Hello Northeast Ohio Counties!

Coffee to Combines will be available on Wednesday morning! If you, or someone you know, would like a hot cup of coffee delivered to the field, please call 330-638-6783. Leave a message with a field location, time of harvest, and how many cups of coffee.

Please be sure to checkout the article on safely drying grain. We have had wet weather that can cause some concerns going into storage.

Have a great week!
EPA Announces 2020 Dicamba Registration Decision
By: EPA Press Office
Source: https://www.epa.gov/newsreleases/epa-announces-2020-dicamba-registration-decision

Brooklet, Ga. (October 27, 2020) — At the Cromley Farm, U.S. Environmental Protection Agency (EPA) Administrator Andrew Wheeler announced that EPA is approving new five-year registrations for two dicamba products and extending the registration of an additional dicamba product. All three registrations include new control measures to ensure these products can be used effectively while protecting the environment, including non-target plants, animals, and other crops not tolerant to dicamba.

“With today’s decision, farmers now have the certainty they need to make plans for their 2021 growing season,” said EPA Administrator Andrew Wheeler. “After reviewing substantial amounts of new information, conducting scientific assessments based on the best available science, and carefully considering input from stakeholders we have reached a resolution that is good for our farmers and our environment.”

Through today’s action, EPA approved new registrations for two “over-the-top” (OTT) dicamba products—XtendiMax with VaporGrip Technology and Engenia Herbicide—and extended the registration for an additional OTT dicamba product, Tavium Plus VaporGrip Technology. These registrations are only for use on dicamba-tolerant (DT) cotton and soybeans and will expire in 2025, providing certainty to American agriculture for the upcoming growing season and beyond.

To manage off-site movement of dicamba, EPA’s 2020 registration features important control measures, including:

- Requiring an approved pH-buffering agent (also called a Volatility Reduction Agent or VRA) be tank mixed with OTT dicamba products prior to all applications to control volatility.
- Requiring a downwind buffer of 240 feet and 310 feet in areas where listed species are located.
- Prohibiting OTT application of dicamba on soybeans after June 30 and cotton after July 30.
- Simplifying the label and use directions so that growers can more easily determine when and how to properly apply dicamba.

The 2020 registration labels also provide new flexibilities for growers and states. For example, there are opportunities for growers to reduce the downwind spray buffer for soybeans through use of certain approved hooded sprayers as an alternative control
method. EPA also recognizes and supports the important authority FIFRA section 24 gives the states for issuing locally appropriate regulations for pesticide use. If a state wishes to expand the federal OTT uses of dicamba to better meet special local needs, the agency will work with them to support their goals.

This action was informed by input from state regulators, grower groups, academic researchers, pesticide manufacturers, and others. EPA reviewed substantial amounts of new information and conducted assessments based on the best available science, including making Effect Determinations under the Endangered Species Act (ESA). With this information and input, EPA has concluded that these registration actions meet Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) registration standards. EPA believes that these new analyses address the concerns expressed in regard to EPA’s 2018 dicamba registrations in the June 2020 U.S. Court of Appeals for the Ninth Circuit. Further, EPA concluded that with the control measures now required on labels, these actions either do not affect or are not likely to adversely affect endangered or threatened species.

To view the final registration of the dicamba products, visit docket EPA-HQ-OPP-2020-0492 at www.regulations.gov.

Background

The United States is the world’s leading soybean producer and second-leading soybean exporter and also serves as the world’s third-largest cotton producer and the leading cotton exporter. Today, there are limited cost-effective options to control herbicide-resistant weeds affecting these commodities. In 2018, approximately 41 percent of U.S. soybean acreage was planted with dicamba-tolerant (DT) seed and almost 70 percent of U.S. cotton acreage was planted with DT seed in 2019. Relative to alternative herbicide programs, postemergence dicamba may reduce weed control costs for some growers, possibly by as much as $10 per acre, or over five percent of net operating revenue, not accounting for all measures growers will have to take to control off-field movement of dicamba.

