

2007 Internal Portfolio Review for Portfolio: Agricultural Structures and Farm Management

I. Background

This document was prepared in May 2007 as the internal review of Portfolio: Agricultural Structures and Farm Management for fiscal years 2001-2005. It contains updates to the portfolio, responses to the comments of the external panel review and changes to criteria scores with accompanying justifications. This document is a result of the efforts of the National Program Leaders in collaboration with CSREES Office of Planning and Accountability. Originally, Agricultural Structures and Farm Management Portfolio included KA 601 and KAs 401, 402, and 404 (Structures, Facilities, and General Purpose Farm Supplies; Engineering Systems and Equipment; and Instrumentation and Control Systems). The restructuring of the portfolio left only KA 601 and KA 723 in this portfolio. KA 401, 402 and 404 were moved to the Food and Non Food Products Development Portfolio. Several reasons exist for the grouping of KAs 601 and 723. First, in a prior external panel review, recommendations were made to restructure the KAs to align with the agency organizational goals. It was further recommended to shift KAs 401, 402, and 404 to Food Processing and Bio-Based Products Portfolio. Internally, the assignment of KAs to specific portfolios was reviewed and a decision was made to shift KA 723 to Portfolio Agricultural Structures and Farm Management where it seemed to logically fit. The KA 723 was initially externally reviewed as part of the Quality of Life in Rural Areas Portfolio. The programs contained within KA 723 have risk management components and appropriately fit in Portfolio Agricultural Structures and Farm Management. Given this, the current review includes KAs 601 and 723. KAs 401, 402, and 404 will be discussed in their new portfolio by the end of 2007.

- **The following knowledge areas (KAs) are included in Portfolio: Agricultural Structures and Farm Management**
 - KA 601: Economics of Agricultural Production and Farm Management
 - KA 723: Hazards to Human Health and Safety

- **Portfolio reviews:**
 - External Review: July, 2004
 - Internal Review: June, 2007

- **Portfolio score from the PREP in July, 2004: 73, an internal annual assessment was conducted in 2006 with a score of 81.**

The portfolio received an overall score of 73 from the panel in the 2004 PREP. Table I-2 below shows the breakdown of scores for different questions and criteria.

Table I-2. Scoring of Portfolio: Agricultural Structures and Farm Management		
Criteria	Panel Score	2007 Score
Relevance		
1. Scope	2	2.5
2. Focus	2	2
3. Emerging Issues	2	2.5
4. Integration	3	2
5. Multi-disciplinary	1	2
Quality		
1. Significance	3	2
2. Stakeholder	3	3
3. Alignment	2	2.5
4. Methodology	2	2
Performance		
1. Productivity	2	3
2. Comprehensiveness	2	3
3. Timeliness	2	2
4. Agency guidance	2	2.5
5. Accountability	2	2.5
Overall score	73*	84

* Note that these scores are weighted; therefore the overall score is not a summation of the criteria scores. It is weighted and summed as well.

II. PREP Report Summary and Specific Panel Recommendations

The panel found that CSREES staff in Economic and Community Systems; and Plant and Animal Systems make a significant difference and add considerable value to the work of both the agency and the partnership. The evidence presented in this portfolio reflects hard work and indicates high levels of productivity. There is evidence of increasing emphasis on integration and that CSREES staff is becoming more creative and determined about planning and reporting as forms of accountability.

The panel recommends continued effort in partnerships with 1890 and 1994 institutions. Many opportunities exist for programming on critical issues, expanding urban track issues and the issue of rural-urban interface. National needs can often be met by working in international collaborations and contexts. The panel suggests that the partnership continue to expand interactions with stakeholders to include "emerging stakeholders." It is as important for planning processes to identify new stakeholders and partners as it is for the process to identify emerging issues and priorities. Further, players throughout the partnership should examine all federal reports across states within program areas in order to document the synergistic effect of integrated funding on levels of research, education and extension productivity.

There is a need to standardize and expand the documentation and evaluation metrics across program areas and increase the archiving and accessibility of research project data (in the CRIS and other systems). This is necessary in order to permit meta-analysis of the data. The panel recommends training on the logic model for agency employees and external and internal partners. Instead of just evaluating past performance, the panel also suggests developing strategic plans for each problem area and increasing stakeholder contributions by including panel members and other stakeholders in the development and review of CSREES strategic plans at the portfolio level. Finally, the panel suggests increasing the documentation of outcomes. Formative evaluations to document program implementation successes and challenges should be performed.

II. CSREES response to PREP recommendations that cross all portfolios

In response to directives from the Office of Management and Budget (OMB) of the President, CSREES implemented the Portfolio Review Expert Panel (PREP) process to systematically review its progress in achieving its mission. Since this process began in 2003, fourteen expert review panels have been convened and each has published a report offering recommendations and guidance. These external reviews occur on a rolling five-year basis. In the four off years an internal panel is assembled to examine how well CSREES is addressing the expert panel's recommendations. These internal reports are crafted to specifically address the issues raised for a particular portfolio; however, despite the fact that the expert reports were all written independent of one another on portfolios comprised of very different subject matter, several themes common to the set of review reports have emerged. This set of issues has repeatedly been identified by expert panels and requires an agency-wide response. The agency has taken a series of steps to effectively respond to those overarching issues.

Issue 1: Getting Credit When Credit is Due

For the most part panelists were complimentary when examples showing partnerships and leveraging of funds were used. However, panelists saw a strong need for CSREES to better assert itself and its name into the reporting process. Panelists believed that principal investigators who conduct the research, education and extension activities funded by CSREES often do not highlight the contributions made by CSREES. Multiple panel reports suggested CSREES better monitor reports of its funding and ensure that the agency is properly credited. Many panelists were unaware of the breadth of CSREES activities and believe their lack of knowledge is partly a result of CSREES not receiving credit in publications and other material made possible by CSREES funding.

Issue 1: Agency Response:

To address the issue of lack of credit being given to CSREES for funded projects, the Agency implemented several efforts likely to improve this situation in 2005.

First it developed a standard paragraph about CSREES' work and funding that project managers can easily insert into documents, papers and other material funded in part or entirely by CSREES.

Second, the Agency is in the process of implementing the "One Solution" concept. One Solution will allow for the better integration, reporting and publication of CSREES material on the web.

In addition, the new Plan of Work (POW), centered a logic model framework, became operational in June 2006. The logic model framework is discussed in more detail below. Because of the new POW requirements and the POW training conducted by the Office of Planning and Accountability (also described in more detail below), it will be simpler for state and local partners to line up the work they are doing with agency expenditures. This in turn will make it easier for project managers to cite CSREES contributions when appropriate.

The Assistive Technology for Disabled Farmers program (AgrAbility) is an integral component of Knowledge Area 723 (Hazards to Human Health and Safety) and is contained within the current portfolio. The AgrAbility Program has been featured in a CSREES-produced Partners video magazine. Partners is a video magazine produced three times a year by CSREES. It highlights the programs and accomplishments of the partnership between CSREES and the Land Grant University System in the areas of research, education, and extension. Media products include DVDs, streaming video, VHS tapes and CD-ROMs. Furthermore, because the majority of the programs contained within KA 723 are extension programs, project directors are particularly diligent in acknowledging CSREES funding on their websites, publications, and products. Any item that relates back to CSREES funding bears written acknowledgement.

Issue 2: Partnership with Universities

Panelists felt that the concept of partnership was not being adequately presented. Panelists saw a need for more detail to be made available. Questions revolving around long-term planning between the entities were common as were ones that asked how the CSREES mission and goals were being supported through its partnership with universities and vice versa.

Issue 2: Agency Response:

CSREES has taken several steps to strengthen its relationship with university partners. First, to the extent possible, implementing partners will be attending the CSREES strategic development exercise which is intended to help partners and CSREES fully align what is done at the local level. Second, CSREES has realigned the state assignments for its National Program Leaders (NPLs). Each state is now assigned to one specific NPL. By reducing the number of states on which any individual NPL is asked to concentrate and assigning and training NPLs for this duty, better communication between state and NPLs should occur. Finally, several trainings that focused on the POW were conducted by CSREES in geographic regions throughout the country. A major goal of this training was to better communicate CSREES goals to state leaders which will facilitate better planning between the universities and CSREES.

