



The Ohio State University Extension Vegetable Crops

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In this Issue:

1. New Bee Advisory Box on Pesticide Labels
 2. Pumpkin Field Day
 3. Basil Downy Mildew
 4. Southern Ohio Veg Report
 5. Cucurbit Downy Mildew Report
 6. Ask Us
-

New Bee Advisory Box on Specified Pesticide Labels - *Mary Ann Rose, Cindy Folck, Renee Shetlar; OSU Extension Pesticide Safety Education Program*

EPA announced Thursday that new bee advisories will be appearing on certain pesticide product labels that contain imidacloprid, dinotefuran, clothianidin, and thiamethoxam. These active ingredients are part of the neonicotinoid group of insecticides.

The bee advisories will be highlighted on the label with an icon to alert applicators to specific use restrictions and instructions to protect bees and other insect pollinators. The new labels will also contain a pollinator advisory box with recommendations to avoid risk to pollinators. A graphic of the sample box is on EPA's website at:

<http://www.epa.gov/pesticides/ecosystem/pollinator/bee-label-info-graphic.pdf> . EPA will be working with pesticide manufacturers to update future labels to reflect these changes.

Currently, pesticide products considered toxic to bees and other pollinators contain label language that informs applicators about bee toxicity. These labels also have precautions for applicators who may be applying when bees

may be visiting the treatment area. Ohio pesticide applicators are reminded that Ohio Pesticide Law already contains requirements for them when applying pesticides with a bee advisory. If the pesticide label says the product is highly toxic to bees, applicators must contact the beekeepers with registered apiaries (beehives) within ½ mile of the target area if the spray application area is more than ½ acre in size and the crop is in bloom. The notification must be made at least 24 hours before application. A list of registered apiaries is available by calling the Ohio Department of Agriculture at 614-728-6987.

EPA's new pollinator advisory box for these labels will include reminders that bees and other insect pollinators forage on plants when they are flowering, shedding pollen, or producing nectar. The label will also encourage applicators to minimize exposure of this product to bees and other insect pollinators when they are foraging on plants around the application site. Recommendations include minimizing drift to attractive habitat around the application site and to be cautious of drift toward beehives.

The Ohio Pesticide Law requirements for notifying registered apiaries is available at: <http://codes.ohio.gov/oac/901:5-11-02> (scroll down to #15) and for more information about EPA's actions regarding pollinators, visit: <http://www.epa.gov/opp00001/ecosystem/pollinator/risk-mgmt.html>

Pumpkin Field Day – More Details – Jim Jasinski, OSU Extension IPM Program, Celeste Welty & Reed Johnson, Dept. of Entomology

Novice and experienced growers are invited to stop by the Western Ag Research Station in South Charleston on August 26th from 5-7 PM. Topics will center around insect and disease management as outlined below. Attendees will be taken out to the research and demonstration plots via wagon for a “hands on” experience.

Topics

Honey bee pesticide interaction update – Reed Johnson

Pumpkin pest & pesticide update – Celeste Welty

Review 11 powdery mildew control programs – Jim Jasinski

16 hybrid variety trial – Jim Jasinski

Demonstration of custom designed air assist Jacto sprayer – Jim Jasinski

There is no charge for admission, and no pesticide credits (PAT or CCA) are available for this field day. Please contact Jim Jasinski at jasinski.4@osu.edu or 937-462-8016 to pre-register for this event. This event starts promptly at 5 PM. Refreshments will be served.

Directions to the Western Ag Research Station: 7721 S. Charleston Pike, South Charleston, OH 45368 can be found here on the right hand side of the page (<http://oardc.osu.edu/branches/branchinfo.asp?id=9>).

Downy Mildew on Basil – *Elaine Grassbaugh, Horticulture and Crop Science*

Downy mildew was first spotted on ‘Genovese’ high tunnel basil on Friday, August 16 in Columbus, Ohio. Field grown ‘Genovese’ approximately 100 feet away are showing symptoms also as of today, August 20.

