



Ohio Fruit ICM News

EPA Cancels Bayer Product in Response to Court Ruling

Sources: Office of Pesticide Programs, U.S. EPA, www.epa.gov/pesticides ;
Pesticide & Toxic Chemical News, Vol. 38, No. 7

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The Ohio State University Extension

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EPA is intending to issue a cancellation order for spirotetramat, a new insecticide manufactured by Bayer CropScience. The product was approved by EPA in 2008 for use many crops including apples, pears, peaches, oranges, tomatoes, grapes, strawberries, almonds, spinach and Christmas trees. **The trade names of the product include Movento and Ultor.**

However, in December a federal judge banned the insecticide after finding EPA failed to publish its registration decisions or properly seek public comment before approving the product for use. The lawsuit was brought by environmental groups who claim EPA did not adequately assess the honeybee risk from the active ingredient or give notice and opportunity for comment on the registration decision.

Bayer points out the ruling is not based on the safety or efficacy of the product. The company estimates they will lose over \$90 million from testing, registration and lost sales of spirotetramat.

The public comment period on the cancellation order for spirotetramat is being published on the EPA website at <http://www.epa.gov/opprd001/factsheets/spirotetramat-canc-order.pdf> EPA has indicated the cancellation order will not be published in the Federal Register because the product must be vacated by February 16, 2010 according to the federal court. Public comments must be submitted on or before February 8, 2010. The cancellation order will establish the disposal of existing stock and product already in the hands of wholesalers, retailers and users.

If you have articles for the newsletter that you would like to have considered to be included in upcoming issues, please submit to either Howard Siegrist at siegrist.1@cfaes.osu.edu or Melissa Swearingen at swearingen.34@cfaes.osu.edu

New York Berry News: Currant Events Cornell University

March 30, 2010: 2010 Ontario Strawberry School, Newtonville, Ontario, Canada. For flyer with more information click on the following link:
<http://www.ontarioberries.com/2010strawberryschool.pdf>



EMPOWERMENT THROUGH EDUCATION

Vegetable & Fruit Insecticide News for 2009-2010

Celeste Welty, Extension Entomologist
Ohio State University Extension



New products with new active ingredient:

- Regent 4SC (fipronil): for in-furrow use on potatoes for wireworm control. Made by BASF. Registered 2008.
- Requiem 25SC (extract of *Chenopodium ambrosioides*): for control of soft-bodied insects (whiteflies, aphids, mites, thrips) on Brassica leafy veg., bulb veg., cucurbits, fruiting veg., leafy veg., root/tuber veg., grapes, pome fruit, tree nuts. Made by AgraQuest. Dec. 2008.
- SucraShield (sorbitol octanoate esters, 40% AI): for control of aphids, caterpillars, leafhoppers, plant bugs, mites, thrips, whiteflies. Works by contact, creating holes in insect exoskeleton, which leads to death by dessication. On OMRI list, for use on organic crops. Made by Natural Forces LLC. Registered 2008.
- SorbiShield 90 (sorbitol octanoate, 90% AI): similar to SucraShield but not on OMRI list.

New products with old active ingredient:

- FarMore DI 400 (thiamethoxam [Cruiser] plus 3 fungicides): commercial seed treatment for cucumbers, melons, pumpkins, and other cucurbits for systemic control of cucumber beetles; and for lettuce for aphid and leafhopper control. Made by Syngenta. Registered 2009.
- Vetica 2.66SC (flubendiamide [Synapse] plus buprofezin [Courier]): premix for caterpillar control and leafhopper and whitefly suppression on leafy veg., fruiting veg., cucurbits. Made by Nichino America Inc. Registered 3/2009.
- Tourismo 3.5SC (flubendiamide [Belt] plus buprofezin [Centaur]): premix for caterpillar and leafminer control and leafhopper and scale suppression on pome fruit, stone fruit, grapes. By Nichino. 3/2009.

New or improved formulations:

- Capture LFR (bifenthrin): for mixing with liquid fertilizer. For use on potato for wireworms, white grubs. Made by FMC.
- Baythroid XL 1EC (beta-cyfluthrin): replaces Baythroid 2EC (cyfluthrin). Rates the same as old rates. Made by Bayer.
- lambda-cyhalothrin: Warrior II (2.1SC) replaces Warrior (1SC). Rates now half of old rates. Made by Syngenta.
- Platinum 75SG (thiamethoxam) replaces Platinum 2SC. Made by Syngenta.
- Oberon 4SC (spiromesifen) for use on potato; other crops on older Oberon 2SC label. Made by Bayer.
- Applaud 70DF (buprofezin) replaces Applaud 70WP. Made by Nichino America.
- Centaur 70WDG (buprofezin) replaces Centaur 70WP. Made by Nichino America.

