

## **PESTICIDE BOARD SUBCOMMITTEE MEETING**

### **MINUTES OF MEETING**

**December 20, 2019**

**The Department of Agricultural Resource, 251 Causeway St., FL #5 Conference RM 1 Boston,  
MA**

#### **MEMBERS PRESENT**

- Michael Moore, Chairperson, Director of Food Protection Program ○  
Department of Public Health
- Hotze Wijnja, Ph.D., Alternate Designee for Commissioner John  
Lebeaux ○ Department of Agricultural Resources
- Marc Nascarella, Designee for Commissioner Monica Bharel ○  
Department of Public Health

#### **ALSO PRESENT:**

- Susie Reed, Department of Agricultural Resources

#### **I. MINUTES**

##### **VOTED**

That the Pesticide Board Subcommittee approves the summary notes for September 17, 2019 meetings.

Moved: Nascarella

Second: Wijnja

Approved: 2-0-1 (abstention by Moore)

#### **II. PRODUCT REGISTRATIONS**

##### **VOTED**

That the Pesticide Board Subcommittee registers the pesticide products listed on the EIPAS PR December 20, 2019 Subcommittee cover sheet:

Moved: Wijnja

Second: Nascarella

Approved: 3-0

### III. NEW ACTIVE INGREDIENT

Discussion of the new active ingredient *Pseudomonas fluorescens Strain CL145A*.

Wijnja introduced the new active ingredient *Pseudomonas fluorescens Strain CL145A*, a biopesticide formulated in the product Zequanox CS, EPA Reg. No. 84059-15. This product has aquatic use pattern as a molluscicide, labeled for control of quagga mussels and zebra mussels, which are invasive mussel species. Zebra mussels were first identified in Laurel Lake in Erving, MA in 2011.

Zequanox was first registered by U.S. EPA in 2011 for use in enclosed system and semisystems. In 2014, the use in open system was registered. Zequanox CS is labeled for use in enclosed and semi-enclosed systems.

Wijnja pointed out that Massachusetts has a special review process for aquatic pesticide use following registration of product by Pesticide Board Subcommittee. This pertains to the pesticide use in open systems that requires a permit issued by MassDEP. The additional review of aquatic pesticide is done by MassDEP, in collaboration with MDAR, to meet Massachusetts Environmental Policy Act requirements.

The meeting packet included the Biopesticide Registration Action Document (BRAD) for *Pseudomonas fluorescens Strain CL145A* for support of initial registration. This document and additional supporting documents are available at [www.regulations.gov](http://www.regulations.gov) Docket ID: EPA-HQOPP-2011-0568. Wijnja summarize the information in the BRAD.

The biopesticide contains *Pseudomonas fluorescens Strain CL145A* organisms that have been radiated. Fermentation media are also part of the formulation. This particular strain was isolated from river mud in northern part of United States, and was found to have molluscicidal properties that are effective against quagga and zebra mussels. The mode-of-action is by mussels filtering substances out of water, which then come in contact with certain parts in mussels; the biopesticide degrades the epithelial lining of digestive tubules in their digestive glands that kills them.

The product is applied to the water surface or injected into water. The rates are in the range of 0.0067 to 0.013 oz active ingredient per gallon of water. The specific rate depends on lifestage to the mussels to be treated and type of water system, among other factors.

Regarding human health risk, the information indicates that the biopesticide has a low acute toxicity profile; the oral toxicity is classified in category IV. Pulmonary exposure testing data indicates that it is not toxic, infective or pathogenic to rats. Sub-chronic Tier II and Tier III studies were not required. The exposure assessment indicates minimal exposure with food and drinking water. It is pointed out that this biopesticide is a naturally occurring organism and that the use of this product is not expected to increase exposure to food and drinking water beyond background levels. Overall the toxicity information and use pattern of this material shows no harm to the population from residues when used according to label instructions.

The occupational risk assessment indicated potential risk with handling the concentrated product and therefore respiratory protection is required for mixers and handlers. The ecological risk assessment considered the non-target effects of live cells of this strain verses irradiated cells. For fish, mortality rates of up to 89% were observed with live cells compared to 3% with irradiated cells. Given that the formulated product contains irradiated cells and lower levels of cells, it has lower toxicity and poses low risk to fish. The product is less toxic to aquatic invertebrates. It also has low toxicity to native mussel species such as the blue mussel and unionid mussel. Mallard duck data indicate low toxicity.

The revised ecological risk assessment released by U.S. EPA in 2014 describes uncertainties relative to the evaluation of potential for effects to non-target organisms. The uncertainties include the stability (or instability) of the active ingredient and associated limitations in efficacy. EPA presents a possible approach to address this uncertainty by assuming stability constant values, calculating concentrations at various test periods, and refined risk estimates. Refined assessments of environmental concentration patterns in open waters (static and flowing) were also done. EPA concludes that the delayed nature of the mode of action causes uncertainty in the risk assessment. Mitigation of non-target risks can be done by considering the timing of the application (avoiding applications during breeding season) and considering knowledge of migration and breeding patterns. The registrant points out that EPA's revised risk assessment is overly conservative and inaccurately uses the fish early-life stage endpoint. It also points out and acknowledges the difficult nature of this biopesticide material with respect to using procedures that are designed for active ingredient chemicals. The registrant suggests that the original study endpoints should be considered by end-users and permit writers when evaluating risks.

U.S. EPA registered Zequanox in 2011 for a limited period of one year. Additional data informed a revised risk assessment and measures to mitigate potential for non-target risks. In 2014, EPA approved updated labels that also included a sub-label for the use in open systems.

Wijnja pointed out that for proposed uses in Massachusetts, the Dept. of Fisheries and Wildlife reviews permit applications for uses in or near lakes and ponds where mussel species are located.

**Move** that the Pesticide Board Subcommittee approve the product registration for the following pesticide product. This product contains the active ingredient *Pseudomonas fluorescens Strain CL145A* and has never before been registered in Massachusetts.

1. Zequanox CS, EPA Reg. No. 84059-15

Moved: Wijnja  
Second: Nascarella  
Approved: 3-0

#### **IV. Pesticide Product Review Update**

Wijnja stated that the report on neonicotinoids review by the contractor that was hired by the Department. The report will be shared with the Subcommittee as part of the next step in the individual review of neonicotinoids.

Relative to individual reviews, Moore shared his search in the Statehouse Library Archives for individual reviews conducted in the past by Subcommittee. Moore shared a Pesticide Bureau Annual report from 1997 that showed examples of individual reviews. The Subcommittee considered these examples relevant given that individual reviews have not been conducted recently and may be informative for the current task of an individual review of neonicotinoids.

**V. New Business**

**MOTION TO ADJOURN THE MEETING**

It was moved, seconded and passed unanimously.

**VOTED**

To adjourn December 20, 2019 Subcommittee Meeting.

Moved: Moore

Second: Nascarella

Approved: 3-0

Meeting adjourned at 9:40 a.m.