

ANR EXTENSION CONNECTION

Agriculture and Natural Resource News and Events for Jefferson County

August-September | 2016



It's Showtime!

This Issue:

Greetings	1
Aphids on Cucumbers	2
Plants in Dry Weather	3
Outdoor Photo Tips	3
Soil & Nutrient Management .	4
Pesticide Recycling	4
Fall Fungi	5
Events.....	6
Survey	

The Jefferson County Fair is fast approaching...

...and fall is just around the corner. Here at the Extension office, July has flown by with Independence Day, Skill-a-thon, and the Harrison County and Ohio State Fairs. Some of you may have noticed that your corn began to tassel early on due to the dry weather we have been having. July has seen persistent high temperatures, and much of the state has been placed in a heat advisory. Jefferson County luckily avoided much of the extreme heat seen further out west, but the forecast for August and September is predicted to be warmer than average. Yikes!

In this newsletter, you will find information on mushrooms you may run into, a notorious pest that is out and about, as well as events going on in August and September, including the Farm Science Review. Stay cool!


Erika Lyon, ANR Educator

Aphids on Cucumbers and Other Vine Crops

By Celeste Welty, *Extension Entomologist*

Aphid outbreaks on cucumbers, melons, and other vine crops are being reported from several parts of Ohio. The aphids are often found in the presence of various natural enemies, but in some cases the natural enemies are not abundant enough to keep the aphids under control. Natural enemies currently being found are lady beetle adults, lady beetle larvae, lacewing larvae, hover fly larvae, and parasitoid wasps that cause aphid mummies.

If aphid infestations are in localized areas within a field, then a good IPM approach is use spot treatment in only the part of the field where aphid density is high. If an insecticide is needed for aphid control on muskmelons or watermelons, a good product to start with is Dimethoate, which is an old organophosphate product; note that Dimethoate is not allowed on cucumbers or squash or pumpkins. For licensed applicators, Lannate (methomyl) is a Restricted Use Product (RUP) that is a good choice for cucumbers and melons, but not allowed on squash. Although neonicotinoid insecticides such as Admire, Assail, Actara, and Venom are among the most effective products available for aphid control and are not RUP, we do not recommend them once the plants are flowering due to toxicity to bees. For squash and pumpkins, flowers are generally all closed by noon so spray of neonicotinoids in afternoon or evening is possible. For melons and cucumbers, flowers stay open, so there is no good time to use neonicotinoids. Neonicotinoids should NOT be used in drip irrigation once the crop is flowering due to systemic effects on bees. For good aphid control without worry to bees, the best choices are the narrow-spectrum products Beleaf (flonicamid) or Fulfill (pymetrozine), but these are expensive, costing about \$25 per acre. Although various pyrethroids (Asana, Baythroid, Brigade, Mustang Maxx, Pounce, Warrior) do include aphids on their labels as target pests, they do a good job of killing aphids only if the aphid population is light, and they do not do well against heavy populations of aphids. Insecticidal soap is an option for aphid control, but spray needs to contact the aphids to be effective, which can be challenging once vine crops develop a large canopy.



Fun Fact: Some species of ants are known to manage “herds” of aphids for honeydew, much like how we raise cattle. In some cases, ants may become aggressive in defending their aphid livestock. To learn more about this relationship, visit <http://ipm.ucanr.edu/PMG/PESTNOTES/pn7404.html> and <http://ohioline.osu.edu/factsheet/HYG-2031-10>

How to Contact the Jefferson County Extension Team:

587 Bantam Ridge Road
Suite C
Wintersville, OH 43953

Website: jefferson.osu.edu
Phone: (740) 264-2212

Janine Yeske County
Director/4-H
Educator
Email: yeske.1@osu.edu

Erika Lyon
ANR Educator
Email: lyon.194@osu.edu

Katrina Bleininger
SNAP-Ed Program Assistant
Email:
bleininger.2@osu.edu

Cheryl Lightfritz
Office Associate
Email: lightfritz.1@osu.edu

It's Fair Time...

