

VegNet *The Vegetable and Fruit Crops Teams Newsletter*

<http://vegnet.osu.edu>

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Northwest Ohio Processing Update

from Jeff Unverferth, Agricultural Manager at Hirzel Canning Co

The Ohio processing tomato harvest is underway and in full swing with good early harvest yields, averaging 25% better than an average year and great quality being reported. Harvest issues being reported include bacterial canker disease and fruit physiological disorders including yellow shoulder disorders that are showing up in early varieties. Yellow shoulder disorder has never been an issue before which the weather may have had something to do with it expressing itself this season. Processing pepper harvest began about 2 weeks ago. *(Editor's note for more information on yellow shoulder disorder of tomato visit Dr. David Francis's outstanding website at <http://www.oardc.ohio-state.edu/tomato/managingcolor.htm>)*



Processing tomato harvest is in full swing in Ohio
Photo by Jeff Unverferth



Yellow shoulder disorder on early tomato varieties
Photo by Jeff Unverferth

2014 Upcoming Events

Sept. 16-18

Farm Science Review in London, OH.

Oct. 14

Pumpkin Field Night at OSU South Centers in Piketon, Ohio.

Contact Charissa McGlothlin at mcglothlin.4@osu.edu or 740.289.2071 ext. 132.

OSU South Centers Update at Piketon

from Ryan Slaughter, Research Assistant OSU South Centers

Red raspberry harvest continues in high tunnel and outside.

The Spotted Wing Drosophila (SWD) is still being identified in traps located in wooded areas and in red raspberry fields at Piketon. We have yet to identify any in the vineyard. We continue to follow tight insecticide spray schedules to control the SWD.

Hops harvest continues, with two varieties remaining to be harvested- Mt. Hood & Nugget.



Ripe red raspberries at Piketon

Photo by Ryan Slaughter



Hope cones close to harvest

Photo by Thom Harker



Tomatoes are ripening and are being harvested

Photo by Ryan Slaughter



Cones on bine at Piketon

Photo by Thom Harker

Wayne County IPM Scouting Program Update

from *Rory Lewandowski, Extension Educator, Agriculture and Natural Resources*

The Wayne County IPM scouting program season ended on August 29. During the final two weeks in August scouts noted the following:

- Cabbage worm larvae were increasing to threshold levels in cole crops planted for fall harvest.
- Vine crops, pumpkins, squash, zucchini and cucumbers all had heavy pressure from powdery mildew and growers need to continue regular fungicide applications to stay ahead of the disease. Some growers were facing discouraging pumpkin and squash losses due to large animal (probably ground hog and raccoon) feeding.
- Stink bugs were found on a range of crops, but doing the most damage to tomato, pepper and eggplant.
- Two spotted spider mite populations were increasing in some high tunnel tomatoes and growers were advised to start control options.
- After weeks of very low corn earworm moth trap captures, the population exploded over the Labor Day weekend with trap captures averaging 50 to 70 moths per night.
- Spotted wing drosophila (SWD) numbers continue to increase. Traps in 3 unsprayed areas yielded 196, 210 and 377 SWD flies the week of August 25-29.



Wildlife damage to pumpkin

Photo by Christine Smedley, IPM scout



Wildlife damage to pumpkin

Photo by Christine Smedley, IPM scout



Stinkbug on tomato

Photo by Christine Smedley, IPM scout

Time to think about garlic planting

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

Garlic has become an increasingly popular vegetable crop among producers, marketers, and consumers. People are discovering its nutritional values and producers have found garlic to be a potentially highly profitable crop. August and early September is the time to plan your garlic production and marketing.

Two main garlic types are "hardneck garlic" and "soft neck garlic," or "bolting" and "non-bolting garlic." The main difference between these two subspecies is that one almost always produces a seed stalk, the top of which will bear small aerial bulbils--not true seed--while the other rarely produces a seed stalk. Hardneck garlic has smaller bulbs with fewer, more uniform size, and more organized arrangement of cloves. Softneck garlic has larger bulbs, more numerous cloves in a more random arrangement and of more variable size.

Elephant garlic is not true garlic, but rather a member of the leek family. The combinations of the sulfur compounds, is different in garlic and "Elephant garlic." The production guidelines and processes are very similar for garlic and "Elephant garlic". August and September is time for planting preparation, since ideal planting dates are September to early November, depending on the area. Primary pre-planting considerations are seed selection, purchase, and field selection and preparation. Seed availability has, and continues to be, a major obstacle for those who want to enter or stay in the garlic business. Seed quality is critical to profitable production, yet few sources of quality seed, especially the more specialty varieties, exist. If you plan to save your own garlic for seed, or acquire it from your neighbor, special precaution is in order: make certain it is free from nematode, white rot, and any other serious diseases or insects and save the largest bulbs for seed.



