

VegNet *The Vegetable and Fruit Crops Teams Newsletter*

<http://vegnet.osu.edu>

Editor: Brad Bergefurd

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SUMMER TOUR

& Field Day

JUNE 25, 2014



Network with your peers!

White House Fruit Farm - Canfield, Ohio
Agri-tourism at its best

McMaster Farms - Columbiana, Ohio
Third-generation wholesale and retail farm



Register online at OPGMA.org/Tour

Registration Opens TODAY

Don't miss this opportunity to refresh your perspective of the Ohio produce industry. See the latest equipment, packaging, seeds, chemicals, and services designed to grow your business, and network with more than 250 growers and marketers across Ohio.

Don't wait to register. <http://opgma.org/tour>

2014 Upcoming Events

- ♦ **April 28, 29, 30-** High Tunnel Training, OSU South Centers, Piketon
- ♦ **April 30-** Gap Training, Muskingum and Carroll Counties (see p. 8)
- ♦ **May 22-** Strawberry Plasticulture Field Night, South Centers in Piketon (see p. 4)

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

Cuyahoga County Update

from *Jacqueline Kowalski, MA, Extension Educator, Agriculture and Natural Resources*

A cold snap last week caused slight damage to Swiss Chard and other greens. However, after leaf removal, plants should recover just fine. Asparagus began to emerge after the cold spell and is coming along well. Two warm and windy days over the weekend dried the ground out nicely.



Rhubarb after the cold snap.

Photo by Jacqueline Kowalski

Southeast Ohio Update

from *Mark Landefeld, OSU Extension Educator, Monroe County*

Most of the onions are in the ground, some do not look too good because it was so wet under the plastic and the freezing temperatures last week and cabbage is being planted. The ground is still being worked and prepared for planting.



Onions damaged from last weeks freeze .

Photo by Mark Landefeld



Winter annuals are in bud or bloom and even setting seed.
Photos by Timothy Malinich



Currants and gooseberries in tight cluster. This is *Ribes Red Lake*.

North Central Update

from Timothy Malinich, Extension Educator, Agriculture and Natural Resources, Erie County

Field moisture greatly improved from two weeks ago. Most areas of standing water are gone and fields should be ready to work soon.

Crop Stage

Grape buds swelling, loss of vines (and a few cordons) apparent now. Pruning still underway in vineyards as growers wait to see the extent of damage to vines.

Apples at green tip to ½" green, peaches beginning to break vegetative buds. Currants and gooseberries in tight cluster. Elderberry new growth up to one inch in some varieties. Cane damage becoming more apparent on blackberries. New bines from hops crowns beginning to elongate.

Weed Control

Winter annuals in full bloom and ready to set seed. Germination of weed seed occurring in sunny areas—types of weeds not identified.

Brad Bergefurd to host Strawberry Field Night at OSU South Centers May 22nd



Strawberries in bloom this week at Piketon. Photos by Thom Harker

Strawberry Plasticulture Field Night will be held at the OSU South Centers on Thursday, May 22, 2014 from 6 to 9. Plasticulture and matted row strawberry field research will be showcased.

Topics to be covered will include:

- winter protection techniques
- Israeli drip irrigation demonstration and management
- row cover management
- cultivar evaluations
- pest and disease control
- Spotted Wing Drosophila monitoring and trapping
- Integrated Pest Management (IPM) techniques

Cost to attend is \$15.00. Registration deadline is May 19th. To register for the workshop, please contact Charissa McGlothlin at mcglothlin.4@osu.edu or call 740.289.2071 ext. 132.

Plasticulture Strawberries, Hops, and Tomato Update

from Thom Harker, Research Assistant OSU South Centers

Fertigation continues on plasticulture strawberries. Strawberries were covered with row cover due to chance of patchy frost tomorrow (4/22) morning. Hops bins are re-growing since they were cut last week and are 4-8 inches tall. Will begin to train to twine next week. Tomato grafting began this week with tomatoes in the healing chamber.



Fertigation of strawberries.

