comments so that the co-chairs can digest what they've heard and at the same time have time for our other

1 presentations.

So, Carolyn, you were next.

MS. BRICKEY: Yeah, I guess I do agree that these
are the two most important topics that you've selected as
potential candidates for workgroups. But I still am very
unclear about what the purpose of the workgroup is in either
case. What it would do. How it would be structured.

And, you know, as Sarah points out, the time constraint is a big thing. I'm on the PPDC. I'm on the inerts workgroup. You know, I mean, there's just a lot of stuff going on and it's just hard to keep up and do all of it. And I can tell you, some of these conference calls -- no offense to anyone -- are torture. So you have to really feel like going into it, that you know what you're supposed to be doing and what you're going to get out of it.

So I just urge you to be very judicious in how you structure it. I would be happy to provide future input on that, but I don't want to take a lot of time on that now.

MR. MCCABE: I think you're absolutely right. We

1	need to have clear direction on what these workgroups are
2	going to achieve. What they're going to address. And I
3	think, as Cindy said, there needs to be some charge that they
4	go forward with, rather than just sort of meet and talk about
5	these things. I mean, otherwise we'll have some nice
5	meetings, but won't produce anything.

And we want to see something come out of this.

Something that can advise. Something that, you know, can elevate the informed debate on these issues.

MR. EHRMANN: And I think one of the factors -- and I think Jay mentioned this yesterday -- in terms of kind of a process suggestion is that groups like this can bring ideas and concepts to the larger group that are really presented by members of the TRAC, you know, from across stakeholder perspectives, which helps to kind of break up the dynamic of the Department and the Agency always being the presenters.

You would do that, though -- you need to do that in response to a question or, you know, the issues on which the Department and the Agency want advice. So, I mean, that's

1	why it's kind of two pieces of the puzzle. And my experience
2	is that, as people have said, a group just kind of put aside
3	you know, put out there with a very large general charge
4	isn't necessarily going to be that much help in terms of
5	giving advice.

I think the real motivation of those who have been particularly interested in workgroups has been, we want to be able to give some advice. We want to be helpful to the Department and the Agency. So I think it's incumbent on them, as Mike is suggesting and Rich, too, to put the -- you know, here are the issues we're grappling with as the agencies help us. You know, these three points or these five, whatever it is, rather than kind of replicating the broader discussion.

So that's going to take a little work to get that together as Mike indicated, to get your thoughts about what those issues are, and across the Department and the Agency to have some more discussions. That's going to be very helpful.

There are also a number of methodologies that we're

1	using these days to try to be more efficient about this. And
2	there is no replacement for being in the room and grappling
3	with these issues, so I'm not saying there wouldn't be any
4	meetings. But, you know, through the Internet and other
5	approaches there are a lot of ways to exchange ideas and
6	refine thoughts that can help make those meetings maximally
7	productive when you actually get in the room.

So I think everybody is aware of everybody's resource and time constraints and need to factor that in in terms of the process that we would use to help bring crystallized thoughts to the CARAT which is the ultimate objective.

Next is Mark.

MR. WHALON: Thanks, John. And I want to echo the thanks for hearing us, Mike and Rich. I appreciate that.

I would like to address the resource issue, too. I think that the issues of transition and cumulative analysis are too important not to put personnel and other resources into them. They're critical. They're absolutely critical.

1	But I would like to echo what Sarah said about
2	additional resources. I think that the challenge really
3	maybe to John or to those of you that structure these
4	meetings and will be involved in the workshops or the working
5	groups and whatever comes out of those working groups is
6	to get the critical resources, personnel and other to the
7	table at the time that we have those discussions. That's
8	going to be critical to moving ahead.

And the other thing that I would just like to say is that if what comes out of the workgroup on transition and cumulative is a workshop, and the structure of that workshop and the purpose and hopefully synergism, that would be a great accomplishment coming out of a workgroup.

So maybe that ought to be the first agenda process for one of those workgroups, that we lay out the purpose, and we lay out the structure, and we lay out what we would like to accomplish in terms of synergism about these issues.

Thanks. I really appreciate you hearing us.

MR. EHRMANN: Rob?

1		I	MR.	HEDB	ERG:	I	would	just	re	iterate	what	you	said.
2	You	don't	al	ways	have	to	meet	face	to	face.			

3 MR. EHRMANN: Okay, thank you. Jean-Mari?

MS. PELTIER: Thank you. And I want to echo the

same thing. I would say, though, that I think Sarah makes a

good point. In the past when we had the TRAC meetings and

the workgroups with TRAC, we met in conjunction with TRAC,

and I think that was effective.

I would just put in a pitch, though. I think there are some of us around the room who have had a lot of experience in dealing on transition issues ourselves. The citrus industry has been very actively involved. So I think if we had a meeting and just allowed some of us to brainstorm about transition strategies, I think it would be good.

I would put in a pitch to do it on the west coast, because if you look at -- for Carolyn it's got to be better. For those of us over here on this side of the table, there are a number who are west coasters. If we choose a city that is served by Southwest Airlines, you can get there cheap, and

- 1 I think it might be an effective way to do it.
- MR. AIDALA: Well, you're either going to go to
- 3 Steve's house or Dan's house.
- 4 (Laughter.)
- 5 MR. EHRMANN: Jean-Mari?
- 6 MS. PELTIER: I have a cabin in the woods.
- 7 MALE SPEAKER: For those in Michigan, it doesn't
- 8 matter.
- 9 MR. MCCABE: If we get the budget that I hope that
- 10 we get, we may have some travel money to go to the west
- 11 coast. If we don't, yeah.
- 12 And on the topic that Sarah brought up about the
- breakout groups at a future CARAT meeting, I think that
- that's -- that really is something that we ought to think
- about, because they can be very productive. And it can also
- inject a level of energy into the meeting that, you know, can
- move you in places that you might not have gone before.
- 18 So I think we ought to think about that.
- MS. DAVIS: Along that same line, if you could get

1 Clif	f to	bring	some	of	his	products.
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2 (Laughter.)

And in that vain, we might want to add some, you know, bread makers and cheese makers to the CARAT group.

5 MS. PELTIER: I have organic olive oil that I can 6 bring, because we're organic olive oil producers.

7 MS. DAVIS: There you go.

MR. AIDALA: Hey, sounds like a party to me.

9 MR. EHRMANN: Shelley Davis?

10 FEMALE SPEAKER: Jack Daniels would be okay.

11 MALE SPEAKER: Sounds like I got the resources to

12 travel now.

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13 (Laughter.)

MS. DAVIS: I think that in some ways there is a little bit of tension in these meetings between complete transparency and allowing the CARAT to have time to discuss and advise. And by that I mean that a lot of the time of the CARAT is taken up by these educational presentations, which I think are very good and very important. But to my mind

that's the kind of thing that could be more effectively done in a workshop.

So I would think that think about how some of these educational things could be packaged in a workshop, which therefore is also open to more people. You know, a wider range of folks. And then give us written material and have a real short presentation and let us spend these times together in discussion and, therefore, you know, advising and all that kind of aspect of it.

And if I could just raise one thing which I think I have said since 1996 at various of these meetings, you know, push is going to come to shove with cumulative when the risk cup is too full. And the real question at the heart of the Food Quality Protection Act is how do the decisions get made when the risk cup over- flows. And talking about that process, to me, would be something that would be useful with this range of stakeholders.

18 MR. EHRMANN: Thank you. Let's see. Wally and 19 then Cliff.

	-
2	us about the ability to advise, which I think is very
3	important to the commitment we in the agricultural community
4	have made.
5	And also to talk to answer to Jim about the
6	question of how many. I think around 15 people is a good
7	number. Maybe it's not the number for each group, but I
8	could be part of it.
9	I think the cumulative area is an area that I would
10	like to see action on before we have our next CARAT meeting.

DR. EWART: I want to echo thanks for listening to

like to see action on before we have our next CARAT meeting.

Because I think we're at a stage in that process where our

input hasn't been heard, and we're at a stage where we would

like to be able to not only be on the same page, but also be

able to advise on that as stakeholders.

Thank you.

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MR. EHRMANN: Thanks. Cliff?

MR. OHMART: Just a quick comment on the resources issue. The transition workgroup would be something that I personally would be really wanting to be involved in. But

2	have resources to travel like this. I feel like I could								
3	contribute. So I did want to also mention that.								
4	And then along with Jean-Mari, since they're								
5	talking about the west coast, I would be willing to open up								
6	the new Lodi Wine Visitors Center as a place to meet for the								
7	workgroup, if they meet out there.								
8	(Laughter.)								
9	FEMALE SPEAKER: Yeah.								
10	MR. OHMART: Oh, yeah. There's a wine tasting bar								
11	open seven days a week.								

the only reason I'm here today is just because -- I don't

(Laughter.)