Issue 3: National Program Leaders

Without exception the portfolio review panels were complimentary of the work being done by NPLs. They believe NPLs have significant responsibility, are experts in the field and do a difficult job admirably. Understanding the specific job functions of NPLs was something that helped panelists in the review process. Panelists did however mention that often times there are gaps in the assignments given to NPLs. Those gaps leave holes in programmatic coverage.

Issue 3: Agency Response:

CSREES values the substantive expertise that NPLs bring to the Agency and therefore requires all NPLs to be experts in their respective fields. Given the budget constraints often times faced by the agency, the agency has not always been able to fund needed positions and had to prioritize

its hiring for open positions. In addition, because of the level of expertise CSREES requires of its NPLs, quick hires are not always possible. Often, CSREES is unable to meet the salary demands of those it wishes to hire. It is essential that position gaps not only be filled but that they be filled with the most qualified candidate.

Operating under these constraints and given inevitable staff turnover, gaps will always remain. However, establishing and drawing together multidisciplinary teams required to complete the portfolio reviews has allowed the Agency to identify gaps in program knowledge and ensure that these needs are addressed in a timely fashion. To the extent that specific gaps are mentioned by the expert panels, the urgency to fill them is heightened.

Issue 4: Integration

Lack of integration has been highlighted throughout the panel reviews. While review panelists certainly noted in their reports where they observed instances of integration, almost without fail panel reports sought more documentation in this regard.

Issue 4: Agency Response:

Complex problems require creative and integrated approaches that cut across disciplines and knowledge areas. CSREES has recognized the need for these approaches and has undertaken steps to remedy this situation. CSREES has recently mandated that up to twenty percent of all NRI funds be put aside specifically for integrated projects. These projects cut across functions as well as disciplines and ensure that future Agency work will be better integrated. Finally, integration is advanced through the portfolio process which requires cooperation across units and programmatic areas.

Issue 5: Extension

While most panels seemed satisfied at the level of discussion that focused on research, the same does not hold true for extension. There was a call for more detail and more outcome examples based upon extension activities. There was a consistent request for more detail regarding not just the activities undertaken by extension but documentation of specific results these activities achieved.

Issue 5: Agency Response:

Outcomes that come about as a result of extension are, by the very nature of the work, more difficult to document than the outcomes of a research project. CSREES has recently shuffled its strategy of assigning NPLs to serve as liaisons for states. In the past, one NPL might serve as a liaison to several states or a region comprised of states. Each state will be assigned a specific NPL and no NPL will serve as the lead representative to more than one state. This will ensure more attention is paid to extension activities.

In addition CSREES also has been in discussion with partners and they have pledged to do their best to address this issue. The new POW will make extension-based results and reporting a priority. Placing heavy emphasis on logic models by CSREES will have the effect of necessitating the inclusion of extension activities into the state's POWs. This, in turn, will require more reporting on extension activities and allow for improved documentation of extension impact.

Beginning in Fiscal Year 2006, extension projects funded under the Smith-Lever 3(d) funding line have submitted annual CRIS reports. The submission of the annual reports via CRIS has greatly improved the ability of program staff to identify outcomes and impacts as well as provided states with a mechanism to track and share their progress through the CRIS public access database.

Issue 6: Program Evaluation

Panelists were complimentary in that they saw the creation of the Office of Planning and Accountability and portfolio reviews as being the first steps towards more encompassing program evaluation work; however, they emphasized the need to see outcomes and often stated that the scores they gave were partially the result of their own personal experiences rather than specific program outcomes documented in the portfolios. In other words, they know first hand that CSREES is having an impact but would like to see more systematic and comprehensive documentation of this impact in the reports.

Issue 6: Agency Response:

The effective management of programs is at the heart of the work conducted at CSREES and program evaluation is an essential component of effective management. In 2003 the PREP process and subsequent internal reviews were implemented. Over the past three years fourteen portfolios have been reviewed by expert panel members and each year this process improves. NPLs are now familiar with the process and the staff of the Planning and Accountability unit has implemented a systematic process for pulling together the material required for these reports.

Simply managing the process more effectively is not sufficient for raising the level of program evaluations being done on CSREES funded projects to the highest standard. Good program evaluation is a process that requires constant attention by all stakeholders and the agency has focused on building the skill sets of stakeholders in the area of program evaluation. The Office of Planning and Accountability has conducted training in the area of evaluation for both NPLs and for staff working at Land-Grant universities. This training is available electronically and the Office of Planning and Accountability will be working with NPLs to deliver training to those in the field.

The Office of Planning and Accountability is working more closely with individual programs to ensure successful evaluations are developed, implemented and the data analyzed. Senior leadership at CSREES has begun to embrace program evaluation and over the coming years CSREES expects to see state leaders and project directors more effectively report on the outcomes of their programs as they begin to implement more rigorous program evaluation. The new POW system ensures data needed for good program evaluation will be available in the future.

Within the current portfolio, several projects have demonstrated their commitment to developing quality evaluation tools and mechanisms. In Colorado, Robert Fetsch developed a quality of life measure and evaluated AgrAbility clients' improvements in quality of life before, during, and after participating in the AgrAbility program. The results of the study were drafted into a manuscript and is currently in press. As a result of the study completed in Colorado, several other states with AgrAbility projects are implementing quality of life measures using Dr. Fetsch's methods and reporting the results to CSREES in their annual progress reports.

Issue 7: Logic Models

Panelists were consistently impressed with the logic models and the range of their potential applications. They expressed the desire to see the logic model process used by all projects funded by CSREES and hoped not only would NPLs continue to use them in their work but, also, that those conducting the research and implementing extension activities would begin to incorporate them into their work plans.

Issue 7: Agency Response:

Logic models have become a staple of the work being done at CSREES and the Agency has been proactive in promoting the use of logic models to its state partners. Two recent initiatives highlight this. First, in 2005, the POW reporting system into which states submit descriptions of their accomplishments was completely revamped. The new reporting system now closely matches the logic models being used in portfolio reports. Beginning in fiscal year 2007, states will be required to enter all of the following components of a standard logic model. These components include describing the following:

- Program Situation
- Program Assumption
- Program Long Term Goals
- Program Inputs which include both monetary and staffing
- Program Output which include such things as patents
- Short Term Outcome Goals
- Medium Term Outcome Goals
- Long Term Outcome Goals
- External Factors
- Target Audience

The system is now operational and states were required to begin using it by June of 2006. By requiring the inclusion of the data components listed above states are in essence, creating a logic model that CSREES believes will help improve both program management and outcome reporting. Please note a sample logic model has been included in Appendix A.

The second recent initiative by CSREES regarding logic models concerns a set of training sessions conducted by Planning and Accountability staff. In October and November of 2005 four separate training sessions were held in Monterrey, California, Lincoln, Nebraska, Washington D.C. and Charleston, South Carolina. More than 200 people representing land-grant universities attended these sessions where they were given training in logic model creation, program planning, and evaluation. In addition, two training sessions were provided to NPLs in December 2005 and January 2006 to further familiarize them with the logic model process. Ultimately it is hoped these representatives will pass on to others in the Land-Grant system what they learned about logic models thus creating a network of individuals utilizing the same general approach to strategic planning. These materials also have been made available to the public on the CSREES website.

III. Panelist's Comments and NPLs' Response

The U.S. agricultural sector must be able to quickly respond to changing political, economic, technological, environmental, and consumer-driven market forces. Agricultural production and markets are constantly affected by external factors such as weather and growing conditions, diseases and pests, financial conditions, cultural practices, and consumer demand. New and emerging risks associated with domestic and international policy, genetic technology, exotic invasive species, and complex agricultural diseases that can affect humans defy conventional means of identification, quantification, and management. CSREES contributes to the improvement and strengthening of this responsive agricultural system through sponsoring research into alternative methods to identify, assess, and manage risk, providing relevant education, and extending information and practices to improve production and market decision-making through enhanced risk management. Agricultural Structures and Farm Management Portfolio includes the following Knowledge Areas:

- KA 601: Farm Management and Risk Management
- KA 723: Hazards to Human Health and Safety

A description of the work being done in each of these KAs follows directly below.

- **Relevance**

Scope:

- Declining number of Ph.D. graduate degrees awarded may inhibit future U.S. research capacity.
- Adequate coverage of farm structures.
- Need to increase and encourage greater coverage in the area of sensors.