Following reports of damage resulting from the off-site movement of dicamba, EPA amended the dicamba registration labels in 2017 and in 2018. In June 2020, the U.S. Court of Appeals for the Ninth Circuit vacated the registrations for three dicamba products: XtendiMax with VaporGrip Technology, Engenia Herbicide, and DuPont FeXapan Herbicide. As a result of the Court’s decision, EPA issued cancellation orders outlining limited circumstances under which existing stocks of the three affected products could be distributed and used until July 31, 2020.
For Safety’s Sake: Don’t Take Drying Shortcuts with Stored Corn
By: Dee Jepsen and Lisa Pfeifer
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2020-37/safety’s-sake-don’t-take-drying-shortcuts-stored-corn

Wet weather conditions are causing concerns with the 2020 corn crop going into storage. Proper management of stored grain will be the key to eliminating risks to human health and safety later in the season.

Grain that goes into the bin with higher moisture content presents a host of possible issues.

- It can freeze or bind.
- Mold issues can arise.
- An environment susceptible to insect problems can be created.
- Higher volumes of bin fines can result.

All of these issues ultimately affect grain flow efficiencies, which can lead to a number of safety hazards. These conditions can cause grain to become bridged or line the sidewall of the bin, resulting in the need for bin entry into an unstable environment.

Producers will need to monitor bin conditions and test the moisture level of the product more frequently throughout the storage season. Do not take shortcuts by reducing the adequate drying time needed when putting the crop in the bin.

Establishing best management practices for safety at the bins now and following those throughout the storage cycle will be a good layer of defense in eliminating hazards.

Start with a “no bin entry” policy. This is the absolute best form of protection from becoming a victim.

If entry must occur, proceed with caution by following these steps:
• Turn off all power to the bin that is being entered. Lockout any equipment that could be started while a person is inside.
• Monitor the air quality in the bin before entry.
• Wear a harness and lifeline for fall protection.
• Wear an N-95 mask to eliminate respiratory hazards.
• Have an observer outside the bin and maintain constant visual communication during entry. Ideally in the event of entry a team of 3 would be on hand. One person in the bin, one person at the opening and one person on the ground.
• While completing tasks inside the bin always be aware of your surroundings and changing conditions.
• Do not by-pass or dismantle guards.

In incidents of entrapment or engulfment, response time is crucial and having preplanned for events of this nature can help first responders save critical time. Follow these emergency plans at each of your stored grain facilities:

• Post emergency numbers at the bin, including gas, electric and other utility suppliers.
• Number and label bins so first responders can identify where they need to be when called.
• Keep your vendor(s) or installer(s) information in a known location for contact in the event of mechanical or structural questions during an emergency.
• Inquire with your local fire department about the type of rescue equipment and training they have to respond to grain entrapment situations.

As the wet harvest season continues, keep drying down that grain. By keeping your crop in good condition throughout its storage life you can prevent grain entrapment risks in the future.

Have a happy and healthy harvest from the OSU Ag Safety and Health team!
Decreased atmospheric inputs of sulfur (S) to cropland and increasing removal with harvested crops necessitates a closer look at sulfur fertility management using the 4Rs. Considering the soil organic matter, percent sand, crop status, and sulfur fertilizer solubility are critical to meeting crop nutrition needs for optimal production. Earn 0.5 CEUs in Nutrient Management by reading this article and taking the quiz at www.certifiedcropadviser.org/education/classroom/classes/889.

