Cornell Cooperative Extension

Eastern NY Commercial Horticulture Program

Berry E-News ~ July 15, 2021



Blackberries at Stanton's Feura Farm - Harvest is just starting.

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"To Do" List

All Crops

SWD numbers in traps have risen dramatically at all sites. Growers should use most effective materials first and stay on a 7 day spray schedule.

Rain events have increased the probability of disease. Be prepared to spray plants for powdery

mildew and botrytis as soon as possible. I'm seeing these diseases in all regions and all crops. Additionally, phytophthora root rot is a huge risk even in well drained soils.

Now is the time to gather foliar samples for nutritional analysis. See the article in this E-News.

Strawberries

- Most fields should be done with renovation. It will be hard to get the later varieties renovated with soil moisture as high as it is, but at earliest possible opportunity that should be done.
- Keep a look-out for strawberry weevil. The adults are out and notching leaf edges (photo at right). There are insecticides that can help control the adults, but a long lasting, sustainable and effective solution can be had by using entomopathogenic nematodes. For more information on strawberry root pests – keep reading this E-News.



Raspberries/Blackberries

• **Phytophthora** is a big risk with the saturated soil conditions. **SWD** in fruit should be monitored. Check the <u>Guidelines for monitoring fruit for SWD larvae</u>.

Blueberries

• The crop looks fantastic! HUGE fruit. Keep crop protected with regular sprays for SWD.

Ribes

• **Powdery Mildew** on Currants and Gooseberries. One of the easiest ways to avoid this is to plant resistant cultivars. The red currant cultivars Minn 69 and Viking, the white currant cultivars Blanka, Mason's, and Primus and the black currant cultivars Ben Alder, Titania, and Ben Tirran have shown tolerance. Prune and thin bushes to provide better air circulation and drying conditions. Better fungicide coverage will also aid in disease management. Delayed dormant sprays at green-tip stage of Lime Sulfur Ultra (27% lime sulfur) at 3 gal/100 gal water or Rex lime sulfur (28%) at 3 gal/100 gal water will help greatly.





Powdery Mildew on Black currant foliage (left) and gooseberry fruit (right). Photos: L. McDermott and PNW Pest Mgmt Handbooks

For Your Information

Blueberry Harvester for Sale

JVD over the row, self-propelled harvester. Built in 2000. It was built using a 40 horse Kubota tractor. It has 20-30 hours of use. There are 50 lugs (tubs) to hold the blueberries included. It runs very well. There was no manual with it when originally purchased. It's very similar to the BEI Harvesters. You should be able to harvest about an acre an hour when using it.

Contact Gary Camp, 717-664-0603, hwellington88@gmail.com



BMPs for Non-Chemical Weed Control

Cover of the BMP manual for Non-Chemical Weed Control with 9 images of various methods, including fire, grazing, hand pulling, biocontrol, and cutting. This manual provides comprehensive descriptions of 21 commonly used non-chemical weed control techniques and of biological control agents for 18 weed species/species groups that will help you as a practitioner treat weeds more effectively.

Authors of each chapter have compiled research and on-the-ground knowledge of subject experts on tools and methods of application, as well as on efficacy of techniques under various environmental conditions and across different classes of invasive plants. Environmental, cultural, and human safety risks are also highlighted to help support safe and effective use of techniques. This manual is designed to be a go-to resource for practitioners that are either complementing their weed control work with non-chemical techniques or are exclusively restricted to not using herbicides. Individual BMPs will be incorporated into an online decision support tool still in development.

This manual is available as a free download. <u>Click here for a PDF of BMP for Non-Chemical Weed</u> <u>Control.</u> (291 pp., 21.5 MB)

Berry office hours - Every Thursday afternoon from 12:30pm - 1:30pm

Anya Osatuke and Laura McDermott will hold offer a 15-minute update and then answer questions from growers. All berry growers are welcome to join us. Use this Zoom link and/or phone number to join: <u>https://cornell.zoom.us/j/98032160743?pwd=S0JDV0NIMmRhbVpidXhONVFra056UT09</u>

Meeting ID: 980 3216 0743 Passcode: 353671 One tap mobile +16468769923,,98032160743# US (New York) +16465189805,,98032160743# US (New York)

Dial by your location +1 646 876 9923 US (New York) +1 646 518 9805 US (New York)

Upcoming Events

Berry Production Twilight Meeting

NEW DATE: Tuesday, July 27th from 5-7:30 pm Rulfs Orchard 531 Bear Swamp Rd, Peru, NY Cost: FREE