DR. BERGER: Yes. I just wanted to agree with Shelley that I think some of these topics are excellent to perhaps visit on a workshop or just kind of an update basis before we have our CARAT meeting, so when we do have the CARAT meeting, we can actually have exchange and discuss.

And then as far as workgroups, I kind of have a

MR. EHRMANN: Lori, last comment on this?

1	little bit of a problem with limiting it to, you know, ten
2	people or 15 people, because if people are getting involved
3	with that to learn about that particular area, if their
4	number isn't called to be a part of the workgroup, they might
5	feel like they've been left out. So I would just caution
6	that there be some real thought put into how these things are
7	limited in participation.

MR. AIDALA: And, again, I think there are some different models we can use to decide on the topic and the specific purpose of that subgroup in terms of education, developing proposals, bringing ideas to the CARAT, and I think we'll have to sort through that pretty carefully. And the numbers issue is going to be closely related to that. So that's very helpful.

All those comments are very helpful. I think, cochairs, that there seems to be pretty broad based support for what you suggested, Mike.

18 MR. MCCABE: We'll work on it.

MR. AIDALA: We'll work on it. And you'll be

1	getting communication in the relatively near future about
2	specifically some of the ideas from the Agency and the
3	Department about how to proceed and express your interest in
4	which issues and that kind of thing.

MR. EHRMANN: Okay. I would like to thank the presenters for allowing us to interrupt the flow of their drinking water presentations to have this discussion.

Denise, if you could return for you to introduce your next presenter?

MS. KEEHNER: Nelson Thurman from EFED is going to basically go over what we know and what we're doing in the drinking water assessment arena right now. What I've asked him to do is try to flip through things fairly quickly, but hit on some sort of highlights and high points in terms of what we're doing and how we're doing it.

MR. THURMAN: Okay. Essentially what I'm going to do is talk to you about how information we've learned from programs, such as what Bill Wilbur presented to you, have been used -- how we've used that in terms of coming up with a

drinking water assessment.

No single study or program has given us a complete picture. But there are a lot of pieces to the puzzle that we've been able to pull together to give us information on the likelihood, extent and nature of occurrence of pesticides in drinking water. And this in turn has driven the way we approach that.

We know some pesticides have been found in water.

Some of these are found not only in drinking water sources,
but have made it through the drinking treatment process.

Just importantly, we know that not all pesticides have
occurred in there and we need a way of separating those that
are not likely to be found in drinking water from those that
are of potential concern.

Further, because we're not just considering drinking water concentration but we're looking at aggregate exposure, it's possible that some pesticides may be a concern even at very low concentrations in water. So we need a way to take that into account.

1	We also know that drinking water is local, as
2	Denise pointed out. We know that the number of factors
3	affect the vulnerability of certain drinking water resources,
4	so that some will be more vulnerable than others. So we need
5	to take into account the local variations.

There is also a seasonal variation and the year to year variation. This particular figure just points out the difference between one year and the next year. You see more than 20-fold difference in 1999 which was a dry year.

This may seem like a little strange graph, but I want to use it to illustrate the type of variability we need to take into account when we're doing our drinking water assessments. If you look at that red squiggly line in the middle, that line represents the mean concentration of a pesticide. And this is no pesticide in particular. It's just for illustration.

If you go left to right across that graph, that represents the variation from place to place where you may find that pesticide concentration. If we go out to that 90

percentile and go up there, you may find that the mean

concentration that 90 percent of the population are exposed

to would be four or less, or conversely 10 percent of the

population may be exposed to concentration of greater than

four.

However, there is the year to year variability that you may see. The blue and green lines kind of give you a bracket of that type of variability. So these are the type of things we need to address when we're doing our assessments.

Let's go to the next one. This just basically summarizes that. Essentially what we do for our process is first of all we try to screen out those pesticides that are not likely to be a concern from those that may be a potential concern.

First of all, we use screening models to estimate the pesticide concentration in drinking water, and we compare this to a health based level of comparison. Essentially if you look at the risk cup, what we do for screening purposes,

is we load in the exposure from food and residential first, and what's left over is the drinking water level comparison.

So if you had a risk cup of, say, ten, and food and residential came up to seven, we would have a level of comparison of three. Now the way we use our screen is if our model estimates -- for instance, if we have this drinking water level comparison of three, and our model estimates come up with one, then we're confident that that pesticide is not going to be a problem and we don't do anything else about it.

If the reverse happens, and we have a pesticide with a concentration of three and the level of comparison is one, then what that means is that we need to get more information. And that's how we use the screening process.

We know there are a number of drivers that we need to take into consideration, and this just illustrates the major ones. If you look at the pesticide use and pesticide properties at the top, it gives us an idea of how much pesticide is potentially available to move to a water source. The site and hydrology factors and the weather factors, the

parts at the bottom, give us an idea of how much would actually move. So those interact together.

I'm really going to skip over the ground water screening part, other than to let you know that we do have a screen that we put into place. It's based on monitoring data. I'm going to skip that. We're working on a second level screen now. We're going to focus on surface water screen, because this is where most of our concerns have come in in our assessments.

When the FQPA came into place, the first surface water models we had were developed for ecological exposure assessments. And we simulated a high runoff field draining into a farm pond. Now we knew that did not represent a drinking water source, but we were confident that as a screen — and once again, just to separate whether a potential — it at least would work until we got something better. And we did a lot of work going to Science Advisory Panels and various workshops to come up with better tools.

(END OF TAPE 2, SIDE B)

1	MR. THURMAN: So we're representing something that
2	isn't actually a drinking water source. In fact, that
3	picture you see right there is the index reservoir that we
4	used in our assessment. It represents the type of reservoirs
5	that we know to be particularly vulnerable, which are small
6	reservoirs and small watersheds. They're runoff prone.
7	They're agricultural areas in the midwest.
8	We have monitoring data to know that there are pesticides
9	within them.
10	We also have made some adjustments based on the
11	fact that a watershed is not going to be completely covered
12	with a crop of use, so that we're accounting for the

percentage of that area as cropped.

We evaluated these screening models against the monitoring data that we've had. This happens to be an illustration for atrazine. What you're seeing there is from a study that was conducted by the registrant community. Each of those lines are peak concentrations at individual reservoirs. Most of these reservoirs are in the midwest and,

once again, represents some of the ones we think are going to be vulnerable.

If you look at our model level, you can see that what we're having -- that this is functioning as an effective screen. And the story is told for just about every other pesticide we have. Our modeling estimates are either following at the high end of the actual monitoring concentrations or slightly above the high end.

We've also evaluated the impact of our screening process of those pesticides that are undergoing tolerance assessments. In fact, the numbers you see up here are going to be a little bit different from what you read in the background document. I think in the background document we told you there were 74 chemicals that have screening assessments done.

Well, out of those 17 chemicals, we had not yet calculated drinking water level of comparison, because the food and residential exposures took that up. If you look at the 57 chemicals which had screening assessments and drinking

1	water level comparisons both you see the vast majority
2	of those passed the screen. Of those that didn't pass, the
3	majority of the concerns were with surface water. We also
4	know that a lot of those concerns were with chronic exposure.
5	MS. KEEHNER: Can you explain that ratio one more
6	time?
7	MR. THURMAN: Okay. There is we had 74
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chemicals that we looked at. And of those 74 chemicals, these are the ones where we've had screening assessments done. Of those 17 of them, we were unable to calculate — at the point we did the assessment, we had not been able to calculate drinking water level comparison, because the exposure from food and residential took the risk cup up. So there was no drinking water level comparison. There was no room for that. So if you were to add those in — they haven't passed any screens, because there was no screen to pass.

And that's roughly about 60 percent were passing the screen.

But the ones where we have been able to calculate

drinking water level comparison, 79 percent of those have passed so far.

Okay. We are still looking at some improvements, and some of these you're going to see in some science policy papers that are coming out, as well as science advisory panel presentations. We're essentially adding a third screen that is going to take into account some of the variability in time that we see at these sites. And we look at those screens as an improvement that will help us further narrow our focus on those that are of potential concern.

We do use monitoring data whenever it is available. Monitoring data early in the screening process is used to augment our screen. As we move up farther into the screen, monitoring data becomes much more prominent in terms of making our risk assessments in that regard. As you know, it's not going to be available for all pesticides, particularly for new pesticides.

We do consider the quality of the data. You know, the quantity of it. How much of the pesticide use area has

1	been represented by the monitoring. How many years of
2	sampling have occurred. And the relevance. Do the data
3	actually are they actually represented to the pesticide
4	use areas.

All of this information we take into account. At the same time, we also realize that some of this data is not going to be available. We have used data call in to get additional information. Even those are going to be expensive. They're going to take some time. As a result, we are looking at other ways of providing projective tools to take into account the more limited monitoring data we often find.