Photos by Thom Harker



Hops bins ready to be trained at Piketon.

Photo by Thom Harker



Tomato grafting at South Centers. Photo by Thom Harker

Southern Ohio Vegetable and Fruit Update

Brad Bergefurd, OSU Extension Educator, OSU Extension Scioto County and OSU South Centers

The winter that won't end! Just when we thought all of the freeze injury to our crops was over, the Tax Day, April 15 and 16, freeze event of 2014 struck Ohio fruit and vegetable growers hard. From my farm visits and reviewing crop reports from throughout Ohio, it seems that farms south of I-70 got hit the worst with last week's freeze event. 22 degrees was reported for the low in Washington, Ross and Clinton Counties, and areas in Scioto County had a low of 17 degrees and we had 20.6 degrees at our research farm at Piketon. Decisions were made to pull freeze blankets on cabbage in Lowell, Ohio and on plasticulture strawberries that were showing bloom in Ross, Scioto, Highland and Pike counties.



Strawberries bloom damage after freeze.
Photos by Brad Bergefurd

Even with freeze blankets in place strawberry blooms that were emerged and in the popcorn stage are showing severe damage and plants are showing damage.

Asparagus harvest began last week and emerged spears during the freeze event were severely damaged. Apples, peaches (yes there WAS some bloom) and cherries that were in bloom and full bloom during the freeze event are showing severe damage. Unprotected cabbage that had been in the ground for 3 weeks was severely damaged.



Asparagus harvest has begun
Photo by Paul Fuhrmann



Cabbage that was precovered before the freeze, and cabbage that was left uncovered.
Photos by Tom Witten

Article continued on the next page

Sweet corn that was at full leaf and spike under clear plastic was severely damaged. Recently-set sweet onion plants in Monroe County showed severe freeze damage, but are greening back up this week. Plasticulture strawberries in bloom were covered with row covers yesterday afternoon due to forecasted scattered pockets of frost this AM (4/23).

Field operations have continued almost non-stop the past week with only about one day out of the fields on April 14 and 15, with most areas receiving from .25 to .5 inch of rain. Over the Easter weekend and early this week (4/20-4/22), temperatures around the Piketon area were in the mid to high 70's making for ideal field conditions.

Anhydrous, lime and fertilizer application continues and grain farmers have begun planting corn. Spraying of burn-down and pre-emerge herbicides continues. Plowing and working ground continues and planting of cover crops continues. Orchard, blueberry, grape and bramble growers continue finishing up pruning. Bed shaping and laying of plastic for tomato, pepper and melon planting has ramped up this past week. The first bare ground sweet corn has been planted and the last of the plasticulture sweet corn is being planted this week. High tunnel tomato planting continues, and stringing, tying, and training began on March-planted high tunnel tomatoes. High tunnel tomatoes planted the end of January are the size of golf balls and are sizing up nicely with the increase in sunshine and temperatures. Lettuce planted in greenhouses is growing with the increased light levels. Hops have all been trimmed, strings are being dropped from the 20-foot tall trellis and training of the first bines will begin at the end of this week or early next week at Piketon and Wooster. Fertigation of nitrogen continues on plasticulture and matted row strawberry and will begin on hops next week.



Pruning clinic (4/17) at Fuhrmann orchards in Wheelersburg, Ohio. Photo by Brad Bergefurd



Tomatoes being trained in high tunnel in Rainsboro. Photo by Brad Bergefurd



Tomato and Cabbage transplants at Hirzel farms in NW Ohio. Photo by Jeff Unverferth

Muck Crops Research Station Update

from Robert (Bob) Filbrun, Assistant Manager, OARDC Muck Crops Research Station, Willard, Ohio

After a warm and breezy weekend in the muck, soil conditions improved immensely and growers hit the field.

There's been great forward progress in just two days:

- ◆ Cover crop burn down
- ◆ Field prep including fertilizer applications, plowing and dising
- ◆ Even some planting has occurred, including: radish, parsley & green onion

Growers anticipate getting dill, cilantro, collards, kale and mustards in the ground by Friday afternoon.