Registration expanded to additional crops:

- Rimon 0.83EC (novaluron): for caterpillars, now for use on blueberry, & stone fruit except cherries (Jan. 2010), tomato (2009). By Chemtura.
- Zeal 72WSP (etoxazole): for mite control, now for use on cucumbers, all stone fruit. Made by Valent. Registered Dec. 2009.
- Portal, FujiMite (fenpyroximate): now for melons, tomato, pepper, eggplant, for mite, whitefly control. By Nichino America. Registered 7/2009.
- Voliam Flexi (thiamethoxam + chlorantraniliprole): now for use on head and stem Brassica, leafy Brassica, cucurbits, fruiting veg., leafy veg., for sucking pests and caterpillars. Made by Syngenta. Registered July 2009.
- Voliam Xpress (lambda-cyhalothrin + chlorantraniliprole) now for use on pome fruit, stone fruit, tree nuts, and potatoes, for caterpillars, beetles, true bugs. Made by Syngenta. Registered July 2009.
- Centaur 70WDG (buprofezin): now for use on all stone fruit, not just peaches, for scale control. Made by Nichino America. Registered 7/2009.
- Acramite 4SC (bifenazate): now for use on beans, for mite control. Made by Chemtura. Registered June 2009.
- Movento 2SC (spirotetramat): now for use on potato, for aphid control. Made by Bayer. Registered October 2008.
- Kanemite 15SC (acequinocyl): now for use grapes, for mite control. Made by Arysta. Registered April 2008.
- Leverage 2.7SE (1.6+1.1SE) (imidacloprid + cyfluthrin): now for use on dry peas. Made by Bayer. Registered March 2008.

Registration expanded to additional pests:

- Belt 4SC (flubendiamide): now for oriental fruit moth on apple, and grape berry moth and red-banded leafroller on grape. Made by Bayer.
- Applaud 70DF (buprofezin): now for use to control grape mealybug on grape. Made by Nichino America.

Registration modifications:

- Guthion 50WP Solupak (azinphos-methyl): limit per year for 2010 reduced to 4 lb/A for apple and pear, 1.5 lb/A for cherry and blueberry, 2.5 lb/A for parsley. Made by Makhteshim (MANA).
- Lorsban 4E (chlorpyrifos): can now be used on apple for post-bloom trunk drench to control borers, if not used prebloom. Made by Dow.
- Durivo 1.67SC (thiamethoxam + chlorantraniliprole): in addition to application via drip, now for in-furrow or post-seeding drench. By Syngenta.
- Clutch 50WDG (clothianidin): supplemental label for grape allows soil application, for leafhopper control. Made by Valent.
- PennCap-M (microencapsulated methyl parathion): on sweet corn, only for machine harvest. Made by United Phosphorus.

Continued from page 2: Vegetable & Fruit Insecticide News for 2009-2010

Products or uses lost:

- Di-Syston 8EC, 15G (disulfoton): delete use on all crops including beans, cabbage, lettuce, potato, pepper. Made by Bayer. Dec. 2009.
- Monitor 4L (methamidophos): delete use on all crops including tomato, potato. Made by Bayer. Dec. 2009.
- Furadan 4F (carbofuran): delete use on all crops including cucurbits, sweet corn, potato. Made by FMC. March 2009
- Lorsban 4E (chlorpyrifos): delete use on sweet corn only as pre-plant and at-plant T-band application. Made by Dow. Jan. 2009
- Lannate (methomyl): delete use on strawberry. Made by DuPont.

Product replacements:

- SpinTor (spinosad) has been replaced by two spinetoram products: Delegate 25WG (fruit), Radiant 1SC (vegetables). Made by Dow.
- Confirm 2F (tebufenozide) has been replaced by Intrepid 2F (methoxyfenozide). Made by Dow.
- endosulfan: Endosulfan 50WP is gone, but Thionex 50W (MANA) exists, as do Endosulfan 3EC (Drexel) and Thionex 3EC (MANA).
- bifenthrin: Capture 2EC is gone, but Brigade and many generic products still available.
- deltamethrin: Decis (from Bayer) is gone, but generic Delta Gold (from Winfield Solutions) still exists.