In a 2018 report from the USEPA (USEPA, 2020), sulfur deposition decreased by 58% from the time period of 2000–2002 to 2016–2018. This is corroborated on a smaller scale by an assessment of long-term data from tile drainage and rivers in two Illinois watersheds. David et al. (2016) saw negative sulfur balances of 11.5 to 20.5 lb sulfur per acre per year resulting from sulfur export from harvested crops being greater than sulfur input. The soil’s organic sulfur pool saw the greatest depletion. In-field sulfur budgets did not predict the variation in river SO$_4^{2-}$ concentration over time. The study found that surface runoff volumes and reductions in atmospheric deposition had a stronger relationship to riverine SO$_4^{2-}$ trends.
While reductions in atmospheric sulfur deposition are well documented, changes in the sulfur status of soils are not always discussed; however, soil testing indicates soil sulfur values are decreasing. In a report based on data from U.S. soil-testing laboratories, samples testing under 3 ppm increased by ~7.5% while samples testing above 3 ppm decreased by an equivalent amount from 2001 to 2015 (IPNI, 2015). With these observed trends, a question to consider is how efficiently do cropping systems utilize sulfur? A recent analysis of sulfur use efficiency (SUE) estimated world SUE of applied sulfur in fertilizer to be 18% (Aula et al., 2019).

**Sulfur in Soils and Plants**

Sulfur concentration in soils varies depending on parent material, mineralogy, organic matter, and hydrology. In most agricultural soils, sulfur is present in both organic and inorganic forms with greater than 90% commonly found in the organic form. Organic matter and minerals are the primary soil sources of sulfur for growing crops. Availability is affected by mineral solubility and organic matter mineralization rates. For example, soil minerals and precipitates like gypsum (CaSO₄ • 2H₂O) or epsomite (MgSO₄ • 7H₂O) accumulate in regions with low rainfall and high evaporation. Many of the precipitates that contain sulfur return sulfur to the soil solution if conditions like low soil pH or saturation exist and the compounds dissolve. Sulfur in organic matter will be released when conditions favor mineralization. Other major non-applied sources of sulfur for crops are atmospheric deposition and irrigation water. Atmospheric deposition in the United States has decreased substantially in recent decades, and now is typically only ~1.5 lb of sulfur per acre per year. Sulfur concentration in irrigation water varies by water supply. A report of irrigation water samples in Nebraska showed a median sulfur supply of 53.5 lb applied in one acre-foot of water across the state (Wortmann, 2019).

Sulfur is primarily taken up in the sulfate (SO₄²⁻) form from the soil. Prior to use in energy and protein production, SO₄²⁻ must be reduced and assimilated into organic compounds. Sulfur and nitrogen (N) are closely linked in many plant metabolic processes. For example, synthesis of enzymes and nitrogen fixation in legumes strongly requires adequate sulfur. The synergism between sulfur and nitrogen has been well documented (Salvagiotti et al., 2009; Fismes et al., 2000). The metabolic roles and mobility of sulfur in plants defines what deficiency symptoms will look like in specific crops. Sulfur is relatively immobile in plant tissue compared with nutrients like nitrogen, phosphorus, and potassium; and deficiency symptoms will appear on younger tissue first. Sulfur-containing proteins are necessary for photosynthesis; thus, chlorotic yellowing will appear in sulfur-deficient tissue. Sulfur tissue concentration in a healthy crop ranges from 0.1 to 0.5%. Other effects of sulfur deficiency are reduced grain protein content, inhibited shoot growth rates, and delayed maturation.

**Source**

The strong relationship of sulfur availability in the soil to soil organic matter is an important consideration when choosing a source of sulfur for fertilization. Sulfur
fertilization sources vary by solubility, other nutrients associated, and sulfur content (Table 1). Additionally, some sulfur sources, such as ammonium sulfate and elemental sulfur, are acid forming, and a lime application may be required with continued use (Schwab, 2008). The most soluble forms of sulfur fertilizers are the bisulfates, thiosulfates, and polysulfides. Being water soluble, these sulfates are immediately available to plants and are a good choice when sulfur is applied to correct a deficiency (Table 1). Animal manures are also a source of sulfur for crops, and if they are being applied, they should be tested and accounted for when making sulfur applications.

