THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

Department of Agricultural Resources
100 Cambridge Street, 9th Floor, Boston, MA 02114
www.mass.gov/agr

MASSACHUSETTS DEPARTMENT OF AGRICULTURAL RESOURCES

Maura T. Healey	Kimberley Driscoll	Rebecca L. Tepper	Ashley E. Randle
GOVERNOR	LIEUTENANT GOVERNOR	SECRETARY	COMMISSIONER

FPESTICIDE BOARD SUBCOMMITTEE MEETING MINUTES

April 18, 2023
Meeting to be held via remote participation: Join Zoom Meeting at:
https://us06web.zoom.us/j/81005128274?pwd=OXRaTCtBbHNSVEZhbjhvREZuU0xJUT09
Passcode 956306

BOARD MEMBERS IN ATTTENDANCE

Michael Moore, DPH, Food Protection Program (Chair)	Present
Taryn LaScola-Miner, MDAR, Designee for Commissioner Randle	Present
Marc Nascarella, DPH, Designee for Commissioner Goldstein	Present
Nicole Keleher, DCR, Designee for Commissioner Montgomery	Present
Richard Berman, Commercial Applicator	Present

The Board did meet or exceed the minimum number (3) of members present to form a quorum and conduct business.

A. REVIEW OF MINUTES FROM March 21, 2023

Motion: R. Berman
Second: M. Nascarella
Discussion: None
In Favor: M. Nascarella, R. Berman, M. Moore
Opposed: None
Abstained: N. Keleher, T. LaScola-Miner

B. PRODUCT REGISTRATIONS

Motion: That the Pesticide Board Subcommittee registers the pesticide products listed on the EIPAS PR April 18, 2023 Subcommittee cover sheet with the exception of the following products:

1. Disarm C Fungicide, EPA Reg. No. 70506-495,
2. GCS S-Metolachlor 82.4% EC, EPA Reg. No. 94730-37,
3. Mineiro 2 F Flex, EPA Reg. No. 91234-304,
4. COLT + SWORD Herbicide, EPA Reg. No. 34704-1011,
5. Resicore XL, EPA Reg. No. 62719-756, and
6. Theia Fungicide, EPA Reg. No. 94713-2-92488.

Moved: R. Berman
Second: N. Keleher
Discussion: None
In Favor: T. LaScola-Miner, M. Nascarella, N. Keleher, R. Berman, M. Moore
Opposed: None
Abstained: None

C. STATE RESTRICTED USE MOTIONS

Restricted Use As Defined under the Groundwater Protection Regulations:

Move: That the Pesticide Board Subcommittee has determined that the use of the following products

1. Disarm C Fungicide, EPA Reg. No. 70506-495, containing chlorothalonil,
2. GCS S-Metolachlor 82.4% EC, EPA Reg. No. 94730-37, containing metolachlor,
3. COLT + SWORD Herbicide, EPA Reg. No. 34704-1011, containing MCPA, and
4. Resicore XL, EPA Reg. No. 62719-756, containing acetochlor

may cause an unreasonable risk to man or the environment, when taking into account the economic, social, and environmental costs and benefits of their use. This determination is based upon the leaching potential and toxicological concern of these substances as defined in the "Protection of Groundwater Supplies from Non-Point Source Pesticide Contamination" Regulations. Therefore, the Subcommittee hereby modifies the registration classification of agricultural/commercial pesticide products containing ***chlorothalonil, metolachlor, MCPA, and acetochlor*** from general to restricted use for groundwater concerns.

Moved: R. Berman
Second: T. LaScola-Miner
Discussion: None
In Favor: T. LaScola-Miner, M. Nascarella, N. Keleher, R. Berman, M Moore
Opposed: None
Abstained: None

Restricted Use Classification for Certain Neonicotinoids Products:

Move: That the Pesticide Board Subcommittee has determined that the following product:

1. 1. Mineiro 2 F Flex, EPA Reg. No. 91234-304, containing imidacloprid

may pose unreasonable adverse effects to the environment as well as to pollinators, when taking into account the economic, social, and environmental costs and benefits of its use in the Commonwealth and is thereby restricted. This is pursuant to the Subcommittee's decision on March 1, 2021 to modify the registration classification of products containing neonicotinoids, including ***imidacloprid***, that have outdoor non-structural uses or outdoor non-agricultural uses on the label from general to state restricted use.