And this is where Dr. Ron Parker is going to talk to you about those tools.

DR. PARKER: Well, thank you. I'll try to be brief, as well. I'm going to talk to you about tools and methods we're developing beyond the screening level that you've just heard about.

Let's suppose that a chemical fails the high

exposure site screen. Our screening assessment says that at a few vulnerable sites we have a maximum concentration of, say, 40 parts per billion. Let's suppose further that toxicity tests show a potential toxicity of 35 parts per billion. How big a problem might we have? Without looking at other sites, we can't really say at that point.

What we need is some type of linkage to the population exposed at each concentration level. There are more than 8,000 community water systems that use surface water as a source of supply. The concentration varies in those -- from place to place, from day to day and from year to year within each system. Recognizing the need to link the number of individuals exposed, we've explored two USGS NWQA sub-projects which involve computer simulation.

Both of these projects have methods to estimate pesticide concentrations at community water system locations. Based on concentrations measured at other sites, the link to populations exposed is through the numbers of persons that are served by each of those community water systems. This

gives the population exposed at each concentration level.

And I can show a demonstration of that here in a second. The U.S. Geological Survey accelerated these projects to speed up the pesticide portion of their work, and we've presented the results of both of these projects twice to science advisory panels, the first time in March and the second time just at the end of September.

The graph on the screen is an example of the results we will be getting. Along the bottom of the graph, you can see the proportion of the population served from zero to one. In this case, the one represents 60 million people in that particular database. Along the left side, you can see the concentration of each number of people which are exposed at that level.

I might add that it's the form of this graph that is important in this case and not the actual numbers for atrazine.

If you move along to the plate nine level on the bottom on the right, you can see in this example that roughly

54 million people, .9 times 60 million, would have a

pesticide concentration below 0.4 milligrams per liter, and

the remaining six million people would have a concentration

about that .4 milligrams per liter.

Did we miss a slide there? Let me say something about how this method works. The U.S. Geological Survey looked at several potential factors that might be useful in determining pesticide concentrations in surface water. The pesticide use intensity, the amount of pesticide applied in each water set above the community water system, was the most important variable. If the pesticide isn't applied in the watershed above, then obviously you don't have pesticide in the drinking water.

The size of the drainage area was also very important. The soil properties determine how much of the pesticide soaks into the ground and how much runs off to be available in the surface water. The down over land flow category represents the amount of rainfall that happened in that particular watershed. As we move further into this

project, we may find -- I would presume that we would find other factors that are important as well.

This is the general structure of one of the models using these variables. The positive variables in the table have a plus sign and are shown in black there. The negative variables in the table have a minus sign and are shown in red. These are the same variables that were important enough in the previous slide there.

Along the bottom you can see the percentage values. Those are the R-squared values which mean something if you're a statistician. The R-squared value is a measure of the predicted -- the predictive value of the particular model for that particular portion of the distribution.

This is an example of that. The R-squared values vary from zero for no predictive ability to a maximum of one for perfect predictive ability. This small circle is the closer. Those small circles are to the line. The more predictive ability that you have in the center graph there, you can see an estimate that was made completely based on the

1	pesticide	use	inte	ensity	in	the	basin.	That	one	in	particular
2	had a R-so	quare	e of	about	.7.						

In looking at the bottom graph there, looking at the full model where you have all five of the predictors working, you can see much better agreement. Much better predictive ability. That particular one had a R-square value of .91, which is excellent for this type of environmental modeling.

Sid, could you go back to the double graph that was on there earlier? One more. There it is.

In this figure you can see work which has been done toward validation of this process. This is a comparison of the measured values with the predicted values for concentrations at the same site. Each of those dots is one particular value. Along the left you can see the predicted concentration based on these regressions equations, and along the bottom you can see the measured concentration that we're trying to predict with those equations.

The green dots are the values based on the actual

1	regression	equation	that	was	used	for	developing	the	model
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The blue and the red dots represent sites which are used to see how well that equation works at other locations that we're not using in developing the model. And you can see

5 that it also works very well for those sites.

The upper graph, the 95th percentile represents the higher values which would only be seen five days out of the year. All of the other 95 days out of the year, you would actually have lower values. The lower graph is the mean annual concentrations for those sites for each of those years.

MS. KEEHNER: What does this mean?

DR. PARKER: It's a measure of how well we can actually predict the values at each of those sites. In getting away from our single high exposure site screen, we eventually hope to be estimating predictions at up to 8,000 individual drinking water locations, based on the amount of pesticide applied in the basin and the amount of rainfall that is washing that off in order to get a link to the actual

1 population.

So it's important that we're able to predict not only at our single high exposure site for the screen, but that we be able to look at the variability and the range across all of the sites that use surface water across the country. We're also doing a little bit of exploration of a single, simple model for ground water as well.

Okay. Now to the where do we go from here.

Results for atrazine suggest that this method will work, not only for atrazine but for other chemicals as well. Both of the science advisory panel meetings have also endorsed this conclusion. There is a methodology to carry out a cumulative aggregate exposure assessment for the OPs, which will be presented to a SAP meeting in December using this methodology.

And in a moment we'll be hearing about an intergovernmental steering committee formed of ourselves, of the Department of Agriculture and USGS which has been formed toward developing a plan for collection of data and for the

1	madal	darralamman+
_	moder	development.

2 To this point in the presentation, we've been talking about raw water only. Next Dr. Rudy Pisigan will be 3 4 looking at the impact of water treatment on pesticides and on 5 some implications of the policy.

6 Thank you.

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7 Mark did you have a question MR. EHRMANN: 8 specifically?

9 MR. MILLER: Yeah, I just had a specific question relative to this. First of all, I think there was one or 10 maybe even two slides that you didn't include in this 11 12 handout, and I wondered if we could get them subsequently.

13 DR. PARKER: Yeah, absolutely.

> Thanks. The other question I had is, MR. MILLER: in the multiple regression like you're using here to do predictions, I would like to know how many predictors you're actually using. Are they laid out in that table?

DR. PARKER: They are. There are five predictors 19 at the present time. We're moving in to looking at pesticide

1	fate characteristics for each of the pesticides and impact of
2	local weather as predictors also. In looking at the
3	variability from year to year, frequently it's the weather
4	that drives that.

MR. MILLER: And my third comment is, have you looked at the power of the test as you've gone to more predictors in terms of -- I mean, the more predictors you use, the greater the amount of variation you could explain, and part of it is because of the error term you're using.

And I just wondered if you looked at the power of the test relative to the number of predictors you're using.

DR. PARKER: Well, we have. Sid, could you put on the graph with the three -- the slide with the three graphs?

The center one there, all of the prediction is done totally based on the amount of pesticide that was applied in the basin from not very adequate data. So even using that one predictor, we still have a R-squared of -- I think it was about .7.

Using the whole model with the last four regression

1	variables, you can see that the predictive values were much
2	closer to the line. The predicted values are much closer to
3	the measured values. And the R-square in that particular
4	case for these 567 sites in the current database was .91,
5	which is absolutely fabulous for this kind of modeling.
6	MR. MILLER: It's really great, and I'm really
7	impressed. Are other compounds do they respond in the
8	same way that atrazine does?
9	DR. PARKER: They do. If I would have had a little
10	more time, we have four or five other herbicides for which
11	individual models have been developed. Two or three

MR. MILLER: Thanks. The only other that I would say to you is that in the previous presentation Nelson listed 10 and two, the compounds that were of concern. I wonder if you would just provide that to us.

insecticides, also. They all respond very well to this kind

DR. PARKER: Which of those compounds?

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of analysis.

MR. MILLER: Yeah, that's it. That's the question.

- 1 Essentially I think it's the third to the last slide that
- Nelson had. He listed ten that exceed on surface water and
- 3 two that exceed on ground water.
- 4 MR. EHRMANN: Which is which?
- 5 MS. KEEHNER: You want the specific compounds that
- 6 had --
- 7 MR. MILLER: Yeah.
- 8 MS. KEEHNER: Okay, sure. That's easy.
- 9 MR. EHRMANN: Okay? Let's go to our next
- 10 presenter, if we might. Our last presenter.
- MS. KEEHNER: Right.
- MR. EHRMANN: Thank you.
- MS. KEEHNER: So Dr. Rudy Pisigan. He was part of
- our scientific advisory panel team that went to the SAP in
- 15 September on the topic of the impacts of treatment on the
- occurrence of pesticides in drinking water.
- DR. PISIGAN: I'm the last speaker who would
- 18 briefly discuss the last line of the plans to exposure
- 19 assessment of pesticides in drinking water. This will be

1	very quick and to the point.
2	(Laughter.)
3	MR. EHRMANN: Thank you. That's very good.
4	(Laughter.)
5	FEMALE SPEAKER: All right.
6	(Applause.)
7	DR. PISIGAN: So just in summary
8	(Laughter.)
9	we have looked at different processes that can
10	remove or postpone pesticides in the raw water used for
11	producing drinking water. And basically this is what I and
12	Dr. James Hedrick with indulgence found out from our
13	preliminary literature review.
14	Conventional treatment that includes scarbulation
15	(phonetic) population, which is widely used in most treatment
16	nlants generally is not effective in the world of

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like those used for fumigation.

pesticides. Air stripping, or also known as aeration, this

process could be effective in removing boiler type pesticides

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1	Carbon absorption and membrane treatment, which are
2	not frequently used in most water treatment facilities, they
3	have high removal efficiency. I have to point out that these
4	are not widely used. They are only used probably in large
5	water treatment systems serving maybe 50,000 to more than
б	100,000 people.

