

# **VegNet** *The Vegetable and Fruit Crops Teams Newsletter*

<http://vegnet.osu.edu>

Editor: Brad Bergefurd

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## **Ohio Vegetable Industry Loses a Great Friend & Supporter**

Many knew Ron Guess of Groco Family Farms in Jamestown, Ohio. Ron was a great supporter of Ohio State University Vegetable research and dedicated many years serving on Ohio Produce Growers and Marketers Association Committees and dedicated countless hours to the Ohio Vegetable and Small Fruit Research and Development Program and served on the Board. Ron and I spent MANY hours walking his vegetable fields and he was one of the hardest working people I have ever met. We will all miss Ron greatly.

## **Ronald P. Guess**

March 23, 1958 - April 9, 2014

Ronald P. Guess, 56, of Jamestown, passed away Wednesday, April 9, 2014, at his residence. He was born March 23, 1958, in Xenia, Ohio, the son of Mark P. and Connie J. Milburn Guess. He was a member of St. Brigid Church, a 1976 graduate of Greeneview High School, and attended the Wooster Branch of The Ohio State University. He was a former member of the Eager Beavers 4-H Club and participated in The Ohio State University LEAD Class. He was a lifelong Greene County farmer and worked with his family on Groco Family Farms. He started "Ron's Pride", a large vegetable growing operation, and was an innovator of vegetable harvest equipment. He is survived by his wife, Tammy (Adrian) Guess, his parents, Mark and Connie Guess, Jamestown, mother-in-law, June Potter, Xenia, father-in-law, Ralph Adrian, Xenia, two sons and daughters-in-law, Brent (Laura) Guess, and Philip (Kristen) Guess, three grandchildren, Cooper Guess, Kenley Guess, and Tucker Guess, all of Jamestown, two step-daughters, Amber Dillon, Maryland, and Haley Dillon, Jamestown, three sisters and brothers-in-law, Catherine (Rock) Persinger, Jamestown, Martha (Mark) Rector, Jamestown, and Teresa (Steve) Moore, Lees Creek, by several nieces and nephews, and by many close friends. Ron will be greatly missed by all who knew and loved him. Services were held Saturday, April 12, at Neeld Funeral Home, 1276 N. Detroit St., Xenia, with Rev. John Krumm officiating. Burial was at the Woodlawn Cemetery, Bowersville. Contributions may be made to the VITAS Hospice, 3055 Kettering Blvd, Suite 320, Dayton, OH, 45439, in his memory. Condolences may be made to the family at [www.NeeldFuneralHome.com](http://www.NeeldFuneralHome.com).

<http://www.neeldfuneralhome.com/sitemaker/sites/NeeldF1/obit.cgi?user=1283401Guess#>



**Ron Guess Leading a National Agriculture Extension Agents Tour of Groco farms fields and packing shed in July 2006**  
 Photos by Brad Bergefurd



**Ron Explaining His Cucumber Field Harvest Operations using one of his self propelled Harvest Aids (in background) he designed and built**  
 Photos by Brad Bergefurd

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**Muck crops research station update-Robert (Bob) Filbrun, Manager, OSU/OARDC  
Muck Crops Agricultural Research Station, Willard, Ohio**

Celeryville, Ohio Update – 4/14/2014

With the windy and warmer conditions last week, local muck soils began to dry out. With temperatures near 80 degrees on Sunday – 4/13, the soil temperatures were on the rise with average temps in the mid-upper 50s within the upper 2-4” of soil. After this brief glimpse of spring, Monday’s wet and windy conditions gave way to forecasts of 1-3” of snowfall for Tuesday morning. Once again, local muckers retreated into a holding posture. Other than “jetting” and repair of field tile, field work has yet to commence.



**Tile Jetting in Progress**

Photos by Robert (Bob) Filbrun





**Drain tile repair**

Photo by Robert (Bob) Filbrun

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### **Report from Cuyahoga County- Jacqueline Kowalski, Extension Educator, Agriculture and Natural Resources, Cuyahoga County Extension**

Land preparation continued as we had a few warm and windy days over the weekend. Many growers direct seeded or transplanted their specialty greens. Work has been slowed down by the two inches of snow we received last night.



**Snow on garlic in Cleveland April 15**

Photo by Jacqueline Kowalski

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### **North Central Report (April 8 report)- Tim Malinich, Extension Educator, Erie County**

Buds continue to develop slowly. Apple looks just short of silver tip. Recent heavy rain left some fields flooded, but most of the areas will be drained within the day. Cut into blueberry buds at one farm this week. Though the bud scales looked a bit desiccated every dissected bud looked viable. Growers are getting ready for fertilizer and pesticide

applications—calculating quantities and ordering product. Many growers are using soil and tissue analysis (last year's) to make fertilizer decisions. The amount of freeze damage is also being factored in, as crops with significant losses due to the cold weather would have reduced nutrient requirements for the coming year.