Southern Ohio Vegetable Report - *Brad Bergefurd, OSU Extension & South Centers*

Due to wet weather and flooding events this season harvest gaps are being experienced with sweet corn, cucumbers, summer squash, beans, melons and zucchini due to wet field conditions.

Production issues are really increasing with recent storms the past 2 weeks including downy mildew on cucurbits and basil, late blight of tomato / potato and spotted wing drosophila on berry crops. Other production issues have included: herbicide drift injury continues; deer, turkey and bird damage continues to cause extensive economic losses for many vegetable growers especially on sweet corn and cabbage crops.

High tunnel plantings of fall and winter crops such as carrots, greens, lettuce etc. has begun in fields and high tunnels. Sweet corn harvest continues with some harvest gaps being experienced due to rainy conditions at planting 70 days ago. Harvest of beans continues with very high demand especially for half runner beans which still are running around \$50 dollars a bushel wholesale at area produce auctions. Harvest of sweet onions, potatoes,

summer squash, basil, cucumbers, pickles, zucchini and cabbage continues. Blackberry harvest is beginning to wind down with spotted wing Drosophila and Drosophila being reported in several plantings, it seems this rise in SWD pressure has increased with recent storms. Growers are following tight insecticide programs attempting to stay ahead of this devastating pest. Some quality issues are being reported on blackberry and tomato due to heavy rains and Drosophila damage over the past 2 weeks.

Direct seeding of all fall greens continues. With the recent heavy rains weed control has been a top priority as well as fungicide applications. Cultivation and side dressing of Nitrogen continues on late planted crops.

Cucurbit Downy Mildew Update - *Sally Miller, OSU Department of Plant Pathology*

Downy mildew was found in **cucumbers** in sentinel plots in Pike County, Ohio on August 16, 2013. It was also confirmed in **pumpkins** in Wayne County, Ohio on August 19, 2013. This is the first confirmation of downy mildew in southern Ohio, and the first time we have reported downy mildew on pumpkins anywhere in the state. Symptoms on pumpkin leaves are small necrotic, irregular spots surrounded by chlorosis (yellowing). Ohio cucurbit growers should begin preventative fungicide programs if not already started. See recommendations below.





Photos: Downy mildew on pumpkin. Top left, symptoms on leaf; top right, close-up of symptoms on top of leaf; lower left, close-up of symptoms on top of leaf.

SUGGESTED DOWNY MILDEW MANAGEMENT PROGRAMS FOR ALL CUCURBITS

Fungicide application:

Protection before disease appears: Apply one of the following fungicides on a 7-10 day schedule, tank mixed with Bravo, Manzate or Dithane: Ranman, Previcur Flex, Tanos, Curzate or Gavel (Gavel already contains mancozeb). Presidio has been effective against downy mildew in the past, but its efficacy appears to be dropping in the eastern US. Since we don't know where Ohio strains are coming from, Presidio should be used with caution. Alternate products. The application interval can be lengthened under dry conditions. Use the shorter interval under cool, moist conditions.

Management after disease appears: Apply one of the following fungicides on a 5-7 day schedule (cucumbers, melons) or 7-day schedule (pumpkins, squash, gourds), tank mixed with Bravo or Dithane: Ranman, Previcur Flex, or Tanos. Use caution with Presidio as it may not be as effective as it has been in the past. Alternate products. The application interval can be lengthened under dry conditions. Use the shorter interval under cool, moist conditions. See product labels for fungicide rates.

Always tank mix targeted fungicides with a protectant fungicide and alternate targeted fungicides with different modes of action (see FRAC Codes below).

Note that the fungicides recommended above have different pre-harvest intervals (PHI). Keep this in mind when fungicides are applied after harvesting begins.