The next important transformation process is softening, which is typically conducted when you have a hard water with high levels of magnesian and calcium. So you make that system alkaline, high PH. In that particular past condition, we have data information to suggest that pesticides can be converted to byproducts.

And lastly, chlorination, which is used for disinfection and at other times oxidation, we have information and data to suggest that some pesticides can be postponed to oxidation byproducts. A case in point is diazinon, which can be converted to oxon, which is far more toxic than the parent pesticide.

Now what are the implications of these water

1	treatment impacts, especially when we try to do assessment
2	for drinking water? It appears that a case by case approach
3	is applicable when we factor in treatment effects. At the
4	same time, we have to realize that we need more data in order
5	to factor in treatment effects. The data in most
6	cases are not available for most pesticides. We have also to
7	contend that the treatment effects will be viable, and in
8	some cases the removal efficiencies of the same treatment
9	that makes will vary from one treatment plant to another.

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And most important, we need to take into account the transformation products that are generated from chlorination and softening, because if some of them are more toxic, then we've got to deal with them.

In the future, you are going to expect from EFED obviously to release a paper on the effects of water treatment so that the public can review and comment on it.

Thank you for your attention.

Thank you very much. Denise, any MR. EHRMANN: closing comments to summarize your presenters, and then we'll

1	have	Αl	say	а	few	words	about	the	interagency	process
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MS. KEEHNER: Okay, very good. I guess just in conclusion, we obviously have spent a lot of time within EFED trying to understand, and within the U.S. Geological Survey trying to understand the whole issue of the occurrence of pesticides in drinking water. We are coordinating with our Office of Ground Water and Drinking Water. We are coordinating with the Department of Agriculture as well.

I think that this suggestion that we have a workshop on drinking water is a good one, because I want you to understand better and have a better knowledge base of what is known and what isn't known, and to have an opportunity to dialogue about it a little bit to sort of improve your foundation as you move into discussion of any kind of policy issues.

Because there are substantial, in my view, public policy issues that are looming on the drinking water front.

Just a very quick one is the whole issue of the balance between prevention and treatment. You know, what is the

appropriate public policy posture in cases where pesticides
are occurring more frequently than just occasionally. Is
treatment the answer really or is prevention where we want to
end up.

MR. EHRMANN: Okay. Thank you very much. Before we turn to Al, let's just have a round of applause to thank the various presenters.

(Applause.)

Again, we appreciate your flexibility in conforming to our all too tight schedule and imparting a lot of very useful information. And you do have, for the most part, the slides, etc., so I'm sure if anybody has any follow up questions -- and we will open this up for discussion in a minute, too. But if you have any specific clarifying kind of technical questions, I'm sure Denise and her folks would be happy to respond to those questions. So be sure you review those materials and we can do that.

I want to turn to Al just to say a couple words about the interagency process, and then we'll open it up for

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MR. JENNINGS: Okay. I just need a couple of minutes. It's already been talked about briefly. But we agreed with EPA and the Geological Survey that there is a better mousetrap here for predicting drinking water concentrations, and we've worked over the last couple of months to try to sort out how we're going to get ourselves organized to help develop this.

And there is a steering committee, EPA, Geological Survey and us. Right now we're talking about two workgroups to be part of that steering committee. One focused on model development and refinement and monitoring data that is needed to validate or further development of the model.

And the second one -- for lack of a better term -that we're talking about is the ancillary data group. And I
think that name means that we see lots of other information
that is going to ultimately be needed to go into the model,
but can't get any further than that. So hence the title
ancillary data.

Lots of information that we can see there on
pesticide use data. We've got a good handle through our
surveys and through registrant surveys of a number on what
the national picture looks like. In some cases what the
state picture looks like. But also recognize that in the
predictive model, the closer we can get to actual watershed
use data, the better off we're going to be. That, of course,
is easy to say and hard to obtain data.

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But anyhow the group will be -- we're meeting next week to kick off the workgroup process. And of course we'll be consulting and talking to the NGOs who have an interest in this as it goes along. Certainly the idea of a workshop is a good one. I think probably multiple workshops as we measure our progress make a lot of sense.

That's what we're about. I guess one other thought. The tie in here with the Pesticide Data Program is a strong one. Keith mentioned yesterday in the budget that it looks like we're going to get an additional million or so dollars in the Pesticide Data Program, and a lot of that will

1	be targ	rete	d at	drinki	ing v	water	moni	itoring	g. So	we're	100	king
2	for how	we	can	match	PDP	with	the	model	devel	opment	to	help
3	further	tha	at ei	ffort.								

MR. EHRMANN: Thanks, Al. Let me -- just in terms of our agenda, it's about noon. The last time I checked, there was only one public commenter signed up in terms of allowing time for that. So I think we can take probably whatever time we need, at least half and hour or so, if you want on discussion of what you just heard on drinking water. Then we'll go to the public health presentation and have some time for discussion on that and summarize things.

So comments on the drinking water. Sarah, did you have a comment?

MS. LYNCH: Yeah. I just wanted to urge when looking at the benefits or trade off between treatment versus prevention that you also look at the costs. I didn't see that in the materials that you provided that you were going to be looking at that, and I think that's an important part of the picture.

1 MR	EHRMANN:	Okay.	Dan?
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MR. BOTTS: Just a real quick follow up in looking at the maps that were up there. There seems to be a much more geographically intensive process than the watershed and reservoir models that had been discussed and talked about.

One of the concerns that we've had, at least from our perspective in the specialty crop production area, is it seems to work extremely well in row crops where there is pretty much a confined rotation type process on a watershed basis where you're rotating between three or four crops on a cycle and the land use is essentially constant in agriculture. On some of the places that we farm on specialty crops, there doesn't appear to be a problem, at least from the detection issues that were shown there.

How are we going to go about getting the land use information to be able to use that model for those specialty crop uses or predictors, especially on new products?

MR. EHRMANN: Comment?

19 MS. KEEHNER: I think that that's one of the

1	challenges facing, frankly, the interagency or
2	intergovernmental workgroup, and the formation of that
3	ancillary data workgroup is to figure out how can we best
4	approach gathering the kind of information that you need to
5	really cover the full spectrum of pesticides and pesticide
6	uses in cases where you have an exceedence of, you know, the
7	screening level assessment.

I don't know what the answer is right now. But we've got to bring the people in the room who might be able to help in that area and develop a plan to gather that information in some manner.

MR. BOTTS: That's the reason I raised the question, because I think as these interagency agreements go forward, the people who actually determine where these products are used are the growers, and they need to be involved in the discussion of how you get to those endpoints of data needs and how you're going to get that information collected.

19 MR. EHRMANN: Good. Thanks, Dan. Other comments?

1	Questions?	Yeah,	Jay?

MR. VROOM: I think that it's important to continue to emphasize the value of the interagency work, particularly not only specific work the USDA has done to benefit water quality. But also in general the progress that farm legislation for the last 15 years has made in reducing soil erosion and increasing conservation tillage and many, many other things that relate to farmer education.

And new practices contribute a lot to a positive trend line. And some of the data that we saw snapshots of here in the course of the presentations, you can see some of that trend line and some of the data is older. Even the last three to four years, I know there have been a lot of continued cultural practice improvements with regard to conservation tillage and the like, which is incentivized by the farm bill.

So I think that that interagency interaction and continued emphasis also on farm education and cultural practice improvement is really, really critical.

1	Thanks.
	manns.

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MR. EHRMANN: Good. Other comments? Yeah, Rob?

MR. HEDBERG: One thing I would like to see in the models, too, is -- the art spreads that they have are very good for risk assessment. It would also be good to look at what can we do about risk mitigation and prevention on site.

If at all possible, if you could assess what treatments the farmers could implement and what impact those would have.

10 MR. EHRMANN: Yeah.

MR. JENNINGS: Well, I definitely agree with that.

And one of the things that we will be looking for is how to put those terms in the model, so that in addition to predicting, we know what we can go back and tell the farmers to do or not to do to make sure the chemical or whatever stays where it's supposed to.