## Weed Control

Applicators should also think about pre-emergent herbicide choices for the coming year. If there has been a persistent weed problem then take time to correctly identify the weed. Applying a product that will not affect the target weed is an all too common problem. Also, incorrect application time, choice of pre emergent, application rate, or resistant weed could all play a part in poor weed control. Changing any of the previously listed parameters could improve the efficacy of the pre emergent.



**Recent heavy rains left some fields flooded, but these should drain within a day. Blueberry buds looked a bit desiccated, but every dissected bud was viable.** Photos by Tim Malinich.

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**Regional update from North central/northwest Ohio- Allen M. Gahler, Extension Educator, Ag and Natural Resources, OSU Extension Sandusky County and**

Northwest Ohio Update Week of April 7 – 11, 2014

Growers are gearing up for the spring season with continued seeding of tomatoes, cabbage and peppers in the greenhouse with the hope of warmer weather on the horizon. Concerning field work very little spring tillage work has been completed at this point due to cold wet soil conditions. There are a number of growers who had hoped to have early sweet corn plantings in by now but cool soil temperatures have delayed planting. There has been some fertilizer broadcast applied on a limited basis. A local CSA grower was able to direct seed potatoes, spinach, and onions last weekend, and has several other crops growing in high tunnels.

Fruit growers are finishing apple pruning, and continuing with copper sulfate and oil sprays, with green tip still a ways off. Several growers that dealt with scab problems last year are making urea applications to the ground and mowing orchards now as preventative practices. Cold damage reports on peaches, blackberries, and wine grapes are significant, with little optimism for any type of harvest.



**Ottawa county apple trees with a fresh 2 inches of snow on April 15!**

Photo by Allen Gahler.



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**Vegetable Crops/North Central Ag. Research Station update-Matthew G Hofelich, Manager, OSU/OARDC North Central Agricultural Research Station, Fremont, Ohio**



**Tomato Breeding and Cabbage Research transplants have been seeded at the OARDC/North Central Agricultural Research Station in Fremont, Ohio**  
Photos by Allen Gahler



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## **Southern Ohio Vegetable and Fruit Update- Brad Bergefurd, OSU Extension Educator, OSU Extension Scioto County and OSU South Centers**

Despite some areas receiving 3 to 5 inches of rain early last week, field operations resumed this past Friday through Sunday (April 11-13) with fertilizer and lime being spread, anhydrous being applied, moldboard and chisel plowing, ground being worked, beds being formed, plastic mulched being laid, onions and cabbage being transplanted and peas & sweet corn being planted. Greenhouse and high tunnel work continues in full force with seeding of melons and vegetable transplants and in ground planting of high tunnel tomatoes, lettuce and greens. The last of the lime sulfur applications have been made to brambles, blueberries and grapes this past week with most at full bud swell. Row covers continued to be removed from plasticulture strawberry throughout the state this past weekend where temperatures exceeded 80 degrees. Plasticulture strawberries are at 10 to 15% bloom. Row covers are being reapplied to strawberry and to cabbage fields today for freeze and frost protection (April 15) with temperatures in the low 20's and high teens being forecasted. Sweet corn planted under plastic the last week of March has emerged and is showing first leaf, bare ground sweet corn planted on April 1<sup>st</sup> is at spike stage. Some areas received a dusting to a little over 1 inch of snow early this morning (April 15).



**Fertilizer and lime were being applied between rains this past week throughout southern Ohio and the Scioto River valley** Photos by Brad Bergefurd



**Field work was slowed April 7 through 11 with areas receiving 3 to 5 inches of rain**  
Photos by Brad Bergefurd



**Wood fired boilers and propane furnaces are keeping high tunnels warm tonight (April 15) with forecast lows into the high teens and low 20's. Photos by Brad Bergefurd**



**Row covers were applied to cabbage fields in Washington county April 15 with a forecast low of 21 degrees on the 16th. Photo by Tom Witten**



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**Hops research update (Wooster site) April 9 report: Chelsea Smith, Research Assistant, OSU Department of Entomology**

Wooster Hop Yard: 98% emergence as of Monday (4/14). Last night everything froze! I'll be heading out to the hop yard this afternoon (4/16) to inspect the bines and get some pictures.



**Photo taken on April 9<sup>th</sup> before the freeze.**  
Photo by Chelsea Smith

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

Pruning of grape research trials finished up late last week. Spring cleanup of strawberry research trials also finished up late last week. Strawberry row covers were reapplied today April 15 due to forecast lows this evening and tomorrow morning in the low 20's to high teens with an average of 4 to 6 blooms showing per plant . Row covers will be removed once temperatures moderate above freezing on Thursday or Friday. The first flush of bull shoots and hops bines were removed this week. Preemergent herbicides were applied to grape, blueberry and bramble crops this week.



