

VegNet

The Vegetable and Fruit Crops Teams Newsletter

<http://vegnet.osu.edu>

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Drainage Around High Tunnels is Important

From Matt Kleinhenz, Department of Horticulture and Crop Science, The Ohio State University

An article about drainage in a dry year may seem strange. Hopefully, though, it will help prepare for the inevitable.

Eventually, it will rain in more places than it has this season. Also, if model-based forecasts are correct, when it rains, it is likely to rain buckets, not arrive slowly over a long time. Heavy rains on dry, hard ground can cause all sorts of trouble, even for high tunnel growers. Maybe, especially, for high tunnel growers because a flooded tunnel can be difficult to overcome.

Generally, the only water we want in a high tunnel is the water put there by irrigation. Yet, a simple calculation tells us that a 1-inch rainfall on a 30 ft x 96 ft high tunnel equals about 0.6 gal per sq. ft. and a little more than 1,700 gallons overall. **(Continued on next page)**

Drainage Around High Tunnels is Important Continued

From Matt Kleinhenz, Department of Horticulture and Crop Science, The Ohio State University

All that water comes to within inches of the edge of the tunnel (baseboards) but, hopefully, none of it enters the tunnel. Snow to liquid water ratios are also important to high tunnel growers, particularly ones with fall-to-spring business. Snowmelt must be diverted but that may rely nearly entirely on surface drainage when upper levels of the soil are frozen. Recent research places typical snow to liquid ratios for Ohio between 12 and 14 (i.e., 12 inches of snow releases 1 inch of liquid water). Either way, heavy rain and/or snowmelt on frozen ground may be the worst case scenario. Planning for it can be useful.

Unwanted water entering the tunnel slows business operations, promotes weed growth, and increases humidity (raising disease potential). It may also lower crop quality. High tunnels are supposed to be used to help avoid all these conditions and provide other benefits. So, adequate drainage in and around tunnels is very important. Over the years, it has become clear that inadequate drainage outside tunnels has hampered business based on what happens inside them. Droughty periods may be ideal times to improve drainage around tunnels.

Many steps can be taken to insure that drainage around (away from) tunnels is adequate. Grading during site preparation, subsurface systems (tiling), surface grading, and other ways can be used alone or in combination based on the characteristics of the site, the high tunnel-based operation, and farm resources. An inexpensive, straightforward, and helpful approach is shown in the picture. It moves water away from the tunnel during the heaviest events while also controlling weeds around the clock. Still, it is not a substitute for preparing the site many feet away from the tunnel properly since water must move and stay away from the tunnel for it to remain dry and productive.

Contact Matt Kleinhenz (ph. 330.263.3810; kleinhenz.1@osu.edu) or see our Facebook (<https://www.facebook.com/pages/The-OSU-Vegetable-Production-Systems-Laboratory/155936034478066>) for more information.



Moving water away from high tunnels quickly and without causing other trouble is important, especially when a lot of water is near their sidewalls (e.g., during heavy rain or snowmelt). Multiple steps can be taken to drain areas around high tunnels effectively. Steps differ in drainage capacity, and resources needed for setup and maintenance. Here, with tunnels between crops, soil was banked against the sidewalls then covered with nylon-based fabric (ground cover). On July 30, 1 inch of rain fell in less than 75 minutes at the site and no water entered along the edge of the tunnels. That is an improvement over previous experiences at the site.

Matt Kleinhenz
July 20, 2016; OARDC

Pumpkin and UAV Field Day

From Jim Jasinski, IPM Program

There will be something for both experienced and new pumpkin growers at this year's field day, especially if you have an interest in technology. Mark your calendar now for the annual Pumpkin / UAV Field Day on Thursday, August 18th from 6-8pm at the Western Ag Research Station in South Charleston.

Featured at the field day will be some traditional stops including a powdery mildew fungicide demonstration trial with new products Evito, PHD, Fontelis, and Luna Experience, plus standards such as Quintec, Merivon, Procure, Microthiol Disperss, Flint, and Manzate Pro.

We will also have a Harris Moran powdery mildew tolerant/resistant variety trial highlighting 12 hybrids including small fruit (Mischieff, Cannon ball, Field Trip, Little Giant), medium fruit (Gladiator, Magic Wand, Magic Lantern, Magician), and large fruit (Apollo, Kratos, Ares, Rhea).

State specialists for insects and diseases will be present at the field day to answer your questions about diagnosis and management.

Some new research will also be highlighted including the basics of using multi-spectral imagery and Unmanned Aerial Vehicles (UAVs) to detect diseases like powdery and downy mildew on pumpkins and cucumbers. A demonstration of the UAV surveying a field will follow the presentation.