10/13/2009; rev. 1/9/2010, 2/25/2010



See Page 4 for:

Summary of Vegetable & Fruit Insecticide Changes, 2007-2010

Continued from page 2 & 3: Vegetable & Fruit Insecticide News for 2009-2010

Summary of Vegetable & Fruit Insecticide Changes, 2007-2010

NEW REGISTRATIONS:sweet corn

Belt (8/2008)
Radiant (9/2007)
Hero (2/2007)

cucurbits

Voliam Flexi (7/2009)
FarMoreDI400 (8/2008)
Synapse (8/2008)
Durivo (8/2008)
Voliam Xpress (8/2008)
Coragen (5/2008)
Warrior (1/2008)
Assail (1/2008)
Radiant (9/2007)
Avaunt (7/2007)
Actara (6/2007)
Mustang Max (1/2007)

cucumbers & melons only

Zeal (2/2008, 12/09)

melons only

Portal, FujiMite (7/2009)

tomato, pepper, & eggplant

Portal, FujiMite (7/2009)
Voliam Flexi (7/2009)
Movento (9/2008)
Synapse (8/2008)
Durivo (8/2008)
Voliam Xpress (8/2008)
Coragen (5/2008)
Brigadier (5/2008)
Radiant (9/2007)
Actara (5/2001, 6/2007)
Hero (2/2007)

tomato only

Rimon (2009)

cole crops

Voliam Flexi (7/2009)
Movento (9/2008)
Synapse (8/2008)
Durivo (8/2008)
Voliam Xpress (8/2008)
Coragen (5/2008)
Brigadier (5/2008)
Radiant (9/2007)
Actara (6/2007)
Platinum (6/2007)
Hero (2/2007)

greens (collard, kale, mustard)

Voliam Flexi (7/2009)
Synapse (8/2008)
Durivo (8/2008)
Coragen (5/2008)
Brigadier (5/2008)
Avaunt (7/2007)
Actara (6/2007)
Platinum (6/2007)
Brigade (2/2007)

lettuces, endive, spinach, parsley

FarMoreDI400 (2009)
Voliam Flexi (7/2009)
Movento (9/2008)
Synapse (8/2008)
Durivo (8/2008)
Coragen (5/2008)
Radiant (9/2007)
Avaunt (7/2007)
Actara (6/2007)
Platinum (6/2007)
Mustang Max (1/03, 1/07)

lettuces only

Voliam Xpress (8/2008)

lettuce, head only

Brigadier (5/2008)
Hero (2/2007)

spinach only

Brigadier (5/2008)

herbs

Provado (8/2007)
Admire (8/2007)

beans & peas

Acramite 4SC (2/2007, 6/09)
Brigadier (5/2008)
Assail (1/2008)
Hero (2/2007)

peas (dry) only

Leverage (3/2008)

radish, beets, turnip, carrot

Mustang Max (1/2007)

onions

Intrepid (2/2008)
Assail (1/2008)
Radiant (9/2007)

potato

Voliam Xpress (7/2009)
Regent (2008)
Movento (10/2008)
Voliam Flexi (8/2008)
Endigo (7/2008)
Altacor (5/2008)
Brigadier (5/2008)
Warrior (1/2008)
Belay (12/2007)
Brigade (2/2007)
Acramite 4SC (2/2007)
Mustang Max (1/2007)

strawberries

Assail (1/2008)
Radiant (9/2007)

brambles /canberries

Assail (1/2008)
Delegate (9/2007)
Provado (8/2007)
Admire (8/2007)
Actara (6/2007)
Mustang Max (1/2007)

blueberries

Rimon (1/2010)
Intrepid (4/2008)
Assail (1/2008)
Delegate (9/2007)
Mustang Max (1/2007)

grapes

Movento (9/2008)
Belt (8/2008)
Voliam Flexi (8/2008)
Altacor (5/2008)
Brigadier (5/2008)
Kanemite (4/2008)
Delegate (9/2007)
Admire (8/2007)
Avaunt (7/2007)
Actara (6/2007)
Platinum (6/2007)
Clutch (3/2007)
Mustang Max (1/2007)

apples & pears

Voliam Xpress (7/2009)
Movento (9/2008)
Belt (8/2008)
Voliam Flexi (8/2008)
Altacor (5/2008)
Onager (2/2008)
Portal (1/2008)
Delegate (9/2007)
Admire (8/2007)
Mustang Max (1/2007)

peach, plum, & cherry

Zeal (2/2008, 12/2009)
Voliam Xpress (7/2009)
Centaur (7/2009)
Movento (9/2008)
Belt (8/2008)
Voliam Flexi (8/2008)
Altacor (5/2008)
Onager (2/2008)
Assail (1/2008)
Delegate (9/2007)
Admire (8/2007)
Avaunt (7/2007)
Acramite 50WS (2/02, 2/07)
Mustang Max (1/2007)

peach & plum

Rimon (1/2010)