Table 1. Common sulfur fertilizer sources (The Fertilizer Institute, 2020)

<table>
<thead>
<tr>
<th>Fertilizer material</th>
<th>Chemical formula</th>
<th>Sulfur content, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium sulfate</td>
<td>(NH₄)₂SO₄</td>
<td>24</td>
</tr>
<tr>
<td>Ammonium thiosulfate</td>
<td>(NH₄)₂S₂O₃ • 5H₂O</td>
<td>26</td>
</tr>
<tr>
<td>Ammonium polysulfide</td>
<td>(NH₄)₂S₆</td>
<td>40–50</td>
</tr>
<tr>
<td>Potassium sulfate</td>
<td>K₂SO₄</td>
<td>18</td>
</tr>
<tr>
<td>Potassium-magnesium sulfate</td>
<td>K₂SO₄ • 2MgSO₄</td>
<td>22</td>
</tr>
<tr>
<td>Elemental sulfur</td>
<td>S°</td>
<td>&gt;85</td>
</tr>
<tr>
<td>Gypsum</td>
<td>CaSO₄ • 2H₂O</td>
<td>12–18</td>
</tr>
<tr>
<td>Magnesium sulfate</td>
<td>MgSO₄ • 7H₂O</td>
<td>14</td>
</tr>
<tr>
<td>Potassium thiosulfate</td>
<td>K₂S₂O₃</td>
<td>17</td>
</tr>
</tbody>
</table>

Rate
Soil analysis for sulfur has shown an inconsistent ability to predict a crop response to applied sulfur. Most soil-testing labs use either a monocalcium phosphate or potassium chloride extraction when measuring soil SO₄²⁻. Soil sample depth and environmental conditions need to be considered when interpreting soil test results for SO₄²⁻ sulfur. Subsoil sulfur may be utilized for crops later in the season when both soil conditions and adequate root growth are ideal; however, as sulfur is very mobile in the soil, relying on a subsoil supply is often disadvantageous. Conditions that hinder or favor SO₄²⁻ leaching through the soil profile may either result in more or less sulfur available during the growing season.

Research to determine crop response curves to different sulfur application rates and soil test levels continues to evolve with the recent changes in sulfur atmospheric deposition. Trials in Indiana in 2017 and 2018 tested different combinations of sulfur source, rate, timing, and placement (Camberato & Nielsen, 2018). For the sulfur-responsive sites in...
the study, yield increases ranged from 4 to 22 bu/ac with rates of 10 to 15 lb of sulfur per acre at sidedress maximizing the yield response (Camberato & Nielsen, 2018). Response to sulfur applications varies, depending on soil characteristics and fertilizer source. Understanding these differences is critical to determining the sulfur application rate.

**Timing and Placement**
Sulfur released from soil organic matter can help meet crop need; however, depending on the soil, sulfur supply may be insufficient. Tissue testing in season is a reliable way to diagnose crop sulfur status. If sulfur deficiency is diagnosed early in the season, it can be corrected with a prompt application of a sulfate-based fertilizer (The Fertilizer Institute, 2020). In Minnesota, research has shown that soybean plant tissue sulfur concentration at growth stages V5 and R2 displayed strong correlations with grain yield, and KCl-extracted soil SO$_4^{2-}$ showed a negative correlation (Kaiser & Kim, 2013). The solubility of the sulfur fertilizer applied needs to be considered when making timing and placement decisions. For example, elemental sulfur will be slowly available compared with sulfate or sulfite fertilizers and should not be applied to correct in-season concerns.

**Conclusions**
Sulfur fertilization needs and practices are evolving due to reduced atmospheric sulfur deposition. Increasing crop yield, which further decreases soil sulfur concentrations, is also contributing to sulfur fertilizer applications to meet crop need. Considering the soil organic matter, percent sand, crop status, and sulfur fertilizer solubility are critical to meeting crop nutrition needs for optimal production.

**US Corn Crop's Growing Sensitivity to Drought Revealed**
By: Stanford University
Like a baseball slugger whose home run totals rise despite missing more curveballs each season, the U.S. Corn Belt's prodigious output conceals a growing vulnerability. A new Stanford study reveals that while yields have increased overall -- likely due to new technologies and management approaches -- the staple crop has become significantly more sensitive to drought conditions. The research, published Oct. 26 in Nature Food, uses a novel approach based on wide differences in the moisture-holding capabilities among soils. The analysis could help lay the groundwork for speeding development of approaches to increase agricultural resilience to climate change.

