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Muck crops research station update-Robert (Bob) Filbrun, Assistant Manager, OARDC Muck Crops Research Station, Willard, Ohio

Lots of wind and rain in the Willard and Celeryville muck crops area of Ohio the past week.

Field Conditions: continue to be wet after 1.3” of rainfall between April 3rd & 4th.

Soil Temperatures: continue to hover between 42-46 degrees F at 2-4” of soil depth

Current Field Activity: wet conditions continue to limit activity to isolated field tile work

Lingering Effects of Winter: damage from cold temperatures, high winds and high moisture levels have had a significant effect on our honey bees and overwintered Russian Dandelion (Taraxacum kok-saghyz).

- Muck Crops ARS lost both of its honey bee colonies and initial reports by local beekeepers indicate colony losses in excess of 50% with replacement packages in extremely short supply.
• Overwintered field plantings of Russian Dandelion have experienced significant frost heaving and moderate loss due to wet soil conditions.

• Erosion of muck soil has been a concern during periods of excessive winds and limited snow cover. Irrigation ditch banks reveal a fresh blanket of muck now with the disappearance of snow.

Greenhouse Production: greenhouse plug production has begun with approximately 750 trays of Russian Dandelion and 42 trays of Bell Peppers.

Muck Wind Erosion in Willard  Overwintered Honey Bee Colony Loss
(Photos by Bob Filbrun)

Muck crops update- Ken Holthouse, General Manager /Sales, D.R. Walcher Farms, North Fairfield, Ohio

Pepper plants were soaking up the sunshine in the Willard, Ohio area today (April 8) after almost a week of rainy and cloudy growing conditions. The use of a germination chamber made for a very nice stand in pepper plug plants.
A nice stand of pepper plants at D.R. Walcher Farms
(Photo by Ken Holthouse)

Southeast Ohio Update- Mark Landefeld, OSU Extension Educator, Monroe County

(March 29 update) Eastern Ohio Amish producers have ground turned over, but they are waiting on warmer temperatures to go to the fields. Rain turned into snow Saturday night (3/22) and Sunday morning (3/23) accumulating about one inch, but melted quickly when the overcast skies cleared and sun came through.

Plowing has been done in Monroe County
(Photo by Mark Landefeld)
The rain began to fall last Thursday April 3 and continued on and off till Tuesday April 7 with many areas receiving anywhere from 3 to 7 inches of total rainfall. Needless to say this rain event has slowed field work however greenhouse and high tunnel work continues in full force. High tunnel tomatoes, lettuce, greens continue to be planted in high tunnels this week and seeding of all vegetable and melon transplants continues. There have been some issues with cucumber transplant elongation due to low light levels and cloudy growing conditions and/or high day temps and low night temps. Lime sulfur applications continued to brambles, blueberries and grapes the past week. Row covers continued to be removed from plasticulture strawberry throughout the state. New rotatable trellis systems on blackberry are being installed in the Circleville area as weather permits. Apples were at full green tip last Thursday April 2 in Scioto County with spray applications, pruning and grading and packing apples continuing. Fireblight infections from last season have resulted in tree death on some cultivars. Mummified fruit left on infected trees seems to have spread the bacterium to other parts of the tree (see picture) reiterating the importance of sanitation in the orchard. Deer are damaging newly emerged fruit buds on unfenced apple orchards in Lucasville Ohio however fenced orchards have no deer damage.
Apples at green tip in Scioto County
(Photo by Brad Bergefurud)

Deer damage to apple fruit buds (Scioto County)
(Photo by Brad Bergefurud)
Mummified fruit can inoculum for Fireblight on apple
(Photo by Brad Bergefurrd)

Poly deer fence installed around 40 acre orchard
(Photo by Brad Bergefurrd)
Cucumber transplant stretching
(Photo by Scott Witten)

Hops Research Update (Wooster site) - Chelsea Smith, Research Assistant, OSU Department of Entomology

Wooster Hop yard update: Hops bines are at 94% emergence with the tallest bine in the field at 6cm, but they are growing fast!