CANCELLATIONS:tomato, potato

Monitor 4L (2009)

beans, cabbage, lettuce, pepper

DiSyston 8EC, 15G (2009)

cucurbits, sweet corn, potato

Furadan 4F (2009)

strawberry

Lannate

Site Considerations For Strawberries and Raspberries

Laura McDermott, Capital District Vegetable and Small Fruit Program
Cornell Cooperative Extension



Choosing a site for a perennial fruit planting can be daunting. The investment is significant both in time and money. There are many factors to consider, so time should be taken to be thorough. Growers should consider developing a 5 year rotational plan that would accommodate adding long-term crops periodically.

Perhaps the most important site consideration for strawberries and raspberries in the northeast is your market. Most berries in NYS are sold for the retail fresh market, and many of those berries are actually picked by the customer. U-pick operations pose unique challenges to growers because of the need to handle crowds of people and their vehicles in a safe, efficient manner. Because both strawberries and raspberries are extremely perishable, berry fields should be located as close as possible to a cooler.

Second in priority would be the quantity and quality of water available for irrigation, frost protection and even cooling. All berry crops have very shallow root systems leaving them particularly vulnerable during drought. Yield will be dramatically reduced if irrigation is not available. Weed control can also be impacted by lack of water as many preemergent herbicide need to be watered in to be effective.

From a disease prevention standpoint good soil drainage is the most important site consideration. Berry crops will not thrive in a site that has standing water at any point during the year. Raspberries and strawberries are particularly susceptible to a number of soil-borne diseases that are exacerbated by wet soils – these include Phytophthora, verticillium and anthracnose among others. If a prospective site that fits all other parameters is selected, remediation of inadequate drainage is a prerequisite to success. Subsoil drainage or raised beds would be appropriate actions.

The northeast climate offers plenty of chilling to fill the requirement of berry crops. Like fruit trees, berry crops need to receive the appropriate chilling in order to break dormancy: for strawberries it is between 200-300 hours and raspberries need from 800 to 1700 hours.

Our cool climate does pose constraints for winter hardiness. In the Adirondack region of NYS, growers are challenged by a short growing season which makes it more difficult to ripen fall bearing raspberries. Summer raspberries may suffer winter damage in exposed and windy areas throughout the state, and strawberries need to be mulched to prevent desiccation and cold damage. Still, the biggest problem for spring berry crops is erratic temperature swings in the spring. Frost protection is a huge labor effort for strawberry growers so care should be taken to avoid frost pockets when choosing a site for the planting. Moderate slope is sometimes helpful to allow cold air to move away from the planting.

Other site considerations that will be covered in the talk include the site cropping history, the weed status of the field, and the soil properties. Developing a crop rotation with annual vegetable crops and cover crops will also be discussed.

The Northeast Regional Agricultural Engineering Service publishes a series of production guides for strawberries (NRAES-88) and brambles (NRAES-35) that contain detailed information on marketing and site location.

Central Ohio Poison Control Number

(800) 222-1222

TTY # is (614) 228-2272

Strawberry Mulching - That's a Berry Good Question!!!

Kathy Demchak, Department of Horticulture
Penn State University

Q. I never got straw on my strawberry field this winter. After hearing Rich Marini's talk at Hershey on winter injury, and reading his article on mulching and crown injury, maybe I should check some crowns. Assuming I can find the plants under the snow, can I check the crowns for winter injury during the winter? (Paraphrased from several growers)

A. I've only checked for winter injury in the spring and had no idea whether you could check during the winter, so I asked Rich. His answer was that you can, but the crowns may or may not show injury yet since the plants are still dormant. So, you can dig the crowns up now, but bring them inside for two or three days before cutting through them. Keep them wrapped up so they don't dry out, and then check for browning. He also pointed out that if you do already have injury, you can't do much about it at this point, so waiting until spring to check still has its advantages.



Left to Right: Strawberry Plant with mild winter damage, and strawberry plant with no winter damage

As an additional note, on very old plants the lower crown areas will be brown even without winter injury, just because that part of the root system dies off over time. So, to help sort this out, in matted-row systems, it's less confusing to check the crowns of daughter plants – that way you know that you are looking at crown tissue that would have been affected over this past winter. In plasticulture, if you just planted plug plants this past summer, all of the crown tissue will be relatively new. However, if you have only older dormant plants to check, it can be more difficult to tell what is going on, so check the past year's crown tissue for browning. Usually that's about the upper inch or inch and a half of the crown.