Ohio State
July 27-Aug 7
Columbiana (Lisbon)
Aug 1-7
Jefferson (Smithfield)
Aug 16-21
Guernsey (Old Washington)
Sept 12-17
Tuscarawas (Dover)
Sept 19-25

Outdoor Photo Tips:

Photography has been a hobby of mine since 8 years old. There is just something magical about capturing a single moment in time, whether it is a honey bee pollinating a flower, a loon taking flight, or a still of a family gathering. I know my fascination with photography is shared by many, so I will be posting on what I have learned since I first picked up a camera.

Photo Tip: Don't just leave your camera in the Auto setting...try making adjustments manually. Most cameras will allow you to adjust the shutter speed (how fast the shutter closes), aperture (size of lens's diaphragm opening), and ISO (light sensitivity). Usually an Auto setting will not work in dark places or if you are wanting a long exposure.



Plant Concerns in Dry Weather

By Clif Little, OSU Extension Educator Guernsey County

Nitrates: Plants naturally contain some nitrate, but forages and some weeds grown under stress conditions, such as drought may contain excessively high nitrate concentrations. Sudangrass, sorghum, pearl millet, corn, pigweeds and lambsquarter can all accumulate high levels of nitrates. Nitrates accumulate in plants when there is a relatively large amount of available soil nitrate and plants take up the nitrates but don't completely metabolize them into plant proteins because of poor growing conditions. High rates of nitrogen fertilization and drought are factors that contribute to nitrate buildup in plants and can harm animals when these forages are grazed, fed as green chop, or when not fermented long enough. Nitrate accumulation tends to be highest in the lower portions of the stalks and stems of these plants. How the forage is offered can make a difference in the likelihood of nitrate poisoning. Hungry animals fed fresh or green chop silage are more likely to consume a deadly portion. The older and more stressed mature animals are most susceptible since their ability to transport oxygen is already compromised. In addition, rapid changes in diet, parasitism and anemic animals are more at risk. Test any forage before it is fed if you have reason to be concerned. Your OSU Extension office should be able to direct you to laboratories which can perform these tests.

Hydrocyanic Acid: Prussic acid, also called hydrocyanic acid, is another compound that can build to toxic levels in some plants when they are under stress from drought or frost. Sorghum, Sudangrass, Sorghum-Sudangrass, Johnsongrass, and unimproved varieties of Reed Canarygrass can all pose a threat of prussic acid poisoning. Prussic acid is not usually a concern in dry hay that is fully cured or in completely fermented silage. However, when these forages are in the boot stage of growth, have new shoots, are fed heavily with nitrogen fertilizer and grazed or fed as green chop during a drought or after a frost there is reason for concern. When it comes to reducing the risk of prussic acid poisoning, time is our friend. Don't be in a hurry to graze the above mentioned drought stressed or frosted forages. It is recommended to wait 3 weeks before feeding silage if you have reason to be concerned. Sorghum that has wilted and dried for 6 days or more after a frost is generally considered safe. It is possible to test forages for prussic acid. Dr. Mark Sulc, OSU Forage Specialist describes the process in the Sept. 2012 issue of this newsletter, <https://u.osu.edu/beef/2012/09/26/testing-for-prussic-acid-content-in-forages/>. C.L. Rhykert and K.D. Johnson of the Purdue University Agronomy Department, in "Minimizing the Prussic Acid Poisoning Hazard in Forages", report that livestock "death on pasture are partially caused by cattle selectively grazing leaves and shoots. These plant parts may contain 2-25 times more prussic acid than stems. Cattle may also avoid frost-damaged leaves and shoots, grazing instead the young suckers lower on the plant that could contain lethal levels of prussic acid. Therefore, if new shoots develop after a frost, the crop should not be grazed until this new growth is 2 feet tall." The treatment for prussic acid poisoning must be administered quickly and is similar to treatment for nitrate poisoning. If you suspect any problem contact your veterinarian immediately.

