United States Department of Agriculture

Animal and Plant Health Inspection Service

Policy and Program Development

Environmental Services, Unit 149
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OPP Regulatory Public Docket (7502P)
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue N.W.
Washington, DC 20460-0001

Subject: **Docket ID Number EPA-HQ-OPP-2005-0231; USDA APHIS Comments on Metaldehyde RED**

Environmental Services, on behalf of the United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), appreciates the opportunity to comment on the October 3, 2006 Federal Register Notice of Availability of EPA's Registration Eligibility Decision (RED) for Metaldehyde. The purpose of this comment is to request that broadcast applications on non-crop use sites be retained on certain labels so that public service use of metaldehyde, a critical tool for Federal and State programs that target exotic, invasive snails and slugs, may continue.

Due to its efficacy, metaldehyde has become the primary tool used in invasive terrestrial snail and slug (hereafter referred to as "mollusk") eradication programs conducted by USDA APHIS Plant Protection and Quarantine (PPQ) and State regulatory agencies. Exotic, invasive mollusks pose a threat not only to human health, but also to our nation's agriculture and environment. The public service afforded by the continued use of this product is such that APHIS respectfully requests EPA to retain its use as a broadcast treatment on all non-crop use sites necessary for APHIS and state regulatory agencies to continue their invasive mollusk operational programs. These use sites include fallow land; barrier strips; uncultivated non-agricultural areas; recreational areas; non-food or non-feed brush; weed or dense vegetative areas; railroad, pipeline, highway, power and telephone rights of way and roadsides; guardrails and fences; lumberyards; storage areas; industrial facility sites, including yards and walkways around industrial buildings, parking areas, parks, golf courses, other public areas; and airport and similar industrial non-crop areas. Current programs use the pelleted, mini-pelleted, granular, and emulsifiable concentrate formulations. Broadcast treatments are needed at rates up to 2.0 lb a.i./A. It is possible that up to 6 treatments per year may be necessary for certain areas of the country.

The APHIS PPQ Mission

Through the Plant Protection Act of 2000, APHIS PPQ is directed by Congress to safeguard our nation's agriculture and environment from invasive, non-indigenous plant pests. Increased detections of invasive and destructive mollusks over the years has caused PPQ to develop an Invasive Mollusk Program to target domestic infestations of the Giant African Snail (*Achatina fulica*), detected in nine states and one territory, the Cuban Slug (*Veronicella cubensis)* detected on the Northern Mariana Island of Rota, and over nine species of invasive terrestrial snails (of the Genera *Monacha,Cernuella, Trochoidea, Xeropicta, Xerolenta, Candidula, Hygromia)* which have been detected in seaports, rail yards and freight yards in four states.

The Giant African Snail and other Achatinids

Giant African Snails (Figure 1) are considered to be one of the most damaging land snails in the world. It is known to consume at least 500 different types of plants, including not only a wide variety of important tropical crops such as breadfruit, cassava, cocoa, papaya, peanut, and rubber, but also most varieties of beans, peas, cucumbers, and melons along with a wide variety of ornamental plants. Live Giant African Snails are prohibited entry into the United States, but commonly brought into the country by air passengers from African nations to be used as food. They are also traded illegally over the Internet from international or domestic sources for uses in the pet trade.

While there are no known infestations of these species in the environment at this point in time, a successful eradication program was conducted in Miami, Florida when an infestation developed as a result of a school-aged child bringing snails back from Hawaii to use as pets back in 1966. The snails were eventually released into the family garden and, over time, a large population became established in the neighborhood. When the infestation was discovered in the early 1970's, the Florida Department of Agriculture established a quarantine and eradication program using hand-picking, public awareness campaigns, and metaldehyde baits.

The Giant African Snail is also an intermediate host of the rat lung worm (*Angiostrongylus cantonensis*), a nematode which causes eosinophilic meningitis (or cerebral angiostrongyliasis) in humans. The spread of the disease has been correlated with the spread of this snail in Asia and the Pacific. These organisms can be transferred by ingesting improperly cooked snail meat or by handling live snails and allowing their mucus (slime) to contact human mucous membranes such as those in the eyes, nose, and mouth. See http://www.dpd.cdc.gov/dpdx/HTML/angiostrongyliasis.htm. Snails in the Giant Snail family (Achinatidae) may carry other diseases that affect humans and animals.

Currently, APHIS is seizing all live snails in the Giant Snail family Achatinidae, including *Achatina achatina, Achatina fulica, Archachatina marginata,* and *Limicolaria aurora.* In 2004, APHIS and state cooperators seized 6,871 snails in 10 states from the pet trade and from schools where they were used in classrooms. *Achatina fulica* was been detected in the past 5 years on several Caribbean islands and APHIS is in the process of conducting laboratory and field efficacy experiments in Barbados using various metaldehyde formulations on this species to prepare for a potential infestation in the continental United States.

