Hello, Northeast Ohio Counties!

The snow has returned! After a mild February and first 2 weeks of March, many thought winter was over. But we in the Snow Belt know better! We have had questions about tomorrow’s Agronomy School—no it is not canceled! Make sure the 4-Wheel drive is on and leave plenty of time to get there safely. We are expecting close to 90 folks for this event. It will be a great way to spend a snowy day in Northeast Ohio.

We had a nice visit with between OSU Extension and our Area Legislators last Friday in Northern Trumbull County. Thanks to W.I. Miller & Sons and Red Basket Farms for opening up their operations to our State Representatives and OSU Extension & OARDC Administration!

David Marrison
Extension Educator
Ag & Natural Resources
Ashtabula County

Lee Beers
Extension Educator
Ag & Natural Resources
Trumbull County
Ashtabula County Women in Agriculture: Conversations and Crafts
The Ashtabula County Women in Agriculture Program will be hosting their next event on Saturday, March 18, 2017 from 9:30 a.m. to 11:30 a.m. at the Last Resort Bed and Breakfast located at 4373 Cork Cold Springs Road in Geneva, Ohio. The Ashtabula County Women in Agriculture program was started this winter and OSU Extension invites any lady involved in agriculture in Ashtabula County (or surrounding counties) to join this group.

This Saturday’s program will focus on how other women in agriculture are able to balance their farm and personal life while providing effective leadership to their business. During this gathering, a panel of successful women in agriculture will share their experiences and answer questions. After the panel, we will continue the conversations while we make a burlap wreath. Supplies will be provided. We thank Marsha Gurich for hosting the group. There is no fee to attend this event; however courtesy reservations are requested. Please call the O.S.U. Extension Office (440-576-9008) or email Abbey Averill (averill.10@osu.edu) to register by Friday March 17.

Winter Beef Clinic to be held on March 23, 2017 in Jefferson, Ohio
OSU Extension and the Ashtabula County Cattlemen’s Association would like to invite Northeast Ohio Beef Producers to their Winter Beef Clinic on Thursday, March 23, 2017 at the Ashtabula County Extension Office in Jefferson, Ohio. The keynote speaker for this workshop will be John Grimes, Associate Professor & OSU Extension Beef Specialist. Join us as we discuss the basics of feeding beef cows and calves in Northeast Ohio.

During this workshop, John Grimes will share how to economically feed cattle on a small beef farm in Ohio. Discussions will be held on feeding Brood cows and their calves. Learn how to read a hay analysis report so you can get the biggest bang from your hay & baleage feeds. John will use the results from local farms to show how forage quality impacts the overall nutrition program. Learn about hay storage basics and grain & mineral supplementation. Learn more about the new Veterinary Feed Directive.

Local 4-H and FFA Youth will also want to attend as John will share how to feed your steer for the county fair. Learn how to plan for the growth of your steer from the day of purchase all the way through fair.

This workshop is free and open to all beef producers in Northeast Ohio. 4-H and FFA youth will also gain valuable experience from this workshop. No registration is required. Light refreshments will be served. A program flyer can be found at: http://go.osu.edu/ne-events. More information can be received by calling the Ashtabula County Extension office at 440-576-9008. Do not miss this chance to increase your beef nutrition management skills.

East Ohio Women in Agriculture Conference is March 24
Female farmers, growers and those women interested in becoming farm operators can learn more about the industry during a conference offered by Ohio State University Extension, which is the outreach arm of the College of Food, Agricultural, and Environmental Sciences at The Ohio State University.

The East Ohio Women in Agriculture Conference is March 24 from 9 a.m. to 3:45 p.m. at the R.G. Drage Career Technical Center, 2800 Richville Drive Southwest, in Massillon. The event is targeted toward women, including those of high school age, who are interested in, involved in or want to become involved
in food, agricultural or natural resources production or small business, said Heather Neikirk, an OSU Extension educator and co-organizer of the conference.

“Ohio women in agriculture are paving the way for the future,” Neikirk said. “As Extension educators and agricultural professionals, it is our mission to ensure that these women and young women have access to the tools and opportunities necessary to learn, grow, connect, inspire and empower themselves and one another to meet the challenge of producing food, fuel and fiber for a global population.”

Statewide, some 31,413 women are reported as principal operators of farms. Combined, those farms cover some 3.8 million acres and contribute $230 million in economic impact, according to the 2012 U.S. Department of Agriculture’s Census of Agriculture.

The conference will include remarks by Marlene Eick, co-founder and client lead of Herdmark Media, a Wooster, Ohio-based agricultural media company. Educators with OSU Extension as well as industry experts will conduct the conference sessions. The sessions will include:

- Five Legal Things You Should Know about Farmland Leases
- Equine Dental
- Renewable Energy Development in Ohio Agriculture
- Beekeeping Basics
- Season Extension Techniques for Your Farm
- Assigning Farm Tasks for Children
- Forage Identification and Hay Selection
- Cut Flowers for Income
- Farmer’s Market Basics

The conference will also feature a special session led by the Ohio FFA for high school-aged participants. Registration is $55, or $30 for students, which includes lunch and a continental breakfast. Information is available at regonline.com/womeninageast or by calling 740-622-2265. The registration deadline is March 10.

Additionally, on March 25 from 8 a.m. to 3:45 p.m., also at the R.G. Drage Center, a “Living the Small Farm Dream” Small Farms Conference will take place. Participants can register for this and the East Ohio Women in Agriculture conference at a reduced rate if attending both. For more information, visit agnr.osu.edu/small-farm-programs.

For more information on the Women in Agriculture conference, contact Neikirk at 330-832-9856, ext. 3476, or neikirk.2@osu.edu. More information about women in agriculture can also be found at the Ohio Women in Agriculture blog at https://u.osu.edu/ohwomeninag

Northeast Ohio Small Farm Conference slated for March 25
By: Tracy Turner, turner.490@osu.edu

The 2017 Northeast Ohio “Living Your Small Farm Dream” small farm conference will be held on Saturday, March 25 at the RG Drage Career Center in Massillon located at 2800 Richville Dr. SW Massillon, 44646. The conference is a program of the OSU Extension Small Farm Program and will provide farm owners and landowners with the opportunity to learn more about skills useful on a small farm, how to make their small farms work better, expand their operations, or gather ideas on how to utilize rural acreage.