Understanding the Base Cation Saturation (BCSR) Philosophy of Soil and Nutrient Management

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

Soil testing and interpreting the results of soil tests are bedrock parts of soil and nutrient management. At its most basic, the process is about analyzing the content of soils and using the numbers to guide both the application of fertilizer and other materials (e.g., lime, gypsum) and various soil and irrigation management practices. Analyzing the nutrient content of soils is relatively straightforward. Choosing how to use the data in developing fertilizer recommendations is not. Philosophies about soils, crops, agriculture and the environment, business management, the role of science, etc., come into play. Currently, three philosophies are prominent. Vegetable fertility management experts at the University of Florida summarize these philosophies in an excellent publication (see (<http://edis.ifas.ufl.edu/pdf/SS/SS62300.pdf>)). Base Cation Saturation Ratio (BCSR) or “Soil Balancing” is one of the philosophies included in the UF publication. With USDA and other support, BCSR is also being tested by a team of OSU researchers and Ohio farmers. Overall, university-based research supporting and describing how to use two other philosophies (Sufficiency Level of Available Nutrient – SLAN, and Build-up and Maintenance) is stronger than for BCSR. That has not stopped growers and the consultant community from using the BCSR philosophy in, it seems, ever larger numbers.

Although many who use the BCSR philosophy farm organically, soil balancing is used by other growers, too. In its work, The OSU and farmer team is not comparing BCSR to other philosophies. Instead, the team is examining BCSR and its main aspects only. Our experiments on farms and research stations document BCSR effects on soils, crops, and weeds. We also want to better understand the appeal of BCSR and its economics.

Using the BCSR philosophy calls for maintaining target ratios of calcium, magnesium, and potassium on the soil cation-exchange complex, often by applying gypsum and other materials. One BCSR experiment at the OSU-OARDC is documenting the effects of gypsum (G), potassium sulfate (KS), and G+KS applications on the yield and quality of dwarf popcorn, edamame soybean, and butternut squash. Effects on soils and weeds are also being evaluated. Dwarf popcorn and edamame soybean were included in the experiment partly as “specialty crop equivalents” to the standard corn and soybean varieties used in other experiments in the project. Other articles on BCSR will follow in VegNet. One will describe soils growers and consultants say give the best results when a BCSR philosophy is used. Another will discuss the BCSR-crop quality relationship. Contact Matt Kleinhenz (ph. 330.263.3810; kleinhenz.1@osu.edu) for more information. Also, see http://organicfarmingresearchnetwork.org.ohio-state.edu/network_activities/soil_balancing/ for additional information on the OSU-farmer BCSR project.

Opportunity for farmers to dispose of pesticides

The Ohio Department of Agriculture will accept unwanted pesticides at these locations and times. Only farm chemicals will be accepted. Paint, antifreeze, solvents, and household or non-farm pesticides will not be accepted. To pre-register, or for more information, contact the Ohio Department of Agriculture at 614-728-6987.

Aug. 22 from 9:00 a.m. to 3:00 p.m. at the Hardin County Fairgrounds

14134 County Road 140

Kenton, OH 43326

Aug. 24 from 9:00 a.m. to 3:00 p.m. at the Miami County Fairgrounds

650 North County Road 25-A

Troy, OH 45373

Aug. 23 from 9:00 a.m. to 3:00 p.m. at the Guernsey County Fairgrounds

335 Old National Road

Old Washington, OH 43768

Aug. 31 from 9:00 a.m. to 3:00 p.m. at the Huron County Fairgrounds

940 Fair Road

Norwalk, OH 44857

Foraging for Fall Fungi

By Erika Lyon

Late summer to early fall is a fantastic time of year for the fungi enthusiast. You will often find many kinds of fungi after a good rain, if you know where to look. Fungi are excellent decomposers – that is, they consume nutrients from organic material and consequently breakdown debris such as logs and leaves. After a rain shower and the right environmental conditions, fruiting bodies, or the visible structures of fungi, develop and disperse their spores. Are you finding fungi and fungi-like organisms (such as slime molds resembling vomit) on your mulch? Mulch can make a very hospitable environment for fungi because of its organic content. Penn State has a great Fact Sheet on these fungi: <http://extension.psu.edu/publications/ul201>

Fungi come in all shapes and sizes. Oftentimes, the common names reflect the appearance of the fruiting body. Dead Man's Fingers can be easily identified because, as the name suggests, it appears much like fingers reaching out of the ground. Carbon Antlers are similar to Dead Man's Fingers, except they resemble antlers. Bird's Nest fungi look much like eggs in a dish...but so do Splash Cups! And there are so many species of Corals and Puffballs!



