

NORTHEAST OHIO AGRI-CULTURE NEWSLETTER

Your Weekly Agriculture Update for
Ashtabula, Portage and Trumbull Counties

March 8, 2022



Daffodils letting us know spring is around the corner

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Hello Northeast Ohio Counties!

Though we got to enjoy so 70-degree weather this weekend, it looks like the forecast is back to normal for the foreseeable future.

We are uploading the recordings from the Northeast Ohio Agronomy Breakfast online and can be accessed here: <https://u.osu.edu/neoab/>

Also, don't forget that daylight saving time starts this weekend!

Stay safe and have a good week!

Lee Beers
Trumbull County
Extension Educator

Andrew Holden
Ashtabula County
Extension Educator

Angie Arnold
Portage County
Extension Educator

IT'S A WORM'S WORLD! The Impact of Nematology on Plant and Soil Health

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2022-05/its-worm%E2%80%99s-world-impact-nematology-plant-and-soil-health>

“If all the matter in the universe except the nematodes were swept away, our world would still be dimly recognizable . . .” Nathan Cobb (1915)

If nematodes are so abundant, why do we know so little about them? The Plant Nematology Lab (PLNTPTH 6002.02) and The Department of Plant Pathology invite everyone to our nematology panel in-person and via Zoom. Prestigious nematologists and scientists will answer your questions about nematodes and the impact of nematology, particularly on plant and soil health.

Do not miss the opportunity to ask your questions to Drs. Greg Tylka, Terry Niblack, Chris Taylor, and Tom Mitchell.

Join us to learn more about these fascinating animals!

MONDAY, MARCH 7, 3:00 – 4:00 PM EST – PANEL

Panelists also available for informal discussion, 4:00 - 4:30 PM

In-person location: Kottman Hall 102 [2021 Coffey Rd., Columbus, OH 43210]

Zoom: [register here!](#) [link: http://go.osu.edu/nema_panel_osu_2022]

Contacts: lopez-nicora.1@osu.edu and lewandowski.52@osu.edu

Corn College and Soybean School Recordings Available

By: Laura Lindsey, Amanda Douridas

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2022-05/corn-college-and-soybean-school-recordings-available>

Did you miss our Corn College and Soybean School this year? We have you covered!

Check out the AgCrops Team YouTube channel for all the

recordings: https://www.youtube.com/playlist?list=PLYlh_BdeqniLOu-Q32gjLcKQliE9p3P9B

Recordings include:

- ***Soybean Management for 2022 by Dr. Laura Lindsey.*** This recording covers soybean planting date, including ultra-early dates. Dr. Lindsey also includes information about cover crop termination timing prior to soybean planting.

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Link: https://www.youtube.com/watch?v=IS3MyThsFxE&list=PLYlh_BdeqniLOu-Q32gjLcKQliE9p3P9B&index=6&t=1500s

- **Corn Management for 2022 by Dr. Osler Ortiz.** Dr. Ortiz discusses a wide-range of corn topics, including abnormal ears, the national corn yield contest, and observations from the Ohio Corn Performance Test.
Link: https://www.youtube.com/watch?v=gQQWyi5z6Nk&list=PLYlh_BdeqniLOu-Q32gjLcKQliE9p3P9B&index=6
- **Soybean Cyst Nematode and Other Soilborne Pathogens by Dr. Horacio Lopez-Nicora.** Learn about soybean cyst nematode damage and management as well as damage and management of other soilborne pathogens. Dr. Lopez-Nicora also covers seed treatment options in soybean.
Link: https://www.youtube.com/watch?v=BUBpcePKA3I&list=PLYlh_BdeqniLOu-Q32gjLcKQliE9p3P9B&index=8
- **Field Crop Diseases: Emphasis on Corn Tar Spot by Dr. Pierce Paul.** Hear from Dr. Paul on environmental conditions that favor tar spot and foliar fungicide options.
Link: https://www.youtube.com/watch?v=W5r1Oan_Y7k&list=PLYlh_BdeqniLOu-Q32gjLcKQliE9p3P9B&index=7
- **Insects Are Full of Surprises: Field Crop Gotchas by Dr. Kelley Tilmon.** Dr. Tilmon covers soybean gall midge as an emerging soybean pest in the western soybean belt as well as fall armyworm.
Link: https://www.youtube.com/watch?v=x_rMcx3eZMU&list=PLYlh_BdeqniLOu-Q32gjLcKQliE9p3P9B&index=1
- **Corn Insect Management by Dr. Andy Michel.** Dr. Michel provides an overview of corn insect management. Topics include: Asiatic garden beetle, caterpillars in ears, and Bt resistance.
Link: https://www.youtube.com/watch?v=8hKHg3O9MPs&list=PLYlh_BdeqniLOu-Q32gjLcKQliE9p3P9B&index=4
- **2022 Weed Management Update for Corn and Soybeans by Dr. Mark Loux.** Dr. Loux provides information on corn and soybean herbicide options and updates to weed prevalence in Ohio.
Link: https://www.youtube.com/watch?v=qn4uUGj0bPI&list=PLYlh_BdeqniLOu-Q32gjLcKQliE9p3P9B&index=3
- **Meeting Nutrient Needs for Corn and Soybean by Dr. Steve Culman.** Learn about soil sampling strategies and pH management, corn nitrogen rates, and update from on-farm trials in Ohio. Link: https://www.youtube.com/watch?v=T6q_tpQ936U&list=PLYlh_BdeqniLOu-Q32gjLcKQliE9p3P9B&index=2