Action Taken:

In fiscal year 2005, four of the 31 National Research Initiative programs solicited research proposals addressing sensing, detection, or monitoring/measurement methods (food safety, nano-scale science and engineering, plant biosecurity, animal disease countermeasures, and air quality). The nanotechnology program focused specifically on sensor development as a priority area. A total of 13 sensor-related projects were funded by the NRI in 2005. In fiscal year 2007, the NRI funded 12 projects under the Nanoscale Science and Engineering topic area (there were no projects funded under this topic area in fiscal year 2006 since the program is offered in alternate years and will be accepting applications again in FY 2008 at an anticipated level of approximately \$5 million). The SBIR program continues to support sensor technology development across many of its 12 program areas. Eighteen sensor-related projects were funded by the SBIR program in fiscal year 2005. In fiscal year 2006, eight projects were funded by the SBIR program under the Plant Production and Protection – Engineering topic area. Furthermore, the anticipated award dates for phase I and II of SBIR projects under the Plant Production and Protection – Engineering topic area in fiscal year 2007 are May and September, respectively.

Focus

- Probably have more wood construction projects than needed.
- Future should include greater focus on bioenergy, bioproducts and nanotechnology.
- Concern about overemphasis given to risk management in PA 601.
- Concern that CSREES is becoming an implementer of other agencies' programs; (e.g. Risk Management Agency and Trade Adjustment Assistance programs);
- CSREES needs to be a more proactive leader in research areas of critical need.

Action Taken:

Please refer to the Food Processing and Bio-Based Products Portfolio, which includes the following KAs to address the first two concerns. As stated earlier, KAs 401, 402, and 404 were moved to the Food and Non Food Products Development Portfolio. They will be assessed by the end of 2007 and will feature issues raised above.

Knowledge Areas:

- 401: Structures, Facilities, and General Purpose Farm Supplies
- 402: Engineering Systems and Equipment
- 404: Instrumentation and Control Systems

The following addresses the remaining three concerns:

There are many programs within CSREES that address the farm management needs of America's producers, particularly within research and extension arenas. Some of research programs such as, the Markets and Trade program are funded by the NRI, the Small and Medium Farms Program is funded by both NRI and SBIR. The SARE Program funds many farm management related projects as well. Historically, the largest program in this knowledge area dealing with farm profitability was in the Initiative for Future Agricultural and Food Systems (IFAFS) program of that same name and was funded at approximately \$20-25 million in both 2000 and 2001. IFAFS has not been funded since 2001. The Risk Management Program which deals with all five areas of risk (production, marketing, human resource, legal & environmental, and financial) addresses the priority issues revolving around the farm management topic area and therefore is an appropriate program to highlight.

CSREES implements programs as directed by Congress such as the Risk Management Education (RME) Program. The Agricultural Risk Protection Act (ARPA) of 2000 specifically directed the Risk Management Agency (RMA) to provide \$5 million to CSREES for the implementation of a broad, risk management education program. In comparison, the RMA has an additional \$20 million that it uses for various risk management education programs. In the Trade Bill of August 2002, Congress directed the USDA to develop a Trade Adjustment Assistance (TAA) Program for farmers. While the Foreign Agricultural Service (FAS) became the Executive agent for that program, it requested CSREES to participate since the law required that farmers must receive technical assistance on how to adjust to import competition from an "Extension Service agent or employee" before they are eligible to receive cash benefits or Department of Labor re-training benefits.

It is only logical that CSREES agreed to participate in the TAA Program given this requirement in the law. It should be noted that other agencies are also involved in this program, namely FAS as the overall manager, ERS as a technical reviewer of petition information and data, FSA as the receiver of applications and the purveyor of cash benefits, and the Department of Labor. In conclusion, the RME Program is a Congressionally directed program, and the TAA Program law contains language that provides a fully valid reason for CSREES' involvement.

Emerging Issues

- Concern one: Sensors for food safety and security will be important in the near future and will need more research focus.
- Concern two: When current Concentrated Animal Feeding Operations (CAFO) regulations are extended to smaller operations, engineering and economic research and extension will be needed.

Action Taken:

Please refer to the Food Processing and Bio-Based Products Portfolio, which includes the following KAs to address the first concern:

Knowledge Areas:

- 401: Structures, Facilities, and General Purpose Farm Supplies
- 402: Engineering Systems and Equipment
- 404: Instrumentation and Control Systems

- Concern two: When current CAFO regulations are extended to smaller operations, engineering and economic research and extension will be needed.

The following is in response to concern two:

To address this concern, in fiscal year 2006, CSREES funded a Hatch project at North Carolina State University entitled "Farm Level Decisions, Effectiveness of Conservation Policies and Sustainable Land Use." Thirty percent of the project is classified under KA 601, while the other 70% is classified under KA 605 – Natural resource and Environmental Economics. In terms of the field of science, 100% is embedded in economics. The purpose of this Hatch project is to support and evaluate farm level decisions and policy designs in the context of sustainable land use and agricultural production. The project takes a multi-disciplinary approach to the investigation of the production-economic, environmental and sociological performance of different land use systems at the farm and regional level in an integrated way. (Please see appendix for more information on project progress)

Integration

- Major needed transition to more integrated work has been made and is doing quite well.

- Principal investigators should be given incentives to take more responsibility for extending research results.

Action Taken:

In October 2005 CSREES organized and held a one day workshop to identify strategies for enhancing the effectiveness of integrated competitive programs. The workshop included presentations and participation by Principal Investigators and National Program Leaders involved with integrated programs. Breakout sessions identified various strategies that included possible incentives for extending research results that will enhance the overall relevance and effectiveness of integrated programs.

In the near future, principal investigators will have more guidance from CSREES in providing results on a consistent basis after the rollout of the One Solution System, which will be a one-stop portal of accountability for all Research, Education, and Extension investments. More information is included under the “Portfolio Accountability” section.

Multidisciplinary

- Work on sensors will need to be multidisciplinary, integrating with other sciences (physics, chemistry and biology) outside of historic working relationships.

Action Taken:

Beginning in mid-2004, CSREES began administering the Agricultural Prosperity for Small and Medium-Sized Farms program, which is under the National Research Initiative. The purpose of this program is to foster interdisciplinary studies to improve our understanding of the interactions between the economic and environmental components important to the long-term viability, competitiveness and efficiency of small and medium-sized farms (including social, biological and other components, if necessary). This program attempts to bring together and integrate disparate work conducted separately on each of these factors in the past. Program outcomes are expected to provide new insights to the factors that enhance rural prosperity, especially for smaller producers. To date, 15 projects were funded in fiscal year 2005, and 13 were funded in fiscal year 2006.

While not sensor-specific, the inclusion of KA 723 allows demonstration of a wide variety of interdisciplinary and multidisciplinary working relationships. State AgrAbility projects in Oklahoma, Colorado, Delaware-Maryland, and Pennsylvania incorporate faculty and staff from their respective Land Grant University departments of education, biological systems engineering; the cooperative extension service; local occupational and physical therapists; and non-profit disability organizations. Successful implementation of a state AgrAbility project is dependent upon cooperation and collaboration between multidisciplinary entities.

- **Quality**

Significance

- Midwest Plan Service has been a great source of output, but may need to adopt a self-funding approach. Future funding may be less certain than past.
- Research itself is valuable, but educated young engineers are the greatest output of the system.

Action Taken:

Please refer to the Food Processing and Bio-Based Products Portfolio, which includes the following KAs that best address these concerns.

Knowledge Areas:

- 401: Structures, Facilities, and General Purpose Farm Supplies
- 402: Engineering Systems and Equipment
- 404: Instrumentation and Control Systems

Stakeholder

- System responds well to the engineering needs of producers and agribusinesses. CAFO regulations are a great example -- the system had a major role in providing information and shaping the regulations.
- Industry has a good working relationship with the agricultural research system in setting priorities.

Action Taken:

In fiscal year 2006, CSREES funded a project at Pennsylvania State University entitled “Enhancing the Prosperity of Small Farms & Rural Agricultural Communities: The Role of Industry Clusters.” It was funded through the National Research Initiative under the Agricultural Prosperity for Small and Medium-Sized Farms topic area. Its purpose was to 1) study industry clusters formed around commodities (e.g., dairy, wines, mushrooms); agricultural practices or philosophies (organic vs. non-organic); and social or ethnic networks (Portuguese, Hispanic, female farmers), and 2) to use computational network analysis to measure cluster effectiveness. Thereafter, the findings would lead to the development of recommendations for improving the efficiency of small farmers, and delivering extension information to small farmers. The potential impact of this project is anchored in conducting systematic studies and analyzing results of data from successful clusters to generate results that will help provide much needed information to small farms and rural communities. Measurements of industry cluster characteristics and effectiveness will result in improvements that will eventually benefit American agriculture. To date, it is too early in the project to confirm this impact, but the participants (research subjects) all see the value of the effort and are participating with great enthusiasm.