A coral fungus in Grand Manan, New Brunswick

Some fungi are edible, and some have a sinister double. Some mushrooms are classified as edible but can be lethal if the individual fruiting body contains a high dose of a toxin. An example of this is the beefsteak morel mushroom, a species of false morel that is commonly found during the spring months. Beefsteak mushrooms carry a poison that is transformed into



rocket fuel (monomethylhydrazine) after ingestion. The dosage of a toxin varies from one individual to the next, and seldom does size of a mushroom indicate how toxic individuals are. Human sensitivity to mushrooms is also highly variable.



Amanita mushroom

Always know what species of mushroom you are dealing with before you eat it. Identification usually can't be done by looks alone...spore color (via spore print), smell, and physical characteristics such as cap texture are good indicators of species. Also, know the material a mushroom is growing on – do you really want to eat it if it's growing on dung?

Some mushrooms that may make an appearance during the fall season include Amanitas (poisonous), Chanterelles (choice edible, but careful – its look alike is the toxic Jack-o-Lantern), Milk Mushrooms, Shaggy Mane (edible), Russulas (some edible and some poisonous depending on species), Meadow Mushrooms (edible), Chicken Mushrooms, Hen of the Woods (choice edible), and Slippery Jack (edible).

For more information and a longer listing of mushrooms commonly found in Ohio, check out Bulletin 942: Mushrooms and Macrofungi of Ohio and the Midwestern States and PLPATH-GEN-11: the Wild Mushrooms Fact Sheet available on Ohionline.



SATURDAY, AUGUST 13th

ATWOOD LAKE PARK

11AM THRU 3PM

RAIN OR SHINE

2nd Annual

LAKE & LAND

Festival

LEARN

EXPERIENCE

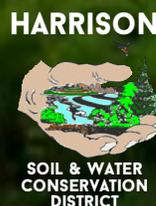
9500 LAKEVIEW RD NE, MINERAL CITY, OH

Fish Shocking Demo, Kayaking, Passport to Fishing,
Boat Tour, Archery Range, Swimming,
Zoo Animals & more!

Bring your picnic basket or
purchase food from the
Atwood Camp Store and
Concession Stand.

get
FREE
admission
with voucher
\$5/car without voucher

For details or to get a voucher
for free admission call:
330-859-1050
Or visit:
carrollswcd.org/lake&land



Pasture Walk

Presented by the Eastern Ohio Grazing Council
In cooperation with Carroll, Columbiana, Harrison, Jefferson, Mahoning, Stark, & Tuscarawas
Soil and Water Conservation Districts and the Natural Resources Conservation Service

Our Mission:

The Eastern Ohio Grazing Council's goal is to promote the conservation of our soil and water by growing and grazing forages. Our pasture walks and meetings present new and old ideas for review, discussion and possible implementation.

Brian Porterfield runs a 300 cow beef operation based in Belmont County, with 26 cow/calf pairs currently being managed on this Harrison County farm.

On Farm Pasture Evaluation

Utilizing the Pasture Condition Score Sheet

Developing a Water System in the Middle of Nowhere

Reducing Winter Hay Need

Managing Multiple Herds in Several Locations

Please bring your lawn chairs for the meal/social hour

Upcoming Events:

September 22nd - Pasture Walk 6pm - Carroll County

October 27th - Pasture Walk 6pm - Stark County

Please support our sponsors:



**FARMERS
EXCHANGE**



**CARROLLTON
LIVESTOCK AUCTION, LLC**
Carrollton, Ohio
Wayne Falb, owner/manager (330) 831-7040



farmCREDIT
MID-AMERICA



Look for us
on Facebook!