The Cuban Slug
APHIS scientists are currently conducting controlled efficacy trials in cages on an island located in the Commonwealth of the Northern Marianas Islands to control the invasive Cuban slug (Figure 2). Several formulations of metaldehyde will be tested in order to find an efficacious and economical control method (Table 1).

Other Terrestrial Snails
Other invasive terrestrial mollusks which have entered this country are from the families Hygromiidae, Helicidae, and Arionidae. These are primarily temperate species of European origin, but over time they have entered and have become established in other parts of the world. They are frequently intercepted at our nation's ports of entry, entering as hitchhikers on containers arriving by sea vessels. Populations of several species have become established at our nation's seaports. Invasive snails later show up in rail yards as the infested containers are transported from Canada or within our nation's borders by rail and the snails escape into the environment. Quarantine species of concern are as follows:

- HYGROMIIDAE: *Candidula intersecta, Cernuella virgata* (Vineyard Snail), *Cochlicella spp., Monacha cartusiana, Xerolenta obvia, Xeropicta spp., Xerotrica conspurcata*;

- HELICIDAE: *Theba pisana,* White Snail;

- ARIONIDAE: *Arion lusitanicus*.

Populations of some species, such as *Xerolenta obvia*, in rail yard right-of-ways, can build up quickly as shown in Figure 3. Two of species snails, the vineyard snail and the white snail, are serious pests of grain crops in Australia. Populations of both species build quickly to the point that they display massing behavior. This causes serious problems for mechanical harvesters and use of grass and grain crops by livestock.

APHIS has interception records spanning 20 years indicating a constant rate of entry on sea containers by these species through our nation's international ports of entry. APHIS has been working with some foreign ports and the Department of Homeland Security, Customs and Border Protection (DHS, CBP) to enforce sanctions intended to influence exporters to eliminate the transporting of mollusks on their sea containers. While APHIS and CBP take action on containers where interceptions occur, many infestations are missed. Snails which escape detection have become established in seaports and rail yards.

APHIS and, in some cases, state regulatory agencies are either conducting or planning to conduct eradication programs in rail yards and seaports to eliminate the risk that these species might be further transported to other parts of the country. The eradication methods entail removing debris piles, modifying potential snail habitats by removing weeds and other host vegetation, and applying metaldehyde baits.

APHIS-supervised mollusk treatments involving broadcast treatments of metaldehyde in rail yard and seaport areas are summarized for the years 2000 through 2006 in Table 2. In the year

2000, APHIS supervised a successful eradication program at a military transport terminal located in the port of Sunny Point near Wilmington, NC. The program eradicated four species: *Monacha syrica, Cernuella virgata, Trochoidea pyramidata, Xeropicta sp.*

In the last 4 years, APHIS supervised terrestrial snail suppression/eradication programs targeting *Monacha catusiana* in a Chicago rail yard and *Xerolenta obvia, Monacha cartusiana, Candidula intersecta,* and *Hygromia cinctella* in rail yards located in the Detroit area (Table 2). APHIS anticipates these species will be eradicated from Detroit rail yards within the next 2 years.

Recent detections of *Cernuella virgata* on 200 acres around the seaport of Tacoma, WA and *Candidula intersecta* on an unknown number of acres around the seaport of Seattle, WA as well as on 10 acres at the inland seaport at Coos Bay, OR will likely result in similar eradication programs for the west coast.

Special Use Box
In the event that all non-crop broadcast uses are removed from general users of this chemical, APHIS respectfully requests that EPA consider retaining non-crop uses within a "Special Use" box or section on the label identified by the following statement: "**Broadcast applications may be made to the following use-sites in response to State or Federal invasive mollusk eradication operations**: fallow land; barrier strips; uncultivated non-agricultural areas; recreational areas; non-food or non-feed brush; weed or dense vegetative areas; railroad, pipeline, highway, power and telephone rights of way and roadsides; guardrails and fences; lumberyards; storage areas; industrial facility sites, including yards and walkways around industrial buildings, parking areas, parks, golf courses, other public areas; and airport and similar industrial non-crop areas."

Products Used
Mollusk eradication and/or suppression programs use the following products, or are investigating their potential uses:

EPA Reg. No	Manufacturer	Trade Name
5481-511	Amvac Chemical Corp.	Deadline MPs
5481-103	Amvac Chemical Corp.	Durham granules
74941-2	De Sangosse UK	Metarex
71096-7	Or-Cal Inc.	Snail and Slug Bait
71096-4	Or-Cal Inc.	Slug Fest Colloidal

Environmental Issues
Prior to the initiation of an APHIS-supervised mollusk eradication effort, APHIS examines the operation in accordance with both the National Environmental Policy Act (NEPA) and the APHIS NEPA Implementing Procedures (7 CFR Part 372). Endangered species issues are addressed within these documents; it is APHIS policy to address and complete all necessary consultations in accordance with section 7 of the Endangered Species Act (ESA) before a NEPA document is completed.