Selection and purchase of quality garlic seed in August is very important

Photo by Brad Bergefurd

Five planting considerations or recommendations are:

- Earlier planting means higher yield potential. September to November planting is optimum.
- The size of bulbs harvested is directly related to the size of cloves planted and the spacing of the plants.
- If you are buying seed, learn the cultural history of the garlic and the field in which it was grown; if saving your own seed, save the largest, best bulbs and cloves.
- Plant immediately after "cracking" (dividing the bulbs into individual cloves). Individual cloves do not keep long, due to disease susceptibility and desiccation.
- Cover the top of each clove with 1/2 to 2 inches of soil, depending on winter temperatures. With last winter's polar vortex events shallow plantings resulted in excessive frost heaving, colder winters require deeper planting. *Article continued on the next page*

Time to think about garlic planting

Continued...

Five cultural practice considerations or recommendations are as follows:

- Weeds are frequently the worst problem; garlic is a poor competitor; the crop is in the ground a long time. Avoid, prevent and control weeds.
- Garlic is a moderate user of nitrogen; it may or may not require phosphorus, depending on the soil and previous management. It rarely responds to potassium fertilizer and rarely requires micronutrients. Don't guess always soil test.
- Up to half of the nitrogen needs should be available at planting or early in the season; another major need will occur in late winter, after rain caused leaching, and when the garlic begins its strong re-growth. No nitrogen should be applied during the last 60 days before harvest; the garlic should run out of nitrogen late in the season.
- Garlic can grow in a wide range of soil textures and soil pH. Fertilization, irrigation, and harvest practices may be different for individual fields and farms.
- Diseases and insects to watch for include Fusarium basal rot, purple blotch, white rot, stem and bulb nematode, mites, and cutworms.



For a profitable garlic crop prior planning is necessary
Photo by Brad Bergefurd

If you are interested in learning more about garlic production visit the following Ohio State University and University of Kentucky fact sheets at <http://ohioline.osu.edu/hyg-fact/1000/1627.html> and <http://www.uky.edu/Ag/CCD/introsheets/garlic.pdf>. If you would like to be added to our commercial horticulture list serve to receive Ohio fruit and vegetable crop updates and information contact Brad Bergefurd, Bergefurd.1@osu.edu or call the OSU South Centers 1-800-860-7232 or 740-289-3727 extension #132.

Produce Budget Reviews

from Stan Ernst, Business & Marketing Specialist/Ag Economist, OSU Extension Specialty Crops Business Program

After many years of not being updated Stan Ernst, Food & Horticulture Market Specialist/Ag Economist with the OSU Extension Specialty Crop Business Program, is beginning to update these budgets for a number of fruit and vegetable crops. Before they are officially launched Stan and his staff would like to have producers make a quick review and comment of these draft budgets. If you're interested in being a reviewer, please email Stan Ernst at Ernst.1@osu.edu with subject line "Produce Budget Reviewer". Cucumber, Sweet Corn, and Pumpkin draft budgets are ready for review and tomato, popcorn and hops are almost ready for review. Thanks for your assistance with the updating these specialty crop production budgets. (Editor's note for production budgets currently available at OSU visit http://www.oardc.ohio-state.edu/hocorn/popcorn_index.htm and for production budgets available at the University of Kentucky visit <http://www.uky.edu/Ag/CCD/budgets.html>)

Powdery Mildew Program Efficacy on Pumpkins – An Aerial View

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

Powdery mildew is a key foliar disease on pumpkin that growers need to control every year in Ohio. If a significant portion (ca. >75%) of the lower or upper leaf surface is colonized by this pathogen, those leaf sections are likely to die prematurely. Loss of canopy has significant consequences such as exposing mature orange fruit to direct sun, leading to a reddish sunburn, rendering the fruit unmarketable. Powdery mildew can also infect pumpkin handles, rendering them soft, spongy, and shriveled.

Many pumpkins are scheduled to be shipped to wholesalers and retailers in the next few weeks, so keep your spray program active for as long as you have fruit in the field.

Because powdery mildew is a pathogen that has demonstrated the ability to become insensitive to certain fungicides over time, researchers at OSU annually conduct trials to determine the efficacy of both labeled and experimental products yet to be commercialized.

During treatment evaluation, both the upper and lower leaf surface are visually inspected for colonies that have infected the leaf and are rated on a percent leaf coverage basis. *(Continued on the next page)*



Figure 1 Aerial photograph of powdery mildew study on pumpkin at the Western Ag Research Station. Note image was taken with a fish eye lens
Photo by Jim Jasinski



Figure 2 Aerial photograph of poor disease management treatment. Note exposed orange mature fruit
Photo by Jim Jasinski



Figure 3 Aerial photograph of an effective disease management treatment. Note dense, dark green foliage
Photo by Jim Jasinski

Powdery Mildew Program Efficacy on Pumpkins – An Aerial View continued...