[www.facebook.com/
EasternOhioGrazingCouncil](http://www.facebook.com/EasternOhioGrazingCouncil)

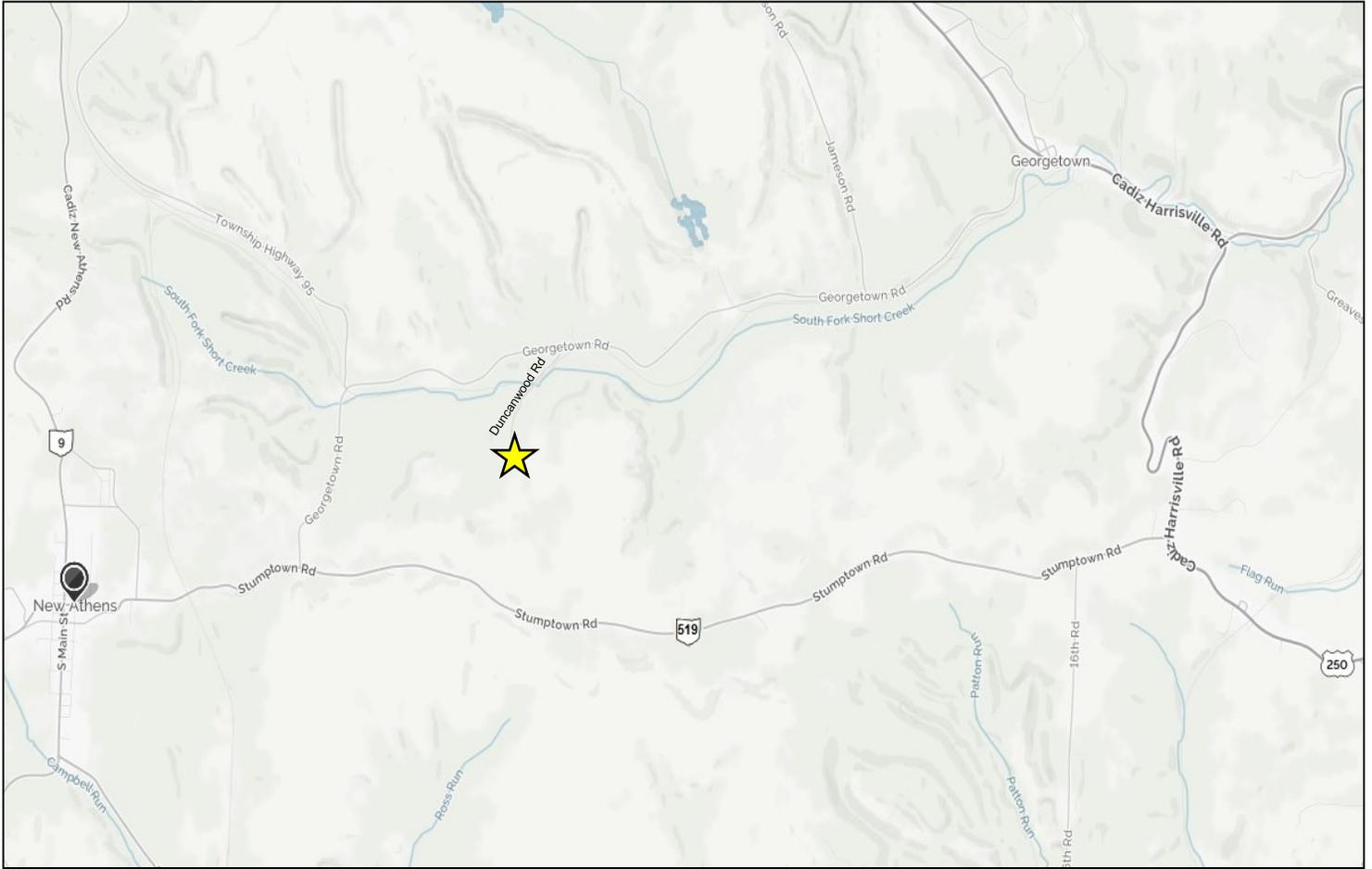
*Eastern Ohio
Grazing Council*

