

Top of Ohio EERA 208 South Blackhoof Street Wapakoneta, OH 45895-1902

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Auglaize County OSU Extension Weekly Agriculture Newsletter – November 20, 2019

Scouting and Latest Information





2-leaf wheat

Harvesting corn

Hello!! Good afternoon! I pray you are well. No precipitation this past week and back in the fields doing work late in the week!

If you are a buyer and need some hay OR have hay to sell, let me know. I have an individual that needs some hay right now. Call the OSU Extension office at 419-739-6580.

OSU Extension is conducting a survey. Please read the information below and please take part in the survey. A hard copy will be attached if you need that format:

Attached is the 2019 Yield Survey that will be shared in this week's CORN newsletter. There are two ways to complete the survey: 1. a Qualtrics survey that can be accessed at go.osu.edu/yield19, or 2. completing the attached paper form and returning to Elizabeth Hawkins (by email: Hawkins.301@osu.edu or US mail: 111 S. Nelson Ave, Suite 2, Wilmington, OH 45177).

We would like to gather information for as many fields as possible, in as many counties as possible to maximize what we can learn from 2019 and the planting delays caused by the excessive rainfall. The results will be summarized and shared with you. The survey needs to be completed by December 31, 2019 to ensure



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we will have the information available for use at your local meetings this winter. If you have any questions, please don't hesitate to ask.

Joke: How did the farmer find his wife???

No rain fell this past week. This is the first week of no rainfall since the beginning of August!! Temperatures were way below normal for the week!! On Tuesday we were 27 degrees below normal for the high and 28 degrees below normal Wednesday morning for the low!! Average high temperatures should still be 52 degrees F!

Tasks for the end of the week included: fall tillage, hauling manure, harvesting corn, spreading fertilizer and other amendments, and tiling fields.

I drove a section of the county on Sunday.

Wheat – Wheat quality looks pretty good, although the stand is weak in some fields. I rated the wheat the same as last week which was 7% excellent, 29% good, 69% fair, and 0% for poor and very poor. Most wheat is at the 2-leaf stage which is behind schedule and has not started to tiller. Therefore tillering will have to be done next spring more than likely.

Alfalfa – Alfalfa is now dormant. Dormant herbicide applications can now be made.

Corn – All corn is at the R6 (black layer) stage. Only about 75% of corn has been harvested in the county as of Sunday and there were people harvesting on Sunday. Some people are waiting for the moisture to come down as it is still in the mid-20's. Last year at this time 87% of the corn was harvested in the county. I'm still hearing yields from 130 to 310 bushels per acre. Get out and harvest the corn as it continues to lodge. I left the corn condition the same again this week since we are harvesting. The condition last week was 2% excellent, 14% good, 74% fair, 10% poor and 0% very poor.

Soybean – All harvested to the best of my knowledge.



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Weeds – Fall herbicide application may no longer be effective, although it looks like the snow protected most of them, so I would try some applications when it is warm and sunny to see what happens.

Insects - No report.

There were NO changes to the XtendiMAX, Engenia, FeXapan, or Tavium labels. The Engenia label still has the most approved products compared to XtendiMAX and FeXapan. No new herbicides were added to the XtendiMAX label this past week, which totals 152 herbicides. No new adjuvant was added the XtendiMAX label, now totaling 344. Eleven new nozzles were added to the XtendiMAX label, which totals 37. No new Drift Reducing Adjuvant (DRA's) was added to the XtendiMAX label this week, making a total of 58 DRA's. No new nutritional products were removed from the XtendiMAX label which totals 203. No new products were added to the Insecticides, Fungicides, Plant Growth Regulator and Other group on the XtendiMAX label which totals 61. Three new adjuvants were added to the Engenia label, which now totals 485. No new herbicides were added to the Engenia label, which brings the total herbicide count to 144. No new products were added to the Other category (growth regulators, and fungicides) on the Engenia label, which totals 29. No new insecticide were added to the label which currently has 28 products. No new Drift Reducing Adjuvants (DRA's) were added to the Engenia label, which totals 105. No new nozzles were added to the Engenia label, which totals 29. No new nutritional products were added to the Engenia label which totals 177 products. No new product was added to the pH Modifier group of the Engenia label which totals 16 products. The FeXapan label has many of same the products and nozzles as the XtendiMAX label, but NOT all are the same, so check the FeXapan label carefully. There are 120 herbicides, 49 DRA's, 312 adjuvants, 151 nutritionals, 44 insecticides, fungicides, and others, and 26 nozzles that have been approved for the FeXapan label. There are 13 herbicides, 66 DRA's, 181 adjuvants, and 41 nozzles approved for use with Tavium.

Answer to joke: He tractor down!

Upcoming Meetings

1. Pesticide Applicator Exam Preparation Course. This meeting will be held **December 5, 2019** from 8:30 AM to 12:30 PM at the Auglaize County Administration Building in the basement room. Check flyer for additional details.