OSU South Centers Update- Thom Harker, Research Assistant and Ryan Slaughter, Research Assistant, OSU South Centers, Piketon

Grape pruning continues at the Piketon
Fulton OSU Extension to Offer Low Tunnel/High Tunnel Workshop and Farm Tour - Eric A. Richer, Extension Educator, Fulton County

The Fulton County OSU Extension invites area producers to participate in the Low Tunnel/High Tunnel Workshop and Farm Tour on April 24th, 2014 from 9:30 am to 3:00 pm at Heritage Inn in Archbold, OH. This program is geared towards new low tunnel/high tunnel producers or for those who wish to “brush up” on the basics of integrating tunnel systems into their fruit or vegetable operations. The workshop will offer three instructional sessions with the theme of Growing Crops Under Covers: 1) Why It Works, Why It Fails, 2) Linking Under-Cover Crops to Profitable Markets and 3) Tunnels of Many Types and Uses. Thanks to a Warner Grant for Sustainable Agriculture, OSUE Fulton in collaboration with Doug and Valerie Kinsman will complete the day with case studies of microclimate management and a tour of the Kinsman Farm. Speakers for the day will include Matt Kleinhenz, the OSUE Vegetable Specialist, growers Doug and Valerie Kinsman and Eric Richer, Extension Educator, Fulton County. The day will include many small round table discussions, a light lunch and full lunch at Heritage Inn. Presentation materials and a select grower publication will be included in the registration. Cost of the event is $30 for the first person from the farm and $20 for each person thereafter. Registration form can be found at www.fulton.osu.edu or by calling 419-337-9210. Registration deadline is April 17th.
OHIO STATE UNIVERSITY EXTENSION

LOW TUNNEL/HIGH TUNNEL
Workshop and On-Farm Tour

THURSDAY, APRIL 24, 2014 ● 9:30 A.M.-3:00 P.M.
Check in at 8:30 am with light breakfast

Heritage Inn
At Sauder Village
22611 State Route 2
Archbold, OH 43502

Program
- Growing Crops Under Covers:
  • Why It Works, Why It Fails
  • Linking to Profitable Markets
  • Tunnels of Many Types and Their Use
  • Case Studies of Microclimate Mgmt from the Kinsman Farm
- Farm Tour of Kinsman Farm
- Multiple “Round Table” Discussions

Speakers
- Matt Kleinhenz, Ohio State University Extension Vegetable Specialist
- Valerie & Doug Kinsman, Growers
- Eric Richer, OSU Extension, Fulton County

Provided for the day:
- Presentation materials
- A select grower publication per farm
- Light breakfast, full lunch

Cost:
- $30 per person for 1st person from one farm, $20 for each person thereafter.

Pre-registration is required. $30 per person for 1st from one farm; $20 for each registration thereafter. Registration deadline is April 17, 2014. Includes light breakfast, lunch, materials, and one publication per farm. Make checks payable to Ohio State University Extension. Mail to OSU Extension, Fulton County, 8770 State Route 108, Suite A, Wauseon, OH 43567. Please detach and return this form with payment. Thank you.

Name(s): ____________________________________________
Address: ____________________________________________
Phone: ____________________________________________ E-mail: ___________________________

Low Tunnel/High Tunnel Workshop and On-Farm Tour
High Tunnel Farm Tour & Training Opportunity – Brad Bergefurd, Extension Educator, Scioto County and Piketon Research & Extension Center

You are cordially invited to apply for the upcoming High Tunnel Training…OSU South Centers will be offering a High Tunnel Training on April 28th, 29th, and 30th. This training will be offered to Ohio educators and farmers and will be hosted by Brad Bergefurd and the OSU EIPM program.

This training has a three day agenda. One can participate in two or all of the sessions.

April 28th, Day 1– High Tunnel Facility Farm Tour
The tour will consist of four locations. First, we will begin at The Ohio State University, Piketon Research & Extension Center in Piketon, Ohio. Next the group will visit Weber Farms in Jackson. After the Weber farm we will visit the Zimmerman Farms in Hillsboro and the Rainsboro Produce in Rainsboro. We will have a working lunch at 12 noon at Zimmerman Farms (this will be a boxed lunch).

The topic for lunch will be high tunnel tomato training and pruning demonstration.