Participants will choose from more than 25 different sessions offered over 4 breakout sessions during the day. General topic tracks include horticulture production, livestock and aquaculture, small farm management, natural resources, marketing and selling. Presenters include OSU Extension specialists and educators as well as USDA agency personnel, and area farmer entrepreneurs. The trade show represents industries, businesses, services and organizations that provide products or services utilized on a small farm or rural property.
A sampling of some of the topics that will be covered at the conference includes:

- Chainsaw Safety, Maintenance and Operation
- Raising sheep and goats
- Grass-fed Beef Production
- Fruit tree pruning
- Hobby Maple Syrup Production
- Fruit Tree and Small Fruit Disease Management and Prevention
- Micro Greens Production
- Vegetable Production and Season Extension with Tunnels
- Using and calibrating hand held sprayers on the farm
- Growing Shiitake mushrooms
- Selling eggs, poultry, produce and cottage foods
- Marketing Meat Goats
- Renting and Leasing Farmland
- Renewable Energy
- Small Farm Tax Issues
- Aquaculture Opportunities
- Vegetable Disease Diagnostics

The Chainsaw Safety, Maintenance and Operation topic as well as the Vegetable Production and Season Extension with Tunnels are both super sessions that extend over two break-out session time periods. The vegetable production and season extension with tunnels session will actually start at the OARDC high tunnels in Wooster and then move to the RG Drage Center for the in-door portion of the session. Participants may elect to do only the Wooster part, only the RG Drage Center part or both parts of this topic.

The conference begins with registration at 8:00 am, and an opening general session at 9:00 am. The conference concludes at approximately 3:45 pm following the final breakout session. Registration cost is $60 per person, which includes lunch and morning refreshments. The registration deadline is March 17. For those who are interested in attending both the Women in Agriculture conference [http://agnr.osu.edu/events/east-ohio-women-agriculture-conference-0](http://agnr.osu.edu/events/east-ohio-women-agriculture-conference-0) at the same location on March 24 plus the small farm conference on March 25 there is a discounted registration fee of $100 to attend both conferences. Student discounts are also available.

A conference brochure and registration form along with descriptions of all the breakout sessions as well as on-line registration is available on the OSU Extension Small Farm Program web site at: [http://agnr.osu.edu/small-farm-programs](http://agnr.osu.edu/small-farm-programs). Questions can also be directed to the Wayne County Extension office at 330-264-8722.

Ashtabula County Master Gardeners’ Spring Gardening Program at Local Libraries in March

Even though it is still winter, it is not too early to think about spring. The Ashtabula County Master Gardeners would like to invite you to join them at libraries across Ashtabula County during the week of March 18-25. Join teams of the Master Gardener Volunteers to learn more about pollinators, tomatoes and Container & Raised Bed Gardening- The Good, The Bad & The Ugly. The program locations are:

On Saturday, March 18, the Master Gardeners will be offering this program at the Andover Public Library and the Kingsville Public Library from 10:00 a.m. to 12:00 p.m. and at the Ashtabula Public Library from 1:00 to 3:00 p.m.

On Monday, March 20, the program will be held at the Harbor-Topky Memorial Library from 1:00 to 3:00 p.m. and at the Henderson Memorial Library in Jefferson.
from 6:00 to 8:00 p.m. On Wednesday, March 22, the program will be offered at the Conneaut Public Library from 1:00 to 3:00 p.m.

Then on Saturday, March 25, the gardening program will be offered at both the Rock Creek Public Library and the Grand Valley Library from 10:00 a.m. to 12:00 noon. And last but not least, the Geneva Public Library will host the final session from 1:00 to 3:00 p.m. on the same day.

These programs are free however space is limited. Please call your local library to reserve your spot! A program flyer can be accessed at: http://ashtabula.osu.edu/program-areas/master-gardener-volunteers/upcoming-educational-programs. This flyer includes the phone numbers for the libraries. More information can also be received by calling the Ashtabula County Extension office at: 440-576-9008 for more details.

Woodland Management Field Day to be held on April 8 in Chardon, Ohio
The Ohio Department of Natural Resources will be hosting a Woodland Management Field Day on Saturday, April 8th from 9:00 a.m. to 1:00 p.m. at the Hambden Orchard Wildlife Area on Sisson Road in Chardon, Ohio. ODNR Service Forester Aaron Kash, ODNR Private Lands Biologist Ryan Jackson, and NRCS District Conservationist Jonathan Mauk will be offering a morning field day to discuss and demonstrate options for private woodland management. Various aspects of wildlife habitat, forest management/timber harvesting, and conservation practices will be covered. This event is being held in the woods in previously harvested areas so appropriate footwear and attire will be necessary. This event is FREE but you must register by calling 440-564-5883 or emailing aaron.kash@dnr.state.oh.us

Chainsaw Safety Class to be held on April 8
OSU Extension Trumbull County will be offering a chainsaw safety class on Saturday, April 8th from 9:00 a.m. to 12:00 noon at the Trumbull County Ag and Family Education Center in Cortland, OH. This class is designed to help you handle and operate your chainsaw safely when you are clearing out a fence row, cleaning up after a storm, or any other time that you may use your chainsaw. The class will begin inside with an overview of protective equipment designed to minimize injury before moving to basic saw maintenance. We will cover saw basics, how to perform a safety check, and how to keep your chain sharp. We will wrap up the morning with demonstrations outside to show proper tree felling and bucking techniques.

Pre-registration is requested by April 5th, 2017. Cost for the class is $30/person and includes handouts, light refreshments, and additional materials. To register please complete the registration form and return to OSU Extension Trumbull County, 520 West Main St., Suite #1, Cortland, OH 44410. Please call 330-638-6783 or email Lee Beers (beers.66@osu.edu) for more information.

Widely Accepted Vision for Agriculture May be Inaccurate, Misleading
Source: http://news.psu.edu/story/452218/2017/02/22/widely-accepted-vision-agriculture-may-be-inaccurate-misleading

UNIVERSITY PARK, Pa. -- "Food production must double by 2050 to feed the world's growing population." This truism has been repeated so often in recent years that it has become widely accepted among academics, policymakers and farmers, but now researchers are challenging this assertion and suggesting a new vision for the future of agriculture.

Research published today (Feb. 22) in Bioscience suggests that production likely will need to increase between 25 percent and 70 percent to meet 2050 food demand. The assertion that we need to double global crop and animal production by 2050 is not supported by the data, argues Mitch Hunter, doctoral student in agronomy, in Penn State's College of Agricultural Sciences. He says the analysis shows that production needs to keep increasing, but not as fast as many have claimed. However, clarifying future food demand is only part of the story.
"In the coming decades, agriculture will be called upon to both feed people and ensure a healthy environment," said Hunter. "Right now, the narrative in agriculture is really out of balance, with compelling goals for food production but no clear sense of the progress we need to make on the environment. To get the agriculture we want in 2050, we need quantitative targets for both food production and environmental impacts."

A review of recent trends in agriculture’s environmental impacts shows that they are increasing and must drop dramatically to maintain clean water and stabilize the climate, according to the researchers. Specifying quantitative targets, the researchers contend, will clarify the scope of the challenges that agriculture must face in the coming decades, focusing research and policy on achieving specific outcomes.

"Food production and environmental protection must be treated as equal parts of agriculture’s grand challenge," says study co-author David Mortensen, professor of weed and applied plant ecology, Penn State.