**Row covers being applied for freeze protection this afternoon to strawberries in bloom (April 15)**  
 Photos by Thom Harker



**Bines on 4/8**  
 Photos by Thom Harker



**Hops bines on 4/15**



**Cutting Hops Bines for Chef market testing**

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## **Critical Temperatures for Common Fruit Crops- Gary Gao, Ph.D., Extension Specialist for Small Fruit Crops and Associate Professor, OSU South Centers**

Many parts in Ohio received snow the morning of April 15, 2014. There was a light dusting in Central Ohio, while about an inch of snow fell in parts of northeast Ohio. Air temperatures are projected to get down to 27F in Cincinnati, 25F in Columbus, 23F in Marietta, 25F in Cleveland, 20F in Youngstown, and 24F in Toledo tonight. Fruit growers may have questions about critical temperatures for different fruit crops.

I gathered a few links on critical temperatures for various fruit crops from NC State, Michigan State, and Washington State. These links should give you a good idea about what to expect. Growers need to keep in mind, that many factors should be taken into consideration, when reading these articles. Some of the possible factors are: fruit types and cultivars, local temperatures, developmental stages of fruit crops, and fruit load last year. These could all make a difference.

Assessing Cold Injuries in Blackberries and Raspberries (NC

State): <http://www.ces.ncsu.edu/disaster/freeze/BlackberryRaspberryAssessment.pdf>

Critical Temperatures in Blackberries (NC

State): <http://teamrubus.blogspot.com/2012/04/cold-weather-and-blackberry-and.html>

Frost Control in Blueberries

(MSU): <http://blueberries.msu.edu/uploads/files/Using%20Sprinklers%20to%20Protect%20Blueberries%20from%20Spring%20Freezes.pdf>

Critical Temperatures in Blueberries

(MSU): [http://blueberries.msu.edu/growing\\_blueberries/spring\\_critical\\_temperatures](http://blueberries.msu.edu/growing_blueberries/spring_critical_temperatures)

Critical Temperatures in Grapes (WSU): <http://wine.wsu.edu/research-extension/weather/cold-hardiness/>

Critical Temperatures in Fruit Trees

(MSU): [http://www.hrt.msu.edu/faculty/langg/Fruit\\_Bud\\_Hardiness.html](http://www.hrt.msu.edu/faculty/langg/Fruit_Bud_Hardiness.html)



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## **Crop rotation-An important IPM strategy for growers- Jacqueline Kowalski, Extension Educator, Agriculture and Natural Resources, Cuyahoga County Extension**

Crop rotation is one of the strategies that conventional and organic vegetable growers use to avoid disease and pest problems, achieve better weed control and increase soil quality. Although the benefits of crop rotation are well documented, implementing the practice is easier said than done. This can be very problematic for small, diversified farmers who are planting a number of different species and often several different varieties within those species. Adding to the challenge, many of these crops are succession planted to achieve continuous supply and/or maximize harvest. A third factor can be varying soil types within a field which make growing certain crops more profitable than others.

At minimum, crop rotation plans such include 1) never follow the same crop by itself or any member in the same family in the same field (or bed, in the case of small farms) and 2) a winter cover crop should be planted after annual vegetables every year, if possible. Planning and recordkeeping are critical to developing an effective crop rotation plan. It can be helpful to have a blank farm map in which you can fill in crops grown in each location and keep with other farm records.

Rotation is important to avoiding soil-borne diseases or diseases that overwinter in plant-debris. It is important to plant the susceptible crop far enough away so that it cannot be infected by blowing or washing soil. It is important to remember crop rotation will not control all insect pests and similarly, crop rotation doesn't control airborne diseases such as cucumber downy mildew. For more information on how to develop rotation plans for small, diversified farms see:

<http://smallfarms.cornell.edu/2010/07/04/planning-for-effective-crop-rotation-on-diversified-farms/>

<https://nevegetable.org/cultural-practices/crop-rotation>

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## **Fungicide Resistance Management Resources- Dr. Mike Ellis, Professor Plant Pathology, OSU/OARDC Department of Plant Pathology, Wooster, Ohio**

Dr. Alan Biggs, the Extension Plant Pathologist at WVU, has developed 2 great new resources. Each is a single page table depicting the fungicide resistance management guidelines for Apple Scab and Powdery Mildew and Brown Rot and Peach Scab. Included in the table is the Fungicide, active ingredient, FRAC code, risk rating, management required, and general guidelines. Please click on the url below to access.

