

VegNet *The Vegetable and Fruit Crops Teams Newsletter*

<http://vegnet.osu.edu>

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A Super Time for Super Berries in Ohio

from Gary Gao, Extension Specialist and Associate Professor, OSU South Centers

If you do a Google search for “super berries,” a few plants will come up. Some of the uncommon ones could be Aronia berries, Chinese goji berries and elderberries while common ones could be blueberries, blackberries, and raspberries. With growing interests in super foods by the general public, growers in Ohio might find super berries as viable cash crops.

We are lucky enough to have received a specialty crop block grant from Ohio Department of Agriculture and USDA to work on new and existing super berries. We planted a few of them this year. Our research team members have propagated a few elderberry plants. We also purchased some Aronia berry Chinese goji berry plants. We would like to thank Ohio Department of Agriculture and USDA for a specialty crop block grant.

If you are thinking about planting any of the super berries, Gary Gao would like to hear from you! He created a Facebook page for Ohio Super Berries. The web address is <https://www.facebook.com/OhioSuperBerries>. Gary will provide regular updates there with pictures and comments. This page can also be a good place for growers to connect with each other. There is also a Facebook page for “Aronia Growers East of Mississippi.” The group was started by several growers in Ohio. Please check it out.



Aronia berry in bloom.

Photo by Gary Gao

2014 Upcoming Events

- June 24 OPGMA Summer Tour, Rittman & Ramseyer Farms, Wooster, OH
- July 23 Hops Field Night, Wooster Ohio Contact Charissa McGlothlin at mcglothlin.4@osu.edu to register
- July 30 Hops Field Night, Piketon Ohio Contact Charissa McGlothlin at mcglothlin.4@osu.edu to register

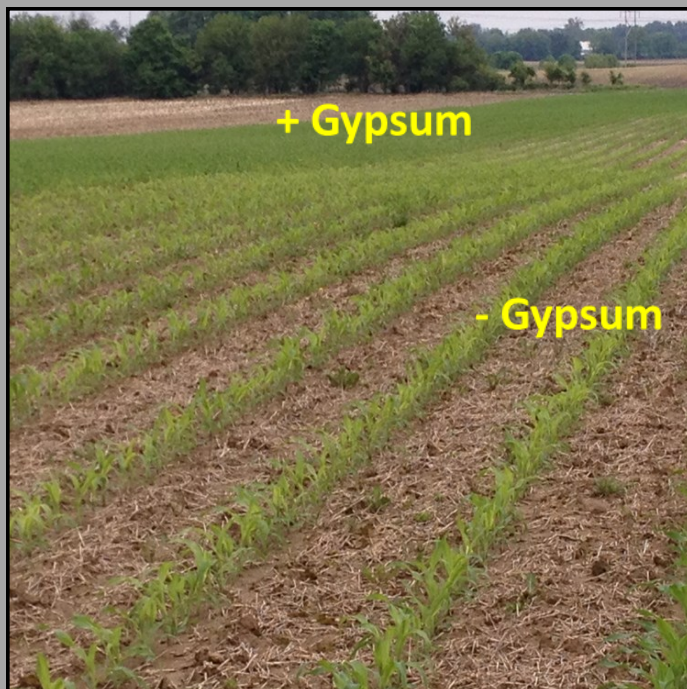
To list your upcoming events in future additions of the VegNet newsletter, please send details to bergeford.1@osu.edu

Corn Response to S Addition

from Matt Kleinhenz, Associate Professor, Horticulture and Crop Science

Sulfur (S) deficiency may cause striping or overall yellowing of corn leaves. Release of S from soil organic matter (O.M.) is the primary cause of S for plants when no fertilizer S is applied. Cold, wet, low O.M., and sandy soils, high residue, and no-till, are conditions that promote S deficiency. Tissue S <0.15-0.18% and/or a N:S ratio >15:1-20:1 are indicative of S deficiency.