If you weren't at Hershey, or missed the article that described winter injury symptoms, it was in the October 2009 Vegetable and Small Fruit Gazette, which you can access at <http://horticulture.psu.edu/cms/veg crops/files/gazetteOct2009.pdf> and in the Sept. 29, 2009 issue of the *Fruit Times*, which you can access at <http://fruittimes.cas.psu.edu/FT2809.pdf>.

Got a question? Chances are that someone else has the same question, but isn't asking! Send your question to Kathy Demchak, at 102 Tyson Bldg., University Park, PA 16802, or via email to kdemchak@psu.edu. You will be credited with the question, or can remain anonymous, as you wish.

Editor: Howard J. Siegrist, Extension Educator, Ohio State University – Licking County
771 E. Main Street, Suite 103, Newark, OH 43055. Phone: 740-670-5315

Email address: siegrist.1@cfaes.osu.edu

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Keith L. Smith, Ph.D., Associate Vice President for Agricultural Administration and Director, Ohio State University Extension
TDD No. 800-589-8292 (Ohio only) or 614-292-1868



Tips for Successful Fruit Tree Planting

Dr. Rob Crasswell, Department of Horticulture
Penn State University

The investment in a new orchard is large, so it is important to do things right beginning with the planting year. Here are some tips to plant successfully:

***Site preparation:** It takes at least one to two years to get a field ready for planting and probably longer on replant sites. During this period you need to improve drainage, add organic matter (cover crops, manure, or compost), adjust soil pH with lime if required, apply phosphorus, and control perennial weeds (which may take two years).

Nursery stock: Work with your nursery to ensure the trees are delivered or ready for pick up when you need them. If you are going to pick the trees up at the nursery call in advance. Undoubtedly, when the weather is good in early spring many growers will want to plant. Trees should be kept dormant until planted, and roots should not be allowed to dry out. If planting is delayed, trees should be heeled into the soil, or kept in cold storage. **DO NOT** place trees in storages where apple fruit have been stored. Ethylene emitted by the apples can severely damage trees. Before placing trees in a cooler that was used for fruit storage be sure the cooler is aired out well. You should not smell any residual apple aroma.

***Time of planting:** The earlier you plant the better. This allows the tree to establish new roots before the warm weather begins pushing the tree's growth and drawing large reserves of moisture. Fall planting can work for more southern sites in Pennsylvania. However, trees can be lost if the weather is too harsh during the winter, the trees are planted too late to become established, or weather is dry with little moisture. (A note from experience in 2005: We had an extended fall and against my better instinct I planted a few trees at Rock Springs. We lost about 30% of the trees. This was the one and only time I planted trees in the fall in my 26 years at Penn State.)

***Method of planting:** Hand or mechanical planting can be successful as long as roots are given adequate room. If possible carry the trees to the field in large drums filled with water or soak trees overnight in water and only carry smaller lots to the field. The most important part is to re-adjust the tree height to ensure that the graft union is a uniform height above the soil line –after soil has settled. I usually recommend having the union about - 3 fingers|| above the final soil line. If the union is slightly below the soil, gently pull up on the tree to bring the union to the proper level.

***Care after planting:** The roots need to come into intimate contact with moist soil after planting. Tamp the soil down firmly. If planting by hand fill the hole about halfway and then tramp the soil down. Fill in the remainder of the soil and tramp the soil down again. After the soil has been firmed up apply fertilizer around the root zone of the tree in a circle at least 5 to 6 inches away from the trunk. Avoid putting dry fertilizer in direct contact with roots or the trunk. Control weeds around the tree either by the use of approved herbicide or by mechanical pulling of the weeds.

***Pruning vs. training:** For many years we thought that the top of apple trees needed to be cut back to balance with the loss of roots due to digging the nursery tree. However, with advances in nursery production (which result in better, more compact root systems), and the need for early apple production (which is delayed with pruning), many newly planted apple trees do not need to be pruned. The focus instead is on tying down all usable feathery limbs, and providing the tree with all the water it needs early in the season. With apples, prune only limbs that are one-half or more the diameter of the central leader. In peaches to be trained to an open center select 3 to 4 limbs as your main scaffolds and head them back by one-half or to three buds.