Nanocarrier spray: better crops without genetic modification

Source: RIKEN. "Nanocarrier spray: Better crops without genetic modification." ScienceDaily. ScienceDaily, 23 February 2022.
www.sciencedaily.com/releases/2022/02/20220223085748.htm

Researchers at the RIKEN Center for Sustainable Resource Science (CSRS) in Japan have developed a way to improve crop quality without needing to create special genetically modified plants. Rather than changing plant genomes, the new technique relies on a spray that introduces bioactive molecules into plant cells through their leaves. The new technology could be used to help crops resist pests or become more resistant to drought -- in less time and at less cost than making lines of genetically modified crops. The study was reported in the scientific journal *ACS Nano*.

Technology allows us to directly alter genomes and create genetically modified organisms (GMOs), including GM food. However, making transgenic plants takes time, money, and still has not gained widespread public support. RIKEN CSRS researchers led by Masaki Odahara have developed an alternative to GM food that can overcome these problems. For example, rather than changing a plant's genome so that it doesn't express a particular gene, the same gene can be suppressed on the fly by inserting a specific bioactive compound into the plant. In this scenario, the bioactive compound is taken into the plant's cells by a carrier that can penetrate the cell walls of plant cells.

While the concept might be simple, making it happen was a challenge. "In addition to designing a way to introduce bioactive molecules into the plants," says Odahara, "we had to consider a delivery method that would be practical for cultivated crops under real agricultural conditions." The team concluded that the best method would be through a spray that could be deployed over large fields relatively easily.

Many types of nanoparticles can penetrate plant cells. The researchers focused on cell-penetrating peptides (CPPs) because they can also target specific structures inside plants cells, such as chloroplasts. The first challenge was to determine which CPPs are best when using a spray. They tagged natural and synthetic CPPs with fluorescent yellow, sprayed them on plant leaves, and measured the amount of fluorescence in the leaves with a confocal laser-scanning microscope at different time points. After performing this procedure in typical laboratory *Arabidopsis thaliana*, as well as in several types of soybeans and tomatoes, they found several natural CPPs that were able to penetrate into the outer layer of the leaves, and in some cases even deeper.

Further experiments showed that this technique worked well when plasmid DNA was attached to the CPPs, and analysis showed that genes were effectively expressed in the leaves of both *A. thaliana* and soybeans after being carried into the cells through an

aqueous spray. The researchers also found that by including other biomolecules and nanostructures in the spray solution, they could temporarily increase the number of pores in the leaves, which increased how much spray was taken up by the plant.

Often, crop yield can be improved by inserting or knocking out genes. After creating a transgenic plant that overexpresses yellow fluorescence in the leaves, the team attached RNA that interferes with fluorescent protein expression to a CPP. As hoped, spraying the leaves with this complex silenced yellow fluorescence expression. "This result was critical," says Odahara, "because it is important that any alternative to genetic modification be able to achieve the same functional outcome." Lastly, the researchers were able to similarly silence genes specific to chloroplasts when they included a chloroplast-targeting peptide to a specific CPP-RNA complex.