(Purdue Agronomy Guide)



Cuyahoga County Crop Updates

from Jacqueline Kowalski, Extension Educator

The growing season in Cuyahoga County has been a roller coaster ride. Unseasonably warm and dry weather, then unseasonably cold weather, followed by flooding rains have presented challenges for small growers. One local grower lost an entire baby lettuce crop to flooding. Asparagus and rhubarb crops are finishing out and strawberries are now coming in. Many of the local Farmers' Markets have opened for the season in the last two weeks, increasing direct marketing opportunities. Greens and lettuce are the most prevalent crops currently found at the Farmers' Markets. Minor foliar damage due to unexpected low night temperatures has been reported on field grown tomatoes and peppers, but the crops are otherwise problem-free. Flea beetles are very active on cole crops but not yet found on eggplant or potatoes. Sporadic fire blight and powdery mildew has been noted on untreated apple trees.



- A. Flea beetles feeding on cabbage
 - B. Fresh Ohio Strawberries, Morning Dew Farms
 - C. Bunching onions, Cleveland Crops
 - D. High tunnel tomatoes, Cleveland Crops
- Photos by Jacqueline Kowalski**

Wayne County IPM Scouting Program

from Rory Lewandowski, Extension Educator, Wayne County

Scouting Summary June 1-8

Vegetables:

Tomatoes were starting to be harvested from some high tunnels during the week of June 1. Probably the most frequently observed issue is botrytis gray mold. Scouts did note the presence of early blight symptoms on some plants in some high tunnels. Field tomatoes are in bloom and beginning to set fruit in, some fields. In other fields, plants still have some symptoms of transplant shock and are leggy. No disease or insect problems have been observed in field grown tomatoes to this point.

Thrips have remained at low levels in onions and garlic. Botrytis gray mold symptoms were observed on some onion leaves. Cole crops generally look good. Slugs and flea beetles are present and doing some leaf damage but at a low, non-economic threshold levels. A few imported cabbage worm larvae were found; nothing at economic treatment levels.

Cucumber beetle numbers are increasing, and in some summer squash, melon and cucumber plantings numbers were at or above economic treatment levels and growers were being advised to spray.

Eggplant and pepper transplants in some fields were showing symptoms of cold stress. Low levels of flea beetle and Colorado potato beetle were observed on eggplants, while low levels of aphids and slugs were found on peppers.

Sweet corn has been stagger planted and growth development ranges from v-1 to v-7. Slugs, black cutworm, and armyworm have all been noted in sweet corn plantings, but none of the pests were at an economic treatment level.

Colorado potato beetles have increased to economic treatment levels on several potato fields this past week and growers are being advised to apply an insecticide. Flea beetles are also present in many potato fields but are not at economic treatment threshold numbers.

Beets, peas and lettuce were all noted as doing well with no pest problems observed.

Fruit:

Overall apples look good. Scouts are noting some fire blight symptoms in susceptible varieties and also noted some low levels of scab present on a few trees. Most growers are following the spray recommendations for control of codling moth in apples and oriental fruit moth in peaches based on growing degree days (GDD) from biofix or making a second follow-up application based on 10-14 days after the first spray application. Scouts did note some low levels of green apple aphids and red mites present on some apple trees.

Strawberry harvest was going full-bore the week of June 1. Some common pests noted by scouts included slugs, spittle bugs, and tarnished plant bugs, all below economic treatment levels. The cooler, wet weather we had the last week in May was favorable to the development of botrytis gray mold, especially on any berries in direct contact with the soil. On some varieties, leaf spot is at moderate to high levels.

On June 8, scouts noted that traps had our first catches of the season of grape berry moth. Based on trap catches growers will be advised to make insecticide spray applications to prevent damage from the grape berry moth.

Some varieties of blueberries are beginning to turn color and harvest will not be far off.

Southern Ohio Vegetable and Fruit Update

from Brad Bergefurd, Ohio State University Extension Educator, Ohio State University Extension Scioto County and OSU South Centers

Irrigation has been the important task for southern Ohio fruit and vegetable growers for some areas have received an inch of rain at best in the past 4 weeks. The crops of largest concern due to the extremely dry field conditions is sweet corn that is in full tassel and pollinating, new plantings that are going in. cucumbers, zucchini and yellow squash that are being harvested, and hops that are beginning to burr and cone up. These extended dry field conditions that have prevailed over much of the southern Ohio growing area have allowed for continued timely field planting and maintenance. Some isolated areas did receive heavy downpours and flash flooding last week and the showers and storms have been more scattered this past weekend.