Alignment

- Historical alignment of portfolio with needs seems good.
- Harvesting of biomass materials may justify developing new machine concepts.
- Substantial need for mechanization in crops that have high labor requirements. For example, labor cost may force U.S. producers out of the tree fruit business. Such work is now acceptable to labor because replacing 2 to 3 workers out of the group is better than having no work for everyone when jobs are exported.

Action Taken:

Please refer to the Food and Non Food Products Development Portfolio, which includes the following KAs that best address these concerns.

Knowledge Areas:

- 401: Structures, Facilities, and General Purpose Farm Supplies
- 402: Engineering Systems and Equipment
- 404: Instrumentation and Control Systems

Methodology

The panel believed that the portfolio demonstrated that CSREES-F+S usually applied appropriate/cutting edge methodology. Panel members recognized the peer-review process for research proposals assures current methodologies are being used.

• **Performance**

Productivity

- Productivity meets expectations. For example, research funding in engineering divided by the number of published reports results in an average cost of \$20,000 per publication; this is comparable to the cost of hiring a graduate student who produces one publication per year.

Comprehensiveness

Some uncertainty exists because of lack of documentation. The portfolio needs increased funding, more and better strategic planning and thinking (tied to thoughtful outcome measures), and greater focus on critical issues.

Actions Taken:

This is an agency-wide issue and therefore should be dealt with on an agency-wide level. However, perhaps because Agricultural Structures and Farm Management Portfolio was the only report that did an analysis of the expected and actual completion dates of the CRIS projects, the comment was one specific to this Portfolio. CSREES will be investigating how best to analyze this information in the future. Some of the issues surrounding completion dates will be addressed by the implementation of the OneSolution System, and the fact two National Program Leaders are now being assigned to one and only one state. These two topics were discussed in greater detail in Section II.

Timeliness

- Hatch projects should be monitored for timely goals and completion dates. Too many Hatch projects may be allowed to continue for too many years.
- Ensure that projects are completed in a timely manner.

Actions Taken:

Again, this is an agency-wide issue and therefore should be dealt with on an agency-wide level. Please refer to the response above under “Completeness”, as it is appropriate as a response to these comments. Furthermore, there are more details about CSREES’ efforts in improving accountability across the agency discussed under the “Accountability” section.

Agency Guidance

- We find no evidence or assertion of CSREES bias in program administration.
- Good leadership does exist in specific engineering areas (i.e. nanotechnology) but there is a need to strengthen overall strategic leadership in economics and engineering programs across the portfolio.
- CSREES should carefully evaluate the practice of outsourcing competitive grant programs such as Risk Management Education, SARE and Rural Development centers. Concerns include: Is decentralized regional grants administration more effective than centralized? Is CSREES losing control and accountability? Is there regional coordination among regions?

Actions Taken:

It should be noted up front that the preponderance of information regarding the SARE and Regional Rural Development Centers is presented in the Economic and Business Decision-Making Portfolio. Hence the External Evaluation Committee examining the Agricultural Structures and Farm Management Portfolio in July 2004 really had minimal information on which to make judgments as to how these two programs were led and operated.

Questions related to leadership: In the last 2 years, CSREES has filled the gap of leadership in regards to economics by the appointment of a new Deputy Administrator for the Economic and Community Systems unit, the transfer of an experienced agricultural marketing NPL into the ECS Unit, and the establishment of an agency-wide social science working group that addresses leadership, management and knowledge voids within the social sciences.

Questions related to outsourcing: CSREES does not regionally “outsource” competitive grant programs unless so directed by the Congress, or if such “outsourcing” makes good sense from political, resource, management and effectiveness standpoints. For both the SARE and Regional Rural Development Programs, the Congress directed that such programs be regional in nature. As a result, these programs have been regional since their establishment by Congress. Hence the programs are not outsourced, but instead are

conducted and managed in partnership between the regions and CSREES. The three NPLs involved in these programs provide national leadership and coordination that includes budget oversight, setting program guidelines, publicizing and communicating program successes and outcomes, and convening and facilitating cross-regional communication between and within regions.

In terms of the RME Program, it became partially regionalized as a result of those who diligently worked to gain funding for the program in FY 2000. Between 2000 and 2003, there was an annual competition for each regional center, and in addition, CSREES also ran a competitive program nationally. However, in January 2003, four National Program leaders within the ECS unit retired, and one was transferred from Competitive Programs to ECS to fill in for the retired NPLs. As a result, both professional and support staff were in short supply, and so it made inimitable sense to fully regionalize the RME Program. Additionally, because of personal shortages, money used for a national competition was divided among the four regions and CSREES got out of the business of conducting RME competitive grants program. Further, what was formerly an annual competition was moved to one competition every four years to provide a “planning horizon” for the four regional centers and the Digital Center for Risk Management Education. Each of the four regional RME Centers, as was the case for the SARE regional centers all became “streamlined” either in 2003 or 2004. This meant that not only were the centers responsible for conducting competitive RME programs in each of their respective regions, they also gained the authority to process the awards and funding through their host universities without having to have CSREES process each of their awards. And finally, in 2004, CSREES published operational guidelines to be followed by each of the four regional centers that specified how they were to conduct their competitive programs, guidance that previously did not exist. In February 2007, these guidelines were updated and published on the CSREES Farm Financial Management program page, making them public to all citizens. The process and procedures used by SARE to manage their regional competitive programs are well established using two boards to oversee operations, a technical one and an administrative one.

In fiscal year 2007, CSREES successfully hired a new NPL for Farm Financial Management to replace the NPL who provided leadership over the program over the last four years. Therefore, business is proceeding as usual. This hiring was crucial as the beginning of 2007 included the reauthorization of the TAA program, and the competitive grants process that is imperative to maintaining one regional center in all four regions, and a Digital Center for providing a number of supporting services to the regional Risk Management Education Centers.

Questions related to grants administration: One of the concerns posed by the Committee dealt with the issue as to whether centralized grants administration is more effective than decentralized regional administration. Given the shortfall of personnel within CSREES to manage, process, and fund individual RME projects, having the regions conduct regional (as well as multi-regional, in the case of the RME Program) competitions and then to process the awards is quite effective, equal to if not more effective than if CSREES were conducting the competitions. In addition, by having the regions manage the program in their regions, this permits the SARE and RME NPLs to provide much

closer oversight and leadership than would otherwise be the case. The regional Rural Development centers conduct a competition that is overseen by a board of directors consisting of representatives from the State Experiment Stations, the Cooperative Extension Service, Higher Education, stakeholders and others. CSREES believes that the manner in which these programs are conducted and overseen make them highly effective.

Questions related to accountability: A second concern was whether CSREES was losing control and accountability of the program. With regard to the all programs, there are specific reporting requirements that must be met and which are being met, otherwise annual funds would not be released until the requirements are met. Each program operates under an established set of guidelines agreed to by CSREES and our partners. Additionally, each host university is required to provide oversight and accountability just as CSREES is so required to do of their programs. Finally, CSREES has actually gained more control and accountability for the manner in which these programs are managed, which has in fact provided the necessary time for the NPLs to more effectively lead and provide necessary oversight of the programs.

Questions related to coordination among regions: A final concern of the committee questioned whether there was adequate coordination among the regions. The coordination among the regions has never been better or more effective. Monthly conference calls, semi-annual (more if deemed necessary) coordination and management meetings, and individual conversations have resulted in the regions being fully coordinated in each of the three programs being discussed. The Operational Guidelines under which the regional RME centers operate dictate a much more coordinated program than was the case prior to 2003. All said and done, coordination has been significantly improved over the last three years, particularly the Regional Rural Development Centers programs and the RME Program.

In 2005, the Southern Rural Development Center and the Southern SARE Program have embarked on a coordinated, joint funding of mutually supportive projects. Likewise, the Southern Regional RME Center has been in discussions with the Southern SARE Program to perhaps jointly fund some risk management studies to better understand the perceptions of risk and the adoption of new technologies and practices by producers.