Field work at Muck Crop Research Station.

Photo by Robert (Bob) Filbrun

Blackberry Update

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

Blackberry canes that survived the cold winter started pushing out new shoots. These new shoots are somewhere between 1/4" to 1" long. So far *Chester Thornless* looks very good at OSU South Centers in Piketon. We have several Polish blackberry varieties in a cold hardiness trial at OSU South Centers. Most of the Polish blackberry cultivars have survived and look very good. Two Arkansas varieties, *Ouachita* and *Natchez*, have sustained severe cold injuries. Many of the canes became brown and are dead due to cold damage to the cambium tissues.

In addition to selecting cold hardy varieties, winter protection can also help blackberry bush survive the cold temperatures. *Ouachita* and *Natchez* blackberry bushes in high tunnels and on rotatable cross arm trellis came through the winter very well. They should produce a crop for us this year. We are still in the middle of assessing winter injuries on all of our blackberry cultivars under different production systems. Stay tuned for more information.

This project is funded by a specialty crop block grant from the USDA through the Ohio Department of Agriculture. We definitely appreciate the support.



Blackberry canes that survived the cold winter started pushing out new shoots.

Photo by Gary Gao



Photos by Matt Kleinhenz

Tomato Grafting Research

from Matt Kleinhenz, Associate Professor, Horticulture and Crop Science

Tomato grafting research continues at OARDC with support from OSU, USDA and the Ceres Trust.

- (1) Trays of tomato seedlings.
- (2) VPSL research team grafted and monitors tomatoes for growth rate <http://hcs.osu.edu/vpslab/>
- (3) Data are collected before and after grafting (e.g., plant vasculature below the cotyledons is evident as four red dots in image).

- (4) Trays of grafted plants are evaluated for vigor and then prepared for planting in fields and high tunnels in Ohio and other states.

One project is testing the performance of 90 combinations of rootstock and scion varieties grown on farms in 12 states. To learn more, contact Matt Kleinhenz. Also, see websites (e.g, <http://hcs.osu.edu/vpslab> and <http://www.vegetablegrafting.org>) and Extension offices.

Be Mindful of Bees During Delayed Planting this Season

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

Authors: Andy Michel and Reed Johnson

Beekeepers in Ohio suffered substantial losses of colonies over the exceptionally long and cold winter of 2013-2014. Here in Wooster we lost more than half of our colonies and beekeepers around the state are reporting levels of winter kill in the 30-80% range. While the frigid temperatures played a substantial contributing role, losses were undoubtedly made worse by all of the problems facing bees today: parasites, diseases, pesticides, breeding problems, and a general lack of summer and fall forage.

Spring is the only reliably good season for bees in Ohio. Colonies that survived the winter and new colonies brought up from the Gulf Coast are in the process of harvesting nectar and pollen from spring-blooming trees and weeds -- but little honey will be made. This spring bounty will be eaten by the bees themselves as they multiply and grow into large productive colonies that will be able to make a honey crop off of clover, black locust, alfalfa and possibly soybean in the coming months. Additionally, robust colonies are needed to pollinate the fruit trees soon and pumpkins, squash, and cucumbers later in the summer.

This spring build-up of honey bee colonies can be directly threatened by corn planting. Insecticide seed treatments used on corn seed produce an insecticidal dust when they are planted. Depending on conditions, this insecticidal dust can settle on the flowering trees and weeds that bees are visiting. Insecticidal dusts are terrible for honey bees because they do not immediately kill the bees visiting flowers. Rather than causing immediate death, the dust is packed up with the pollen and brought back to the colony

where it is can poison young and developing bees inside the colony.