Product	PHI (days)	FRAC Code	Comments
Chlorothalanil e.g. Bravo Weather Stik	0	M5	Protectant; tank mix with targeted fungicides below
Mancozeb e.g. Dithane or Manzate	5	M3	Protectant; tank mix with targeted fungicides below
Ranman	0	21	
Previcur Flex	2	28	Reduced activity suspected in some Ohio counties
Tanos	3	11 + 27	Up to 2 days curative activity but low residual (3-5 days)
Gavel	5	22	Contains mancozeb; see label for worker safety requirements
Presidio	2	43	Possible resistance in CDM populations in Eastern US but not documented in Midwest
Curzate	3	27	Up to 2 days curative activity but low residual (3-5 days)

Tomato Late Blight Update - *Sally Miller, Department of Plant Pathology*
miller.769@osu.edu; 330-263-3678

Late blight was found in Knox and Medina Counties during the last week, and is likely throughout Ohio but not reported. Growers are urged to maintain an effective fungicide program on tomatoes and potatoes. This should continue as long as rainy conditions, high humidity and/or heavy dews are expected. See VegNet July 17, 2013 for details on fungicide recommendations. Briefly, if late blight has not been observed and weather conditions are generally dry and warm, use a protectant fungicide on a 7-10 day schedule, depending on how fast the plants are growing. Good protectants are chlorothalanil (Bravo, Equus, Echo) and mancozeb (Penncozeb, Manzate, Dithane) – use according to label instructions. Under cool wet conditions when late blight is likely, use one of the following tank mixed with one of the above protectants: Curzate, Forum, Presidio, Previcur Flex, Ranman, Reason, Revus Top (except on small fruited varieties) or Tanos. So far, Ohio late blight strains have been sensitive to Ridomil, so that is

another option (but may be risky).

As indicated in previous updates this summer, organic producers must rely on applications of approved copper-based products. Home gardeners should consider spraying tomatoes and potatoes with a fungicide containing chlorothalanil or copper (less effective than chlorothalanil). Next season, consider a late blight resistant variety

(<http://vegetablemdonline.ppath.cornell.edu/NewsArticles/tomato%20growers%20need%20to%20know%20Apr%202013.pdf>).

Handling Blighted Plant Material: *Home garden, high tunnel and greenhouse tomatoes:* Diseased tissue should be placed in a large plastic trash bag and discarded in a trashcan or dumpster. Make sure the bag is tightly closed to prevent escape of spores. We do not recommend composting tomato tissue with late blight as spores may be released into the air and serve as inoculum for other plants. Be sure to remove all tissue with symptoms. If you don't want to contribute to landfills, tomato debris can also be buried or burned if local regulations permit.

Field tomatoes and potatoes: If the outbreak is severe, destroy plants with an appropriate herbicide or by cultivation. The late blight pathogen needs living tissue to grow and reproduce, so killing the tissue will reduce the inoculum load. Make sure to destroy potato cull piles and volunteer potatoes next season.

Ask Us ??

Do you have a pest management or production issue that you would like addressed in future VegNet issues? If so let us know. Email your suggestion to Jim Jasinski, jasinski.4@osu.edu.

Disclaimer Information presented above and where trade names are used, they are supplied with the understanding that no discrimination is intended and no endorsement by Ohio State University Extension is implied. Although every attempt is made to produce information that is complete, timely, and accurate, the pesticide user bears responsibility of consulting the pesticide label and adhering to those directions. Ohio State University Extension embraces human diversity and is

committed to ensuring that all research and related educational programs are available to clientele on a nondiscriminatory basis without regard to race, color, religion, sex, age, national origin, sexual orientation, gender identity or expression, disability, or veteran status. This statement is in accordance with United States Civil Rights Laws and the USDA. Keith L. Smith, Associate Vice President for Agricultural Administration; Associate Dean, College of Food, Agricultural, and Environmental Sciences; Director, Ohio State University Extension and Gist Chair in Extension Education and Leadership. TDD No. 800-589-8292 (Ohio only) or 614-292-1868.