April 29th, Day 2– Basic High Tunnel Training
Topics include: high tunnel basic techniques on Integrated Pest Management in high tunnels, crop physiology and nutritional aspects of high tunnel production, petiole sap analysis demonstration, high tunnel greens and berry production, & high tunnel basics

April 30th, Day 3– Advanced High Tunnel Training
Topics include: advance techniques on Integrated Pest Management in high tunnels, crop physiology and nutritional aspects of high tunnel production, tomato grafting demonstration & exercise, high tunnel greens and berry production, irrigation and fertigation

Cost to attend is $75.00 for two days, and $100.00 for all three days. Space for participating in this training is very limited. An OSU committee will review each application and notify each applicant in an email by April 22nd, indicating whether or not you have been accepted for the training.

For full details and to apply go to [http://go.osu.edu/hightunnel](http://go.osu.edu/hightunnel) The deadline to apply is April 18, 2014.
High Tunnel Training
OSU South Centers
Hosted by Brad Bergefur & OSU EIPM

April 28 — 30, 2014

April 28th, Day 1—High Tunnel Facility Tour
The tour will consist of four locations. First, we will begin at The Ohio State University, Piketon Research & Extension Center in Piketon, Ohio. Next the group will visit Weber Farms in Jackson. After the Weber farm we will visit the Zimmerman Farms in Hillsboro and the Rainsboro Produce in Rainsboro. We will have a working lunch at 12 noon at Zimmerman Farms (this will be a boxed lunch). The topic for lunch will be high tunnel tomato training and pruning demonstration.

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Topics include: advance techniques on Integrated Pest Management in high tunnels, crop physiology and nutritional aspects of high tunnel production, tomato grafting demonstration & exercise, high tunnel greens and berry production, irrigation and fertigation

3-Day Training
Monday, Tuesday, & Wednesday

1864 Shyville Rd.
Piketon, Ohio 45656

Application Deadline to apply is Friday, April 18, 2014

To apply go to:
http://osu.zoom.us/webinar/register

For more information contact:
Chanessa McGlothlin
mcglothlin.4@osu.edu
740.289.2071 ext. 132

http://go.osu.edu/high tunnel2014

Note: Space for participating in this training is limited. An OSU committee will review each application and notify each applicant in an email by April 22nd, indicating whether or not they have been accepted for the training.

The Ohio State University
College of Food, Agricultural, and Environmental Sciences

USDA NIFA
United States Department of Agriculture
National Institute of Food and Agriculture

CFAES provides research and related educational programs to clientele on a non-discriminatory basis. For more information: http://cfaes.osu.edu/civilrights.
Secret Lives of Good Garden Bugs and Buckeye Lady Beetle Blitz - Chelsea Smith Research Assistant, Julie Crook Horticulture Program Assistant Hamilton County, and Jacqueline Kowalski, Extension Educator, Cuyahoga County

Learn about good garden bugs and become a part of our laboratory…Come to one of three locations to attend the *Secret Lives of Good Garden Bugs and Buckeye Lady Beetle Blitz Volunteer Round-up*

- 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 the diversity of predators, parasitoids, pollinators, foraging strategies, courtship, parental care of young, shelter and nest building, adequate pollination on your landscape, and much more!

See the attached flyer for further information and to learn how to participate in the 2014 Buckeye Beetle Blitz. Pre-registration is required. Go to ladybeetles.osu.edu to register. For further information regarding the workshops please contact Chelsea Smith smith.7231@osu.edu
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, parasites, 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 Gardner due out in spring, 2015.

Become part of our laboratory by participating in two summer research projects:
- Buckeye Lady Beetles 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 btlb.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 BLBE 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, 513-846-8998
Jacqueline Kowalski (Cleveland) kowalski.124@osu.edu 216- 429-8200

The Ohio State University
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER
OHIO STATE UNIVERSITY EXTENSION
Minimize Diseases in Vegetable Seedlings in the Greenhouse- Sally Miller, The Ohio State University – OARDC, Department of Plant Pathology

The greenhouse environment can be highly conducive to the build-up and spread of plant pathogens. Fungi, water molds, viruses and bacteria may become established on young plants, sometimes without noticeable symptoms. Damping-off pathogens, like Pythium and Rhizoctonia, may kill some seedlings but leave others with damaged root systems that will prevent them from reaching their full potential in the field.