In spring 2013 we sampled pollen from three bee yards in Madison, Union, and Clark Counties. During corn planting all colonies were bringing back pollen containing corn seed treatment insecticides, sometimes at levels that would be expected to cause bee death. While no obvious bee-kills were observed in our colonies in 2013, we believe that different conditions during planting could have led to a different outcome. In 2013 corn planting in central Ohio coincided with the start of bloom for fruit trees and hawthorns – extremely attractive flowers for bees – which likely drew bees away from the riskier and somewhat less attractive dandelions, mustards and purple deadnettle growing in corn fields and on field margins. In some years planting may happen before or after fruit tree bloom when bees are intensely interested in weeds growing in and near fields. This may have been the case in Ohio in 2012 when planting started early and a number of bee-kill incidents were reported.

Fruit Disease Note

from Mike Ellis, Department of Plant Pathology, The Ohio State University

Fruit growers are encouraged to visit Dr. Mike Ellis' fruit pathology web page. You can get there if you Google Mike Ellis, The Ohio State University and the web address is:

www.oardc.ohio-state.edu/fruitpathology/

The web site has many fruit disease management resources that should be useful to fruit growers. We currently have 45 Plant Disease Fact Sheets and all of them are easily accessible on the web site. There is a fact sheet for almost every fruit disease found on small fruit and tree fruit in Ohio. The sheets contain good photos of disease symptoms, as well as important information useful to successful disease management. The web page contains information on disease control in organic fruit production systems and all of the Midwest Fruit Production Bulletin series are available as PDF files that can be downloaded.

These include:

- Midwest Grape Production Guide
- Midwest Strawberry Production Guide
- Midwest Blueberry Production Guide
- Brambles- Production, Management and Marketing
- Midwest Small Fruit Pest Management Handbook
- Midwest Home Fruit Production Guide
- Controlling Diseases and Insects in Home Fruit Plantings
- Midwest Commercial Small Fruit and Grape Spray Guide
- Midwest Commercial Tree Fruit Spray Guide
- The web page also has a great deal of information on grape disease management

Ohio Produce Safety

from Lindsey Hoover, Food Safety Program Coordinator, Department of Horticulture and Crop Sciences

Upcoming good agricultural practices (GAPs) classes are scheduled for Muskingum and Carroll counties on Wednesday, April 30.

Upcoming classes plan for the month of May include: Montgomery, Ashtabula, Geauga and Hamilton county. Ten people must pre-register in order to proceed with the classes, so check out producesafety.osu.edu to register and save the date!



What's New for Weed Control in Berry Crops

From Doug Doohan, Professor

Department of Horticulture and Crop Science

Weed control in berry crops requires a program of cultural practices and herbicide applications that should start before a plant is placed in the ground. Once established, maintaining weed control will require sequential herbicide applications in spring, summer and fall to control the annual cycles of spring, summer and fall annuals, as well as perennials establishing from seed. Here I summarize some recent product registrations that will be part of a complete herbicide program. None of the herbicides mentioned below will control all weeds, and must be part of a program. Generally speaking, each will be tank-mixed with one or more broad-spectrum burn-down and/ or residual herbicides.

Brambles & Blueberries

Matrix: For improved control of annual and perennial broadleaf weeds and some grasses apply Matrix SG at 4 oz/acre. Matrix controls weeds when applied preemergence, or postemergence. Postemergence applications require addition of a non-ionic surfactant. Matrix can be applied tank-mixed with other herbicides labeled on the crop. Matrix tank-mixed with glyphosate and either Karmex or Princep has provided improved control of perennial weeds in trials conducted at OSU.

In particular, Matrix has provided good suppression of ground ivy, a species that is often a problem in brambles. Applications must be directed to avoid contact with crop stems and foliage. New growth that is sprayed with Matrix will suffer temporary crop injury. 21 day PHI.

Callisto: For improved control of annual and perennial broadleaf weeds apply Callisto at 6 oz/Acre. Include a crop oil concentrate for postemergence applications. Tankmixes with Princep or Karmex may improve perennial weed control. Brambles are less tolerant of Callisto than blueberry and some temporary chlorosis of new growth will occur within several days of application. Callisto should not be applied after the onset of bloom, or illegal residues may occur.