17 That's a good point.

18 MR. EHRMANN: Cliff?

19 DR. OHMART: I have a question. I don't know if

1	anyone can answer it. But in California through the Clea	an
2	Water Act, the TMDL issue was really starting to get the	
3	spotlight.	

And my question to someone out there would be, coordination with the environmental impacts versus drinking water impacts, is anybody looking at that?

MS. KEEHNER: Yeah. In addition to the drinking -my management of the drinking water arena, I also have
responsibility for managing the ecological risk assessment
process. And in fact, there is quite a bit of work underway
between us and the Office of Water on the TMDL issue.

So not to worry. At least within the agency, there is quite a bit of coordination going on. And in fact, there is a working group that has been developed to actually look at the issue of whether we need a pesticide specific surface water prevention or strategy associated with those ecological impacts in the TMDL program.

Total Maximum Daily Loads. It's an Office of Water

-- it's under the Clean Water Act. It's about identifying

1	impaired waterways, and then taking action from an ecological
2	standpoint, and then taking necessary actions to eliminate
3	those waterways from being impaired, putting restrictions in
4	place on certain releases and trying to get those back into
5	compliance.

6 MR. EHRMANN: Marcia?

MS. MULKEY: One thing that might be --

8 MALE SPEAKER: A small, noncontroversial program.

MS. MULKEY: Right.

(Laughter.)

Well, actually one thing that might be worth mentioning is that EPA is working to improve its capacity to engage with the agricultural community across environmental issues. And whatever you may think about our success in interacting with the agricultural community in the pesticide program, the water program has less experience and less history.

And so one of the things we're trying to do is to integrate across our programs, especially in the regional

offices, to engage with the agricultural community. And
that's actually a topic that is worthy of some attention from
stakeholders like you folks. The risk of expanding our focus
way out of kilter, it would be worth your understanding some
of it.

There is also some limited ways in which the Clean

Air Act is engaging with the agricultural community. But

things like -- it tends not to be the heavy pesticide uses,

but things like the concentrated animal feedlots and so forth

are massive challenges to EPA's environmental protection

programs.

MR. EHRMANN: Okay. Any other comments on the drinking water issue presentations? Again, review those materials. If you have other questions, there is discussion about having a workshop on this issue to provide more opportunity to dig in and also to hear about some of the information that is going to continue to roll out. So the agency will be working on that going forward, as Mike and Rich indicated.

1	Let's turn then to the presentation short
2	presentation on public health pesticide activities from
3	Arnold Layne.
4	MS. MULKEY: Just briefly for those of you who
5	haven't met Arnold, he is our senior management leader for
6	Public Health Pesticides. We have a fancier title than that.
7	(Laughter.)
8	MR. LAYNE: A public health official.
9	MS. MULKEY: All right. And he helps us assure
10	that within OPP we are coordinated across our various
11	bureaucratic subdivisions.
12	MR. EHRMANN: Great. Thanks, Arnold. I'm glad
13	you're here.
14	MR. LAYNE: Thank you. Good afternoon.
15	MS. BAKER: This is our eye test?
16	(Laughter.)
17	MR. EHRMANN: You can't see that, Cindy? What's
18	the problem.

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MS. BAKER: Oh, sure. I can see that bottom line,

19

1	yeah.
-	y Carr.

- MS. MULKEY: You have a handout.
- 3 MS. BAKER: Staff encourages something.
- 4 (Laughter.)
- 5 MR. LAYNE: Oh, it's working.
- 6 MALE SPEAKER: Do we have a handout on this?
- 7 MS. MULKEY: I believe so, right?
- 8 MR. LAYNE: You have the MOU. I pulled this
- 9 together rather quickly, and I apologize for the slides. But
- we'll get you copies of it in the mail.
- 11 Good afternoon. I'm Arnold Layne. I am Chief of
- one of two insecticide branches in the Registration Division.
- 13 As Marcia indicated, I also have the honor of serving as the
- Office of Pesticide Programs Public Health Official. And I
- am charged with ensuring the implementation of the public
- 16 health provisions of FOPA. I serve also as the
- single point of contact to CDC and USDA on public health
- issues. And in some small way I assist the Office of
- 19 Pesticide Programs with public health issues related to

pesticides, such as the West Nile virus crisis that we're facing right now.

Immediately after my appointment in 1998, I formed a public health steering committee and also some subworkgroups in order to ensure that we were going to fully implement the provisions in FQPA.

One of the things that we're doing and have been doing for about nine months now is engaging with CDC on a monthly basis. We hold monthly conference and coordination calls with CDC. We have standing agenda items that we talk about. But we also go a step further and we talk about issues of mutual interest to both agencies.

Both EPA and CDC developed a standard operating procedure that we use and have been using for quite some time in order to consult on public health pesticides.

The red bold text there is just an indication of the things that we have done since the last CARAT session. I'm pleased to report today that in July EPA and CDC completed and signed and agreed to a Memorandum of Understanding. And what that

memorandum of understanding does is provide a very broad and
very general framework for our joint efforts and coordination
efforts between both of the agencies.

I want to make it very clear that the law did not require us to have a MOU. Both agencies, though, felt the critical need to have one in place to sort of memorialize the ongoing activities that we have been doing for the past two years, to memorialize that in writing.

EPA and CDC are also engaging on other pesticide issues. We are talking about things like insect repellents, labelling, kid's labelling and efficacy protocols. And most recently, EPA and CDC have been trying to find more creative ways to further enhance our coordination activities. And some of the things that we're discussing right now is sort of brainstorming about our staff exchanges and weekend resident programs, or WRE programs, where folks from EPA go to Atlanta and spend about a week to learn about CDC and vice versa.

For the benefit of the -- next slide, please. And if you loved the first one, you'll love this one.

1 (Laughter.)

FEMALE SPEAKER: Oh, yeah.

MR. LAYNE: For the benefit of those new CARAT

members here today, what I would like to quickly do is walk

you through what some of the requirements are in the law

related to public health pesticides and to tell you what

we've done with regards to those provisions.

The law requires us to essentially publish or identify a list of significant public health pests of significant importance. We've done that. We published in April 2000 a list of pests of significant public health importance. And the comment period ended in July, after a request for an extension.

What we've been doing since the last CARAT session is polling through those numerous comments. We've done that. And at this point in time, in the very near future -- hopefully by the end of this month -- we will be going forward to senior management to provide them with recommendations on how we think we should finalize this list.

The law also requires EPA to consult with HHS or
CDC before taking a suspension or cancellation or final
action against a registrant or a chemical. As I said
earlier, we've developed a process for that in coordination
with CDC. We have also consulted with CDC on 11 chemicals so
far, many of which were organophosphates and carbamates.

The law requires that we sort of implement programs to improve and facilitate the safe and necessary use of chemical, biological and other methods to combat and control public health pests of importance. We are achieving that mandate through the Pesticide Environmental Stewardship Program. We are holding coordination meetings with states. We're talking to stakeholders and with our ongoing activities with CDC and USDA. PESP promotes IPM or integrate pest management and the reduction of the use of chemicals. A couple of examples of members who we work with who are members of PESP is the Department of Defense, CDC and the American Mosquito Control Association.

One of my steering committee members serves on the

CDC-led West Nile Federal Coordinating Committee, so we're engaged with CDC directly on those issues and with the states.

EPA, as well as CDC, has developed mosquito control fact sheets to provide to states and the general public who have interests and concerns about West Nile virus and what the states are doing with regard to mitigating that particular bug. Here recently EPA and CDC have developed a draft joint statement on mosquito control. We felt that it was important that both agencies present a unified front on the West Nile virus and also mosquito control in general.

The law provides also for an exemption or reduction of reregistration fees and registration maintenance fees.

The public health steering committee will review those requests and make decisions with regard to that. We have not received any requests for reregistration fees. And correct me if I'm wrong, I think the reason we haven't is because there are no longer reregistration fees.

(END OF TAPE THREE, SIDE A)

1	MR. LAYNE: registration fees. One was granted
2	and one was denied. And I want to give you a sense of what
3	it means when we say one was granted and the implications,
4	because there is an economic twist to all of this.

Registration maintenance fees is about \$2,000. The one registrant, which was a small business owner in Baltimore, requested a reduction or a waiver of maintenance fees. We granted his request, because he provided us with a justification as to that his products were public health and they were all mosquito and mosquitocide type products. But it cost the agency \$40,000, which doesn't sound like a whole lot of money. But you can imagine the implications if we are to receive a flood of registrants requesting a waiver of maintenance fees.

What we hope to do this November in the normal maintenance fee billing package that we send out to all registrants on an annual basis is to provide criteria and justification and how to sort of apply for this waiver.

The law also gives another benefit, and that is if

you are a public health pesticide, you have the ability to ask for and potentially receive an expedited review process of your chemical. We have not had any requests to date asking for an expedited review for a public health pesticide.

