

Spring Berry "To Do" List

All Berries: <u>Now</u> is the time to gather samples for **foliar tissue testing**. This is best done for berry crops from now until mid-August. See article in the previous newsletter for instructions or visit the Agro One website at: <u>http://dairyone.com/analytical-</u><u>services/agronomy-services/plant-tissue-testing-services/</u>

Spotted Wing Drosophila (SWD) remains a constant threat. I've seen infestation in late June bearing strawberries, early blueberries and summer raspberries – all crops that had always been at risk but we hadn't seen much problems with during the last several years. This year is different! SWD has appeared much earlier and really needs a different mindset than other insects. Very tough pest.

To check on current statewide distribution, click on the **2017 SWD Distribution Map**. For the <u>current list of NY products for **berry crops**, click here</u>. There is a separate page for each berry crop, and the materials and specific details are different for each one, so pleas read carefully.

Blueberries

- Blueberry harvest is going very well at all farms I've visited. Mid and late season varieties are sizing nicely.
- Blueberry scale was a problem last year and is still appearing on some farms. This needs to be controlled in the spring.

Strawberries:

- June bearing renovation has concluded on most farms. In general, the season was slightly above average.
- Day Neutral strawberries are beginning to reach their peak production. If the nights' stay cool we could see a banner year.
- Stay on top of scouting DN's look for disease especially leaf spot, but also crown anthracnose. Tarnished plant bug, thrips, leafhoppers and mites are insect pests of these berries. SWD can also be a real problem – pick clean and refrigerate berries immediately.

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Brambles:

- Black raspberries in some areas have collapsed due to Verticillium wilt. See the article in this newsletter.
- Leafhoppers remain active. It's been interesting to see how different the damage appears on different cultivars of raspberries. Provado and Assail are two chemicals that will help control leafhopper.



Leafhopper damage varies according to primocane raspberry cultivar. From left to right: Caroline, Heritage, Polana all growing side by side in same field.

- Raspberry cane borers reported throughout the region

 see article in this newsletter.
- Plants in wet areas and/or with heavy soil are collaps-

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ing due to Phytophthora. Raspberries DO NOT like wet soil. So no mulch, raised beds when necessary, don't overwater etc. This is a tough year for them – just too much moisture.

Powdery Mildew on Blueberries – Not Symptoms You'd Expect! Kathy Demchak and Cassandra Swett, Penn State Universiy

Powdery mildew, a warmweather high-humidity disease, is present in some blueberry plantings. Lowbush, highbush, and rabbiteye blueberries are all affected.

Symptoms on blueberries are different from those on most other plants, and could be mistaken for a virus or bacterial disease. The powdery mildew organism, Microsphaera vacinii, at first causes a yellow mottling on the upper leaf surfaces (Photo 1), but eventually the mottled areas develop into red spots with a lighter margin; both of these symptoms could be mistaken for a virus. Symptoms on the lower leaf surfaces consist of water-soaked areas (Photo 2) that turn reddish; these symptoms might make one think that the plants have a bacterial disease. The typical "powdery" patches as seen on other crops may be present, but often are not.



Photo 1: Early powdery mildew symptoms on upper surface of blueberry leaf. Credit: Tracey Olson, PA Dept. of Agriculture



Photo 2: Powdery mildew symptoms on lower surface of blueberry leaf. Credit: Tracey Olson, PA Dept. of Agriculture

Since disease development is favored by warm, dry weather, symptoms start to appear in midsummer. The fungus overwinters in dormant buds, so inoculum can build up over time if not managed. In most cases, this disease has minor impacts on growth and fruit production, primarily causing infected leaves fall off prematurely. In rare cases impacts on growth can be severe.

Generally powdery mildew incidence on blueberries is not sufficiently severe to warrant a fungicide spray. However, if leaves are severely affected, fungicides such as Orbit, Tilt or Quash (all in activity group 3), or Pristine (activity groups 7 and 11) may be used. Be sure to follow label directions to avoid development of resistant fungal strains. Cultivars vary in resistance, but information on this subject is limited. (*Source: UMASS Berry Notes,* August 2017 - Vol. 29, No. 8)

Verticillium Wilt (Bluestem) of Raspberries

<u>Identification</u> - Two related soil-borne fungi cause Verticillium wilt. The fungi infect plants through roots, which eventually colonize and plug the vascular system. Leaves develop a dull green color, dry up and drop. Occasionally fruit will dry up as well. New canes often wilt and bluish stripes or ribbons of infected tissue may extend up the canes from the ground. This begins at the bottom of the plant. Frequently, only canes on one side of infected plants wilt or show symptoms. A blue or purple streak on the stem is characteristic of this disease. Black raspberries are much more susceptible to verticillium than red raspberries. Presence of root-lesion nematode can increase disease incidence and severity.

<u>Period of Activity</u> - The disease infects in cool weather, especially in poorly drained soils or after wet springs. The symptoms develop in warmer weather and are associated with periods of water stress or crop development.