Pre-registration for the field day is required by August 15th. Handouts and liquid refreshments will be served. The field day fee is \$5 per person, payable at the field day. To pre-register, send an email to Jim Jasinski (Jasinski.4@osu.edu) or leave a message at the research station on the answering machine (937-462-8016). The Western Ag Research Station is located at 7721 South Charleston Pike, South Charleston, 45368.



Photo: Partial map of pumpkin field taken using Normal Difference Vegetative Index (NDVI) to look for diseases.

Southern Ohio Vegetable and Fruit Update

July 29-August 4th, 2016

From Brad Bergefurd, OSU Extension Educator Agriculture and Natural Resources, OSU Extension Scioto County and OSU South Centers

Field work and harvest remains in full force; however, rains in some areas the past week have caused some muddy conditions. Some areas have increased irrigation schedules due to dry conditions. Most areas have been experiencing nice 1 to 2 inch a week rainfall patterns and crop growth has been exceptional. However, the high rainfall has brought on increased disease pressures, especially where tight fungicide programs have not been followed. Harvest of all produce remains in full swing with daily harvests being made and excellent quality and yields. The typical "back-to-school" produce market slump has arrived where consumers are spending their money on school supplies and shopping which relates to a lower market demand and lower wholesale produce prices. This is a typical pattern that produce growers do not like to see arrive, but it always seems to occur right around this time of the summer.

Harvests include sweet corn, peaches, day-neutral strawberries, green beans, half-runner beans, red beets, radishes, high-tunnel tomatoes, peppers, pickles, field tomatoes, cucumbers, cabbage, zucchini and summer squash, lettuce, sweet onions, new potatoes, bell and hot peppers, hops, pumpkins, blueberries, summer apples (Zestar and Ginger Gold varieties) and blackberries. Hops are maturing about two weeks ahead of normal, with early harvests being made. Main harvest will begin in the next two weeks.



Photo: The local peach crop has been great this season with high market demand, late and white varieties are being harvested.
Photo by Brad Bergefurd

Strawberry runner tips for plasticulture strawberry plugs began arriving into Ohio this week from Nova Scotia and Prince Edward Island and are being hand-planted in trays under mist irrigation propagation systems, with plug plants to be ready in four weeks for planting to the field in early September. Plug growers and tip suppliers are reporting higher volumes of strawberry tips being shipped and plugs being grown for Ohio farms this year.

Field work between rains has included plowing, working ground, spraying, bed shaping for hops and plasticulture strawberry plantings, laying plastic and applying herbicides for plasticulture strawberries, staking and tying tomatoes and staking and tying peppers. Matted-row strawberry fields continue to be renovated, fertilized and irrigated with good plant growth being reported. Some late direct seedings of pickles were planted this week. Transplanting of cauliflower and broccoli continues. Spraying fungicides on tree fruit, hops, brambles, blueberries, grapes, and all vegetable crops continues. New plantings of hops continue to be hand-planted and new high trellis hop systems are being installed.

Leafhoppers and spider mites continue to reach threshold levels in hop plantings requiring tight insecticide and miticide programs. Cucumber beetles continue to reach threshold levels in melons, cucumbers and squash. Flea beetles continue to cause damage to eggplants. With the recent excessive rainfall and saturated field conditions, along with high humidity and high temperatures, vegetable crops are showing more pronounced fungal and bacterial disease symptoms, typical pattern for August and September. Bacterial wilt continues to be reported in cucumbers, melons, and pumpkins. **(Continued on next page)**

Southern Ohio Vegetable and Fruit Update

July 18-28, 2016 Continued

From Brad Bergefurd, OSU Extension Educator Agriculture and Natural Resources,
OSU Extension Scioto County and OSU South Centers



Photos:

- A. Suspected fusarium wilt disease is showing up in vine crops. Photos by Brad Bergefurd
- B. Recently transplanted late watermelon crops are growing fast with recent high temperatures. Photo by Brad Bergefurd
- C. Crops not protected by good fungicide programs are being infected and killed by fungal and bacterial disease with the heavy rains and excessive moisture this season. Photo by Brad Bergefurd

OHIO STATE UNIVERSITY EXTENSION

Hardin County Crop Walk

Fruit & Vegetable Production

Jim Jasinski – OSU Extension Horticulturist

Dr. Sally Miller – OSU/OARDC Plant Pathologist

Mark Badertscher – OSU Extension, Hardin County

Hardin County Crop Walk program will consist of a diagnostic table and walk through a produce patch to learn solutions of common fruit and vegetable problems. Topics include plant nutrition and soil fertility, plant diseases, and insect pest management. Bring along your specimens for questions and answers along with a lawn chair. Location is about three miles northeast of the Scioto Valley Produce Auction.