"Mitochondria and chloroplasts regulate much of a plant's metabolic activity," says Odahara. "Targeting these structures with bioactive molecules delivered via spray could effectively improve economically desirable quality traits in crops. Our next step is to improve the efficiency of the delivery system. Ultimately, we hope this system can be used to safely protect crops from parasites or other harmful factors."

Ohio Farm Custom Rate Survey 2022 Responses – Last Call

By: Barry Ward

Source: <https://u.osu.edu/ohioagmanager/2022/03/07/ohio-farm-custom-rate-survey-2022-responses-last-call/>

The Ohio Farm Custom Rates Survey 2022 data collection has launched. The online survey for 2022 is available at: <https://go.osu.edu/ohiofarmcustomratesurvey2022>
If you perform custom farm work or pay for these services, we kindly ask you to complete the Ohio Farm Custom Rate Survey for 2022.

A large number of Ohio farmers hire machinery operations and other farm related work to be completed by others. This is often due to lack of proper equipment, lack of time or lack of expertise for a particular operation. Many farm business owners do not own equipment for every possible job that they may encounter in the course of operating a farm and may, instead of purchasing the equipment needed, seek out someone with the proper tools necessary to complete the job. This farm work completed by others is often referred to as "custom farm work" or more simply "custom work". A "custom rate" is the amount agreed upon by both parties to be paid by the custom work customer to the custom work provider.

Custom farming providers and customers often negotiate an agreeable custom farming machinery rate by utilizing Extension surveys results as a starting point. Ohio State

University Extension collects surveys and publishes survey results from the Ohio Farm Custom Survey every other year. Past survey summaries can be found at: <https://farmoffice.osu.edu/farm-mgt-tools/custom-rates-and-machinery-costs>

This year we are updating our published custom farm rates for Ohio.

We kindly request your assistance in securing up-to-date information about farm custom work rates, machinery and building rental rates and hired labor costs in Ohio.

This year we have an online survey set up that anyone can access. We would ask that you respond even if you know only a few rates. We want information on actual rates, either what **you paid** to hire custom work or what **you charged** if you perform custom work. Custom Rates should include all ownership costs of implement & tractor (if needed), operator labor, fuel and lube. If fuel is not included in your custom rate charge there is a place on the survey to indicate this.

You may access the survey at: <https://go.osu.edu/ohiofarmcustomratesurvey2022>

If you prefer a document that you can print out and fill out by hand to return, email Barry Ward at ward.8@osu.edu

The deadline to complete the survey is March 31, 2022.

Specialty crop virtual listening session set

By: Sherrie R. Whaley

Source: <https://cfaes.osu.edu/news/articles/specialty-crop-virtual-listening-session-set>

Ohioans with an interest in specialty crops are invited to participate in an upcoming virtual listening session on Friday, March 25.

Sponsored by The Ohio State University College of Food, Agricultural, and Environmental Sciences (CFAES), the free event is set for 9:30–11 a.m. and will be of benefit to many in the specialty crop industry.

Participants should register online no later than Thursday, March 24, at go.osu.edu/2022speccropreg.

Designed specifically for Ohio specialty crop partners, the session will feature CFAES researchers and Ohio State University Extension educators with updates on priorities, existing support for specialty crops, and actions underway related to research and education.

“We will also take time to explore emerging trends for specialty crops agriculture in the state, listen to industry needs, and discuss how CFAES plays an important role in the industry,” said Sam Custer, interim assistant director of OSU Extension, agriculture and natural resources.

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The specialty crop industry in Ohio includes hundreds of acres of flowers, nursery crops, fruits, vegetables, and related products including tomatoes, radishes, beets, lettuces, parsleys, southern greens, sweet corn, asparagus, grapes, onions, celery, melons, eggplant, green beans, pumpkins, bell peppers, cabbage, cilantro, cucumbers, squash, kale, turnips, zucchini, jams, jellies, herbs, apples, cider, berries, peaches, and maple syrup. Other important segments of the specialty crop industry include vegetable seed, canners, and food processors.