"The good news is that new technologies are really helping to raise yields, in all types of weather conditions," said study lead author David Lobell, the Gloria and Richard Kushel Director of the Center on Food Security and the Environment. "The bad news is that these technologies, which include some specifically designed to withstand drought, are so helpful in good conditions that the cost of bad conditions are rising. So there's no sign yet that they will help reduce the cost of climate change."

Corn production in the U.S. is a seemingly unstoppable juggernaut. Despite concerns about resistant weeds, climate change and many other factors, the industry has set record yields in five of the last seven years. Likely drivers of these bumper crops include changes in planting and harvesting practices, such as adoption of drought-tolerant varieties, and changes in environmental conditions, such as reduced ozone levels and increased atmospheric carbon dioxide concentrations that generally improve the water-use efficiency of crops.

As climate change intensifies, however, the cost to maintain crop yields will likely increase. Using county soil maps and satellite-based yield estimates, among other data, the researchers examined fields in the Corn Belt, a nine-state region of the Midwest that accounts for about two-thirds of U.S. corn production. By comparing fields along gradients of drought stress each year, they could identify how sensitivity to drought is changing over time.

Even within a single county, they found a wide range of soil moisture retention, with some soils able to hold twice as much water as others. As might be expected, there were generally higher yields for soils that held more water. They found yield sensitivity to soil water storage in the region increased by 55 percent on average between 1999 and 2018, with larger increases in drier states.

The results made clear soil's ability to hold water was the primary reason for yield loss. In some cases, soil's ability to hold an increased amount of moisture was three times more effective at increasing yields than an equivalent increase in precipitation.
So, why have yields become more sensitive to drought? A variety of factors, such as increased crop water needs due to increased plant sowing density may be at play. What is clear is that despite robust corn yields, the cost of drought and global demand for corn are rising simultaneously.

To better understand how climate impacts to corn are evolving over time, the researchers call for increased access to field-level yield data that are measured independently of weather data, such as government insurance data that were previously available to the public but no longer are.

"This study shows the power of satellite data, and if needed we can try to track things from space alone. That's exciting," Lobell said. "But knowing if farmers are adapting well to climate stress, and which practices are most helpful, are key questions for our nation. In today's world there's really no good reason that researchers shouldn't have access to all the best available data to answer these questions."

Lobell is also a professor of Earth System Science in Stanford's School of Earth, Energy & Environmental Sciences; the William Wrigley Senior Fellow at the Stanford Woods Institute for the Environment and a senior fellow at the Freeman Spogli Institute for International Studies and the Stanford Institute for Economic Policy Research. Study co-authors include Jillian Deines, a postdoctoral research fellow in Stanford's School of Earth, Energy & Environmental Sciences, and Stefania Di Tommaso, a research data analyst at the Center on Food Security and the Environment.

Ohio Certified Crop Advisor Pre-Exam Training
By: Harold Watters, CPAg/CCA
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2020-37/ohio-certified-crop-adviser-pre-exam-training

The Certified Crop Adviser (CCA) Exam Training program, delivered by members of the OSU Agronomic Crops Team, will be held virtually for 2021 on January 5, 6, 7 & 8. This is normally an intensive two-day workshop but will be spread across four days this year, beginning at 9:00 a.m. and adjourn by 1:00 p.m. each day. Provided as a great basic agronomy course, it will be used as a reminder on what is best to study in preparation for the local CCA exam.

In addition to the lectures during the class, study material for the program will be shipped to you registrants in advance of the class. Publications provided:

- Ohio Agronomy Guide
- Ohio, Indiana & Illinois Weed Control Guide
• The Ohio Corn, Soybean, Wheat and Forages Field Guide
• 2020 Tri-State Fertilizer Recommendations
• Modern Corn & Soybean Production
• and access to all digital content

Course contact:

Harold Watters, CPAg, CCA
Ohio State University Extension
1100 S. Detroit St
Bellefontaine, OH 43311
Phone 937 604-2415 cell. Or by email: watters.35@osu.edu.