The public health steering committee and I -- we're trying to find ways to, and exploring options to figure out how we're going to deal with such requests. One thing that we've talked about is modifying our priority ranking procedures that are currently in place and/or forming an ad hoc group that will review those requests and make decisions in a timely fashion as to whether a registrant actually gets to the head of the queue.

The last requirement in FQPA is really not directed at EPA. It's in fact directed at CDC or HHS. And that is, CDC has to make arrangements for the conduct of studies if in fact a registrant, for whatever reason, decides that he or she cannot afford to conduct data as a result of data gaps. They can then -- and CDC determines that the public health use issue has the potential of going away, the registrant can

-			~-~			- ·	_	
1	suggest	that	CDC	conduct	that	data	ior	them.

What EPA has done to help CDC in this regard, is we've provided them with what we think some of the potential data gaps would be, and also an estimate of the costs associated with conducting those tests. We've also facilitated discussions between CDC and the IR-4 program at Rutgers University. The IR-4 program has an established testing program in place already, and we thought that CDC could benefit from their knowledge and experience.

We have not yet been faced with a case warranting a commitment from HHS to conduct the studies. But we do, as I said earlier, have processes in place to get there.

And essentially that's my presentation for this morning. I would like to entertain any questions that you may have.

MR. EHRMANN: George?

17 (Laughter.)

MR. EHRMANN: We've been waiting for this, George.

MR. WICHTERMAN: I feel like I've been let out of a

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Κ.

2	(Laughter.)

First of all, I want to thank the group for at
least putting us on the agenda after two years. It's been
very refreshing and I would encourage more of this dialogue.

6 I've got so many questions, and I know the hour is short.

But first of all, I would like to know, is anyone in the room present today from CDC? Okay.

9 MS. MULKEY: As you know, a CDC representative was 10 here yesterday.

MR. WICHTERMAN: Yes, Mike McGeehin.

MS. MULKEY: Uh-huh.

MR. WICHTERMAN: Yeah. Was anything shared at that
point in time with him present in regards to public health
issues?

MS. MULKEY: There may have been some passing mention. There was no specific discussion.

MR. EHRMANN: Do you mean off-line? Is that what you're talking about?

1	MR.	WICHTERMAN:	Either	off-line	or	on-line.

- whatever. I don't know whether he was at the table or not.
- 3 I was not here.
- 4 MS. MULKEY: He was at the table, yes. He was
- 5 introduced.
- 6 MR. EHRMANN: Yeah, he was here, but we didn't
- 7 -- you know, obviously this topic wasn't on the agenda in
- 8 this forum yesterday.
- 9 MR. WICHTERMAN: Okay. Well, in the memorandum of
- 10 understanding in item -- I believe it's 3B where they talk
- about the issues of consultation and so forth, in the Food
- 12 Quality Protection Act, as far as it relates to HHS'
- mandates, there are only two principal functions. One is
- 14 consultative and the second is data collection.
- 15 And my question is, they go to great length to talk
- about the discussion part of this mandate, but why wasn't
- anything included in the MOU about their responsibility as it
- 18 relates to data collection?
- 19 MR. LAYNE: Well, there was discussion regarding

data collection. Again, the MOU is very broad and provides a general framework of how both agencies will cooperate and work together.

I would like to direct your attention, though, to the background section. And you're right, it doesn't say the words data development program. But I think the paragraph that talks about recognizing the need for tested and effective minor use pesticides which are widely used in public health programs to combat a variety of pests. For example, seeking to preserve the continued availability of these beneficial products that could be canceled otherwise due to a lack of support by their registrant gets at the spirit of the data development program.

MR. WICHTERMAN: One last comment. I think it would behoove the group to include CDC in on a workshop on how they plan to integrate the risk assessment and transition process as being developed here. How they would be integrated in this particular aspect. I don't know if it would be worthy of a workgroup, but at least a workshop, and

1	have	them	at	the	table	as	well,	simultaneously	with	me	being
2	prese	ent ar	nd (other	folks	S.					

- MR. EHRMANN: Thanks, George. A good suggestion.
- 4 Bob -- Robert?

ROBERT: Thanks. Yeah, I also wanted to echo the comments of George. I think it's very important that as part of this process that CDC be represented at the table and be here for these discussions, since that's one of their charges in this, participating in public stakeholder meetings.

Second, you had cited a couple -- the fact that you had only two waiver requests and no requests filed for expedited review. Some of that may be tied in directly to the lack of a definition and the lack of the list, if you will, of what is a public health pesticide at this point in time. And once I think that becomes more defined, you may then start to see a little bit more action in that area.

MR. LAYNE: And I agree with you on that point.

ROBERT: Yeah. And did you give a timing as to when we might see the completed pesticide list -- public

MR. LAYNE: Well, no, I didn't. But we're hoping
to brief senior management probably -- hopefully at the end
of this month and go forward with the finalized list.

ROBERT: For the benefit of the group, is it possible to characterize a little bit of some of the discussions or the comments in the generation of this list as to how inclusive or exclusive it will be?

MR. LAYNE: Let me talk from the past, and that is we went out with a list that was somewhat abbreviated. We tried to sort of define the list and develop a list based on what we thought were good interpretations of what the law required us to do. So the list was very short.

With respect to the multitude of comments that we received, there were some common themes. One was obviously the list was too short. I think in some respects we may have lost some credibility with the public health stakeholders out there. There are a plethora of public health pests.

But what we were trying to do, again, was define a

1	significant public health pest, and the law did not provide
2	us any sort of legislative history to help us deal with
3	defining what it is to be a public health pesticide.

The other common theme that we've heard through the commenters is that the list really should be de-linked from mostly all the other provisions in FQPA. And what that said -- and I'm going to be a little trepidacious here, because I've not talked with management about this.

But one of the recommendations or one of the options is to actually do that. Actually de-link the list from the FQPA requirements and go out with a list that sort of is recognized by the public health community as public health pests. And that's where we're headed, and I would like to sort of stop right there, because I have not shared this with management.

16 (Laughter.)

MR. AIDALA: You have now.

MR. EHRMANN: You have now.

19 (Laughter.)

2 MR. PITTS: I've just in my brief tenure at	
3 USDA, I think one of the more interesting things we came	
4 across was this list. And I can tell you that it got	
5 expansive to the point where we had APHIS having bison as	nd
6 golden eagles on the list. And Al had some pretty good	
discussions with them about the scope of what a public h	ealth
8 pest was.	
9 So there was a pretty extensive effort to have a	a
very expansive list and work down from there.	
MR. EHRMANN: Were the golden eagles a carrier of	or
12 something? What was the	
MALE SPEAKER: They shoot down airplanes.	
14 MALE SPEAKER: Oh.	
MALE SPEAKER: And goring from the bison, right.	
MR. PITTS: I didn't even ask about the bison.	
17 (Laughter.)	
MR. EHRMANN: Carolyn?	

19

MS. BRICKEY: Yeah. Arnold, I believe one of the

1	issues	is f	Eundir	ng for	CDC,	is it	not?	They'	ve never	received
2	any fu	nding	g to d	do any	pesti	cide	work	at all,	right?	

MR. LAYNE: That's my understanding of it. This

has been an unfunded mandate for CDC. And I must give

credit, though, to CDC, because in the face of not having

funding, they have worked with us tremendously in trying to

find creative ways to consult with us. The only issue at

hand for them is obviously a testing program. That's quite

expensive to develop, and they don't have the funds to do it.

10 MR. WICHTERMAN: I'm sorry. You said a testing
11 program?

MR. LAYNE: Yes. A data development program,
essentially.

MR. WICHTERMAN: Okay. Also -- I'm sorry. During your discussion you mentioned some other issues that you were working on, and you had mentioned, I guess briefly, kid labelling and efficacy protocols?

MR. LAYNE: Uh-huh.

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MR. WICHTERMAN: Can you talk a little bit more

1	about	that	and	also	what	some	of	those	other	issues	were?	I
2	didn't	get	them	all.								

MR. LAYNE: Well, I just raised those just to give you an idea that -- I think in fairness to CDC and with EPA. We decided to go beyond the scope of the law with respect to public health pesticides. We used the monthly conference call to engage in those issues relative to sort of implementing the provisions of FQPA. But we also see that there is a great need and a great reason for engaging with them on other issues that are of mutual interest to both agencies, one of which is sort of labelling issues. Labelling on insecticide or public health type products to sort of get CDC's feel on some of those issues. So we're engaging them as much as possible. But again, it goes beyond sort of the scope of the law.

MR. AIDALA: Explain that a little bit further.

These provisions were put into roughly parallel minor use provisions. Minor use have a priority. You know, Congress decides there is some kind of societal justification for

giving them some kind of priority or other affirmative waiver opportunities.