FOR MORE INFORMATION, CONTACT:

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NORTHEAST OHIO AGRONOMY BREAKFAST WEEKLY WEBINAR SERIES - STARTING FEB 23

The Ohio State Extension Offices of Northeast Ohio is excited to offer The Northeast Ohio Agronomy Breakfast - Weekly Webinar Series. Start the morning off right with a quick one-hour presentation each Wednesday starting on February 23, 2022. Each webinar will cover a different topic and offer time to ask questions to the speakers.

There is no cost to attend, and everyone is welcome to join. You can register easily online at Register at: <https://u.osu.edu/neoab/> For any question or for help with registration or zoom, contact Andrew Holden at the Ashtabula County Extension Office at 440-576-9008.

This series will feature a variety of experts on a variety of important agronomic topics, including grain bin fires and safety, farm drainage, corn leaf diseases, soybean disease, and 2022 weather outlooks!

Schedule:

- ☐ March 8th-9th, 8:30-4:30 AM -Conservation Tillage and Technology Conference*
*More information on this separate event can be found here: <https://www.allenswcd.com/cttc/>
- ☐ March 16th, 8:00 AM – Dr. Horacio Lopez-Nicora on Soybean Disease
- ☐ March 23rd, **8:30 AM** –Dr. Vinayak S. Shedekar on Farm Drainage
- ☐ March 30th, 8:00 AM – Dr. Aaron Wilson on 2022 Weather Outlook

Register or watch recordings here:

<https://u.osu.edu/neoab/>

Upcoming Extension Programs

The following programs have been scheduled for NE Ohio farmers. Check back each week as more programs are added to the calendar

Private Pesticide/Fertilizer Applicator Training

March 28, 2022 – Ashtabula County

NE Ohio Agronomy Breakfast Webinar Series Register at <https://u.osu.edu/neoab/>

March 16th, 8:00 AM – Dr. Horacio Lopez-Nicora on Soybean Disease

March 23rd, 8:30 AM – Dr. Vinayak S. Shedekar on Farm Drainage

March 30th, 8:00 AM – Dr. Aaron Wilson on 2022 Weather Outlook

March Into Pruning

March 5, 2022 – Hartford Orchards

Ohio Small Farm Conference

March 12, 2022 – OSU Mansfield Campus

Backyard Chickens

March 16, 2022 – Trumbull County Extension Office

Women in Ag Conference

March 25, 2022



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

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CFAES provides research and related educational programs to clientele on a nondiscriminatory basis. For more information: <http://go.osu.edu/cfaesdiversity>.

Northeast Ohio Agriculture

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Northeast Ohio Winter Beef Clinic

Thursday , March 10th 2022 | 6:30 P.M. to 8:30 P.M.

Beef Cattle Nutrition with Dr. Steve Boyles -6:30

Beef Quality Assurance with Andrew Holden -7:30

Join us for an informative night of beef production and get BQA certified/recertified. The Ashtabula County Cattlemen's Association and Ashtabula County OSU Extension are partnering to offer another great Winter Beef Clinic. The first hour will feature Dr. Steve Boyles, Beef Cattle Extension Specialist for Ohio State University. The second hour will include Beef Quality Assurance (BQA) Training from Andrew Holden, ANR Educator. This training will certify new participants, as well as recertify those who have completed past trainings.

Location: Ashtabula County OSU Extension Office 39 Wall Street Jefferson, Ohio 44047

Cost: Free **Registration:** RSVP for this program by calling the Ashtabula County Extension Office at 440-576-9008 or E-Mailing Andrew Holden at Holden.155@osu.edu

This event is limited in capacity so reserve your spot today!



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**Co-Sponsored by the Ashtabula
County Cattlemen's Association**

CFAES provides research and related educational programs to clientele on a nondiscriminatory basis. For more information, visit cfaesdiversity.osu.edu. For an accessible format of this publication, visit cfaes.osu.edu/accessibility.

CFAES

COLLEGE of FOOD, AGRICULTURAL, and ENVIRONMENTAL SCIENCES

East Ohio Women in Agriculture Conference

**Who should attend:**

Women and Young Women (high school age) who are interested, involved, or want to become involved in food, agriculture, natural resources, or small business.

This one-day conference is a great place to learn, share and network. Be surrounded by other women who are facing the same day-to-day ups, downs, adventures and dilemmas as you.