Moved: R. Berman
Second: N. Keleher
Discussion: None
In Favor: M. Moore, T. LaScola-Miner, M. Nascarella, N. Keleher, R. Berman, M. Moore
Opposed: None
Abstained: None

D. SPECIAL LOCAL NEEDS REGISTRATIONS, [SLN-24(c)]

Special Local Needs (SLN) Renewal Request for existing FIFRA Section 24(c) Special Local Needs registration (SLN No. MA-030001) for the use of Stinger Herbicide (EPA Reg. No. 62719-73) for post-emergence broadleaf weed control in cranberry.

Sarah Miller provided a summary of a renewal request for a Special Local Needs (SLN) label for the use of Stinger Herbicide with active ingredient clopyralid, which was first granted in 2003 and has been actively maintained by the registrant Dow Agroscience LLC. Since the Dow chemical and Dupont merger, the current registrant is now Corteva Agriscience LLC.

Corteva Agriscience LLC updated product labels to reflect the new company name and information and has also requested an update to the SNL label for Stinger use on cranberry in Massachusetts. Currently EPA requires an expiration date on SNL labels. This was not a requirement in 2003, so an expiration date will also be added as part of this essential label update. The history of this SLN for Stinger Herbicide in cranberry dates back to its use under Section 18 Emergency Exemptions from the 1996 through 2002 growing seasons. Stinger was, and remains, a critical tool in management of weed infestations such as wild bean that need to be controlled to minimize the need for complete bog renovation. Bog renovation is very expensive.

The meeting package for this month includes updated SLN initiation form, SLN application documents, and draft SNL labeling. Dr. Hilary Sandler from the UMass Cranberry station is an attendance to support this SNL renewal request and is available to answer any questions that subcommittee members may have.

LaScola-Miner asks if this label is going through Section 3 to have cranberries added.

Dr. Sandler states she does not have the answer but will reach out to the company for more information about the Section 3 label to add cranberries.

Motion: That the Pesticide Board Subcommittee hereby approves the renewal of the existing FIFRA Section 24(c) Special Local Needs registration (SLN No. MA-030001) for the use of Stinger Herbicide (EPA Reg. No. 62719-73) for post-emergence broadleaf weed control in cranberry.

Moved: R. Berman
Second: T. LaScola-Miner
Discussion: None
In Favor: M. Moore, T. LaScola-Miner, M. Nascarella, N. Keleher, R. Berman
Opposed: None
Abstained: None

Special Local Needs (SLN) Renewal Request of the existing FIFRA Section 24(c) Special Local Needs requests (SLN No. MA-130003 and MA-130004 for use of Gowan Malathion 8 Flowable, EPA Reg. No. 10163-21) to control spotted wing drosophila on blueberries and caneberries, respectively.

Sarah Miller provided a summary of a renewal request for a Special Local Needs label for the use of Gowan Malathion 8 Flowable. This is an SLN for the use of malathion on blueberry and caneberries in Massachusetts. *Drosophila suzukii*, also referred to as spotted wing drosophila or SWD, is an invasive pest of soft skin fruits. It was first detected in the United States in central California in 2008, and later found in Oregon, Washington, and Massachusetts. The average infestation under field conditions when left unmanaged was about 20% of the crops. Infestation resulting crop losses valued over $500 million annually in just CA, OR, and WA alone. Spotted wing drosophila has caused damage to commercial caneberry, blueberry, and cherry fields with the potential to damage commercial grape vineyards.