**For more information
and to RSVP
contact Carroll SWCD at
330-627-9852**

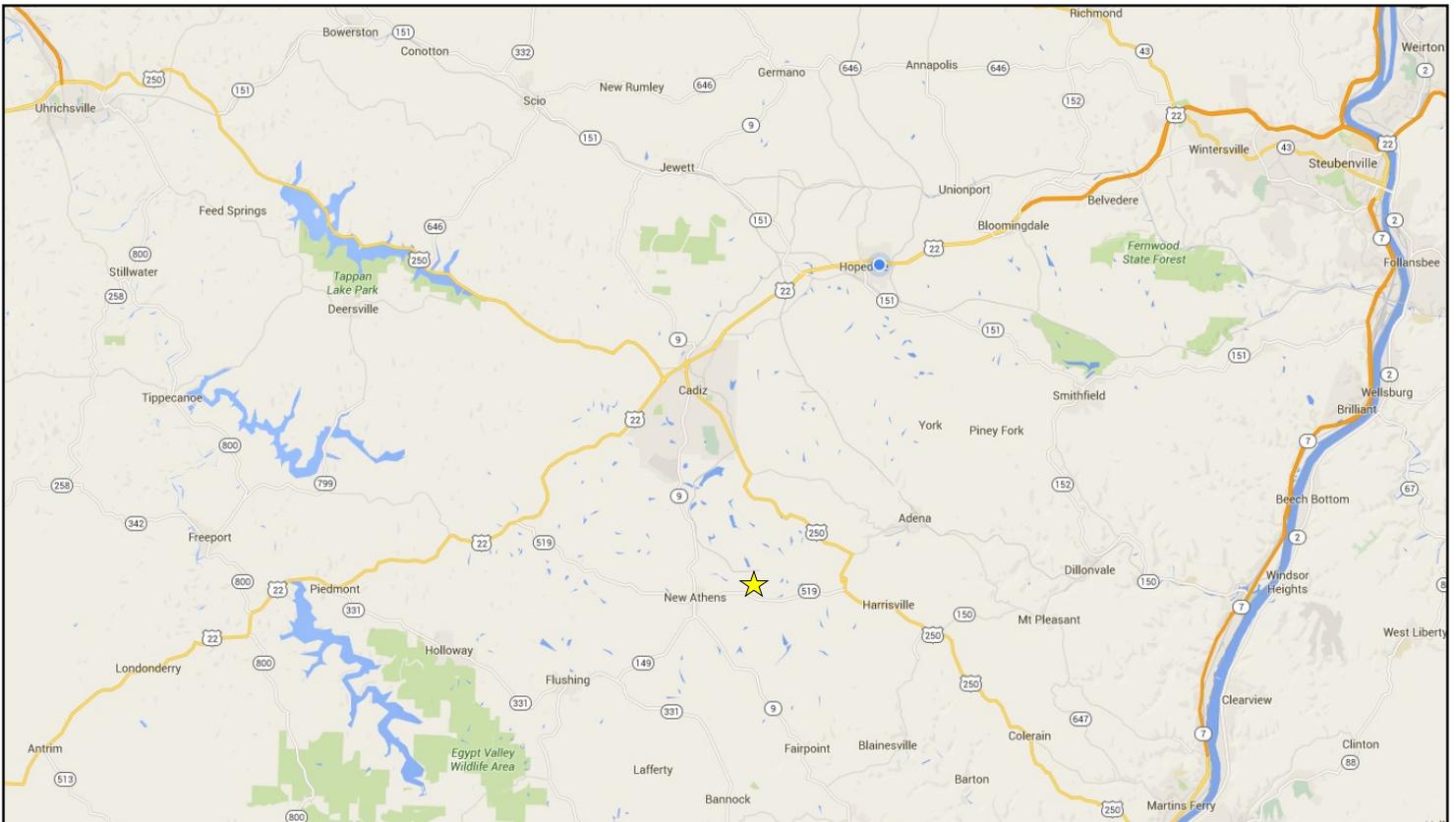
An Equal Opportunity Provider and Employer