These new findings have important implications for farmers. Lower demand projections may suggest that prices will not rise as much as expected in coming decades. However, the authors note that economic forecasting models already are based on up-to-date quantitative projections, so price forecasts may not be affected greatly by this new analysis.

At the same time, farmers will need to ramp up efforts to hold nutrients on their fields, reduce greenhouse gas emissions and improve soil health.

This analysis builds on the two most commonly cited food-demand projections, one from the United Nations Food and Agriculture Organization and one led by David Tilman, a prominent ecologist at the University of Minnesota. Hunter and his colleagues did not dispute these underlying projections; they simply updated them to help reframe the narrative.

"Both of these projections are credible and important, but the baseline years they used are over a decade past now, and global production has ramped up considerably in that time," Hunter explained. So, while Tilman’s study showed that the world will demand 100 percent more calories in 2050 than in 2005 that is the equivalent of only a 68 percent increase over production levels in 2014, the most recent year with available data. To meet the FAO projection, which used different assumptions and projected lower demand, production would have to increase only 26 percent from 2014 levels.

"Given how much production has increased recently, it is pretty misleading to continue to argue that we need to double our crop output by 2050," Hunter said.
Aiming to double food production makes it much harder to move the needle on our environmental challenges.

"To double food production, we would have to increase global agricultural output faster than we ever have before, and we are at a point in the developed world where we already are pushing our farming systems to the max. We don't know how to double yields in these systems, especially without multiplying our environmental impacts," Hunter said.

Despite increased discussion of sustainability in agriculture, the common narrative that we need to drastically increase food production is seldom challenged in agricultural circles, according to the researchers. This is partly because definitions of sustainability vary widely, ranging from "not increasing agriculture's environmental footprint" to achieving "major reductions in environmental impact."

The researchers present hard data and quantitative goals to help clear up this confusion. For global greenhouse gas emissions and nutrient pollution in the Mississippi River Basin, the data show that agriculture's environmental performance is going in the wrong direction, with aggregate impacts steadily increasing. Science-based goals indicate that these impacts must fall sharply over the coming decades to avoid the worst impacts of climate change and reduce the size of the "dead zone" in the Gulf of Mexico.

The authors argue for research and policy efforts to help identify production methods that can meet growing global food demand while also hitting sustainability targets.

"Even with lower demand projections, growing enough food while protecting the environment will be a daunting challenge," Hunter said. "We call on researchers, policymakers and farmers to embrace this recalibrated vision of the future of agriculture and start working toward these goals."

Also contributing to the research were Richard Smith, associate professor, and Lesley Atwood, doctoral degree candidate, both in the Department of Natural Resources and the Environment, University of New Hampshire, Durham; and Meagan Schipanski, assistant professor, Department of Soil and Crop Sciences, Colorado State University, Fort Collins.

The National Science Foundation and the U.S. Department of Agriculture's National Institute of Food and Agriculture supported this work.

**Joe Bodnar Memorial Northern Classic Steer & Heifer Show to be held on Saturday, April 22**

The Ashtabula County Cattlemen's Association will be sponsoring the 20th Annual Joe Bodnar Memorial Northern Classic Steer & Heifer Jackpot Show on Saturday, April 22 at the Ashtabula County Fairgrounds in Jefferson, Ohio. This good old fashion jackpot show will start promptly at noon.

The show is open to all youth under the age of 21 and will begin promptly at noon. An entry fee of $30 per head is required. Cash prizes will be awarded to individual class winners and to the Champion Steer, Reserve Champion Steer, Champion Heifer, and Reserve Champion Heifer. In addition to the open show, a Showmanship class and an Ashtabula County Class will be held. Local residents are encouraged to come out and watch this show. A registration flyer can be found at: [http://go.osu.edu/ne-events](http://go.osu.edu/ne-events). More information about this program can be obtained by calling the Ashtabula County Extension office at 440-576-9008

**Hydrangea School to be Held on May 3, 2017 in Jefferson, Ohio**

The Ashtabula County Extension office is pleased to be offering a Hydrangea School on Wednesday, May 3, 2017 at the Ashtabula County Extension Office located at 39 Wall Street in Jefferson, Ohio from
6:30 to 8:30 p.m. Join OSU Extension Educator Eric Barrett to discover the world of hydrangeas. Learn about types, care, pruning and bloom times. You'll receive a quick reference chart to take to the garden center and a hydrangea plant to take home. The registration fee for this workshop is $30 per person. Please make checks payable to OSU Extension. Registration includes handouts, light refreshments and a hydrangea plant to take home for your landscape. Please mail completed registration form to OSU Extension, 39 Wall Street, Jefferson, Ohio 44047. Due to space limitations, this program will be limited to the first 50 registrants. First come, first served basis. For questions, please call 440-576-9008. A registration flyer can also be obtained at: flyer can be found at: http://go.osu.edu/ne-events.

**Early Season Forage Seeding Considerations**

By Rory Lewandowski, OSU Extension Educator, Wayne County

Source: [http://u.osu.edu/beef/2017/03/08/early-season-forage-seeding-considerations/](http://u.osu.edu/beef/2017/03/08/early-season-forage-seeding-considerations/)

I have been getting questions about seeding forages, both frost seeding and drilling, and this year’s weather pattern needs to be considered when making a seeding decision. Generally March is a good time in our area to consider frost seeding. Frost seeding works better some years than others. Successful frost seeding is dependent upon several factors:

1. The broadcast seed can actually get down to the soil surface. For this to happen you have to be able to see bare soil when you look down upon your sod base. This will not work if there is a thick sod base that covers the soil. Bunch types of sod, composed of orchardgrass and/or tall fescue, work better to frost seed into than sod-forming grasses such as bluegrass. To prepare for frost seeding the recommendation is to “rough up” or “open up” the sod by grazing down tight or mowing very low in the late fall or in the early spring. If livestock are used to do a grazing pass the hoof action can also help to open up the sod.
2. Light tillage may also work.
3. Freeze/thaw action. This happens when we get night-time temperatures in the 20’s and day-time temperatures in the 40’s, preferably for at least several days after broadcasting the seed. These type of days have been very limited to date. If you read any of the fact sheets about frost seeding you typically will see the phrase “broadcast seed on to frozen soil”. We do not have frozen soil this year, thanks to the unseasonably warm temperatures we have experienced in February. This may be another strike against frost seeding success this year.
4. Forage species. Frost seeding works best with heavier seed that has a better chance of getting down to the soil surface. Legumes such as red and white clover work well and have good seedling vigor. Birdsfoot trefoil is also a good candidate for frost seeding but it is a slower establishing species and it may need 2 to 3 years after seeding before it makes much of a contribution to the pasture mix. Grasses do not establish as well with frost seeding, but there has been some limited success with perennial ryegrass and orchardgrass when frost seeded. I believe that for the dollars spent for seed, drilling grasses is the preferred method of establishment. Broadcast legume and grass seed separately because the difference in seed weight between the legume and grass seed results in the grass seed not being thrown as far as the legume seed.
5. Soil pH and fertility are conducive to good seedling establishment and growth. Soil pH should be at a minimum above 6.0 and preferably at 6.5 if legumes are being sown. Phosphorus is an important element for new seedling growth and soil phosphorus level should be at 25 ppm or higher (Bray P1 extractant). Soil potassium should be in the 120 ppm range.