Spotted wing drosophila can complete a generation in as few as 10 days and can rapidly increase in population. Detection of a single larva in fresh market fruit will result in rejection of an entire shipment from a grower. Female SWD preferentially lay eggs in ripening and ripe fruit. There are no effective biological control agents available for SWD; insecticides are currently the only effective management tool. Insecticide efficacy data from experiments conducted in both western and eastern parts of the United States suggest that the following registered classes of insecticide are effective against SWD: organophosphates, pyrethroids, and spinosyns.

Caneberries and other SWD host crops must be harvested frequently and relying on pesticides with pre-harvest intervals greater than three days may result in crop loss due to poor quality. Malathion has a one-day pre-harvest interval, though rain compromises effectiveness against SWD and would require reapplication after precipitation events. Harvesting of caneberries occurs June through September in Massachusetts.

Malathion is the only organophosphate currently labeled and recommended in caneberries in Massachusetts and can be an effective tool in resistance management.

Efficacy data from 2012 suggests that the current labeled rates of malathion are less effective against adult SWD. Therefore, renewal of the SNL 24(c) label with a higher rate is requested so this management option will be available for Massachusetts caneberry growers. Susan Scheufele, Extension Educator from UMass extension, is in attendance to support this SNL renewal.

LaScola-Miner asks if this SLN request was to change application rates or add additional crops onto the label, and whether growers find this SLN to be effective against SWD.

Susan Scheufele states the purpose of the application was to add additional crops to the label. This SLN is important part of the rotation strategy since SWD is active for a long period of time.

Motion: That the Pesticide Board Subcommittee hereby approves the renewal of the existing FIFRA Section 24(c) Special Local Needs registrations SLN No. MA-130003 and MA-130004 for use of Gowan Malathion 8 Flowable, EPA Reg. No. 10163-21, to control spotted wing drosophila on blueberries and caneberries, respectively.

Moved: R. Berman
Second: N. Keleher
Discussion: None
In Favor: M. Moore, T. LaScola-Miner, M. Nascarella, N. Keleher, R. Berman
Opposed: None
Abstained: None

E. NEW ACTIVE INGREDIENT

Discussion of registration approval for the following product containing the new active ingredient *Bacillus subtilis* strain AFS032321 as formulated in THEIA® Fungicide (EPA Reg. No. 94713-2-92488), a broad spectrum fungicidal and bactericidal biological product for the control or suppression of various foliar and soil borne plant diseases in various crops.

Miller gave an overview of Thea® Fungicide (EPA Reg. No. 94713-2-92488), a broad-spectrum fungicide and bactericide that contains the new microbial active ingredient *Bacillus subtilis* strain AFS 032321. The AFS 032321 concentration is a minimum of a billion colony forming units per gram of dry technical powder. By weight the active ingredient is reportedly 100% of the formulation since there are no additional inert ingredients. This spore-forming bacterial species is ubiquitous in air, soil, water, and on plants. It was cultured from an Iowa grain bin. Massachusetts has seven currently approved *Bacillus subtilis* variants and strains that are used as biopesticide ingredients.

This new active ingredient was classified by the Fungicide Resistance Action Committee (FRAC) as group BM02, which is 'Biological with multiple modes of action'. The category created in 2021. These modes of action include production of secondary metabolites and enzymes that are antagonistic to plant pathogens as well as inducing systemic acquired resistance in plants.

The primary health concern with AFS 032321 is exposure that could result in allergic sensitization. Handling precautions in the label language require that handlers wear personal protective equipment (PPE) to cover skin, including waterproof gloves, and specified NIOSH-approved particulate or air-purifying respirators. The Restricted Entry Interval (REI) is 4 hours unless the product is injected or incorporated into the soil, where there will be no contact with treated material. Theia Fungicide should not be applied directly to water or in areas where water is present at the surface. This product may be harmful to pollinating insects if they are exposed to direct treatments and the label prohibits applying this product while bees or other pollinating insects are actively visiting the treatment area.

The product is labeled for foliar spray, chemigation, seed treatment, or soil use for a wide range of vegetable, grain, and fruit crops. The pre-harvest interval (PHI) is zero days. Use areas include field, greenhouse, shadehouse, nursery, and forest sites.