AGENDA

- 9:00 Registration, Network Fair & Breakfast
- 9:30 Welcome
- 10:00 Breakout 1
- 11:00 Breakout 2
- 12:00 Buffet Lunch
- 12:45 Keynote
**Stoic or Stressed? Talking through
difficult topics in a safe space**
Bridget Britton
Behavioral Health Field Specialist
- 1:45 Breakout 3
- 2:45 Breakout 4
- 3:30 Closing and Door Prizes

**THE OHIO STATE UNIVERSITY**
EXTENSION**Friday****March 25, 2022****9 A.M. – 3:30 P.M.**

Ohio FFA Camp Muskingum
3266 Dyewood Rd SW
Carrollton, OH 44615
<https://ffacamp.com/>

\$55 Adults/ \$30 Students

Registration Deadline: March 11

For more information call 330-264-8722

Register online at
go.osu.edu/eowia2022
or complete & send this registration form.

Cancellation Policy: In the event of an unforeseen emergency, the conference will be cancelled by 11:59 PM, March 24, 2022. Attendees will be notified by email. The event will not be rescheduled. No registration fees will be refunded.

Break Out Tracks & Sessions

	Natural Resources	Plants & Animals	Home & Family	Special Interest
Session 1	1-A Sharpen your Skills: Chainsaw Maintenance and Safety – Lee Beers, OSU Extension <i>Learn about safe operation, sharpening, and maintenance of chainsaws. Stay safe with personal protective equipment. Get cutting!</i>	1-B Forages for Horses: The Crash Course – Haley Zynda, OSU Extension <i>Managing horses also means managing grass or hay. From equine nutrition to forage species selection, the course has it all.</i>	1-C He Said, She Said – Emily Marrison, OSU Extension <i>Explore what research reveals about male and female communication. Learn ways to achieve more productive work settings and peaceful home environments.</i>	1-D Being the Boss: 2022 Ag Labor Update – Dr. Margaret Jodlowski, Ohio State University <i>A look at up-to-date data on agricultural labor availability and wages, and research on labor management specifically for female operators!</i>
Session 2	2-A Preparing to Hunt – Janessa Hill, OSU Extension <i>Are you interested in hunting for recreation or food? Learn about resources, equipment, and more to be successful in the field!</i>	2-B Raising Livestock on 5 Acres or Less – Sandy Smith, OSU Extension <i>So, you have some land, and you want some extra income or a supply of food for your family. This session will investigate all your options and possibilities.</i>	2-C Charcuti...what? Everything old is new again! – Kate Shumaker, OSU Extension <i>No matter how you say it, charcuterie has been around for centuries. Learn history, shortcuts, money savers, tips and more!</i>	2-D Real Women, Real lives: Making Professionalism Purposeful. – Cassie Mavis, Morgan Anderson & Mackenzie Ott, State FFA Officers <i>Identify, observe, and implement female leadership principles. We will dive into the driving forces in strengthening a women's professional presence.</i>
Session 3	3-A Get Out: How Nature Improves Our Health – Laura Stanton and Shari Gallup, OSU Extension <i>Did you know that nature is beneficial to every aspect of wellbeing? We'll explore all the reasons to get out! (May be outdoors weather permitting.)</i>	3-B A complete approach to raised bed gardening – Jim Jasinski, OSU Extension <i>Are raised beds right you? Learn about construction, soil mixes, plant selection, and ways to minimize weeds, diseases, and insects!</i>	3-C Canning & Freezing Venison – Melinda Hill, OSU Extension <i>A successful hunt includes safely storing the harvested meat. Learn how to properly pressure can venison, review freezing tips, and more.</i>	3-D Real Women, Real lives: Making Professionalism Purposeful. – Cassie Mavis, Morgan Anderson & Mackenzie Ott, State FFA Officers <i>Identify, observe, and implement female leadership principles. We will dive into the driving forces in strengthening a women's professional presence.</i>
Session 4	4-A Mushroom Mania – Erika Lyon, OSU Extension <i>Learn the basics of the biology, ecology and identification of some common spring mushrooms while venturing on this outdoor fungal foray. (In the event of bad weather, this session will be moved indoors.)</i>	4-B Humane Euthanasia in Livestock – Dr. Sarah Finney, Tri-County Animal Clinic <i>How to recognize when it's time to euthanize and approved methods of euthanasia in livestock animals.</i>	4-C Basic Clothing Repair – <i>Learn basic sewing repair and what to look for when purchasing clothing that's long-lasting to help prevent wear and tear.</i>	4-D Cut Flowers for Income – <i>Learn how to grow, harvest, arrange and market cut flowers.</i>