Also things like the IR-4 program, that there is at least authorized by FQPA but not appropriated -- and that's the money issue Carolyn raises about. IR-4 like funding of actual studies to support registration, which has not been forthcoming.

And separate from that, what Arnold has been talking about beyond that, is obviously even before the West Nile virus, you know, there were a lot of issues that we just have a natural need to talk with and interact with CDC on things like what you just talked about. What we just talked about, labelling and other kinds of things. So it's not just sort of the narrow confines of what provision of FQPA says per se, but also the larger issue of just, you know, interagency coordination.

MR. LAYNE: Yeah. And CDC participates, or has participated, on our science advisory panels. So that's the sort of message I was trying to get across.

1	MR. WICHTERMAN: And you characterized it as being
2	very helpful in opening the door to communication?
3	MR. LAYNE: I do. There is a huge benefit to
4	having the law, because I'm not sure that we would typically
5	think of CDC in the realm of pesticides. And so it has
6	sparked this sort of interest in what both agencies are
7	doing. So there are a couple of things coming out of this
8	requirement in the law that is beneficial.
9	MR. WICHTERMAN: Okay. I just wish the CDC
10	official could have been here to share some of that as well.
11	MR. EHRMANN: Dan?
12	MR. BOTTS: And this question is probably more
13	appropriately directed to him. But in reference to Carolyn's
14	question relative to funding, has there been any indication
15	that there has been a request for funding by HHS in any of
16	their budget proposals to cover their responsibilities under
17	the law?
18	MR. EHRMANN: Anybody know? Arnold, do you?
19	MR. LAYNE: I'm not aware.

1	MR. AIDALA:	As I understand it, there was not for
2	the initial years of	FQPA. I'm less certain that in the last
3	cycle or two there ha	as not been. Marcia may know that.

- 4 MR. WICHTERMAN: I can respond to that.
- 5 MS. BRICKEY: I think there have been efforts in 6 that regard.
- 7 MR. EHRMANN: You think there have been?
- 8 MALE SPEAKER: Yes.
- 9 MR. EHRMANN: George?
- I can respond to that. Back in 10 MR. WICHTERMAN: May, Mike McGeehin with CDC, representing the National Center 11 12 for Environmental Health, spoke to us and made a comment that 13 both the National Center for Infectious Diseases, as well as the National Center for Environmental Health, were going to 14 15 put in a joint funding request. But unfortunately that's a 16 two year funding cycle, and they indicated at that time that 17 in the fiscal year 2002 that monies would be available. But he was not at liberty to share with us what amount, if any, 18 19 was in there, because the President had not reviewed the

- 1 budget.
- 2 So the latest that we're aware of since May of this
- year.
- 4 MR. EHRMANN: Okay, thank you. Any other questions
- or comments for Arnold at this point?
- 6 MR. WICHTERMAN: I've got one more.
- 7 MR. EHRMANN: Okay.
- 8 MR. WICHTERMAN: I was pleasantly surprised in
- 9 Arnold's presentation that EPA is considering putting someone
- on detail -- I believe that's the appropriate term -- down to
- 11 CDC. And it's my opinion that if EPA does something like
- this, that this will be the way to jump start the process and
- really get things moving after four years.
- MR. EHRMANN: Okay. Any other thoughts? Thank you
- 15 very much, Arnold. I appreciate it.
- MR. LAYNE: Thank you.
- MR. EHRMANN: I have three people who have signed
- 18 up for public comment. What I would like to do is ask them
- 19 to make those comments, and then turn it over to Mike for

- 1 closing comments on behalf of both co-chairs.
- The three people that I have on the list are Rich
- Banono, Ed Gray and Jeff Wilson. Is Rich here? Okay. Sir,
- 4 if you could just keep your comments to two minutes.
- 5 MR. BANONO: Okay.
- 6 MR. EHRMANN: Please proceed and tell us a bit
- 7 about yourself. And also if you do have any written
- 8 comments, you're welcome to submit those.
- 9 MR. BANONO: I've already submitted my written
- 10 comments.
- 11 MR. EHRMANN: Great.
- MR. BANONO: My name is Rich Banonow. I'm from
- 13 Massachusetts. Part of me works for U Mass Extension. I
- 14 write the vegetable, small fruit and wheat control
- 15 recommendations for the six New England states. The other
- 16 half of me is a vegetable and greenhouse grower. I raise
- about 50 acres of fresh market vegetables about 30 miles
- north of Boston. So I approach it a little bit from a grower
- 19 and a little bit from an extension person.

1	I'm also a public member of the Massachusetts
2	Pesticide Control Board. I've been doing that for ten years
3	So I represent the public from that standpoint.

So just some thoughts from sitting here for a day and a half. I never went to the TRAC meetings, but I'm sitting here for a day and a half. I should be home harvesting leeks, but just some thoughts.

I think this current CARAT forum really doesn't provide a good opportunity for advice on a specific basis, and the workgroups and workshops, I think, would help this. The best opportunities for providing advice really came from the presenters yesterday. A key message which needs to be reinforced is that pest management is all about controlling pests, weeds, insects and diseases, and spraying is part of that.

There are always a few success stories to get extrapolated. One of my pet peeves is that people say, well, if it works well on this pest and this crop in this area, that, well, it must work on -- there must be similar success

1	stories	for	all	pests	and	all	crops	in	all	areas.	And	this
2	isn't ne	ecess	sari	ly true	e.							

I think research on new chemistry is essential.

How these products and fit into the production practices.

There is a huge lack of knowledge with some of the new biopesticides coming on the market. They come on the market so fast that the researchers and the extension people really don't have time to look at it and see how they fit in.

And a lot of times people ask, well, why aren't growers using something. And a lot of these new products aren't even the recommendations that the universities send out, and everybody is really hesitant to see what they do, because there just isn't enough knowledge on them. With the old products -- the conventional products -- you have 17 years of data sometimes before you had a vegetable registration or a fruit registration, especially with herbicides.

I think there is always going to be an adjustment period with new products and new pest management techniques.

But just keep in mind that I don't think growers have an aversion to saying, oh, well, if this is a BID pesticide or this isn't a conventional pesticide, I don't want to use it.

I mean, there are considerations. Is it easy to fit into your pest management strategy. Can you afford it. Does it work. And if it doesn't, it won't get used. If it does, it will get used and it really doesn't make any difference what the chemistry is all about to a grower.

Effective grower education has been and will continue to be an integral part of improving pest management techniques and practices, and I think extension is always going to be a key to that.

Just a couple of other comments. And I'm really not trying to offend anybody here. The reason that EPA doesn't perceive that the sky is falling as all of these changes are made is simply because there is always enough offshore production to make up for whatever domestic production is lost. And if 20 percent of the apple growers in New England go out of business, or 10 percent of the

cherry growers in Michigan go out of business, nobody really notices it.

I mean, pick up a jar of apple juice and see where the concentrate is from. And I defy people to find USA on there a lot of times, and Germany, Hungary, China and those are the countries that show up. Argentina. But no one really notices and the public certainly doesn't notice that. And I guess it really concerns me that there is not a greater desire on the part of the government to keep production domestic. A lot of people don't seem to care about that.

Reducing risk is important, although if pounds go up, agriculture still gets criticized. Whether it's all the sulfur being used by Galleon Grapes in California and an environmental working group being bent out of shape about that, or whether the GAO report that they're doing for Leahy on 75 percent IPM adoption, and they want to know why the pounds go up and whether it's round up from rounded up already soybeans. Even though it's lower risk the pounds go up, and so it's really difficult to talk to the public about

risk or toxicity levels. It always comes down to pounds, it seems.

I guess risk -- you know, risk is always going to be equal to toxicity times exposure and exposure being use.

And if a lower toxicity compound is used at a higher rate per acre, or more times per season, then risk may not go down at all. Risk may go up. So we need to keep that in mind.

And finally, I guess this has been sort of this little theme. People joke about it all during these conversations. But politically if OPs need to be eliminated, the risk cup is always going to be too full. And no matter how much science you have, the assumptions and the interpretations of the science will always get you the politics that you want.

And if that wasn't true, it really wouldn't make any difference who is going to get elected four years from now, and it really wouldn't make any difference who is going to be in the front office three months from now. Politics is just part of the process, and we all just need to understand

1 that that's always going to be the

Thanks.

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3 MR. EHRMANN: Thank you. Ed?

MR. GRAY: When I left EPA ten or 11 years ago, I
received a plaque from some of my coworkers in the Office of
General Counsel, which reflected a sentence that I had often
said in one way or another to them, which was: when all else
fails, read the statute.

(Laughter.)

10 MR. EHRMANN: But you didn't leave the plaque, so
11 we haven't seen that since then.

(Laughter.)

13 MR. GRAY: I may need to send it back.

14 (Laughter.)