High tunnel tomato harvest continues in full swing since it began April 18, with great quality, fruit size, taste and market demand still being reported, however some plantings are beginning to see disease pressure increase including Sclerotinia stem rot (timber rot), Rhizoctonia, Anthracnose and Verticillium Wilt. Reports of growth regulator herbicide drift injury symptoms continue to be reported on small fruit, grapes, field vegetables and tunnel crops.

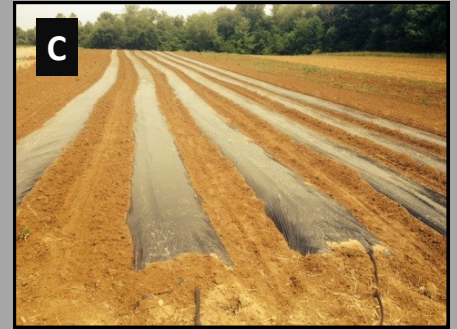
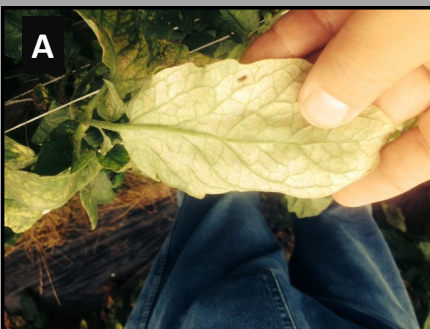
Crops being harvested include high tunnel tomatoes, lettuce, potatoes and cucumbers. Field harvest includes radishes, leafy greens, zucchini, yellow squash, cucumbers, late maturing varieties of strawberries and rhubarb. June bearing matted row and plasticulture strawberry harvest is complete for the season with growers reporting 50% to 80% of a crop due to extreme cold temperatures this winter and spring.

Watermelon, cucumber and cantaloupe are in full bloom and vine training being done weekly to keep plants out of the row middles.

Pumpkin planting began over Memorial Day weekend with great stands and emergence being reported planting will be finishing up over the next 7 to 10 days. Early planted pumpkins are being cultivated and sidedress applications of Nitrogen are being applied.

Planting and transplanting of all vegetable and melon crops continues. Tight fungicide spray schedules are being applied on tree fruit, small fruit, hops and grapes. Burn down and pre emerge herbicides continue to be applied. Scouting and trapping for insects continue with only slight flea beetle being reported on radish, cole crops, tomato and leafy greens.

Sidedress applications of nitrogen continue. Regular cultivation for weed control continues. Nitrogen fertigation continues to be applied weekly on plasticulture vegetable crops. Nutrient deficiencies continue to be reported on hops and vegetables where Nitrogen has leached under isolated heavy rainfall events.



A. Spider mites have become an issue on field and high tunnel crops

B. Irrigation has been almost non-stop in southern Ohio

C. Plastic is being laid for late tomato and pepper plantings

Photos by Brad Bergefurd

Southern Ohio Vegetable and Fruit Update Continued...



- A. Harvest of high tunnel tomatoes continues
- B. Northern Ohio has been receiving flooding
- C. Tomato and cabbage transplanting continues in northern Ohio
- D. Nitrogen side dressing and cultivation continues throughout Ohio
- E. Several southern Ohio growers are beginning to drip irrigate feeder roots between beds
- F. Disease infections have been diagnosed in high tunnel tomatoes

Photos by Brad Bergefurd

Strip Tillage Vegetable Experiment Update

from Zheng Wang, Postdoctoral Researcher, Department of Horticulture and Crop Science, The Ohio State University