Registration Form

Name _____

Address _____

Phone _____ Email _____

Breakout Sessions: 1 _____ 2 _____ 3 _____ 4 _____

Payment Enclosed: \$ _____ for _____ Adult(s) and/or _____ Student(s)

Please register on-line at go.osu.edu/eowia2022 or mail registration and payment to:
OSU Extension Harrison County, ATTN: Women in Ag, 538 North Main St., Ste H, Cadiz, OH 43907

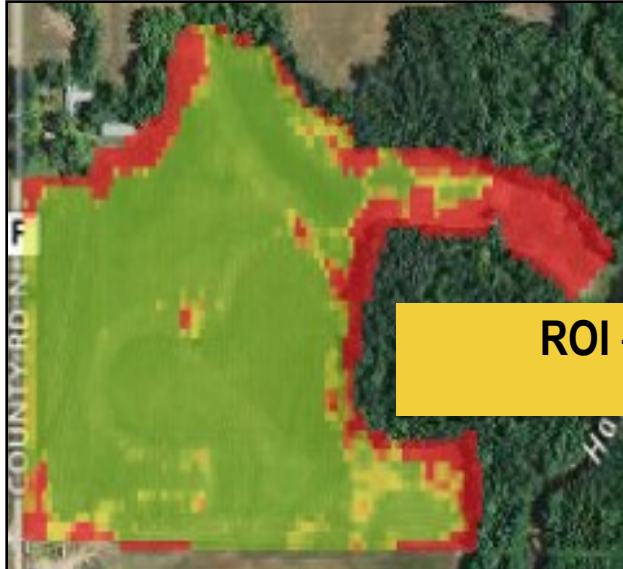


Improving Farm Profits: Turning Red Acres Green



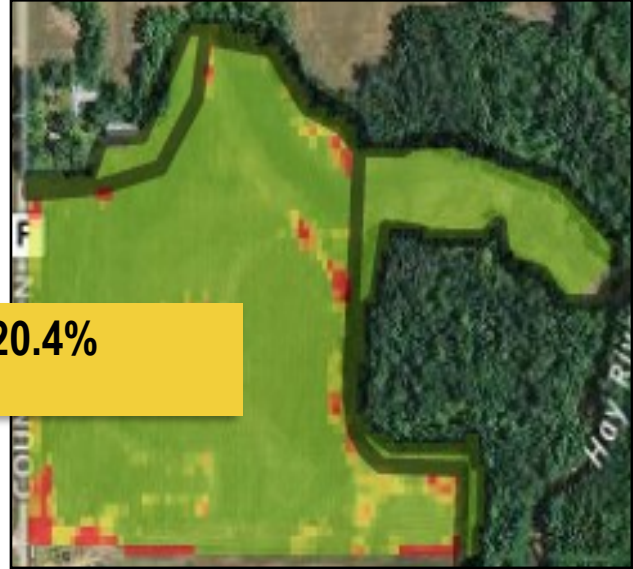
Geauga Soil and Water
Conservation District

Corn/Soybean Rotation No-Till



Avg Yield: 156.5 bu/ac
Profit: \$78.41/ac
ROI: 16.7%

Corn/Soybean Rotation with CREP Scenario



Avg Yield: 183.8 bu/ac
Profit: \$135.70/ac
ROI: 37.1%

Date: March 8th, 2022 @ 6:30pm

Location: Live Zoom Webinar

Do you have areas in your fields that are unproductive because of shade, water ponding, or poor soils? This workshop is for farmers who would like to increase profits by finding and addressing problem areas that are losing money.

To register for this event, scan the QR code or go to:

<https://turningredacresgreen.eventbrite.com>

Questions: Abby Prieur, aprieur@pheasantsforever.org



If you need an accommodation to participate in this event, please contact Kara MacDowell at (330) 282-8622, or by e-mail at kara.macdowell@usda.gov by 2/25/22.

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