Spray drift minimization language restricts ground boom height to 4' and wind speeds to 10 mph or less. Aerial application is prohibited. The maximum single application rate is 5 lbs/acre and the product can be applied with water or tank mix with other compatible products as permitted by their labels. Applications may be repeated, depending on the crop, and various allowed intervals range from 2 to 21 days. It cannot be used on crops in flooded fields.

EPA's human health risk assessment of this bacterial strain made its determination of mammalian toxicity based on both guideline studies and scientific rationales. Some studies were waved if EPA deemed the reasoning sufficiently justified. An acute oral toxicity/pathogenicity study with laboratory rats indicated no adverse effects when administered at a dose of ~450 million colony forming units per rat.

An acute inhalation study on a suspension concentrate form was used to establish an LC50 greater than 2.17 mg/L, indicating very low toxicity, and to support waiver requests for other studies. The acute toxicity data resulted in its classification as Toxicity Level IV (lowest level of concern) for oral acute and inhalation toxicity. Toxicity Category III was assigned for acute eye irritation, dermal toxicity, inhalation toxicity, and dermal irritation. No testing beyond Tier 1 was required.

Aggregate risk: available data showed no observed adverse effects of concern in toxicological testing, so no endpoints of departure could be identified for conducting a quantitative aggregate risk assessment. Qualitatively,

a determination has been made that no unreasonable adverse effects to the US population in general, including infants and children, will result from the use of this strain as a pesticide when label instructions are followed. *Bacillus subtilis* is already present in the environment and EPA considers it unlikely that exposure from treatment would significantly increase levels already found on food commodities. *Bacillus* spores often resist water disinfection treatment so it is commonly detected in drinking water. There were no observable adverse impacts and therefore none are expected from this end product use.

Environmental exposure is expected for both birds and mammals if they come in to contact with treated seeds, soil, plants, insects, or drainage water from treated areas. However, a 35-day avian oral toxicity study showed no mortality or adverse effects in bobwhite quail up to the maximum study dose of 43 million colony forming units per bird. Therefore EPA concluded that no adverse effects for birds or mammals (also based on the rat studies used in the human health assessment) are expected. Some insects could be impacted by exposure in treated fields as modeled by EPA at 10-100 times the allowed application rates, but at label rates there should not be significant adverse effects. The precautionary label statement for managing spray drift is intended to mitigate potential risks to pollinating insects visiting treatment areas.

Exposure risk to aquatic organisms is expected to be primarily from runoff and/or spray drift. Strain AFS 032321 is considered toxic to fish, but EPA does not expect any adverse effects to aquatic organisms to result from application of the end product as labeled.

AFS 032321 is not related to any known plant pathogens and EPA does not expect any adverse effects to plants from exposure. EPA notes that the strain has a lower toxicological profile than some alternative conventional pesticides, such as chlorothalonil, captan, and mancozeb products. The use of Theia also may reduce reliance on copper and antibiotics for bacterial disease control.

Bacillus subtilis strain AFS 032321 does not meet the criteria for being classified as a potential groundwater contaminant in Massachusetts.

Move: that the Pesticide Board Subcommittee approve the product registration for Theia Fungicide, EPA Reg. No. 94713-2-92488, containing the new active ingredient *Bacillus subtilis* strain AFS032321, which has never before been registered in Massachusetts

Moved: R. Berman
Second: T. LaScola-Miner
Discussion: None
In Favor: M. Moore, T. LaScola-Miner, M. Nascarella, N. Keleher, R. Berman
Opposed: None
Abstained: None

F. NEW BUSINESS

There was no new business brought forward.

ADJOURN
Motion: To adjourn the April 18, 2023, Subcommittee Meeting.
Moved: R. Berman
Second: T. LaScola-Miner
In Favor: M. Moore, T. LaScola-Miner, M. Nascarella, N. Keleher, R. Berman
Opposed: None