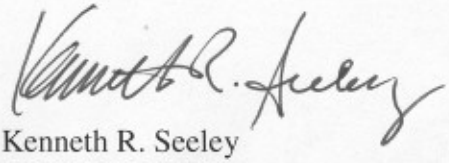
Summary

APHIS PPQ is mandated through its enabling legislation to protect the public from invasive plant pests which threaten our agriculture and environment. A number of invasive mollusks which threaten agriculture, public health and the environment have entered and established themselves in certain regions of the country. APHIS PPQ has developed Exotic Mollusk Eradication operations in response to these established populations. Metaldehyde is a critical tool of these operations, whose success relies on the continued availability of this chemical as a broadcast treatment to non-crop areas at rates up to 2 lb a.i./A/treatment; up to 6 treatments per year may be needed in order to effectuate eradication. While efforts in the Detroit region are winding down as a result of successful treatment operations using this chemical, new populations of exotic mollusks in the western United States have been recently detected on much greater acreage. For the year 2007, it is anticipated that a total of 225 acres may need treatment, involving the use of an estimated 500 lbs. of active ingredient. While APHIS PPQ is exploring the efficacy of alternatives such as iron phosphate, methiocarb, habitat modification, and hand-picking, there currently exists no method that matches the efficacy of metaldehyde; consequently, this chemical is considered to be a critical tool for suppressing and eventually eradicating these invasive exotic organisms.

APHIS looks forward to working with EPA to develop a label that will permit a successful continuation of Federal and State invasive mollusk operations.

If you have any questions about the use of metaldehyde in APHIS Exotic Mollusk Eradication Programs, please do not hesitate to contact Susan O'Toole at 301-734-5861 or by e-mail at sotoole@aphis.usda.gov .

Sincerely,



Kenneth R. Seeley
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Table 1. Metaldehyde formulations planned for testing in Rota, Commonwealth Northern Marianas Islands in 2006

EPA Reg. No.	Trade Name	Formulation	% active ingredient	Application Rate (lb product/Acre)
5481-511	Deadline MPs	Mini-pellet	4%	5-12 pellets/ ft^2 10 lb/ac
74941-2	Metarex	Granules	4%	0.5 - 2 lb/1000 ft^2 6.5-40 lb/ac
5481-103	Durham granules	Granules	7.5%	1 lb/2200 ft^2 17.5-20 lb/ac
71096-4	Slug Fest	Liquid EC	25%	2-4 qts/ac 5-10 oz/10 gallons
71096-7	OR-CAL Snail and Slug Bait	Pelleted/Tabletted	3.25%	1 lb/1100 sq ft 1 tsp/sq yard

Table 2. Summary of treatments supervised by USDA, APHIS, Plant Protection and Quarantine or State Department of Agriculture regulatory officials in 2000 – 2006 in rail yards or seaports

Location	Year	Trade name/ formulation/ EPA Reg. No. (% a.i.)	Approx. Infested Acres Treated	Application Rate (lb a.i./acre)	Maximum number of treatments per site	Approx. Total Amount Applied (lb a.i./acre/yr)
Sunny Point, NC	2000	Deadline M-Ps 5481-511 (4%)	20	1.6/ 0.8/ 0.4	1 - 3	56
Chicago, IL	2003	"	5	1.6	1 - 3	24
"	2004	"	5	1.6	1 – 3	24
"	2005	"	5	1.6	1 – 3	24
Detroit, MI	2001	"	17	1.6	1 – 3	81.6
"	2002	"	17	1.6	1 – 3	81.6
"	2003	"	17	1.6	1 – 3	81.6
"	2004	"	20	0.8 - 1.6	1 – 3	20
"	2005	"	27	0.8 - 1.6	1 – 3	21.6
"	2006	"	5	1.6	1 – 3	6.0
"	2006	Metarex Snail and Slug Bait, 74941-2 (4%)	40	0.56	1 - 3	18

Photograph courtesy of USDA APHIS PPQ

Figure 1. Live Giant African Snails have been smuggled into this country as pets or for use as food. Thousands of specimens of the species pictured here, *Achatina fulica*, were confiscated in 2004 from pet traders and from schools in 10 states, where they were used in classrooms. The slime is known to carry and transfer the rat lungworm (*Angiostrongylus cantonensis*) to humans.

Photograph courtesy of USDA APHIS PPQ

Figure 2: Cuban slug, *Veronicella cubensis* introduced to the island of Rota, of Commonwealth Northern Marianna Islands, is causing serious damage to agriculture there. It was likely introduced to the Pacific from the Caribbean on military household goods containers shipped by ocean vessel.

Photograph courtesy of USDA APHIS PPQ

Figure 3: High densities typical of the *Xerolenta obvia* infestations in a weedy area in a rail yard in Detroit, Michigan. Vegetation is mowed or cleared prior to metaldehyde bait application.