Sandea: The great strength of Sandea is post-emergence control of yellow nutsedge. In addition to nutsedge, post applications can be expected to control ragweed and pigweed. However, emerged lambsquarters and some other broadleaf weeds will not be controlled. Non-ionic surfactant must be used with post sprays. For nutsedge, $\frac{3}{4}$ oz/acre is recommended. Care should be taken to not spray primocanes or foliage in general. For blueberry less than 5 years established do not use more than $\frac{2}{3}$ oz/acre, and do not apply if established for less than 12 months. Some varieties may be sensitive (eg. Elliott). Generally, temporary chlorosis should be expected if foliage is sprayed. 45 day PHI.

Blueberries Only

Dual Magnum: For control of grasses and broadleaf weeds, apply pre-emergence at $\frac{2}{3}$ to $1 \frac{1}{3}$ pints/acre in a band on each side of the row. Provides excellent annual grass control and suppresses yellow nutsedge, but will not control emerged weeds. 28 day PHI.

Secret Lives of Good Garden Bugs and Buckeye Lady Beetle Blitz Volunteer Round-up



8AM – 4PM at three locations across Ohio!

The content presented at all three locations will be the same

- May 14th, 2014 at OARDC's Fisher Auditorium, 1680 Madison Ave, Wooster, OH
- May 15th, 2014 at the Rocky River Nature Center, 24000 Valley Parkway, North Olmsted, OH
- May 16th, 2014 at The Civic Garden Center, 2715 Reading Road, Cincinnati, OH

Learn about good garden bugs:

Learn about the diversity of predators, parasitoids, and pollinators that inhabit your garden. We will discuss foraging strategies, courtship, parental care of young, shelter and nest building, and much more! Presentations feature excerpts, illustrations and photos from the new book "Good Garden Bugs" written by Dr. Mary Gardiner due out in spring, 2015.

Become part of our laboratory by participating in two summer research projects:

Buckeye Lady Beetle Blitz: Participants can elect to participate in our 2014 Buckeye Lady Beetle Blitz Survey. You will receive a toolkit and all the training needed to survey your home garden for lady beetles this summer.

Bee Healthy Landscapes: Is your landscape supporting adequate pollination services? Find out by participating in a new research project. Volunteers will receive vegetable plant starts, a sampling toolkit and all the training needed to measure the impact bees are having on crop production in your garden.

PRE-REGISTRATION IS REQUESTED.

Register by May 1st and pay \$35. Registration after May 1st is \$40. Register early to guarantee a position with our citizen science projects!

Registration includes a light breakfast, boxed lunch, handouts and other materials

Registration: Find the form on our website ladybeetles.osu.edu and send it by email to Chelsea Smith: smith.7231@osu.edu or US mail*:

Chelsea Smith
1680 Madison Ave
Thorne Hall
Wooster, OH 44691

*Any registration forms received after May 1st will not be eligible for the early-bird registration fee

Checks should be written to "Ohio State University"

We will have BLBB T-shirts for sale, men's and women's styles for \$12 each

For more information please contact: Chelsea Smith (smith.7231@osu.edu)

Thank you to our local organizers for their help with this event!

Julie Crook (Cincinnati) crook.46@osu.edu, 513-946-8998

Jacqueline Kowalski (Cleveland) kowalski.124@osu.edu 216-429-8200



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COLLEGE OF FOOD, AGRICULTURAL,
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Keith L. Smith, Associate Vice President for Agricultural Administration; Associate Dean, College of Food, Agricultural, and Environmental Sciences; Director, Ohio State University Extension; and Glad Chair in Extension Education and Leadership.

Steve Slack, Ph.D., Associate Vice President for Agricultural Administration and Director, OARDC

For Deaf and Hard of Hearing, please contact Ohio State University Extension or OARDC using your preferred communication (e-mail, relay services, or video relay services). Phone 1-800-750-0750 between 9 a.m. and 5 p.m. EST Monday through Friday. Inform the operator to dial 814-292-8181 (Extension) or 330-263-3700 (OARDC).

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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