Management after frost seeding. The new legume seedlings need sunlight to develop. This means that the grass plants in the sod mix can’t be allow to shade out the new seedlings. It will be necessary to do either a quick “flash” grazing pass to take off the top of the grass plants and leave a 4 to 4.5 inch residue or a mowing that leaves the same residual height. Once the seedling is established regular grazing or mowing passes can be practiced.

With regard to establishing a new forage stand with a drill, I think we have to look at this year’s weather pattern and what it is doing to soil temperatures. The third week in February we had 50 degree plus soil temperatures at a 2 inch depth. As I write this article in early March we have 40 degree plus soil temperatures at a 2 inch depth. We are ahead of our average. Seed placed in the soil now is likely to germinate and emerge more quickly this year. That may be okay, but it is early March and we could very well get some low to mid 20 degree temperatures yet. Legumes, especially alfalfa, are susceptible to getting that young seedling killed or damaged by these temperatures because their growing point is above the soil surface. Grasses have a little more protection as their growing point is at the soil surface. So, even though you might be able to drill seed now, from a risk management point of view, it may be best to wait until late March or early April.

Tri-County Grape Growers 2017 Steak Dinner to be held on Thursday, May 4
The Tri-County Grape Growers Association is pleased to announce they will be hosting their third annual Steak Dinner on Thursday, May 4 from 6:00 – 8:30 p.m. at the Harpersfield Community Center. Pre-sale tickets are required with each ticket costing $30.00 per person. The ticket price includes a one-year membership in Tri-County Grape Growers. Please RSVP by April 28 to guarantee seating. All are welcome to attend. Tickets may be purchased from the OSU Extension Office in Jefferson, Ohio (440-576-9008), John Linehan (440-466-3207) or from any active Tri-County Grape Grower Member.

 Pipelines, Property, and You: What Ohio Property Owners Impacted by Pipeline Projects Should Know
Written by: Chris Hogan, Law Fellow, OSU Agricultural & Resource Law Program

Several major pipeline projects, which plan to crisscross the state, are in the final stages of preparation. As part of the planning process for a project, pipeline builders plot the path that the pipeline will travel across the state. That path inevitably crosses private landowners’ property. Some landowners may feel overwhelmed trying to understand the rights of private pipeline companies to cross private property in Ohio. The frequently asked questions discussed below should help answer some of the common questions about pipeline projects in Ohio.

Can a pipeline company come on to my property to conduct a survey?
Yes. Prior to building a pipeline, pipeline companies must select a route where the pipeline is to be constructed. A pipeline project usually crosses private property along a proposed route. When a pipeline must cross private property along the project’s route, the pipeline company will ask the landowner for an easement that allows for pipeline construction on the property. However, even before signing an easement, a survey of the property may be necessary to determine the feasibility of constructing a
pipeline on the property. Therefore, a pipeline company may need to enter a landowner’s private property to conduct a survey.

In Ohio, the law allows private companies that are organized “for transporting natural or artificial gas, petroleum, coal or its derivatives . . . through tubing, pipes or conduits” to enter upon private land to examine or survey for pipelines. This means that a pipeline company organized for these specific purposes does have the right in Ohio to enter onto a landowner’s property to conduct a private survey for the purpose of pipeline construction.

**A pipeline company is telling me that they might use Eminent Domain to acquire my property. Is that legal?**

Most likely, yes. A pipeline company may negotiate an easement with landowners which compensates landowners in exchange for the right to build a pipeline. However, landowners may not want to give a pipeline company the right to cross their property. In that scenario, pipeline companies have the option of crossing a landowner’s property by using eminent domain. Eminent domain is the taking of private property for public purposes with compensation.

In Ohio, the same law that allows for companies that are organized “for transporting natural or artificial gas, petroleum, coal or its derivatives . . . through tubing, pipes or conduits” to enter upon private land for survey also allows those same companies to use eminent domain to take private land. The law states that a company organized for the above purpose “may appropriate so much of such land, or any right or interest [to the land], as is deemed necessary for the laying down or building of pipes . . . ” This suggests that pipeline companies have the power of eminent domain in Ohio.

Some argue that the law only grants eminent domain rights for transporting gas, and does not extend the right of eminent domain for the transport of gas derivatives such as ethane. While there is not strong legal support for this argument, it is under litigation in Ohio courts.

To use eminent domain, the pipeline company must prove that the landowner and the company were not able to reach an agreement about granting a pipeline easement and that the taking of the pipeline easement is “necessary.” A pipeline company must establish that the taking of property will serve a “public use.” Ohio courts have noted that the term public use is flexible. Accordingly, Ohio courts have held that private pipelines are a public use if those pipelines provide an economic benefit to Ohio. After establishing necessity and public use, the pipeline company must follow the procedures for eminent domain in Ohio Revised Code Chapter 163.

For an interstate pipeline that runs between Ohio and another state, federal law could allow a company to use eminent domain to obtain land from unwilling landowners. Federal law states that a company may acquire property rights for a gas pipeline if the company has obtained a Certificate of Public Convenience and Necessity from the Federal Energy Regulatory Commission and the company and landowner have not been able to agree on compensation for the pipeline easement. See 15 USC §717(F).

**What about the pipeline cases that are in court right now, do those affect my rights?**

Ohio landowners have probably heard about several high-profile pipeline projects that are planning to cut across the state. Some landowners have challenged the construction of these pipeline projects on their property. These landowners are challenging the right of the pipeline companies to use eminent domain to acquire an easement on their property. Two pipeline projects in Ohio are of particular interest: Kinder Morgan’s Utopia Project and Rover Pipeline LLC.
Northeast Ohio Agriculture 10

A court in Wood County, Ohio decided in 2016 that Kinder Morgan’s Utopia Project, which plans to run across Ohio and into Canada, did not have eminent domain authority. The court concluded that the pipeline did not “serve the public of the State of Ohio or any public in the United States.” The court based its conclusion on the fact that Utopia did not provide a benefit to Ohio. However, Kinder Morgan quickly appealed that case to Ohio’s Sixth Circuit Court of Appeals. Therefore, this opinion is on hold while a higher court decides whether it agrees with the lower court’s interpretation of the eminent domain law. A second high-profile pipeline case involves the right of Rover Pipeline LLC to use eminent domain for an interstate pipeline project. The Federal Energy Regulatory Commission issued this pipeline project a certificate of public convenience and necessity on February 2, 2017. As a result, Rover Pipeline LLC is moving forward with construction on landowners’ property, because a federal court found that the pipeline company has eminent domain authority.