Tuesday

August 9

6:00-8:00 pm

15460 County Road 209
Kenton, Ohio 43326

Bring plant problems, plant
disease and insect specimens

Hardin County OSU Extension
419-674-2297



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hardin.osu.edu

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What's New in Fruit & Vegetable Production?

Presented by OSU Extension Greene County



Join Extension specialists for an update on the latest news in fruit and vegetable production! Topics include:

- **10:00 -11:00 What's eating my produce?**
Keep up to date on high impact insect pests and how to better control them in fruits and vegetables.
- **11:00-12:00 Hydroponics 101**
Learn why cultivating plants in water is gaining popularity, and how to get started using these systems!
- **12:00-12:30: Lunch**
- **12:30 – 2:00 Agritourism and Marketing Local Foods**
Get an update on the new agritourism bill, and an overview of alternative marketing opportunities
- **2:00 – 2:30: Tour Caesar Creek Vineyard**
Learn about Xenia's local vineyard and winery!

FRIDAY

AUG 12

10 A.M. – 2:30 P.M.

Caesar Creek Vineyard
962 Long Rd, Xenia, OH
45385

Cost: \$20 includes lunch

Registration Required
by August 8:

Register online:
<https://www.regonline.com/osuccfruitandvegetable>

**Contact hiatt.32@osu.edu or
937-372.9971x123**



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Orchard Sprayer Technology Field Day

THURSDAY, AUGUST 18 ■ 3:00 - 7:30 pm

Moreland Fruit Farm ■ 1558 Moreland Rd, Wooster OH 44691



Featuring:

- Sprayer demonstrations with new and current sprayer technology
- Education and discussion on how sprayers can be used more effectively and efficiently
- A glimpse of the future: Introducing the Intelligent Sprayer technology
 - Prototype sprayer designed by USDA-ARS/OSU using laser guidance to automatically adjust spray volume and nozzle pattern based upon tree size, leaf density and plant spacing.
 - Trials have shown reductions in pesticide use of 47-70% compared to conventional orchard air blast sprayers
 - Annual chemical savings can amount to \$140 to \$280 per acre
- Resource people: Heping Zhu - USDA-ARS, Lead Scientist of the Intelligent sprayer and Erdal Ozkan - OSU Extension Sprayer Technology Specialist
- Sponsor displays, orchard equipment and supply exhibits

Registration: includes handout materials, refreshments, and a light supper for only \$5.00 per person, pre-register by **Thursday August 11**

For more information:

Rory Lewandowski, 330-264-8722, Lewandowski.11@osu.edu, wayne.osu.edu

Presented by:



Orchard Sprayer Technology Field Day

Registration cost is only \$5/person. Pre-registration requested to the Wayne County Extension Office at 330-264-8722 or email Lewandowski.11@osu.edu by **Thursday, August 11**. Make checks payable to Ohio State University Extension and mail to Ohio State University Extension – Wayne County, 428 W. Liberty St. Wooster, OH 44691. Please detach and return this form with payment. Thank you.

Name: _____

Address: _____

Phone Number: _____ E-mail: _____



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United States Department of Agriculture

Attention Specialty Crop Producers!

Free NAP Workshop

Non-Insured Crop Disaster Assistance Program (NAP)

August 18, 2016

6:30pm - 8:00pm

Madison County USDA Service Center

829 US Highway 42 NE

London, Ohio 43140

Come Learn!

No Cost!

What is NAP?

The Farm Service Agency administers NAP which provides financial assistance to producers of non-insurable crops when low yields, loss of inventory, or prevented planting occur due to damaging weather.

To read more about NAP coverage visit www.fsa.usda.gov/nap.

Workshop Highlights

Workshop highlights include:

- Explanation of NAP requirements, benefits, coverage levels, application, & payment processes.
- Discussion of reporting requirements and presentation by loss adjustor
- Overview of other FSA programs

To register, contact your local Farm Service Agency County Office, or email joseph.howard@oh.usda.gov by **August 5th**.

Registration is encouraged, though walk-ins are welcome!

Persons with disabilities who require accommodations to attend or participate in this meeting should contact Joe Howard at 740-852-4003 or Federal Relay Service at 1-800-877-8339 by August 5, 2016.