Management notes

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- Fungicides are not effective for the control of verticillium.
- Rotate with non-susceptible grasses and cereals.
- Purchase disease free plants grown according to accredited plant propagation guidelines.
- Do not plant raspberries after tomatoes, potatoes, eggplants or peppers because these crops are good hosts for the pathogen. Do not replant raspberries where verticillium has been a -problem.
- Soil fumigation before planting raspberries provides good control on soil types suitable for fumigation.
- If the problem occurs on red raspberries, cut out and destroy infected canes. On black and purple raspberries, dig out and destroy infected plants.
- Resistant cultivars are not available

Verticillium Wilt – left whole plant collapse. (Oregon State University) Right – portion of black raspberry wilting (University of Minnesota)



Controlling Raspberry Cane Borers Mark Lonestroth, Michigan State University Extension

This time of year, <u>Michigan State University Extension</u> educators, including myself, get calls from homeowners complaining that the shoot tips of their raspberries are dying. I ask if there are two rings cut into the stem below the wilting. If the answer is yes, I know they have the raspberry cane borer. Raspberry cane borer, *Oberea bimaculata* Oliver, is a beetle pest of raspberries that is widespread in Michigan. The beetle lives its life feeding on raspberries. The adults emerge in June. They feed on the tender shoot tips of new raspberry canes. The females lay their eggs about 6 inches below the tips of the new primocanes (first year



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shoots emerging from the ground). First, she chews two rings around the stem about 0.5 inches apart. Then she lays an egg between the girdles. The girdling causes the stem tip to wilt.

Control is easy and organic, just remove the portion of the stem between the two girdles and throw it in the trash. If not removed, the larvae burrows down the cane to the base and into the crown the next summer. Affected canes are weak and often break or die the next year. The larva



Top Left: Wilting primocane shoot tip after girdling. Note the two girdles in the background. Photo credit: Mark Longstroth, MSU Extension

Top Right: Close up of raspberry cane borer adult and recently chewed girdles, marking where the egg will be laid. Photo credits: Mark Longstroth, MSU Extension

Bottom Right: Raspberry cane borer larvae boring into raspberry cane. Photo credits: Mark Longstroth, MSU Extension

pupates in the soil and emerges the next year to attack the shoot tips.

This pest seldom requires insecticide sprays and can be controlled by scouting for wilting shoot tips in the summer and removing the stem sections with the eggs before the larvae can burrow into the cane. If there is a severe pest infestation, pesticide sprays are targeted on the adults in the immediate prebloom period, just before the flowers open.





For Your Information

2018 SARE Farmer Grants – The USDAs Northeast Sustainable Agriculture Research & Education Program (NESARE), Farmer Grants offers up to \$15,000 in support or innovative ideas that can advance production practices for growers and producers in the Northeast. The Farmer Grants are for commercial producers who have an innovative idea they want to test using a field trial, on-farm demonstration, marketing initiative, or other technique.

Applications can be downloaded from the NE-SARE website at <u>http://www.nesare.org/Grants/Get-a-Grant/Farmer-Grant</u>. The application deadline is November 28, 2017. NE SARE provides an excellent guidance video at: <u>http://www.nesare.org/Dig-Deeper/Grant-Workshop-PowerPoints-and-Webinars/Farmer-Grant-narrated-PowerPoint</u>.

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Calendar of Events

- August 8-10, 2017 Empire Farm Days, Rodman Lott & Son Farms, 2973 State Route 414, Seneca Falls, NY 13148, Event website: <u>http://</u> <u>empirefarmdays.com/</u>.
- August 15-16, 2017 North American Strawberry Grower's Association Summer Tour. Minneapolis MN. Join us for our 2017 NASGA summer tour as we head to Minneapolis, Minnesota to explore some of the wonderful farming operations of the area in a two-day adventure! For more information or to register, go to http://nasga.org/namerican-strawberry-growers-summer-tour.htm.
- August 29th, 5-7 pm Using weather and climate information and protected culture to perfect berry crop production, The Berry Patch, 15589 NY-22, Stephentown, NY 12168.

Join Cornell, NEWA and MESONET specialists to learn first-hand how berry crop production can be enhanced with protected culture equipment, weather apps and localized information. Look at exclusion netting and insecticidal lures used in research. Observe non-chemical weed control options for day neutral production. <u>Click here to register</u> or go to https://enych.cce.cornell.edu/.

- December 5-7, 2017 Great Lakes Expo. Devos Place Conference Center and The Amway Grand Plaza Hotel, Grand Rapids, MI. Registration opens September 25, 2017. Go to <u>http://glexpo.com</u> for more details on program and registration.
- December 12-14, 2017 New England Vegetable & Fruit Conference. This is the premier fruit and vegetable conference in the New England with over 30 information sessions over 3 days, many Farmer-to-Farmer information sharing sessions each day, over 150 vendors in an expansive trade show, and networking opportunities with and expected 1,500 participants. This conference offers valuable information for growers of all levels of experience from prospective growers or new entry beginners to well seasoned experienced growers, different sized operations from homestead to large commercial farms, and a range of growing systems including organic, IPM, conventional, greenhouse/tunnels, and many others. This year's conference has incorporated some new programming that will expand the value of . Come see what's doing and how attending this conference can help your farm. See the website for program and registration information as it becomes available. Go to https:// newenglandvfc.org.



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