So how do these court cases affect landowners? First, landowners should be aware that other pipeline projects in Ohio likely have eminent domain authority, if they meet the requirements for eminent domain described by Ohio law. Second, landowners should be aware that the pipeline case that began in Wood County and is currently being appealed is still pending. It is important to note that this case is reviewing the Utopia Project’s right to use eminent domain in Ohio. Therefore, this does not mean that all pipeline companies in Ohio no longer have the right to use eminent domain to acquire private property in Ohio. Instead, this case will determine the fate of that particular pipeline project and whether or not that project has the right to use eminent domain to acquire an easement. In the meantime, pipeline companies continue to have the right to use eminent domain in Ohio.

More information on pipelines in Ohio and resources for landowners considering signing an easement is available at: http://aglaw.osu.edu/our-library/oil-and-gas-law.

'Kidney Punch' Compound Could Stop Mosquitoes — Along with Their Resistance
Published on March 13, 2017

You may someday hear less of that buzzing sound. A team led by scientists from The Ohio State University and Vanderbilt University has taken the next step toward developing an improved, sustainable mosquito insecticide — one that won’t cause the biting, sometimes-disease-carrying pests to become resistant to it.

If successful, their work could one day help fight the spread of mosquito-borne illnesses such as Zika and malaria. In an article published last fall in the journal Scientific Reports, Ohio State entomologists Peter Piermarini and Reed Johnson, Vanderbilt pharmacologist Jerod Denton, and colleagues reported several new findings about a mosquito-killing compound they’ve been studying, including that it seems safe for adult honey bees. Piermarini and Johnson are faculty members in Ohio State’s College of Food, Agricultural, and Environmental Sciences. They’re based at the college’s research arm, the Ohio Agricultural Research and Development Center in Wooster in northeast Ohio.

Peter Piermarini (photo: Ken Chamberlain, CFAES)
Called VU041, the experimental compound targets a mosquito’s kidneys — or Malpighian tubules, to be exact — instead of its nervous system, as most current mosquito insecticides do. By doing that, Piermarini said, the new compound bypasses a mosquito’s mechanisms for developing resistance. Possible new tool against diseases like Zika. Insecticide resistance is a “major challenge” in controlling mosquitoes, Piermarini said. It can hamstring efforts to control new mosquito-borne disease outbreaks when they occur, such as when Zika was detected last year in mosquitoes in parts of Miami, Florida — the first finding of the virus in mosquitoes on the U.S. mainland. Zika can cause birth defects in babies born to infected mothers. Resistance also can shrink what’s already a “very limited” arsenal of usable mosquito insecticides, Piermarini said.

“Most of the current mosquito insecticides target the nervous system, and in some cases, resistance to one of those insecticides leads to resistance to others,” he said. Because of that, he said, “We need to develop new insecticides that are toxic to mosquitoes via new mechanisms if we want to develop an effective chemical toolkit for controlling mosquitoes.”

VU041 works by affecting certain potassium channels in the kidneys of adult mosquitoes, which shuts down the kidneys themselves. Potassium channels are types of proteins that regulate functions in cells. The effect is problematic for female mosquitoes, because they, not the males, are the ones that feed on blood. Drinking all that liquid — equal to two to three times their body weight — makes them have to urinate.

Treated mosquitoes can’t go, may ‘pop’
But female mosquitoes treated with VU041 can’t go. They can’t excrete the salts and fluid that come from the blood they ingest. Result: They swell up and die. “In some cases,” Denton said in a Vanderbilt press release, “they just pop.” For the study, the scientists looked specifically at VU041’s effects on the mosquitoes Aedes aegypti, the main transmitter of Zika, and Anopheles gambiae, a leading vector of malaria. They found, for example, that it: is toxic when applied to a mosquito’s cuticle, or outside surface; is toxic to mosquitoes resistant to current insecticides; doesn’t hurt adult honey bees, but further safety testing would be needed on honey bees’ other life stages and also on other insect species, including other beneficial pollinators.

“We included honey bee toxicity in the study because of concerns that existing insecticides used for mosquito and agricultural pest control are contributing to a decline in beneficial insects, such as honey bees and other pollinators,” Piermarini said. “We certainly don’t want to solve one problem, mosquitoes, by contributing to another one, honey bee decline.”

The team also determined that VU041 “moderately inhibits” a single potassium channel present in human heart tissue — a red flag in terms of its safety around people — but that a tweaked version called VU730 avoids the problem while still being effective against mosquitoes.

An ‘important step forward’
Taken together, the study’s findings suggest that VU041 or VU730 could serve as a chemical “scaffold” for creating a sprayed insecticide, Piermarini said. “We’re still in the discovery stage of this research, so it could easily be five to 10 years away for a potential usable product,” he said. “But it’s an important step forward in our initial work that demonstrated that potassium channels in the kidneys of mosquitoes are valuable molecular targets for the development of new insecticides.”
As farmers call in to discuss this strange winter and its risks to their alfalfa stand, concerns continue to grow as the green color has started to come back to alfalfa fields. Actually predicting what this weather is going to do to our alfalfa crop is impossible but scouting this spring will be imperative to determining how your alfalfa crop might do this year.

As temperatures rose into the 60’s or even set records in the 70’s recently it has awakened at least some of the alfalfa plants from their winter dormancy. Once dormancy is broke, the plants start using the nutrients that were stored in the roots and crowns to start spring growth. The early start to regrowth is not the problem, the challenge is going to be how many times winter temperatures returned to average and force plants back into dormancy. Then when another round of warm weather comes through, the plants will break dormancy again utilizing more of their root reserves. Alfalfa is a strong deep-rooted crop and can handle this cycle a couple times but eventually it can run out of root and crown reserves.

The other risk factor we are concerned about is ice formation on the soil surface each time we get a rain shower and it drops below freezing. The ice stops the exchange of gasses between the air and soil, if the exchange stops for a prolonged period of time toxins can build up in the soil, causing the roots to run out of oxygen that damages the roots, weakening the plant reserves to break dormancy. The other risk of wet soils and freezing and thawing is crown heaving. This usually snaps the taproot and raises the risk of crown damage during harvest. When the taproot snaps secondary roots can form that keep the plant alive but its nutrient uptake and ability to survive drought conditions decreases.

The next step is going to be an intensified scouting program this spring paying special attention to low areas and soils that warm up and cool faster which could have broken dormancy more times than other areas of the field. While scouting look for areas that are greening up slower or have uneven regrowth. In these areas root digs will be beneficial. Healthy roots are going to be white and firm while injured roots are spongy, yellowish grey, dehydrated, or even worse, they can be brown with a rotting slim feel.

When doing your scouting after dormancy breaks you will want to take stem counts per square foot to get an idea of how the stand will perform this year. If stem counts are greater than 55 stems per square foot,
stand density will not be a limiting factor. When densities decrease to 55-40 stems, there will be some
yield reductions but, yields will still be adequate in years of low inventory or high hay values. When stem
counts fall below 40, the stand is poor and termination options need evaluated. If damage is spotty
across the field and a mixed stand of grass and alfalfa could work for your operation, you could consider
inter-seeding annual or perennial grasses to improve yield.