Fungicide Resistance Management Guidelines for Apple Scab and Powdery Mildew Control in the Mid-Atlantic United States

Fungicide Resistance Management Guidelines for Brown Rot and Peach Scab Control in the Mid-Atlantic United States - Alan R. Biggs, West Virginia University

The pdf for both are in the following url:

<http://www.caf.wvu.edu/kearneysville/articles/FRACGuidelinesForTreeFruitFungicidesChart-AppleAndPeach-Biggs.pdf>

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## **Part 2 of A Primer on Major Approaches to Vegetable Crop Nutrient Management- M.D. Kleinhenz, Extension Specialist, Horticulture and Crop Science, The OSU-OARDC**

The March 26 issue of VegNet contained Part 1 of this primer on the two major approaches to vegetable crop nutrient management, especially when synthetic fertilizers are the primary inputs. The March 26 article described these two overall approaches (“Deficiency Correction” or “feed the crop” and “Maintenance” or “feed the soil”) briefly. This article summarizes a study that compared the two approaches directly.

Let’s recap before looking at the research. The Deficiency Correction (DC; “feed the crop”) approach allows fertilizer to be applied only after certain conditions are met. Overall, the crop’s need for fertilizer must be verified by extensive testing. Also, the probability of getting a clear response to the application of a specific fertilizer (at a specific rate) must be high. DC-based approaches can help identify “economic maximum yields” – yields at which farmers profit most from fertilizer use.

The Maintenance (“feed the soil”) approach calls for fertilizer application to build soils so that they reach test levels considered to be ideal. The two approaches may set the economic maximum yield differently. For example, Maintenance may trigger fertilizer application at critical soil test levels higher than used in Deficiency Correction.

The two approaches are related and many growers use both at one time or another. However, adhering to one or the other approach rigidly and/or for long periods can affect nutrient management programs, soils and other variables important to growers and non-growers. Is one approach ‘superior’ to the other in ways that matter most to farmers? A University of Nebraska study (<http://passel.unl.edu/pages/informationmodule.php?idinformationmodule=1130447047&topicorder=5&maxto=6&minto=1>) attempted to address this question.

Soil samples were taken from five sites, divided and sent to five different soil testing laboratories. Each laboratory provided recommendations to grow a crop at a realistic yield goal. All nutrients were applied before planting and the experiment continued for ten years. Fertility recommendations were followed every year for each laboratory.

The study led to a number of findings but three were among the most important. First, fertilizer recommendations and costs varied widely among laboratories. Second, a maintenance plus balance approach consistently cost more than a deficiency correction approach. Finally, crop (corn) yields were similar, regardless of the approach used to guide fertilizer applications.

Those research findings and this article do not recommend one approach over another. Instead, the major goal of this article is to encourage vegetable growers to work closely with their advisors to determine the most profitable and environmentally-sound approach to nutrient management on their farm. It may also pay to recognize that rigorously adhering to a maintenance approach may be less profitable overall and that nutrient management plans may need to be adjusted for owned versus rented land. Regardless, a clear understanding of why nutrients are required and how, when, where, in what form and at what rate they can be delivered is important.

Matt Kleinhenz would like to thank Drs. Steve Culman and Laura Lindsey of The OSU for their assistance with this article.



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## **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 24<sup>th</sup>, 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](http://www.fulton.osu.edu) or by calling 419-337-9210. Registration deadline is April 17<sup>th</sup>.

# 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

### Hosted by:

OSU Extension Fulton County

- 419-337-9210, fulton.osu.edu, richer.5@osu.edu

### Cost:

- \$30 per person for 1<sup>st</sup> person from one farm, \$20 for each person thereafter.

**PRE-REGISTRATION IS REQUIRED.** \$30 per person for 1<sup>st</sup> 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

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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 Gist Chair in Extension Education and Leadership.

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## **High Tunnel Farm Tour & Training Opportunity at Piketon – 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 28<sup>th</sup>, 29<sup>th</sup>, and 30<sup>th</sup>. 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 Zimmerman Farms in Hillsboro and 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.

*Breakfast and Lunch will be provided each day.*

### **Cost to attend this training is as follows:**

Cost for selected Educators to attend **will be covered by the OSU EIPM Grant**

For selected educators the following expenses will be covered:

- Hotel room
- Travel
- Meals-breakfast, lunch, dinner **Note:** The breakfast and lunch will be catered by Stillwater catering and All Seasons Catering during the three day training.

Cost for selected Farmers to attend is \$75.00 for two days, and \$100.00 for all three days.



All participants will receive two publications on high tunnel production. 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/hightunnel2014>

COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

# High Tunnel Training

## OSU South Centers

Hosted by Brad Bergefurd & 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 45661

**Application Deadline to apply  
is Friday, April 18, 2014**

#### To apply go to

<http://go.osu.edu/hightunnelapplication>

#### For more information contact:

Charissa McGlothlin  
[mcglothlin.4@osu.edu](mailto:mcglothlin.4@osu.edu)  
740.289.2071 ext. 132

**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.



<http://go.osu.edu/hightunnel2014>

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