Accountability

- Much of the evidence had to be teased out by an NPL, rather than being part of a readily accessible database.
- Need to generate better information about the impact of CSREES programs so it can be communicated to stakeholders.
- Improve reporting of outputs and impacts via scholarly and stakeholder-oriented communication channels.
- Report outputs and impacts according to criteria established by CSREES for meeting OMB requirements; provide a template for reporting.
- Implement post award-evaluation process.
- Include extension and teaching in the reporting and documentation system along with research.

Actions Taken:

The CSREES One Solution Initiative began in May of 2005. It is designed to increase the quality and completeness of reports to OMB, Congress, and the public. One Solution aligns the budget with performance outcomes in the research, education, and extension areas. The system is being developed to allow for streamlined reporting requirements.

The 2007-2011 Plans of Work (POW) for Research and Extension formula funds were entered via electronic, HTML-based forms pre-populated with CSREES-known information about each project. The system also utilizes pop-up help screens to facilitate clarification of data entry. Automatic e-mail notifications alert national program staff and project directors to submit and review reports.

The advent of the One Solution system and its integration with the migration of the Current Research Information System (CRIS) is laying the foundation for ease of reporting and reviewing reports and impact information from funded projects. The system will eliminate much of the “teasing out” of information necessary in the past by soliciting and retaining pertinent project information in a readily accessible database. The system will further enable the reporting of outputs and impacts to stakeholders by requesting the information in a standardized template.

While One Solution is not finalized and complete at this time, early pilot testing results have been favorable and predict that One Solution will facilitate CSREES contributions to increased public accountability and quality government reporting for all three areas of research, education, and extension.

IV. Reference to updates of the self-review paper

Table #1 : CSREES Research Funding for Portfolio: Agricultural Structures and Farm Management by Source during 2001-2005 (KA 601 and KA 723)						
Funding Sources	(\$ in the Thousands)					
	2001	2002	2003	2004	2005	Grand Total
Hatch	2,585	2,812	3,231	3,070	4,098	15,796
McIntire-Stennis	22	47	41	27	30	167
Evans Allen	1,255	1,529	1,445	1,081	1,340	6,650
Animal Health	2	1	2	5	4	14
Special Grants	1,842	2,515	2,619	2,649	4,032	13,657
NRI Grants	692	611	699	765	2,528	5,295
SBIR Grants	65	0	140	371	0	576
Other CSREES	5,514	1,455	1,739	1,769	3,204	13,681
Total CSREES	11,977	8,969	9,917	9,765	15,236	55,864

Table #2: Funding from All Sources for Portfolio: Agricultural Structures and Farm Management during 2001-2005 (KA 601 and KA 723)						
Sources of funding	(\$ in the Thousands)					
	2001	2002	2003	2004	2005	Grand Total
CSREES	11,977	8,969	9,917	9,765	11,914	52,542
Other USDA	650	1,299	1,593	1,676	2,281	7,499
Other Federal	2,994	4,687	8,458	10,262	31,313	57,714
State Appropriations	11,589	15,119	16,308	17,510	23,885	84,411
Private or Self Generated	887	1,109	1,401	1,568	1,936	6,901
Industry Grants and Agreements	1,695	1,982	2,242	2,332	5,527	13,778
Other non-federal	1,470	1,459	1,877	1,479	4,415	10,700
Grand Total	31,262	34,625	41,795	44,594	81,272	233,548

Knowledge Areas	(\$ in the Thousands)					Grand Total
	2001	2002	2003	2004	2005	
KA 601: Economics of Agricultural Production and Farm Management	8,234	5,487	6,196	6,665	7,618	34,200
KA 723: Hazards to Human Health and Safety	3,743	3,482	3,721	3,100	4,296	18,342
Grand Total	11,977	8,969	9,917	9,765	11,914	52,542

- Discuss the funding tables as it relate to activities

Tables 4 and 5 reflect the funding for KA 601 (CSREES Sources) and KA 601 (All Sources) respectively. Between 2004 and 2005, total CSREES funding has increased by almost \$1,000,000. The grand total from 2001 to 2005 is \$34,200,000. Primary CSREES funding sources for KA 601 are Hatch, which includes \$2,049,000 in 2005 and a total of \$9,362,000 from 2001 to 2005; and Special Grants, which includes 2,016,000 in 2005 and a total of 8,758,000 from 2001 to 2005. There was a significant increase in NRI funding for KA 601 from 2004 to 2005, funding jumped from \$185,000 to \$1,264,000. In regards to funding from all sources, State Appropriations comprised the majority with \$11,781,000 in 2005 and a total of \$45,494,000 from 2001 to 2005. Overall, there was an increase in funding over all sources. From 2004 to 2005, there was an increase in funding of \$8,347,000 for KA 601, which represents the biggest increase from one year to the next within the time period of 2001 to 2005. From 2001 to 2005, funding from all sources totals \$104,196,000.

Tables 6 and 7 reflect the funding for KA723 (CSREES Sources) and KA723 (All Sources) respectively. CSREES Funding for KA723 has risen steadily over the past five years, totaling \$18,342,000. Within CSREES, funding is distributed to some extent within most funding sources, but the primary funding originates in Hatch projects and other CSREES funding. Funding for KA723 in the form of special research grants has fluctuated over time. In general, there has been an increase in the dollars spent in KA723 from NRI programs from 2001 to 2005. Funding from all sources for KA723 has greatly increased, particularly from 2004 to 2005. From 2001 to 2005, funding from all sources for KA723 totals \$129,352,000. Over the past five years, there has been a marked increase in other federal funding for KA723. There has also been a significant increase in the amount of funding from Industry Grants and Agreements.

- Evidence gathered since the last review in terms of new studies, evaluations, etc

Pertinent to KA 601 is the Trade Adjustment Assistance Program, which helps producers, including aquaculturists, adjust to import competition. CSREES plays a major role by providing intensive technical assistance and advice to producers before they receive cash benefits through the program. Furthermore, the four Regional Risk Management

Education Centers and the supporting Risk Management Digital Center at the University of Minnesota oversee and coordinate the development and delivery of technical information and advisory packages.

A critical component of CSREES programs involves reaching out to diverse audiences. The following are new results that were provided to CSREES in February 2007 regarding TAA program impacts for Native American producers in Alaska and Washington states:

ALASKA

- Cost: \$865,000
- 310 workshops were conducted in 83 communities by the University of Alaska Marine Advisory Program
- 4,650 people attended the workshops
- The University of Alaska Marine Advisory Program people estimate that approximately 30% of the participants were native.
- Approximately 50% of the cost was incurred serving the native population. The reason for this is it required substantially more time and travel to reach the remote native communities where a most of the native population is located. Also, in many cases, the workshops held in remote areas had only a few attend where the workshops held in Anchorage and other urban areas had a much larger attendance, sometimes over 100 people.
- Based on this information, it is estimated that over \$400,000 was spent providing training to the Alaska native (largely Yup'ik Eskimo) population.

WASHINGTON

- Cost: \$145,000
- 58 workshops were held in over two dozen locations
- 1,192 people attended the workshops. Of those, approximately 400 were Washington fishermen. The remainder fished in Alaska, but lived in Washington during the off season when the training was conducted.
- Of the approximately 400 Washington fishermen, approximately 250 were Native Americans.
- Nearly all of the people who fished in Alaska but lived in Washington were not native.
- The cost of providing the training for the native population in Washington was not as disproportionate as it was in Alaska. For the most part, they were centrally located in Western Washington and didn't require as much time and/or travel.
- Based on these figures, the estimated the cost of providing the training for the native population was approximately \$32,000.

The Assistive Technology Program for Farmers with Disability (AgrAbility) consists of state projects which are partnerships between State Land Grant Universities and non-profit disability organizations. The projects submit competitive proposals, and if funded, are awarded to the land grant university extension system. The National AgrAbility Project, currently housed at University of Wisconsin-Madison, oversees the state and

regional AgrAbility projects. The National AgrAbility project, recognizing the unique challenge of the state projects to gather meaningful impact data from their clients and their programs, initiated an impact study workgroup with representation from several state projects. The impact study group has acknowledged that reporting impacts is critical to program success and sustainability over time. The impact study workgroup is currently pilot testing several different methods of evaluating and recording project impacts. The group reviewed numerous methods of data collection and impact survey collection tools and decided to pilot test several methods in a limited number of states and based on results, make recommendations to the other state projects. The National Project will be prepared to support whichever collection tools the impact study workgroup deems to be the most appropriate for the AgrAbility program and be available to assist state projects as they collect data and prepare impact information. This impact data will assist the state projects when they prepare annual reports for their home institutions as well as for CSREES. KA723 covers many smaller projects as opposed to several large, high-dollar projects. Impacts are more significant in a “the sum of the parts is greater than the whole” kind of way.