Location Map:

Duncanwood Rd, New Athens, OH



Overview Map:



Farm Science Review

SEPTEMBER 20, 21, 22, 2016

Tuesday and Wednesday 8:00 am to 5:00 pm and Thursday 8:00 am to 4:00 pm

Ohio farmers unsure of whether they are required to get fertilizer certification or who have questions about how to maintain fertilization records can speak one-on-one with experts from the College of Food, Agricultural, and Environmental Sciences at The Ohio State University during this year's Farm Science Review, Sept. 20-22.

Ohio State University Extension will host a Pesticide and Fertilizer Applicator Exhibit at the three-day farm trade show, which is held annually at the Molly Caren Agricultural Center in London, Ohio.

The exhibit will provide information on Ohio's fertilizer certification requirements as well as information on pesticide licensing and application technologies, said Mary Ann Rose, program director for OSU Extension's Pesticide Safety Education Program.

Passed in 2014, Ohio's agricultural nutrients legislation requires individuals who apply fertilizer on more than 50 acres to become certified by Sept. 30, 2017.

Already, more than 11,850 Ohio farmers have gone through Fertilizer Applicator Certification Training, or FACT, which offers information on best management practices to apply fertilizer for optimum crop yields, reduce the risk of nutrient runoff and improve water quality throughout the state.

The training, offered by OSU Extension, fulfills the educational requirements of Ohio's new agricultural fertilization law, Rose said. Farmers who have questions about the law, pesticide licensing or application technologies can speak with Extension professionals at the exhibit during Farm Science Review to learn more.

"We'll be available to explain who needs to be certified and why," she said. "We are also there to offer farmers advice on how to apply pesticides and fertilizers both safely and legally."

FACT was developed by CFAES field specialists and is offered in partnership with the Ohio Department of Agriculture. The training provides research-based tactics to keep nutrients in the field and available to crops while increasing stewardship of nearby and downstream water resources.

In order to gain the Ohio Fertilizer Applicator Certification, farmers need to attend the FACT program in person and complete the necessary Ohio Department of Agriculture forms. Information on where the trainings are being held can be found on the Ohio Nutrient Education and Management website at pested.osu.edu/NutrientEducation/.

A limited number of FACT meetings will be held this summer and fall, with many more offered in the winter of 2017.

OHIO STATE UNIVERSITY EXTENSION

“The exhibit at Farm Science Review will also have live demonstrations of spray nozzle technology, information on pesticide licensing and recertification as well as how to protect yourself against mosquito-borne illness like the Zika virus,” Rose said.

The Ohio Pesticide Safety Education Program provides training, education and outreach to pesticide applicators about the safe, effective and legal use of pesticides. The program works with farmers, businesses and public agencies to protect human health and the environment and serves as a critical part of job training and business growth in Ohio.

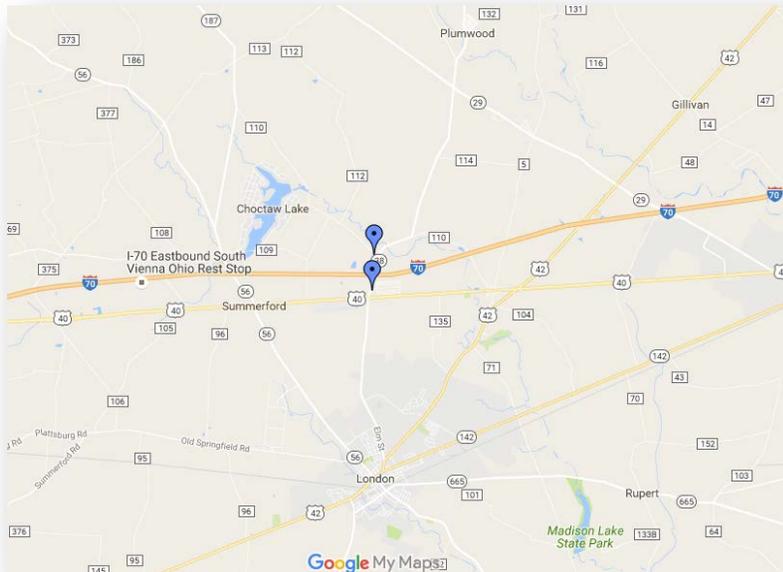
Farm Science Review, which is known as one of the largest farm trade shows, offers farmers and other visitors the opportunity to learn the latest agricultural innovations from CFAES experts.