Damping-off in cabbage seedlings  Bacterial spot in tomato seedlings

Plant pathogenic bacteria present on only a very small number of seeds (e.g. 1 in 10,000) can become a significant threat in some greenhouses. Viruses can be transmitted via insect vectors: Tomato spotted wilt virus, transmitted by thrips, can be a serious problem in Ohio. Other viruses, particularly Tobacco mosaic virus (TMV) and Tomato mosaic virus (ToMV), are very easily spread from plant to plant via infected sap. The following practices will reduce the threat of diseases becoming established in seedlings:

1) Select resistant varieties – no vegetable varieties are resistant to all diseases, but varieties can be found with resistance to persistent problems such as bacterial spot in pepper, ToMV and/or TMV in tomato, pepper and eggplant, and black rot and Fusarium yellows in cabbage and broccoli.

2) Use “clean” seed that has either been tested and shown not to harbor bacterial diseases, or treated with a sanitizing procedure such as soaking in dilute chlorine bleach or hot water. Cabbage seed hot-water treated to prevent black rot is available and highly recommended.

3) Use new or sanitized plug trays or flats and pathogen-free mixes – many pathogens can survive in plant debris attached to old flats, in soil or in re-cycled planting mix.
4) Sanitize equipment, install solid flooring, raise trays from the floor and cover vents with insect-proof netting.

5) Limit movement of personnel and equipment between greenhouses – workers should wash hands thoroughly before entering a greenhouse, and either clean and sanitize boots before entering or use footwear dedicated to that greenhouse. Clothing must also be clean to avoid spreading pathogens or insect pests from greenhouse to greenhouse. No one should be permitted to smoke or use tobacco in the greenhouse due to the risk of transmitting TMV to seedlings from hands contaminated by TMV in tobacco products. Dipping hands in milk inactivates the virus.

6) Clean benches and greenhouse structures thoroughly after the crop – first use soap and water, rinse, then apply a disinfectant to destroy any remaining pathogens or pests.

7) Prohibit the planting of exotic or experimental varieties, or plants from saved seed, in the same greenhouse with commercial seedlings unless all seeds are treated to kill bacteria and viruses.

8) Scout often – it is important to look in the canopy once seedlings start to crowd each other for spots, wilting, or other symptoms, but handle plants as little as possible. Get a diagnosis if in doubt. Samples can be sent or brought in person to the OSU Vegetable Pathology Laboratory in Wooster for diagnosis – see http://www.oardc.ohio-state.edu/sallymiller/t08_pageview3/Diagnostics_Services.htm for instructions. Depending on the disease, entire flats, as well as flats of healthy seedlings surrounding the flat with diseased seedlings, may need to be destroyed.

9) Be a dry grower – many disease problems are brought on by overwatering. Diseases are promoted by wet conditions, so relative humidity should be low, air circulation should be high and plants should be watered only enough to ensure growth and minimize the risk of drought stress.

10) Use pesticides as needed. Several products effective against pathogens and pests are available and permitted under greenhouse conditions. See the Midwest Vegetable Production Guide for lists of approved products http://mwveguide.org/.

Being early March, it is time to put out the annual corn flea beetle and Stewart’s leaf blight prediction based on the average temperatures the past three months (Dec, Jan, and Feb.). Stewart's bacterial disease is dependent on the level of bacteria-carrying flea beetle survival over the winter. Because higher populations of the flea beetle survive during mild winters than during cold winters, winter temperatures have been used to predict the risk of Stewart's disease. Compared to recent years, and even the past few decades, the past three months have definitely been on the cold side.

The ‘flea beetle index’ is calculated as the sum of the average temperatures of December, January and February. This winter we find that all areas of the state have indexes less than 90 suggesting that the risk for the insect and the disease is negligible. Only the two most southern locations (Piketon and Jackson) even reach an index over 80, coming in at 84.8 and 88.7, respectively. The other locations and the corresponding indexes are: Wooster (OARDC) 73.8, Ashtabula 67.5, Hoytville (Northwest Research Station) 63.2, and South Charleston (Western Research Station) 74.1. Obviously, this was a very cold winter!

As always, we would recommend that growers still scout for flea beetles, especially if they have planted a hybrid that is susceptible to Stewart's disease. It is always better to be on the cautious side. However, the realization is that most field corn planted these days, especially all transgenic hybrids, already come with an insecticide seed treatment applied. Thus, it is mostly non-transgenic corn that might need to be considered and watched more closely. Also, field corn hybrids tend to be more resistant to wilt than sweet corn. Sweet corn varieties are much more susceptible to wilt in the first leaf stage. A few are resistant by the second leaf stage and many are resistant in the third and fourth leaf stage. Consult your seed supplier for information on resistant varieties and hybrids.