Join us for a twilight meeting focused on berry production at Rulfs Orchard. Rulfs is a diversified fruit and vegetable operation owned and operated since 1952 by the Rulfs family. Farm staff, CCE specialists, and Cornell research station staff will discuss the following topics:

- Low tunnels for June-bearing strawberry production
- · Managing strawberry pests using beneficial nematodes
- Strawberry weed management and renovation
- · Spotted wing drosophila (SWD) management in blueberries and raspberries
- · Juneberry (aka Saskatoon berry or Amelanchier) production in NYS

DEC Pesticide Recertification Credits: 2.5 in categories 1A, 10, 22, and 23

Please pre-register at https://enych.cce.cornell.edu/event.php?id=1549

Questions: Contact Elisabeth Hodgdon (518-650-5323) or Laura McDermott (518-791-5038).

Field Day at Philia Farm

Thursday, August 5 from 4-6 pm Philia Farm 134 Miller Rd, Johnstown, NY

Join Cornell Cooperative Extension's Eastern NY Commercial Horticulture Program for a field day at Philia Farm in Johnstown, NY from 4-6 pm on August 5th. The meeting will showcase a variety of research projects, including:

- High tunnel pea variety trial
- Storage onion trial
- Leek trial
- · Biofungicide trial on beets
- · Mesotunnel insect netting trial
- · Reduced tillage trial for fall vegetable crops

DEC Pesticide Recertification Credits: 2 in category 23

The cost of the meeting is \$10 for ENYCH members and \$15 for non-members. Please pre-register at <u>https://enych.cce.cornell.edu/event.php?id=1553</u> by August 3rd so that we can order refreshments!

Questions: Contact Crystal Stewart-Courtens (518-775-0018).

Farmers Can Retire Too: Retirement Planning

What does it take to retire? How much do I need? How will medical cost figure into my plans? We will be able to answer all these questions and more during the *Farmers Can Retire Too: Retirement Planning* event.

Thursday, September 16 from 10:00-11:00am Live Online via Zoom

Join Penn State Extension Staff, along with Katrina Boyer from the Pennsylvania Department of Banking and Securities, to discuss how to retire.

This event is being offered at no charge to participants.

Registration is required to receive the link to access the webinar. Registrants will also receive access to the webinar recording.

Foliar Leaf Sampling - Mid-July through Mid-August is the Target Time

One of the best ways to monitor small fruit nutritional status is to do regular foliar testing. This allows growers to monitor performance over many seasons, and to provide individualized fertilizer programs where necessary. Soil tests provide a baseline, but the foliar tests are the 'dietary plan'.

Timing is everything. Late July to mid-August allows most of the fruit plants to finish their spring growth, but it's before the plant starts to move nutrients to the roots and crown in preparation for dormancy. Make sure also to gather a representative sample. The leaves should be distributed from plants throughout the field. If there is a problem area it would be great to do a broad field test – and then a targeted sample from leaves gathered from low vigor plants.

Wash dirt and spray residue off collected tissue using distilled water if possible. Blot off excess water, place tissue in a paper bag, allow tissue to air dry and then send to: Agro-One, 730 Warren Rd., Ithaca, NY 14850. For more information about this process, plus the correct forms and testing kits to include with submission, visit <u>http://dairyone.com/analytical-services/agronomy-services/plant-tissue-testing-services/</u>. The cost is ~\$27/sample. This includes Cornell interpretation of results and management advice.

Strawberries: Collect a minimum of 30 trifoliate leaves that are fully expanded after renovation in July or August. Day Neutral strawberries can be sampled at any time, but you should note the stage of bearing for them. Also, use a lab that can definitely give me results for this atypical crop.

Raspberries: For floricane varieties, collect 30 of the newest fully expanded trifoliate leaves from primocanes in early August. For fall raspberries (primocane varieties), sampling timing maybe a little tricky; and it is good to have soil analysis that is not less than two years old to compliment the leaf analysis. For example – foliar analysis in an early fruiting year showed low Potassium; soil levels were adequate. Probable explanation – fruit acting as a sink for foliar potassium.

Blueberries: Collect 30-50 newly expanded leaves from well-exposed branches in late July or early August. Blueberries often have 2 flushes of growth during season. Leaves for analysis should be fully expanded new growth from 1st flush, not second. Foliar analysis in new blueberry plantings may be beneficial but sometimes produce rather erratic results. This is attributed to the need for 4-5 years to pass after planting for plants to settle down and juvenile growth spurts to be over. Age usually calculated from when plants go in the ground; transplant age not necessarily included in calculation in this respect (i.e. 3 year old transplants, planted 3 years probably still in juvenile growth spurt.)