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OHIO STATE UNIVERSITY EXTENSION



PUMPKIN / UAV FIELD DAY

TOPICS:

UAV and imagery basics
 Update on UAV / Downy & Powdery mildew project
 UAV flight & mapping demonstration
 Insect update
 Disease update
 8 Powdery mildew fungicide demonstration plots
 12 Powdery mildew tolerant/resistant hybrids variety trial

PRESENTERS:

Logan Dyer	Lisa Fiorentini
John Fulton	Jim Jasinski
Sally Miller	Wladimiro Villarroel
Claudio Vrisman	Celeste Welty



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THURSDAY
AUG. 18TH

6 - 8 P.M.

Western Ag Research Station

7721 South Charleston Pike,

South Charleston, OH 45368

Cost: \$5 / person

Pre-register by August 15th

send email to:

Jasinski.4@osu.edu

OHIO STATE UNIVERSITY EXTENSION, SANDUSKY COUNTY NORTH CENTRAL AGRICULTURAL RESEARCH STATION

OSU Vegetable Workshop Series

Join the staff at the North Central Ag Research Station near Fremont and OSU Extension on the 2nd Thursday of each month, April through October for catered breakfast, industry updates, and in-depth tips, tricks, and information from researchers to help make your 2016 growing season a profitable one! Attend when the topic suits you, or come each month and stick around after the speaker to view the OARDC field trials or network with peers and industry reps.

2nd Thursday: April – Oct.

**Bring your plant disease and insect samples for identification and same day delivery to the OARDC lab, free of charge!*

7:00 a.m. Breakfast

with OSU and industry updates

7:30 a.m. Featured speaker

8:00 a.m. Field walk / networking

Held at NCARS office, No rsvp, No cost!

For more information contact:

Allen Gahler, OSU Extension Sandusky County
419-334-6340
gahler.2@osu.edu

Matt Hofelich, North Central Ag Research Station
419-332-5142
hofelich.4@osu.edu

Aug. 4: *Sweet Corn Evaluation/tasting and insect management*

Mike Gastier, Extension Educator – Huron County
Celeste Welty, Extension Entomologist

Sept. 8: *Pepper Evaluation and field walk*

Allen Gahler, Extension Educator – Sandusky County
Non-Insured Crop Disaster Assistance Program Briefing
Brenda Turley, CED – Henry County Farm Service Agency

Oct. 13: *Soil Health and Water Quality - How does it affect me?*

A look at edge of field studies and NCARS water samples
Libby Dayton, OSU Soil Scientist



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**OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER
OHIO STATE UNIVERSITY EXTENSION**

Ohio State University Direct Marketing Food & Agriculture

2016 Webinar Series

One-hour webinars will be offered to bring exceptional speakers to your home, office or local Extension center. If you're interested in finding out more about marketing issues, visit the website for details.



2016 Direct Marketing Webinar Series All webinars begin at 12 noon

Date	Topic	Lead Presenter	Connection
Feb. 18	Marketing Trends Learned from the Super Bowl	Eric Barrett & Rob Leeds	http://carmenconnect.osu.edu/marketingtrends2016/
Mar. 2	Using All Your Senses in Branding Your Business	Eric Barrett & Rob Leeds	http://carmenconnect.osu.edu/brandingyourbusiness/
Apr. 21	Enhancing Your Web Presence	Melissa Carter	http://carmenconnect.osu.edu/enhancingwebpresence/
May 26	Product Recall & Traceability	Eric Pawlowski	http://carmenconnect.osu.edu/productrecallandtracibility/
June 16	Product Labeling	Emily Adams	http://carmenconnect.osu.edu/productlabeling/
July 21	Celebrate Ohio Local Foods Week	Heather Neikirk & Patricia Barker	http://carmenconnect.osu.edu/localfoodsweek/
Aug. 18	Produce Auctions	Brad Bergefurd	http://carmenconnect.osu.edu/auctionsforproduce/
Sept. 15	Pricing Your Products	Megan Leffew	http://carmenconnect.osu.edu/pricingproducts/
Oct. 20	Cooperatively Marketing Your Products	Hannah Scott	http://carmenconnect.osu.edu/marketingyourproducts/
Nov. 17	Using Facebook For Your Business	Duane Rigby	http://carmenconnect.osu.edu/facebookforyourbusiness/
Dec. 15	Survey Results for Ohio Produce Marketers	Direct Marketing Team	http://carmenconnect.osu.edu/surveyresultsformarketers/

For recordings of all webinars go to go.osu.edu/DirectMarketingWebinars



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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.



Brad Bergefurd, MS

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