USDA Officially Announces Sign-Up Date for Farmer and Rancher Disaster Assistance Programs- FSA News Releases for USDA Farm Service Agency

Sign-Up Begins April 15 for Livestock, Honeybee, Fruit Grower Programs

WASHINGTON, April 7, 2014 – The U.S. Department of Agriculture (USDA) announced today that farmers and ranchers can sign-up for disaster assistance programs,
reestablished and strengthened by the 2014 Farm Bill, beginning Tuesday, April 15, 2014. Quick implementation of the programs has been a top priority for USDA.

"These programs will provide long-awaited disaster relief for many livestock producers who have endured significant financial hardship from weather-related disasters while the programs were expired and waiting Congressional action," said Agriculture Secretary Tom Vilsack. "President Obama and I prioritized the implementation of these disaster assistance programs now that the Farm Bill has restored and strengthened them."

The Livestock Indemnity Program (LIP) and the Livestock Forage Disaster Program (LFP) will provide payments to eligible producers for livestock deaths and grazing losses that have occurred since the expiration of the livestock disaster assistance programs in 2011, and including calendar years 2012, 2013, and 2014.

Enrollment also begins on April 15 for producers with losses covered by the Emergency Assistance for Livestock, Honeybees, and Farm-Raised Fish Program (ELAP) and the Tree Assistance Program (TAP).

LIP provides compensation to eligible livestock producers that have suffered livestock death losses in excess of normal mortality due to adverse weather. Eligible livestock includes beef cattle, dairy cattle, bison, poultry, sheep, swine, horses, and other livestock as determined by the Secretary.

LFP provides compensation to eligible livestock producers that have suffered grazing losses due to drought or fire on publicly managed land. An eligible livestock producer must own, cash lease, or be a contract grower of eligible livestock during the 60 calendar days before the beginning date of the qualifying drought or fire in a county that is rated by the U.S. Drought Monitor as D2, D3, or D4.

ELAP provides emergency assistance to eligible producers of livestock, honeybees and farm-raised fish that have losses due to disease, adverse weather, or other conditions, such as blizzards and wildfires, as determined by the Secretary of Agriculture.

TAP provides financial assistance to qualifying orchardists and nursery tree growers to replant or rehabilitate eligible trees, bushes and vines damaged by natural disasters.

USDA Farm Service Agency (FSA) employees have worked exceptionally hard over the past two months to ensure eligible farmers and ranchers would be able to enroll to receive disaster relief on April 15.

To expedite applications, all producers who experienced losses are encouraged to collect records documenting these losses in preparation for the enrollment in these disaster assistance programs. Information on the types of records necessary can be
provided by local FSA county offices. Producers also are encouraged to contact their county office ahead of time to schedule an appointment.

For more information, producers may review the 2014 Farm Bill Fact Sheet, ELAP and TAP fact sheets online, or visit any local FSA office or USDA Service Center.

USDA is an equal opportunity provider and employer. To file a complaint of discrimination, write to USDA, Assistant Secretary for Civil Rights, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, S.W., Stop 9410, Washington, DC 20250-9410, or call toll-free at (866) 632-9992 (English) or (800) 877-8339 (TDD) or (866) 377-8642 (English Federal-relay) or (800) 845-6136 (Spanish Federal-relay).

Disclaimer Information presented above and where trade names are used, they are supplied with the understanding that no discrimination is intended and no endorsement by Ohio State University Extension is implied. Although every attempt is made to produce information that is complete, timely, and accurate, the pesticide user bears responsibility of consulting the pesticide label and adhering to those directions. Ohio State University Extension embraces human diversity and is committed to ensuring that all research and related educational programs are available to clientele on a nondiscriminatory basis without regard to race, color, religion, sex, age, national origin, sexual orientation, gender identity or expression, disability, or veteran status. This statement is in accordance with United States Civil Rights Laws and the USDA. Keith L. Smith, Associate Vice President for Agricultural Administration; Associate Dean, College of Food, Agricultural, and Environmental Sciences; Director, Ohio State University Extension and Gist Chair in Extension Education and Leadership. TDD No. 800-589-8292 (Ohio only) or 614-292-1868.