Currants and Gooseberries: Collect 30-50 newly expanded leaves from well-exposed branches in late July.

Strawberry Root Insect Pests

Strawberry Rootworm – Strawberry Rootworm (*Paria fragariae*) is a pest of strawberries and other plants in many parts of North America. Only 1 generation occurs per year.

Adult strawberry rootworm is oblong and copper-colored with dark streaks on the back. Body size is about 3 mm long. The adults are very she and resemble a flea beetle. The adults overwinter as beetles in plant debris. Larvae are cream-white grubs that feed on roots from late spring to early summer.

Plant injury primarily results from adult feeding on foliage, but larval feeding if heavy can reduce plant vigor. Adult feeding can be seen over two intervals, the first (overwintering adults) in early spring and the second (summer adults) in late summer, and is characterized by an almost skeletonized feeding injury on the leaves. Figure 1 is a photo taken this week in a brand new planting of Jewel. This field was properly rotated out of strawberries for three years and put into a buckwheat rye cover crop rotation. Strawberry rootworm has caused severe injury on this farm after rotation when the new generation of adults emerged and devoured regrowth on a planting.

There are no known resistant cultivars and no scouting thresholds established. Pyganic is labeled for use in NYS, although it has not shown to be especially effective on this infestation.





Top photo: L. McDermott, Bottom photo: University of Maine

Strawberry Root Weevil (Otiorhynchus ovatus). In the Northeast, the three major species of strawberry damaging weevils are the black vine weevil, Otiorhynchus sulcatus (Fabricius), the strawberry root weevil, O. ovatus L., and the rough strawberry weevil, O. rugostriatus Goeze.Platinum is only labeled for strawberryroot weevil. The timing is good right now to try nematodes, but the soil is too dry and will need to be wetted first. According to Dr. Greg Loeb, Cornell small fruit entomologist, a well-timed insecticide application targeting the adult weevils before they start laying eggs will help reduce pressure in fields that are experiencing damage. The insecticide application should occur within 10 days of seeing evidence of adult emergence which would kill the insect during their preoviposition period. This can be more challenging if there are multiple species involved. Other labeled chemicals for all species of weevil include Brigade which has 0 days PHI while Danitol is 2 days and Actara is three days. Emergence would be expected in June, but it may not be before harvest, further complicating the timing. For root weevil, nematodes are also suggested, but they rarely make it through the winter. Dr. Elson Shields, Cornell is working on a project this summer in northern NY to try and establish perennial nematodes in a plot of strawberries that has severe root weevil infestation, so there will be more information about this long-term sustainable approach to controlling strawberry root weevil. There is an excellent webinar recording archived on the Cornell Berry website which details advances in using nematodes for control of strawberry root weevil. Access is by going to http://www.fruit.cornell.edu/berry/webinar/archive.html#Emerging.





Strawberry root weevil photos: A. Ivy

White Grub Complex - Larvae of Japanese beetle, European and Masked Chafer, Oriental beetle and/or Asiatic Beetle (*Maladera castanea*) live in soil for much of the year and feed on newly planted strawberry roots, especially plantings following sod or on lighter soils. The C-shaped grubs are all a light tan with a brown head and six legs. Symptoms of white grub injury on strawberry plants include stunted growth and plant dieback. Adult beetles feed on plants, but their larvae feeding on roots cause much more damage.

There are no scouting thresholds established nor any known resistant



cultivars. Growers should avoid following sod or pasture crops with new strawberry plantings. On such sites, plow the field and let it lie fallow or put in a rotational cover crop such as sudan grass or buckwheat for at least one to two seasons prior to planting strawberries. Avoid establishing new strawberry plantings next to large grassy fields that serve as a source of these beetles and their larvae.

Labeled insecticides include Admire Pro and Platinum. Platinum should be applied as a furrow spray at transplanting or as a post-transplant drench either in trickle irrigation or as a pre-plant hole treatment. Irrigation should follow within 24 hours to move the material into root zone. Mycotrol (*Beauvaria bassiana* strain GHA) is an organically approved product that should be applied when insects first appear; typically a 7-10 day interval occurs before control is seen.

White grubs can do an enormous amount of damage in a short period of time. If you are growing berries on a light soil and sense that vigor and leaf size is deteriorating, dig up plants this summer and check the roots.

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