And I just want to say that most of the conversations that I heard today were based on the assumption, sometimes explicitly stated, that, okay, the aggregate exposures may be okay for most of these compounds, but when you get to cumulative all hell is going to break

1	lose. And the unstated assumption there, I think, is that
2	you have to follow the same rules for cumulative assessment
3	that you do for aggregate and that it's rigid.

This is the statute. And it has a definition of safe in it. And it's defined in terms of aggregate residue - - or aggregate exposure to the residue. Now it also says elsewhere that you should consider cumulative when you are making a safety decision, but it doesn't say that you are bound to assess cumulative exposure in the same way that you are required to assess aggregate exposure.

And I would simply suggest that there is a politics issue here, and it is to what extent are you going to do what you may and treat it as if it's what you must. And I think a lot of the problems here could be solved, or at least mitigated, if we give a little more attention to the options versus the mandates.

17 Thank you.

18 MR. EHRMANN: Thank you. Jay, is your card up for 19 after the public comment? Okay. Jeff Wilson?

1	MR. WILSON: Hi. Jeff Wilson, a grower from
2	Ontario, Canada, representing the Canadian Horticultural
3	Council. We're here primarily because with NAFTA now, any
4	regulatory decision in any one of the three countries will
5	have some effect in the other countries. And we encourage
6	all of us to work a little closer together.

After the conclusion of a few comments I made yesterday, to put a little more meat on it -- because we were rushed for time -- here goes.

Regarding channels of trade, when a product is dropped, de-listed or suspended the tolerance drops after a period of time. How do we deal with the potential, based on level of detection, for a positive hit on a produce no longer in fact used. But if we assume a level of detection in parts per billion, we could show a hit based on historical use patterns.

In fact, there is some sense that on some products we could show a hit for a period of two or three or question mark years beyond the period when the product ceased to be

1 used. And there will be implications for trade on that.

Regarding the status of the OPs, well, we understand why the majority of the decision documents resulted in the final two weeks of the fiscal period. It places a huge burden on farm groups to properly analyze these decisions. These documents were put together with good intent by a larger number of people than those that will review it at the end of the day. Some accommodation of user needs would, in my estimation, be extremely beneficial for the mutual buy in necessary to facilitate the very transition outlined in some of the decisions mentioned there.

The whole issue of IPM transition -- and there was certainly a fair bit of discussion this morning. I feel there needs to be recognition that some of the roots of IPM are based on reductionism. At the outset, the results tend to be mutually beneficial. Regulators, advocacy groups and others see reduction in pesticide use which justifies the efforts. Farmers tend to see some dollar resources -- a reduction of those -- based on a more analytical approach to

1 pest management.

This was verified personally on my own farm. Any time we've entered a new IPM program on a specific crop, we typically have seen a 10 to 20 percent reduction in some pesticides.

However, many non-farmer driven initiatives -- and not to pick on the World Wildlife Fund potato one. But there is an attempt to validate it in Canada with some limited success right now. Part of it demands a continual reduction in the use of products that may or may not be of concern.

The challenge, in our estimation, occurs in years three to five. The farmers start to either see no or limited potential for dollar reduction, so interest either plateaus or wanes. Also potential problems also start to show up there, and that's fairly predictable. I think there is enough historical fact to back that up now. This may be long after the fact when the partners have gone on to other initiatives. How do we share the economic risk at this point, recognizing that society to that point had been

intimately involved.

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- 2 Also, do we in fact have consumers on side/in sync.
- 3 Have we linked the issue on the one side of our minds
- 4 concerning pesticide use, genetically modified organisms and
- others, but on the other side of our minds the bias we all
- 6 have for visually perfect produce.

Two years ago we went too far in reductionism on

our own farm in sweet corn. We missed a spray and occurred a

loss of over \$10,000. And where were the societal and

environmental partners who previously had lauded me for my

efforts when in fact we took that hit.

Finally, there is, in my estimation, a danger in trying to link pesticide environmental improvement with market potential. Every area has advantages and disadvantages regarding pest management. Does this pit farmers in one area against another. Is it a treadmill with little or no benefit at the end of the day.

I would argue that there needs to be much more.

The process is so surface oriented. There needs to be much

1	more	in	depth	analysis	of	all	this.

which were still in development.

I'll get this typed up and get it in to Margie for
the record. It's sort of chicken scratches at this point.

Sorry to bore you. But this is something that is very
important to the farm community and those that are on the
line out there, especially the economic risk.

Thank you.

MR. EHRMANN: Thank you very much. Any other

public commenters? Okay. Jay, did you have a comment?

MR. VROOM: Yeah, thanks. Just two quick things.

At the June CARAT meeting I had made a suggestion that we take a look at a matrix analysis of some FQPA decisions, just to look at sort of side by side the non-biased sort of straightforward view of the level of consistency across related compounds, and also opposite the science policies

This -- I'm passing around two sheets, a three page draft matrix that we commissioned an independent consulting toxicologist to put together. It doesn't represent ACPA's

view of this. It's just a cut at that idea. And I would
suggest and offer that to whomever serves on the cumulative
workgroup that this might be, with some additional work and
perfection, a tool that could be used in that process.

And we'll continue to work on that, whether it goes to that workgroup or not. But, again, the caveat on this is that it is a draft. It doesn't represent anything more than one individual's independent view of some of those issues. There are many more.

The other thing I wanted to mention is that you will recall about three years ago that we at ACPA were very concerned about FQPA, and we had some messages designed around this red fly swatter. We still have a few of things around, and we still are concerned.

But we think this meeting has gone well, and thank both EPA and USDA for the work that went into this and the outcomes that we feel are apparent. And we have transitioned this fall into a new message, which is we're all FQPA stakeholders.

1	And if you didn't get one of these, Ray McAllister
2	and I have a few left, if you're going camping this weekend
3	and are afraid of wind or whatever. Thank you.

4 MR. EHRMANN: Thanks, Jay. Ed?

MR. SNETSINGER: As a tribal member and a trail member representative of the Tribal Pesticide Program, I would like to thank you for inviting me here to receive some tribal input.

Two issues that came up in our meeting of the Tribal Pesticide Program last month were -- one was subsistence and the other one was Section 18's. As it stands right now, Section 18's -- tribes cannot administer or issue out Section 18's.

And one thing I anticipate is that tribes -- as the cancellation of the use of some of these chemicals goes on, I think the demand for Section 18's within Indian country is more and more. So if this is the avenue for us to administer Section 18's with an Indian country, I think that would be great.

1	Another issue, of course, was subsistence, and I'm
2	not sure how it relates to this group, but it is very
3	important in Indian country. Just to give you an example, in
4	the Shore Water Bay Indian community in Washington the
5	females there experience a 50 percent miscarriages. And
6	there may be some other factors, but some of it links to the
7	oysters being treated possibly with pesticides. That might
8	be a possibility of some of the miscarriages. So that's
9	another one of our concerns.

10 Thanks.

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11 MR. EHRMANN: Thank you. Any other comments before
12 I turn it over to Mike for closing comments? Mike?

MR. MCCABE: Well, once again I would like to thank all of you for being part of this process, particularly those of you who came a long distance to be here. Nowadays whether you're coming a long distance or a short distance, it seems that if you're flying, it really doesn't matter. You get there about the same time, and that's generally late.

I know this because I travel about once a week, and

I think that I've been on time about twice this year. But I
do appreciate not only the effort you put into coming here,
but the work that you put into this issue.

I think that based on what you saw primarily in reports yesterday, you can see that we have made great progress in implementing FQPA and that we are working very hard to speed up our processes on registration and on emergency exemptions. We've got a number of science policy papers in place or will be in place shortly.

We have opened up our process to a point where I think it surprises us sometimes just how open it is and how much involvement we have from members of the public and stakeholders.

This is something we are committed to. We want to continue our progress in this area. We want your advice. We want discussion of the issues. And I think that as we develop our next CARAT meeting, as we develop the workgroups and possible workshops, we will be able to do an even better job of getting your input. Getting the kind of information

1	that	we	need	to	do	our	iob	better.

2 Again, thank you. I look forward to seeing you the 3 next time, although it may be with resume in hand.

(Laughter.)

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5 I don't think so, but --

(Laughter.)

7 But there is always that possibility, as my wife 8 reminds me as we go through our budget each month. But I look forward to seeing you then. Thanks.

> MR. EHRMANN: We will be, as I've mentioned, summarizing the revisions to the transition piece and getting that out to all of you. We'll also be -- the Agency and the Department will be working on specific ideas, as Mike indicated, relative to follow up activities, workgroups and workshops, and get that information out to you as soon as it is available.

And if you have any comments on any of the materials you received after you have a chance to look at them more closely, again, get those to Margie. She'll make

1	sure that feedback gets to the appropriate folks at either
2	the Department or the Agency.
3	Thanks again, and travel safe.
4	(END OF MEETING)
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