The 22 state AgrAbility projects funded in Fiscal Year 2005 served over 1,450 clients. The AgrAbility program provides funding for education, networking, and assistance for disabled farmers and ranchers and their families. The AgrAbility funds are not used for direct purchasing of equipment for clients; rather, funds are used to provide detailed, individualized on-farm assessments to determine modifications that could be made to allow the farmer to continue working safely and successfully on the farm. The on-farm assessments are detailed and make specific recommendations. If outside funding is necessary for procurement of equipment or materials, AgrAbility staff work with the farmer and other various funding agencies, including departments of vocational rehabilitation, to apply for funding. Without the AgrAbility program, many farmers would not be able to continue farming after their disability. AgrAbility staff also provide educational materials and serve as a reference for a wide variety of audiences including farmers; nurses, occupational and physical therapists, and hospital staff; other extension personnel; and farm equipment experts.

The Minnesota AgrAbility Project was established in 1991. The project is a partnership between the University of Minnesota Extension Service, Rural Rehab Technology, Inc., and Goodwill/Easter Seals Minnesota. The project serves all 187 counties in Minnesota. The Minnesota AgrAbility Project provides information and referral, on-site visits, individualized assessment, education and supports services for Minnesotans with disabilities whose goal is to gain or maintain farming and/or farm-related occupations. The project clientele include farmers, farm family members, agricultural workers, rural health care providers, and agri-business leaders. The Minnesota AgrAbility Project conducts outreach through educational presentations, regular mailings, collaborative service agreements, the Fenceline (peer support network), and most importantly, on-site visits. Minnesota AgrAbility Project staff understands that farmers place a high value on interpersonal networks for securing information. By expanding the number of opportunities to meet with farmers one-on-one or in small groups, the effectiveness of training and educational programs has increased, particularly in the areas of preventing secondary injuries and disability accommodation training. Project staff used

opportunities to make presentations at meetings and events of pre-established groups (e.g., traumatic brain injury and arthritis support groups, Farm Bureau, and seed dealers) and within pre-existing health care systems (e.g., cardiac care programs, diabetes regional centers), thus increasing the credibility and accessibility of AgrAbility resources to farmers and agricultural workers. Minnesota AgrAbility Project staff have partnered with Lifease, Inc. to conduct a feasibility study on the conversion of PC-based assessment software to PDA format. The end goal of this partnership is efficient and effective assessment. The PDA formatted software would enable persons making an on-site visit to quickly access a multitude of assistive technology databases and resources, based on the results of the initial assessment tool.

V. Performance Measure(s):

- a. *Measure Description:* Benefits to farmers changing their risk management behavior per the net dollar cost of the Risk Management Education program.
- b. *Measure Explanation:* The measure indicates the Risk Management Education Program’s effectiveness in convincing farmers to adopt insurance and marketing practices designed to increase their profitability and reduce the variability of their income. Notes: (a) The actual values given below were calculated for extension efforts in Minnesota, Wisconsin, Iowa and North Dakota. (b) Dividing the financial benefits by the program dollar is designed to control for changes in funding. (c) The indicator may still be affected to some extent by weather and financial markets.

Time Frame	Target	Actual
2004	Baseline	156
2005	200	229
2006	220	251
2007	242	262
2008	272	
2009	300	

VI. Discuss Change in Scores and the Rational Behind the Change

Consistent with recommendations from the external panel review, the team recalibrated the portfolio and established a new baseline. Some scores were adjusted upward while others downward. Rationale the for changes follows:

- 1) Relevance:
 - a. Scope: increased from 2 to 2.5
 - i. Justification: The Risk Management Education and TAA programs are now firmly established in every region, with annual streamlined grant opportunities made available for subgrantees to focus on needs specific to their region or state. The RME and TAA programs have a broad national scope even though the program content is delivered at the state and regional level, which is appropriate given the vast differences in farming and ranching from place to place.
 - b. Emerging issues: increased from 2 to 2.5

- i. Justification: The competing demands between the growing Ethanol and Bio-Fuels industries have been the subject of recent RME analysis and efforts as have the growing numbers of women farmers in the United States. These two areas – shifts in resource allocation and shifts in demographics – are but two of the emerging issues the RME program is addressing at a national level and within the regions.
 - c. Integration: decreased from 3 to 2.5
 - i. Justification: Reconfiguration aspects of the KA relating to this portfolio caused an initial dissipation of some integrated results. However, under the newly reconfigured portfolio, confidence is high that program integration will rebound. The RME and TAA programs, in and of themselves, are highly integrated at the regional level as the centers located regionally that handle risk management education efforts also prepare and deliver technical assistance under the TAA program. Further integration of farm safety will occur as the newly reconfigured portfolio matures, as the recognition that farm injuries can and does in most cases severely impact the ability of the farm to be properly managed, at least in the short term. By seeking additional opportunities to integrate farm safety with farm financial management and risk management, the overall fiscal picture of the farm can improve. With the removal of agricultural engineering from this portfolio, the portfolio became heavier in extension-related activities.
 - d. Multidisciplinary: increased from 1 to 2
 - i. Justification: The RME program is adding a new emphasis on legal issues and the proper planning for legal and regulatory concerns within the farm environment. This amplification of legal issues is a new effort and is being done in a fully integrated fashion among all four regional RME centers.
- 2) Quality
- a. Significance: decreased from 3 to 2
 - i. Justification: With reconfiguration of the portfolio and removal of many aspects of agricultural engineering from the portfolio, a slight decline in significance of the overall portfolio was appropriate. RME and TAA, as well as the efforts of the farm safety programs, through AgriAbility and other ongoing efforts, are significant to the overall health, welfare and viability of the farming enterprise. TAA is being considered for reauthorization by Congress during 2007 and should it be reauthorized, the mandatory and intensive technical assistance provided through that program will assist in increasing the overall significance of the portfolio to the farming community. Risk management education is of course key to the fiscal and financial health of the farming enterprise, but the loss of agricultural engineering – which is a key need of the farming community – from the portfolio was a significant enough event to require a slight decline in the portfolio for this component. Reconfiguration of the portfolio has resulted in a less broad portfolio mix.
 - b. Alignment: increased from 2 to 2.5

- i. Justification: RME, TAA and the Farm Safety program efforts are in total alignment with USDA and CSREES' Strategic Goals as captured in Strategic Objective 2. TAA and RME are primary components of the remaining KAs in this portfolio and are directly related to Strategic Objective 2.

3 Performance

- a. Productivity: increased from 2 to 3
 - i. Justification: The RME program has a strong record of generating outcome tracking information. This is accomplished through the results verification system utilized throughout the streamlined grants award and reporting process in place for all RME funds. Projects are tracked throughout the life of the project by the Digital Center for Risk Management Education and all results are reported to CSREES and back into the RME leadership for further program analysis and modification.
- b. Comprehensiveness: increased from 2 to 3
 - i. Justification: A broad spectrum of issues is funded every year through the RME centers, these including projects related to: marketing, financial analysis of the farm, recordkeeping, benchmarking of farming operations, analysis of legal and regulatory issues facing the farm, and other key subject areas that will improve the overall financial management of the farming operation and its ability to manage for risk. The TAA program, through delivery of mandatory and intensive technical assistance, is comprehensive in its program subject delivery; however, the delivery of this information is triggered by applications for TAA filed by farmers and fishermen affected by imports and thus, while the content of technical assistance delivery is comprehensive in nature, the overall program is triggered by producer selection to petition for coverage.
- c. Agency guidance: increased from 2 to 2.5
 - i. Justification: The RME and TAA programs received new National Program leadership with the hiring of a new NPL whose background is in the field of agricultural law. This individual brought increased diversity to the overall portfolio as well as new initiatives to strengthen guidance from the agency to the streamlined programs.
- d. Accountability: increased from 2 to 2.5
 - i. Justification: The RME program endorsed and adopted a comprehensive Operations Guide in 2007 for the governance of all program delivery as well as to ensure consistency in program delivery. In addition, the TAA program has a draft of a similar TAA Operations Guide underway that, should the TAA program be reauthorized in 2007, will be adopted to govern the program content, delivery and consistency of TAA at the regional and nationwide level.