The price for the exam preparation class is $200.


• This is an interactive class, and we will limit class size so register early.

Attendees will be provided publications in advance of the class – closing date for registration is December 21st to allow time for shipping to your address. The Ohio Agri-Business Association, operations center for the Ohio CCA Board, is the registration point and will be accepting payment by credit card or check. Before the date of the class registrants will be provided a link to the Zoom meeting sessions, and access to Box providing the presentations and digital handouts.

Instructors:

• Robert Mullen, CPAg/CCA – Chief Agronomist, Nutrien and past OSU Soil Fertility Specialist;
• Greg LaBarge, CPAg/CCA – Professor OSU Extension and Field Specialist Agronomic Systems;
• Bruce Clevenger, CCA – Associate Professor OSU Extension, Area Leader and County AgNR Educator;
• Harold Watters, CPAg/CCA – Associate Professor OSU Extension and Field Specialist Agronomic Systems.

Moderator:

• Lee Beers, CCA – OSU Extension Educator and Area Leader

Planned schedule for 2021 – subject to change depending on speaker availability.

Tuesday January 5 - 9 a.m. to 1 p.m.
Crop Management - Harold Watters

Northeast Ohio Agriculture

OHIO STATE UNIVERSITY EXTENSION
Ashtabula, Portage and Trumbull Counties
Introductions, Basics of the CCA program

- Crop Production
- Photosynthesis
- Crop Physiology
- Variety Selection
- Statistics

**Wednesday January 6 - 9 a.m. to 1 p.m.**
Nutrient Management Concepts - Robert Mullen

- Soil pH and Liming
- Primary Nutrients
- Secondary Nutrients
- Micronutrients
- CEC
- Nutrient deficiencies

**Thursday January 7 - 9 a.m. to 1 p.m.**
Pest Management - Greg LaBarge

- Weeds
- Insects
- Diseases

Fertilizer & Pesticide Math

**Friday January 8 - 9 a.m. to 1 p.m.**
Soil and Water Management - Bruce Clevenger

- Soil Properties

Northeast Ohio Agriculture
- Soil Water
- Surface and Ground Water
- Soil & Wind Erosion

**Local and International Exams** will be given on-line in 2021 anytime you choose between February 3rd and the 10th, and again in early August. You can even take the local on one day and the international on a different day. Registration for the February CCA exam closes December 11th:

[https://www.certifiedcropadviser.org/exams/registration](https://www.certifiedcropadviser.org/exams/registration).

- **For more information about the CCA program:** [https://www.certifiedcropadviser.org/about-program](https://www.certifiedcropadviser.org/about-program)
- **The CCA exams are not given during the preparation class.**

There is a good resource “Preparing for the International CCA Exam” available for purchase from The Fertilizer Institute. The 2019 edition is available: [https://store.tfi.org/products/preparing-for-the-international-certified-crop-adviser-cca-exam](https://store.tfi.org/products/preparing-for-the-international-certified-crop-adviser-cca-exam). This guide is divided into the four categories of the exam: Nutrient Management, Crop Management, Pest Management, Soil/Water Management with subject matter and questions/answers at the end of each chapter. This manual is an excellent study guide for the International Exam. We do not provide this for the class.