That includes offering some 180 educational presentations and opportunities presented by educators, specialists and faculty from OSU Extension and the Ohio Agricultural Research and Development Center, which are the outreach and research arms, respectively, of the college.

Advance tickets for Farm Science Review are \$7 at all OSU Extension county offices, many local agribusinesses and online later in July at fsr.osu.edu/visitors. Tickets are \$10 at the gate. Children 5 and younger are admitted free.

Hours are 8 a.m. to 5 p.m. Sept. 20-21 and 8 a.m. to 4 p.m. Sept. 22.

The Farm Science Review is located at the intersection of US 40 and State Route 38, London, OH. It is also located 2 miles north of London. There is Exhibitor Parking accessible from State Route 38 and US 40.



The Molly Caren Ag Center is located 2 miles north of London, OH. The Gwynne Conservation Area is located on the MCAC, just north of I-70 on Arbuckle Road. The address of the GCA is 640 Arbuckle Road NW.

Agriculture & Natural Resources

Clientele Information Sheet

Please take a few minutes to complete this questionnaire. We will use the information we receive to set up a communication platform that everyone may access in an effort to provide you with information that will be of value to your operation.

Name: _____

Address: _____ Phone: _____

City _____ Zip: _____ Cell Phone: _____

County: _____ Farm Name: _____

Farm Address: _____ Farm Webpage: _____

Email: _____

Type of Operation: _____

Number of Acres: _____ Township: _____

How do you prefer to receive Extension communications (mail, electronic, etc.):

Please check the areas below that you would be interested in receiving information/programming on in the future:

- | | |
|---|--|
| <input type="checkbox"/> Farm Markets | <input type="checkbox"/> Natural Resources |
| <input type="checkbox"/> Farm to School | <input type="checkbox"/> Sustainable Agriculture |
| <input type="checkbox"/> Health Issues/Education | <input type="checkbox"/> Fruits/Vegetables |
| <input type="checkbox"/> Ag Law/Taxes | <input type="checkbox"/> Green Industry/Horticulture |
| <input type="checkbox"/> Ag Business Management | <input type="checkbox"/> Pesticide Applicator |
| <input type="checkbox"/> Local Foods | <input type="checkbox"/> Small Farms |
| <input type="checkbox"/> Energy (Oil, Natural Gas, Solar, etc.) | <input type="checkbox"/> CSA (Community Supported Ag.) |
| <input type="checkbox"/> Livestock | <input type="checkbox"/> Farm Finance |
| <input type="checkbox"/> Equine | <input type="checkbox"/> Ag. Tourism |
| <input type="checkbox"/> Dairy | <input type="checkbox"/> Ag. Development |
| <input type="checkbox"/> Pest Management | <input type="checkbox"/> Technology |
| <input type="checkbox"/> Crops | <input type="checkbox"/> Forestry |
| <input type="checkbox"/> Bees/Aviary | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Aquaculture | <input type="checkbox"/> Other _____ |

Thank you for helping us better serve your needs.



THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

Return form to: Erika Lyon, Extension Educator,
Agriculture & Natural Resources
OSU Extension Jefferson County
587 Bantam Ridge Road, Winterville, OH 43953
740.264.2212, ext. 203
Email: lyon.194@osu.edu