VII. Summary

The portfolio team has reflected on the series of recommendations that emanated from the external panel review team and has taken to heart those recommendations. The team of NPLs managing this portfolio implemented a series of actions that responded to most of the comments and recommendations. To refocus and realign this portfolio, 3 Knowledge Areas (KA 401, 402 and 404) were moved to the Food and Non Food Products Development Portfolio. This move leaves only two KAs – 601 and 723 to populate the new portfolio. Given this new configuration (3 out of 5 KAs were moved), the portfolio team decided to establish a new baseline for the remaining 2 KAs: KA 601 deals with Economics of Agricultural Production and Farm Management and KA 723 covers Hazards to Human Health and Safety. The KA 601 and 723 will undertake additional new initiatives in an effort to continue determining ways to weave these content areas together. As the safety on farms and safety conditions within which farmers and farm workers must exist are critical to the overall risk environment of the farm and contribute to the overall financial management capacity and conditions of the farm, the weaving of these portfolio KAs will confidently improve over time.

KA 601 Success stories

Hatch project at North Carolina State University: “Farm Level Decisions, Effectiveness of Conservation Policies and Sustainable Land Use.”

Furthermore, this project investigates the trade-offs of costs and environmental benefits of changes in agricultural practices at both the farm and the policy levels. Farmers’ perceptions of more sustainable practices and of the conservation regimes are also investigated as a part of the project’s approach. Overall, the project takes a multi-disciplinary approach to the investigation of the production-economic, environmental and sociological performance of different land use systems at the farm and regional level in an integrated way. The insights gathered from this project can contribute to: (1) the improvement of farmers' overall performance; (2) the process of tactical and strategic farm management; (3) the development and evaluation of agricultural and conservation policies; and (4) the formulation of the technical and economic research agenda regarding sustainable and multifunctional agricultural land use. These insights (if transferred and conveyed successfully to smaller operations) can assist in providing producers guidance to adhere to current CAFO regulations when they come down the pipe.

Livestock Marketing Information Center:

Furthermore, the Livestock Marketing Information Center has provided economic analysis and projections about issues and conditions concerning the livestock industry since 1955. USDA members of the LMIC represent one of six Federal partner agencies. Those participating agencies are the Cooperative State Research Education and Extension Service (CSREES), Animal Plant Health Inspection Service (APHIS), Grain Inspection Packers and Stockyards Administration (GIPSA), Economic Research Service (ERS), National Agricultural Statistics Service (NASS), and World Agricultural Outlook Board (WAOB). About 50 percent of the LMIC budget is currently provided by the participating state Land Grant Universities on a formula basis. The bulk of USDA’s baseline funding for LMIC projects is through the Cooperative State Research Education

and Extension Service (CSREES). The Center's resources contribute to economic education, support applied research projects, and policy evaluation. Center staff continuously updates forecasts, projections and support materials related to market situation and outlook. The LMIC is a unique cooperative effort between state university extension specialists, USDA economists, industry cooperators and Center staff. Through cooperative efforts and programs, duplication of effort is greatly reduced while enhancing the overall quality and quantity of livestock market information for producers and other decision makers.

KA 723 Success stories

Minnesota AgrAbility Project. The Minnesota AgrAbility Project was established in 1991. The project is a partnership between the University of Minnesota Extension Service, Rural Rehab Technology, Inc., and Goodwill/Easter Seals Minnesota. The project serves all 187 counties in Minnesota. The Minnesota AgrAbility Project provides information and referral, on-site visits, individualized assessment, education and supports services for Minnesotans with disabilities whose goal is to gain or maintain farming and/or farm-related occupations. The project clientele include farmers, farm family members, agricultural workers, rural health care providers, and agri-business leaders. The Minnesota AgrAbility Project conducts outreach through educational presentations, regular mailings, collaborative service agreements, the Fenceline (peer support network), and most importantly, on-site visits. Minnesota AgrAbility Project staff understand that farmers place a high value on interpersonal networks for securing information. By expanding the number of opportunities to meet with farmers one-on-one or in small groups, the effectiveness of training and educational programs has increased, particularly in the areas of preventing secondary injuries and disability accommodation training. Project staff used opportunities to make presentations at meetings and events of pre-established groups (e.g., traumatic brain injury and arthritis support groups, Farm Bureau, and seed dealers) and within pre-existing health care systems (e.g., cardiac care programs, diabetes regional centers), thus increasing the credibility and accessibility of AgrAbility resources to farmers and agricultural workers. Minnesota AgrAbility Project staff have partnered with Lifease, Inc. to conduct a feasibility study on the conversion of PC-based assessment software to PDA format. The end goal of this partnership is efficient and effective assessment. The PDA formatted software would enable persons making an on-site visit to quickly access a multitude of assistive technology databases and resources, based on the results of the initial assessment tool.

AgrAbility of Wisconsin. AgrAbility of Wisconsin is a partnership between University of Wisconsin-Extension Cooperative Extension and the Easter Seals Wisconsin Farm Assessment and Rehabilitation Methods program (FARM). Since 1991, the collaborative efforts have allowed AgrAbility of Wisconsin to serve over 1000 clients. In 2003, Easter Seals and FARM program staff entered into an agreement with the Wisconsin Department of Vocational Rehabilitation (DVR) to provide training to DVR staff, outreach to potential consumers, and services to DVR consumers. Under the agreement, FARM staff provided 72 farm assessments in 2003. The trainings provided information relating to the issues farmers face and cultural aspects of farm family life. The trainings also identified special challenges that DVR counselors typically face when working with

farmers. The trainings have resulted in an increase in clients since 2003, a decrease in the amount of waiting time experienced by new clients, and a joint increase in available collaborative resources.

Appendix

- Any portfolio graphics (KA logic models, honeycombs, graphs, etc.)
- Additional funding tables

Funding Sources	(\$ in the Thousands)					
	2001	2002	2003	2004	2005	Grand Total
Hatch	1,602	1,753	2,031	1,927	2,049	9,362
McIntire-Stennis	22	30	25	23	15	115
Evans Allen	969	1,089	1,076	927	670	4,731
Animal Health	0	0	1	2	2	5
Special Grants	983	1,755	1,697	2,307	2,016	8,758
NRI Grants	567	221	617	185	1,264	2,854
SBIR Grants	65	0	81	0	0	146
Other CSREES	4,027	639	667	1,294	1,602	8,229
Total CSREES	8,232	5,487	6,196	6,665	7,618	34,198