2017-2018 Ashtabula County Beef Scholarships Applications Available
OSU Extension and the Ashtabula County Cattlemen’s Association are pleased to announce they will be
awarding two youth beef scholarships for the 2017-2018 school year. One $1,000 scholarship will be
awarded to a deserving 2017 High School Senior who will be attending an accredited full four year
college or an accredited two year technical institute in 2017-2018. In addition, one $500 scholarship will
be awarded to a current College Student who is currently attending an accredited full four year college or
an accredited two year technical institute.

Applicants must be resident of Ashtabula County. The first preference by the Ashtabula County
Cattlemen’s Association is the scholarships be awarded to deserving students who have been involved
in the beef industry as a youth. Examples of this could include: working on a family beef operation;
involved with a beef project through 4-H or FFA; or works on a local beef farm. The second preference
for the scholarship recipients would be awarded to students who are currently or will be studying a beef
related field in accredited full four year college or an accredited two year technical institute. Previous
winners of the $1,000 High School Senior Scholarship are eligible to apply for the $500 College
Scholarship. However, the $500 college scholarship can only be received once by a student during their
college career.

Applications must be received by the Ashtabula County Cattlemen’s Association by May 1, 2017 by 4:30
p.m. for consideration for the scholarship. No late applications will be considered. The application can
be obtained at: http://go.osu.edu/ne-events Additional information can be obtained by calling the
Ashtabula County Extension office at 440-576-9008.

David’s Weekly News Column
Published in the Jefferson Gazette on March 15, 2017 and the Ashtabula County Star Beacon on March
19, 2017.

Hello Ashtabula County! One of my favorite agriculture committees to work with is the Ashtabula County
Cattlemen’s Association. This board has been very proactive in developing educational programs for our
local beef industry and are great examples of how to give back to your community. I appreciate all the
work the Cattlemen’s Directors volunteer during the year. Thank you to Bart Kanicki, Dr. Bryan Elliott,
David Nye, Zach Ward and Tyler Brown! Today, I would like to provide details on next week’s Winter
Beef Clinic and encourage youth to apply for a Cattlemen’s scholarship. Have a great week!

OSU Extension and the Ashtabula County Cattlemen’s Association would like to invite Northeast Ohio
Beef Producers to their Winter Beef Clinic on Thursday, March 23, 2017 at the Ashtabula County
Extension Office in Jefferson, Ohio. The keynote speaker for this workshop will be John Grimes,
Associate Professor & OSU Extension Beef Specialist. Join us as we discuss the basics of feeding beef
cows and calves in Northeast Ohio.

During this workshop, John Grimes will share how to economically feed cattle on a small beef farm in
Ohio. Discussions will be held on feeding Brood cows and their calves. Learn how to read a hay
analysis report so you can get the biggest bang from your hay & baleage feeds. John will use the results from local farms to show how forage quality impacts the overall nutrition program. Learn about hay storage basics and grain & mineral supplementation. Learn more about the new Veterinary Feed Directive.

Local 4-H and FFA Youth will also want to attend as John will share how to feed your steer for the county fair. Learn how to plan for the growth of your steer from the day of purchase all the way through fair. This workshop is free and open to all beef producers in Northeast Ohio. 4-H and FFA youth will also gain valuable experience from this workshop. No registration is required. Light refreshments will be served. A program flyer can be found at: http://go.osu.edu/ne-events More information can be received by calling the Ashtabula County Extension office at 440-576-9008. Do not miss this chance to increase your beef nutrition management skills.

OSU Extension and the Ashtabula County Cattlemen’s Association are pleased to announce they will be awarding two youth beef scholarships for the 2017-2018 school year. One $1,000 scholarship will be awarded to a deserving 2017 High School Senior who will be attending an accredited full four year college or an accredited two year technical institute in 2017-2018. In addition, one $500 scholarship will be awarded to a current College Student who is currently attending an accredited full four year college or an accredited two year technical institute.

Applicants must be resident of Ashtabula County. The first preference by the Ashtabula County Cattlemen’s Association is the scholarships be awarded to deserving students who have been involved in the beef industry as a youth. Examples of this could include: working on a family beef operation; involved with a beef project through 4-H or FFA; or works on a local beef farm. The second preference for the scholarship recipients would be awarded to students who are currently or will be studying a beef related field in accredited full four year college or an accredited two year technical institute. Previous winners of the $1,000 High School Senior Scholarship are eligible to apply for the $500 College Scholarship. However, the $500 college scholarship can only be received once by a student during their college career.

Applications must be received by the Ashtabula County Cattlemen’s Association by May 1, 2017 by 4:30 p.m. for consideration for the scholarship. No late applications will be considered. The application can be obtained at: http://go.osu.edu/ne-events Additional information can be obtained by calling the Ashtabula County Extension office at 440-576-9008.

To close, I could like to share a quote from Gilbert K. Chesterton who stated, “To love means loving the unlovable. To forgive means pardoning the unpardonable. Faith means believing the unbelievable. Hope means hoping when everything seems hopeless.” Have a good and safe day.

Upcoming 2017 Winter Extension Program Dates
The following programs have been scheduled for Northeast Ohio farmers this upcoming winter. Complete registration flyers can be found at: http://ashtabula.osu.edu/program-areas/agriculture-and-natural-resources/upcoming-educational-programs-deadlines

2017 Northeast Ohio Agronomy School
March 15 at the Williamsfield Community Center

Last Chance Pesticide Re-certification Session
March 16 at the Geauga County Extension office
2017 Ashtabula County Dairy Banquet  
Saturday, March 18 at Camp Beaumont

Northeast Ohio Winter Beef Clinic  
March 23 at the Ashtabula County Extension office

Chainsaw Safety Class  
April 8 at the Trumbull County Extension Office

2017 Northeast Ohio Grape School – A Focus on Pinot Gris  
April 18 at Virant’s Winery

2017 Joe Bodnar Memorial Northern Classic Steer & Heifer Show  
Saturday, April 22 at the Ashtabula County Fairgrounds

Hydrangea School  
Wednesday, May 3 at the Ashtabula County Extension office

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THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

David Marrison  
Ashtabula County Extension Office  
39 Wall Street  
Jefferson, OH 44047  
440-576-9008  
marrison.2@osu.edu  
ashtabula.osu.edu

Lee Beers  
Trumbull County Extension Office  
520 West Main Street  
Cortland, OH 44410  
330-638-6783  
beers.66@osu.edu  
trumbull.osu.edu
Ashtabula County Women in Agriculture:
Conversations and Crafts

Saturday, March 18, 2017
9:30 a.m. to 11:30 a.m.