While this is a very effective method of evaluating fungicides, it is also very time consuming. At the Western Ag Research Station, in addition to the traditional method of leaf evaluation, we are beginning to investigate other ways of determining fungicide program efficacy. We have begun to look at our research plots from an aerial perspective, to see if differences in the plant canopy can be detected and related to the overall health or stress of the plant. In the case of powdery mildew we are observing canopy development, color, and percent cover.

To get a broad sense of what aerial evaluation might entail, take a look at Figure 1. These 16 plots represent a powdery mildew fungicide demonstration trial on pumpkin, where clearly some treatment plots have significantly more cover and are greener than other treatment plots, meaning some fungicides are doing a better job than others at controlling this disease. The untreated check plot is in the lower right and is nearly 100% covered by powdery mildew on the top (and bottom) leaf surface, hence it looks rather white.

In Figure 2, notice how the canopy is thinned and the orange fruit is exposed in plots along the lower boundary? These mature fruit might be prime candidates for sunburn, but knowing that they are exposed might lead to picking this area early, reducing the threat of sunburn and potential loss. Figure 3 represents a fairly robust powdery mildew treatment with a solid, deep green canopy.

While there are many questions surrounding the usefulness and practicality of this approach such as image interpretation, ground truthing the plant pathogen or stress, earliness of disease detection, evolving Federal Aviation Administration laws, cost effectiveness, etc., it is not unreasonable to think that soon growers may have options to help them better scout and manage not only their pumpkin crop, but other crops as well, through the use of aerial imagery.

Muck Crop Update

from Robert Holthouse of D.R. Walcher Farms and Holthouse Farms

The winter squash harvest has begun with nice yield and quality being reported this year.



Butternut squash close to harvest

Photo By Robert Holthouse



Butternut squash

Photo By Robert Holthouse

Muck Crop Update Continued...

from Robert Holthouse of D.R. Walcher Farms and Holthouse Farms



Good quality and size butternut squash
Photo By Robert Holthouse



Nice yield of butternut squash being estimated
Photo By Robert Holthouse



Spaghetti squash near harvest
Photo By Robert Holthouse



Pie pumpkins close to harvest
Photo By Robert Holthouse



Pumpkin quality and size are excellent
Photo By Robert Holthouse



Stem quality remains high
Photo By Robert Holthouse

Southern Ohio Vegetable and Fruit Update

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

The drought conditions have subsided over the southern Ohio growing region with nice rainfall events occurring the past 2 weeks. However, foggy mornings in the Scioto river valley the past few weeks have been increasing disease pressure on vine crops and tomato in particular. Harvest of the fall broccoli crop just started over the Labor day weekend. Broccoli and cauliflower plantings of the past 2 months are growing nice with evenings and mornings temperatures in the high 50's to mid 60's. Harvests of all vegetable and melon commodities continues including cantaloupe, watermelon, sweet corn, cabbage, pepper, tomato, cucumber, pickle, summer and winter squash, zucchini, sweet onion, potato, sweet potato, red beets, and basil continues. There is high market demand for the jack o lantern and winter squash crop, where the harvest began the last week of August with good yields and quality being reported. Seasonal demand for all produce was sluggish as school resumed but rebounded last week with seasonal Labor Day demand being high. Harvests of Gingergold, Goldie and Gala apples and pears continue with high demand being reported. Prices and demand remain sluggish for #2 and canner grades of produce at local produce auctions. Harvest of high tunnel tomato, cucumber and raspberry continues but yield and quality has diminished. Disease and insect pressure continues especially increased populations of spotted and stripe cucumber beetles resulting in increased bacterial wilt symptoms on cucurbits. Powdery mildew pressure remains high and severe infections on unprotected cucurbits have



Harvest of fall broccoli has begun

Photo by Brad Bergefurd

occurred. Fungal and bacterial disease infection on pepper and tomato continues to be reported requiring strict preventive fungicide and insecticide spray applications on a regular schedule. Late season weed pressure continues in all vegetable and fruit fields especially with increased rainfall the past few weeks. Cultivation, hand hoeing and shielded, pre and post emergent herbicide applications continue to be performed. Direct seeding of fall greens, radishes and lettuce crops continues in the field and in high tunnels. Harvest of moderate day-neutral San Andreas strawberry variety continues but has diminished. Planting of plasticulture strawberry crops began the last week of August and will continue through next week with high quality plug plants being reported. With increased interest in farms adopting strawberry plasticulture and planting more acreage in Ohio, there are reported shortages of plug plants for farms that did not pre-order their plants two months ago.

Article continued on the next page

Southern Ohio Vegetable and Fruit Update Continues...



Fall broccoli is growing well with cooler nights

Photo by Brad Bergefurd



Cauliflower getting ready to be blanched or tied up

Photo by Brad Bergefurd



Harvest of sweet corn continues with the last of the plantings just starting to show tassel

Photo by Brad Bergefurd

VegNet Newsletter

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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