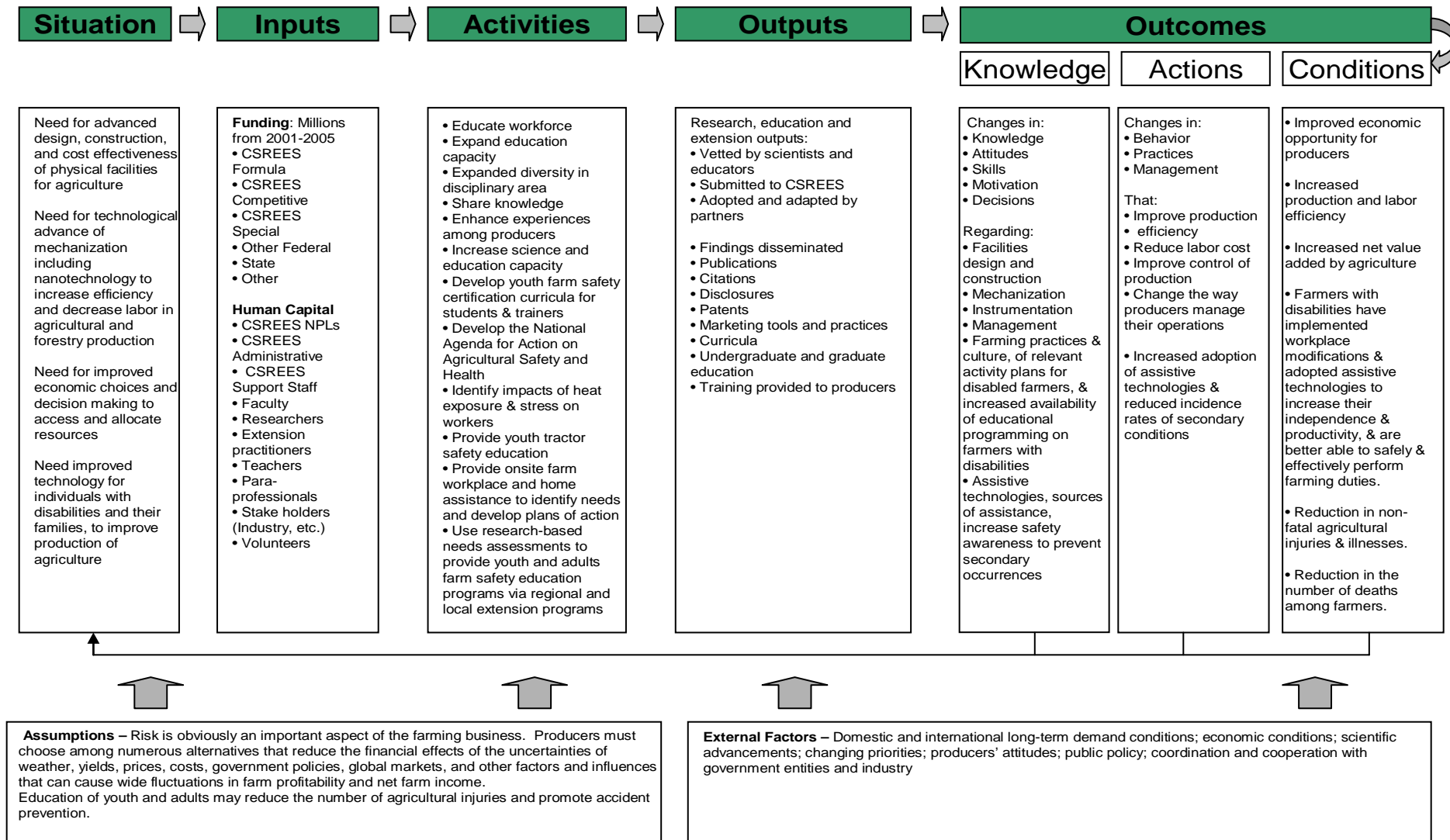
Sources of funding	(\$ in the Thousands)					
	2001	2002	2003	2004	2005	Grand Total
CSREES	8,234	5,487	6,196	6,665	7,618	34,200
Other USDA	510	979	1,005	1,147	1,945	5,586
Other Federal	610	756	943	873	3,134	6,316
State Appropriations	6,734	8,742	8,702	9,535	11,781	45,494
Private or Self Generated	608	589	616	709	1,087	3,609
Industry Grants and Agreements	567	703	880	888	1,246	4,284
Other non-federal	382	414	897	831	2,185	4,709
Grand Total	17,645	17,671	19,235	20,649	28,996	104,196

Funding Sources	(\$ in the Thousands)					
	2001	2002	2003	2004	2005	Grand Total
Hatch	983	1,059	1,200	1,143	1,262	5,647
McIntire-Stennis	0	17	16	4	17	54
Evans Allen	286	440	369	154	131	1,380
Animal Health	2	1	1	3	11	18
Special Grants	859	760	922	342	437	3,320
NRI Grants	125	390	82	580	346	1,523
SBIR Grants	0	0	59	371	46	476
Other CSREES	1,487	816	1,072	502	2,046	5,923
Total CSREES	3,743	3,482	3,721	3,100	4,296	18,342

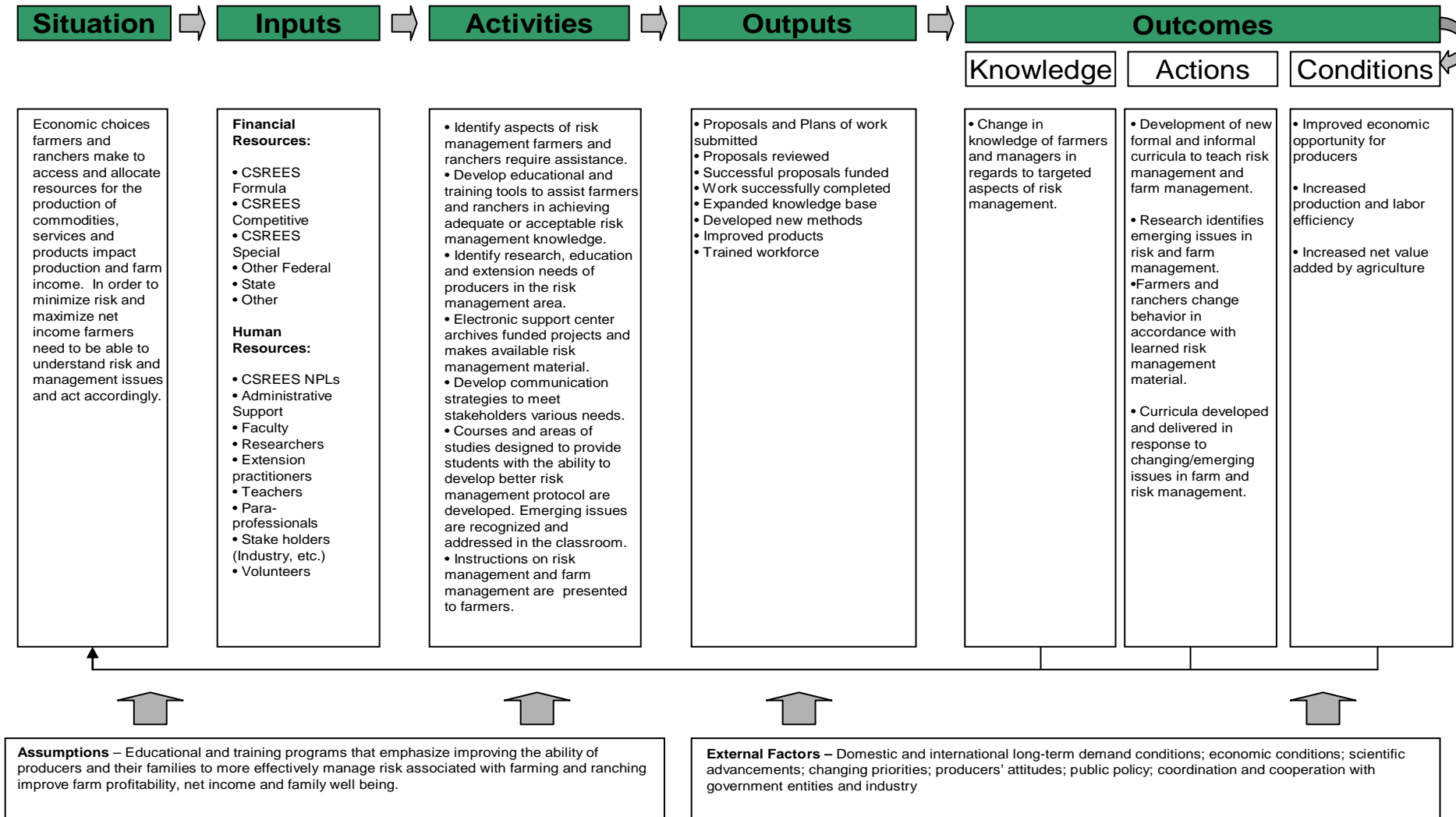
Table #7: Funding from All Sources for Knowledge Area 723 during 2001-2005						
Sources of funding	(\$ in the Thousands)					
	2001	2002	2003	2004	2005	Grand Total
CSREES	3,743	8,969	3,721	3,100	4,296	23,829
Other USDA	140	320	588	529	336	1,913
Other Federal	2,384	3,931	7,515	9,389	28,179	51,398
State Appropriations	4,855	6,377	7,606	7,975	12,104	38,917
Private or Self Generated	279	520	789	859	849	3,296
Industry Grants and Agreements	1,128	1,279	1,362	1,444	4,281	9,494
Other non-federal	1,088	1,045	980	648	2,230	5,991
Grand Total	13,617	16,954	22,560	23,945	52,276	129,352

IV. Logic Models

Portfolio 2.4: Structure of the Agricultural Sector and Farm Management Logic Model



KA 601: Economics of Agricultural Production and Farm Management Logic Model



KA 723: Hazards to Human Health and Safety Logic Model