**2020 Ashtabula County Beef Banquet Tickets**

The Ashtabula County Cattlemen’s Association will be holding the 31st Ashtabula County Beef Banquet on Saturday, November 7th at the Williamsfield Community Center beginning at 7:00 p.m. The event will be following all social distancing guidelines. This year you have the option to eat in person or take the meal as carry out. Banquet activities will include an excellent prime rib dinner, entertainment; ticket drawing prizes; and fine fellowship. Tickets for the banquet can be purchased from the Directors of the Cattlemen’s Association. Directors are David Nye, Harts Grove Township; Zach Ward, Austinburg Township; Dr. Bryan Elliott, Cherry Valley Township, Garret Love, Linesville, PA, and Evan Flack, Williamsfield Township. Tickets are $25 per person. Call the Ashtabula County Extension office at 440-576-9008 for more information. Pre-reservations should be made by October 31st, 2020.
Global warming is a subject that causes people to ask a lot of questions. When scientists inform the public that humans are causing global temperatures to rise, one of the first set of questions is: Hasn’t global temperature always fluctuated? After all, the glacial grooves at Kelley’s Island prove that Ohio was once covered with ice. Something caused that global cooling, and when the ice age ended, something caused massive global warming – and none of it was humans. So why the concern about global warming now? Isn’t it likely that the warming is natural and not caused by humans at all?

“These are all great questions, and the public deserves answers to them,” said Thomas W. Blaine, Associate Extension Professor with Ohio State, who will be speaking virtually via Zoom in a program hosted by Ashtabula County Extension on November 19th at 7 p.m. “The way that I structure my presentation brings a lot of satisfaction to audience members who do not believe these kinds of questions have been adequately answered or explained by the scientific community. I present a history of earth’s climate, explaining why temperatures have fluctuated so much in the past. We go over the era of the dinosaurs, the ice ages, you name it, we cover it. It turns out that audiences just love learning about Earth’s natural history – it’s a lot of fun.”

Another set of questions goes like this, “Hasn’t Earth been much warmer than it is now for most of its history? If that is true (and it is), then why worry about a few degrees warming in the next 50-100 years?”

Blaine explains, “Again, the fact that Earth is currently in an ice-house as opposed to its normal condition of a hot-house, is something that I carefully explain in my presentation. How these changes came and went is something on which I focus as well. It answers a lot of questions people have. This is important, not only because it clears up a lot of the confusion about what is at stake now, but it also gets people interested in science. How many potential budding young scientists do we have in Ashtabula County? You just never know what kind of experience is going to direct someone to go to Ohio State or another university and come out with a PhD n Physics, Chemistry, Biology, or another great field. Basically, I think that any program that increases scientific literacy among the public is a good thing. That’s why I went into Extension.”

Hosting the presentation on behalf of Ashtabula County Extension are Julie Wayman and Andrew Holden. Julie Wayman, Local Food Coordinator shared, “We are very honored to have Dr. Blaine speaking in Ashtabula County albeit virtually. The program should hold great interest to people across the county including farmers, gardeners,
beekeepers, boaters, students, and anyone who has an interest in our climate and our climate future.”

“We look forward to this evening of education,” agreed Ohio State Extension Ag and Natural Resource Educator, Andrew Holden. “Climate change comes up often in discussion of the weather and agricultural concerns. It will be great to hear from a scientist regarding the current data and research.”

The public is invited to attend this lecture via Zoom. To register and receive your digital invitation to this free event, please visit go.osu.edu/ashtabulaclimate2020
For questions or to register via phone, call the Extension during normal business hours at 440-576-9008.
Department of Agricultural, Environmental, and Development Economics

Agricultural Policy and Outlook Conference

The Agricultural Policy and Outlook Conference is the premier forum related to Ohio’s Agricultural and Food Industry. The virtual 2020 conference is spread out over four days and loaded with experts covering issues important to producers, agribusinesses, and elected officials. Each day features a unique topic: Monday, Nov. 9- Agricultural Finance Conditions and Outlook, Tuesday, Nov. 10- Agricultural and Environmental Policy, Thursday, Nov. 12- Trade and Macroeconomic Outlooks, and Friday, Nov. 13- Commodity and Consumer Demand Outlooks. Come join the discussion and be a part of the conversation.

November 9th, 10th, 12th and 13th; Everyday from 12:00-2:00 EST

Location: Zoom Webinar  Cost: Free to Attend
Details: Registration at go.osu.edu/aedeoutlook

Contact information: Ben Brown at brown.6888@osu.edu or 660-492-7574
Kelli Trinoskey at Trinoskey.1@osu.edu or 614-688-1323