Last Resort Bed and Breakfast
4373 Cork Cold Springs Rd.
Geneva, Ohio 44041

Do you have a burning question of how other women balance farm and personal life or how they provide effective leadership to their business? If so, plan on attending and asking your questions to a panel of successful women in Agricultural from different enterprises. After the panel, we will continue the conversations while we make a burlap wreath. Supplies will be provided. Marsha Gurich will be hosting us at Last Resort Bed and Breakfast which is located at 4373 Cork Cold Springs Rd. Geneva, Ohio 44041. Please call the O.S.U. Extension Office (440-576-9008) or email Abbey Averill (averill.10@osu.edu) to register by Friday March 17.

Questions? Contact Abbey Averill at 440-576-9008 or averill.10@osu.edu

CFAES provides research and related educational programs to clientele on a nondiscriminatory basis.
For more information: http://go.osu.edu/cfaesdiversity
2017 Joe Bodnar Memorial
Northern Classic Steer &
Heifer Show
Saturday, April 22, 2017
Ashtabula County Fairgrounds, Jefferson, Ohio

Champion Steer
Sponsored by:
Clemson Towing
$400

Reserve Champion Steer
Sponsored by:
Countryside Vet Clinic
$200

Champion Heifer
Sponsored by:
Country Creek Cattle &
Country Cowboy Cafe’
$400

Reserve Champion Heifer
Sponsored by:
Ferguson Show Cattle
$200

$25 Pre-Entry fee
$30 Day of Show

Show Time is 12 noon. Health papers must meet state requirements. Exhibitors must be 21 years or younger. Age Showmanship classes will be held. An Ashtabula County-only class will be held after the regular show. This class is sponsored by Bortnick Tractor Sales, Inc. Show Supplies and Food Trailer will be on-site. Generators are permitted. Please do not park on the grass---plenty of paved parking available on-site. Show check-in will be conducted from 8:00 a.m. to 10:00 a.m. on the day of the show. All animals must be checked in at this time. More information can be obtained by contacting OSU Extension at 440-576-9008 or marrison.2@osu.edu or kanickicattleco@windstream.net This show is sponsored by the Ashtabula County Cattlemen’s Association.

Pre-Registration Form (cut and return to address below)

Name of Exhibitor___________________ Exhibitor Age as of January 1, 2017___________________
Street Address______________________________________________________________________
City____________________ State____________ Zipcode____________
Telephone____________________ Email_________________________(email confirmation will be sent)

Will exhibitor be participating in the showmanship class ___yes ___no
Is the 4-H or FFA Exhibitor for Ashtabula County, Ohio ___yes ___no

#of steers entering___________ X $25 pre-registration $____ ______Due
#of heifers entering___________ X $25 pre-registration $____ ______Due

Registrations received after April 14, 2017 or on the day of the event will be $30 per entry. Make Checks payable to A.C.C.A Return Registration Form to: Bart Kanicki, ACCA President, 4664 Schrambling Road, Pierpont, Ohio 44082.
OSU Extension and the Ashtabula County Cattlemen’s Association would like to invite Northeast Ohio Beef Producers to their Winter Beef Clinic on Thursday, March 23, 2017 at the Ashtabula County Extension Office in Jefferson, Ohio. The keynote speaker for this workshop will be John Grimes, Associate Professor & OSU Extension Beef Specialist. Join us as we discuss the basics of feeding beef cows and calves in Northeast Ohio.

During this workshop, John Grimes will share how to economically feed cattle on a small beef farm in Ohio. Discussions will be held on feeding Brood cows and their calves. Learn how to read a hay analysis report so you can get the biggest bang from your hay & baleage feeds. John will use the results from local farms to show how forage quality impacts the overall nutrition program. Learn about hay storage basics and grain & mineral supplementation. Learn more about the new Veterinary Feed Directive.

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This workshop is free and open to all beef producers in Northeast Ohio. 4-H and FFA youth will also gain valuable experience from this workshop. No registration is required. Light refreshments will be served. More information about this program can be obtained by calling the Ashtabula County Extension office at 440-576-9008. Do not miss this chance to increase your beef nutrition management skills.
Small Farm Conference and Trade Show

Hello Small Farm Enthusiast!
This intensive conference will give you the opportunity to choose from different seminars taught by Extension professionals and industry leaders on a wide variety of agricultural enterprises. A tradeshow representing the many industries servicing small farms will be present for you to visit during Saturday hours.

Saturday’s agenda will provide many opportunities for you to attend the informative sessions of your choosing. Saturday’s program will begin at 8:00 am with registration, the trade show, and morning refreshments.

Online registration & session details available at: http://agnr.osu.edu/small-farm-programs

CONFERENCE SCHEDULE
8:00 - 9:00 am: Registration
9:00 - 9:15 am: Opening Comments, Tony Nye, OSU Extension Small Farm Coordinator

SESSION INFORMATION
All session tracks will take place at the R.G. Drage center, with one exception:

9:30 am Super Session on Vegetable Production/Season Extension with Tunnels - Participants will meet at the OARDC Vegetable Productions System high tunnels located behind the State Highway Patrol Building 1540 Dover Road (SR 250) past the OSU-ATI campus.

9:30 am: Session Tracks Begin
• see track listings on back of brochure

11:45 am - 1:00 pm: Lunch & Trade Show

1:15 pm - 3:45 pm: Session Tracks
• see track listings on back of brochure

REGISTRATION and SESSION DESCRIPTIONS can be found online at: agnr.osu.edu/small-farm-programs

For more information, contact:
• Rory Lewandowski (330) 264-8722lewandowski.11@osu.edu
• Tony Nye (937)382-0901nye.1@osu.edu

REGISTRATION DEADLINE is MARCH 17th.
Please copy and enclose a separate registration form for each person attending.

CONFERENCE COST: $60.00
*note: a combined discount fee is being offered to women attending both this conference and the “Women in Ag” conference. A student discount is also available. See registration form.

Make check payable to:
OSU Extension - Small Farm.
* We cannot refund any registration fees.
* No confirmation will be sent.