A vegetable strip tillage study was supported by the Ohio Vegetable & Small Fruit Research & Development Program (OVSFRDP) in Spring-2015. Field preparation was initiated in mid-May at OARDC in Wooster. Regularly, plastic-covered and drip-irrigated raised beds were prepared by moldboard plowing, herbicide burn down, fertilizer application, and bed preparation (shaping, laying drip tape, and covering). Two types of strip-tilled plots, both including wheat, were set up. To begin, all of the wheat was mowed to a height of 14 inches, which promoted tillering at regrowth. About two weeks later, the first type of plot was created by killing the wheat after mowing with herbicide. The second type of plot was created by mowing the living wheat a second time to a height of 8 inches prior to transplanting. Then, a PTO-driven roto-tiller with only one pair of tines was used to create 10-inch wide by 6-inch deep strips in the living and dead wheat plots. A single line of drip tape was also placed in each strip. Tomato and pepper seedlings were transplanted to raised beds and strips on May 29. Living wheat in strip-tilled plots was mowed again to 6 inches tall after transplanting. Also, ryegrass seed was broadcast over the top and into the furrow of half of all raised-bed plots; wind moved ryegrass seed to bed edges. Plant growth and yield are being monitored in all plots.

Check Vegnet and <http://hcs.osu.edu/vpslab> for more updates or contact me (wang.2735@osu.edu), Dr. Matt Kleinhenz (kleinhenz.1@osu.edu), or Jennifer Moyseenko (moyseenko.2@osu.edu) for more information.



- A. Roto-tiller with one pair of tines (all others were removed)
- B. Tilled strips and plastic beds
- C. Peppers in plastic raised bed
- D. Tomatoes in strips with drip tapes alongside

Photos by Zheng Wang

Southeast Ohio Update

from Mark Landefeld, OSU Extension Educator, Monroe County

Spotted Wing Drosophila

Spotted Wing Drosophila (SWD) traps were placed in red raspberry and blueberry crops on May 28th in two Monroe County locations. The traps used the new Trece Pherocon SWD lure as the attractant. All 4 traps were checked on June 5th and June 12th and NO SWD adults were identified among the captured insects.

A blueberry producer placed electric fence around plants to keep deer out and recently placed mylar tape above the plants for bird control. The mylar tape not only flickers, but makes a variety of humming noises depending on wind speed.

Fire Blight

Fire blight was seen on young apple trees. Less resistant varieties showed the most damage. For more information about the disease cycle of fire blight and control measures go to: http://ohioline.osu.edu/hyg-fact/3000/pdf/HYG_3002_08.pdf Picture attachment #4

Rain

Growing conditions have been dry most of the spring and irrigation has been used regularly where growers have systems in place. Most parts of the county received much needed rain over the weekend with some reports as much as 1.7 inches.

Fall Webworm

A few first generation fall webworm nests have been seen. First generation nests are seldom as numerous or as large in size as those produced by the second generation; the first generation nests normally involve only a few leaves. However, female moths often lay their eggs on or near the nests from which they developed, thus second generation caterpillars expand the nests once occupied by first generation caterpillars. For the rest of the story go to: <http://bygl.osu.edu/content/fall-webworm-update-0>



- A. SWD Trap in Raspberries
- B. SWD Trap in Blueberries
- C. Electric fence and mylar tape
- D. Fire Blight

Photos by Mark Landefeld

Spotted Wing Drosophila Update from Clark, Greene, Clinton, and Warren Counties

*from Jim Jasinski, Associate Professor, Extension Educator
Integrated Pest Management Program Coordinator*

Spotted Wing Drosophila (SWD) traps were placed in raspberry, blueberry, blackberry, and grape crops on June 3rd in four southwest counties. The traps used either apple cider vinegar or the new Trece SWD lure as the attractant. All 14 traps were checked on June 10th and NO SWD adults were identified among the captured insects. Last year our first SWD adult detection was mid June, but most detections occurred late June or early July.

The trap used in the monitoring network this year is different than previous years. We retrofitted this new deli cup design with drywall mesh tape to keep out large insects which we found in abundance in our first sample check.



New deli cup SWD trap design with drywall mesh tape to exclude large insects

Photo by Jim Jasinski



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

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Submit Articles:

To submit an article to the VegNet newsletter please send the article and any photos to **Brad Bergefurd** at bergefurd.1@osu.edu or for questions regarding the newsletter call 740.289.2071 ext.132.

About the editor

Brad Bergefurd

Bergefurd is an Extension Educator, Agriculture and Horticulture Specialist with Ohio State University Extension, with statewide responsibilities for outreach and research to the agriculture and commercial fruit and vegetable industries Brad has offices at the OSU Piketon Research & Extension Center in Piketon and at OSU Extension Scioto County in Portsmouth.



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