R.G. Drage Career Technical Center
2800 Richville Dr SW, Massillon, OH 44646

FROM THE NORTH:
* Interstate 77 South to US 30 W to Richville Drive Exit, turn right OR
* SR 21 South to U.S. 30 East to Richville Drive Exit, turn left

FROM THE SOUTH:
* Interstate 77 North to US 30 West, take Richville Drive Exit, turn right OR
* SR 21 North to U.S. 30 East, take Richville Drive Exit, turn left

Small Farm Conference
NORTHEAST OHIO REGISTRATION

• Use one form per person.
• Send to: OSU Extension Coshocton County
724 South 7th Street, Room 110
Coshocton, Ohio 43812
• Deadline for registration: March 17, 2017

Name:______________________________________
Address:____________________________________
____________________________________________
City/State/Zip:__________________________________
Phone _______________________________________
Email:  _______________________________________

CHOOSE DATE / SESSIONS HERE:
I am attending: ____ Saturday only ($60.00)
____ Women in Ag Conference and the Small Farm Conference (combined price of $100.00)
____ I am eligible for a student discount

STUDENT DISCOUNTS
COST
Small Farm Only $30.00
“Women in Ag” and Small Farm $50.00

Indicate class number (#) for Saturday:
• 9:30 am Session #: ____________
• 10:45 am Session #: ____________

After-lunch:
• 1:15 pm Session #: ____________
• 2:30 pm Session #: ____________
2-HOUR SUPER SESSIONS

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9:30 AM</td>
<td>Vegetable Production/Season Extension with Tunnels</td>
<td>Matt Kleinhenz, OSUE Vegetable Specialist</td>
</tr>
<tr>
<td>2</td>
<td>9:30 AM</td>
<td>Using and Maintaining Your Chainsaw Safely</td>
<td>Lee Beers, OSUE Trumbull County</td>
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1-HOUR SESSIONS

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<tr>
<th>#</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
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</thead>
<tbody>
<tr>
<td>3</td>
<td>2:30 PM</td>
<td>Pesticide Application with Backpack &amp; Handheld Sprayers</td>
<td>Rory Lewandowski, OSUE Wayne County</td>
</tr>
<tr>
<td>4</td>
<td>10:45 AM</td>
<td>Disease Management and Prevention: Tree Fruit</td>
<td>Melanie Ivey, OSUE Fruit Pathologist</td>
</tr>
<tr>
<td>5</td>
<td>1:15 PM</td>
<td>Disease Management and Prevention: Small Fruit</td>
<td>Melanie Ivey, OSUE Fruit Pathologist</td>
</tr>
<tr>
<td>6</td>
<td>2:30 PM</td>
<td>Hands-on Fruit Tree Pruning</td>
<td>Eric Barrett, OSUE Mahoning County</td>
</tr>
<tr>
<td>7</td>
<td>10:45 AM</td>
<td>Utilizing Urban Land for Garden Markets</td>
<td>Jacqueline Kowalski, OSUE Summit County</td>
</tr>
<tr>
<td>8</td>
<td>2:30 PM</td>
<td>Micro Greens Production</td>
<td>Jacqueline Kowalski, OSUE Summit County</td>
</tr>
<tr>
<td>9</td>
<td>9:30 AM</td>
<td>Vegetable Disease Diagnostics</td>
<td>Erika Lyon, OSUE Jefferson/Harrison Counties</td>
</tr>
</tbody>
</table>

LIVESTOCK & AQUACULTURE

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>9:30 AM</td>
<td>Grass-fed Beef</td>
<td>Greg Hoffman, Heritage Hills Farm</td>
</tr>
<tr>
<td>11</td>
<td>2:30 PM</td>
<td>Sheep or Goats? That is the Question</td>
<td>Sandy Smith, OSUE Carroll County</td>
</tr>
<tr>
<td>12</td>
<td>1:15 PM</td>
<td>Home Poultry Production</td>
<td>Sandy Smith, OSUE Carroll County</td>
</tr>
<tr>
<td>13</td>
<td>1:15 PM</td>
<td>Aquaculture Opportunities in NE Ohio</td>
<td>Matt Smith, Extension Aquaculture Specialist</td>
</tr>
</tbody>
</table>

MANAGEMENT

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>1:15 PM</td>
<td>Small Farm Equipment: Prioritizing What to Purchase</td>
<td>Matt Kleinhenz, OSUE Vegetable Specialist</td>
</tr>
<tr>
<td>15</td>
<td>10:45 AM</td>
<td>Renting and Leasing Farmland</td>
<td>Chris Zoller, OSUE Tuscarawas County</td>
</tr>
<tr>
<td>16</td>
<td>2:30 PM</td>
<td>Farm Business Plans</td>
<td>Chris Zoller, OSUE Tuscarawas County</td>
</tr>
<tr>
<td>17</td>
<td>9:30 AM</td>
<td>So You Think You Want to Farm</td>
<td>Clifton Martin, OSUE Muskingum County</td>
</tr>
<tr>
<td>18</td>
<td>1:15 PM</td>
<td>Small Farm Tax Issues and Considerations</td>
<td>David Harrison, OSUE Ashtabula County</td>
</tr>
<tr>
<td>19</td>
<td>1:15 PM</td>
<td>Financing My Niche Farm</td>
<td>Darren Metzger, USDA FSA</td>
</tr>
</tbody>
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MARKETING & SELLING

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>2:30 PM</td>
<td>Opportunities to Sell from Home and Farm</td>
<td>Emily Adams, OSUE Coshocton</td>
</tr>
<tr>
<td>21</td>
<td>10:45 PM</td>
<td>Reducing Barriers for Ohio’s Direct Marketers</td>
<td>Emily Adams &amp; Eric Barrett, OSU Extension</td>
</tr>
<tr>
<td>22</td>
<td>9:30 AM</td>
<td>Marketing Goats: What Consumers Want/Ethnic Markets</td>
<td>Tony Nye, OSUE Clinton County</td>
</tr>
<tr>
<td>23</td>
<td>2:30 PM</td>
<td>Growing Your Farm to School Connection</td>
<td>Heather Niekirk, OSUE Stark County</td>
</tr>
</tbody>
</table>

NATURAL RESOURCES

<table>
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<tr>
<th>#</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>9:30 AM</td>
<td>Solar Energy Considerations</td>
<td>Eric Romich, OSUE Energy Ed. Field Specialist</td>
</tr>
<tr>
<td>25</td>
<td>10:45 AM</td>
<td>Pond Management and Care</td>
<td>Gary Graham, OSUE Holmes County</td>
</tr>
<tr>
<td>26</td>
<td>1:15 PM</td>
<td>Hobby Maple Sugar Production</td>
<td>Gary Graham, OSUE Holmes County</td>
</tr>
<tr>
<td>27</td>
<td>10:45 AM</td>
<td>Introduction to Growing Shitake Mushrooms</td>
<td>Jerry Iles, OSUE Fairfield County</td>
</tr>
</tbody>
</table>
Pruning Landscape Plants
Featuring Jim Chatfield

Thursday,
March 9, 2017
10am – Noon
Trumbull County Ag Center
520 West Main St.
Cortland, OH 44410
Cost: $15/person Pre-Registration is requested
Call 330-638-6783 for more information

Join us on Thursday, March 9th to learn how to properly prune and maintain your landscape plants. Jim Chatfield (OSU Extension Specialist) will start the day off with a brief introduction to pruning inside before we move outside for hands-on pruning demonstrations around the Ag Center. This will be a great opportunity to ask learn from an expert and ask questions about your own pruning needs. Please dress for the weather as we will be outside for a large portion of the event.

To register, complete the back side of the flyer and mail with payment to OSU Extension, 520 West Main St, Suite 1, Cortland, OH 44410. Please make checks payable to OSU Extension. Payment can be made at the door on the day of the event, but please call 330-638-6783 to register in advance if you plan to attend.

trumbull.osu.edu