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- **2. Pesticide Applicator Exam.** The ODA will be at the Auglaize County Administration Building in the basement room (209 S. Blackhoof St.) on **December 12, 2019** starting at 10:00 AM to offer exams to commercial and private applicators. Register for the testing date as soon as possible by calling ODA (614-728-6987) or by going on line at:
 - https://agri.ohio.gov/wps/portal/gov/oda/divisions/plant-health/pesticides/exam-registration Please register right away as the room is filling up!!
- **3. Ag Outlook.** This meeting will be held **January 8, 2020** from 1:00 PM to 4:30 PM and a second session from 5:45 PM to 9:15 PM at the Wapakoneta Eagles (25 East Auglaize St., Wapakoneta). Topics discussed will be Farm Bill Nuts and Bolts, Farm Bill, Farming Outlook, and Grain Market Outlook. Register before 12-31. A meal will be provide for free between the two sessions. See attached flyer for more information.
- **4. Small Grains Management Workshop.** This meeting will be held **January 9, 2020** from 9:00 AM to 2:30 PM in the downstairs room of the Auglaize County Administration Building (209 S. Blackhoof St.). This will be the best small grains meeting you have ever been to so get signed up. See the flyer for additional information.
- **5. Plant and Soil Nutrient Management.** This meeting will be held **January 22, 2020**. The exact starting time has not been determined but it will be an all day meeting. The location will be the Eagles in Wapakoneta. This meeting will talk about all aspects of nutrient management.

Corn Rootworm and Management



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Larva

Southern Northern Western

Corn rootworm is a beetle in the adult stage that causes damage to corn roots in the larval stage and corn silks in the adult stage. There are three species present in our area, western corn rootworm, southern corn rootworm and northern corn rootworm. The western corn rootworm is the most prevalent in our area. The western corn rootworm adult is gold in color with a black head and three black stripes on the wing covers. These stripes can blend together to the point of the lines being hard to distinguish on male adults. These beetles look very similar to the striped cucumber beetle where the lines go all the way to the tip of the wing cover and the lines never blend together. The adult northern corn rootworm is pale to dark green in color and is much smaller than the western corn rootworm. The southern corn rootworm is identifiable by its yellowish-green background color on the wing coverings and numerous black spots. The southern corn rootworm usually just feeds on leaves because it does not over winter in our area, so it is not a problem with damaging corn roots.

In late summer the adult female beetles lay eggs deep in the soil. These eggs survive the winter months, except for the southern corn rootworm adult that dies. The eggs hatch from late May to mid-June when corn is about in the four-leaf stage. Egg hatching usually coincides with the appearance of adult firefly (lightning) beetles. The eggs hatch into larvae that feed on corn roots for three to four weeks. A mature larva is about ½ inch long having a dark brown head and plate (rear end of larvae). The larvae pupate for about one to two weeks before emerging as adults. The adult beetles feed on corn leaves, pollen, and silks. The adults are active for about 10 weeks.

Corn yield loss can be substantial whether it is from root feeding or silk clipping and is worst when root and silk feeding occurs. Root feeding by the larvae can be so severe that corn lodges and yield loss is greatly reduced because just a few roots support the plant. Root feeding is most severe in moderate to dry years because roots can not provide enough water and nutrients to the plant, however silk clipping can be severe enough to drastically reduce pollination thereby reducing corn yield.



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The most effective strategy to managing corn rootworm is to rotate to crops other than corn, since larvae only feed on corn roots. This strategy is not always full proof as it is possible for a variant of the western corn rootworm adult to lay eggs in soybean fields that when rotated to corn the following year can injure corn roots. The presence of the western corn rootworm variant laying eggs in soybean has been greatly reduced compared to the early 2000's. Another strategy to controlling corn rootworm is to apply a soil-insecticide at planting that effectively controls the larvae when they hatch. The third strategy is to plant a corn hybrid that produces a Bt toxin that controls the rootworm larvae. This strategy is not full proof either as the original trait did not produce enough toxin to completely control the rootworm, allowing for the build-up of Bt resistant western corn rootworms in other parts of the United States. If planting Bt hybrids, plant hybrids expressing the greatest toxin levels and that contain multiple genes for corn rootworm.

Corn rootworm populations are currently very low in the area and just simply planting corn after soybean will effectively control corn rootworm.

China Trip



Heilongjiang Province with city of Jiamusi listed



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Some individuals have asked me to make comments about my trip to China. It was a very good trip.

I spent most of my time in the Heilongjiang Province in the city of Jiamusi. This is in the northeast part of China. It has about the same latitude as Fargo, ND. This province is one of three areas in the world with black soils which formed by the merger of three large rivers and is relatively flat. This province is one of the major bread baskets for the country.

Average rainfall for this area of China is 18" per year. This year in July and August they had tremendous rains and currently have had 28" of rain.

The first thing you must know is that the Chinese people do not own their land. The government owns the land and farmers have the right to lease the land from the government for at least 45 years initially, then another 30 years. Leasing costs \$227/A to \$453/A.

The major crops grown near Jiamusi are corn, rice, and soybean in that order. Other crops include sugarbeet, Aduzi beans, and sorghum. Rice is grown continuously because the rice is flooded so there is a hardpan to hold water that is detrimental to corn and soybean. The other crops are rotated. When I was there from October 18 to the 29th, soybeans were all harvested, they were finishing rice, and still had a fair amount of corn to harvest.

Average farm size in this area is 20 to 40 acres. Field sizes are 0.25 acres to 30 acres, although some are larger. Some areas seemed to be farmed as one, but was harvested by each leasee. The farmers near Jiamusi live in villages, not on the land they lease.

Most fields are still moldboard plowed in the fall followed by tillage in the spring to make a ridge. Corn is planted with one row per ridge. Soybeans are planted with one or two rows per ridge or in narrow rows on a wide ridge. Row spacing is from 22 to 26" for corn and soybean. Weeds are sprayed with a sprayer although then prefer to cultivate if a second application is needed because of having the ridge. Corn is picked with a self-propelled machine and piled on the ground or on concrete. Some corn is even harvested by hand by cutting off the stalks and hauling it all to the village. Even the rice was stored on tarps on concrete and tarped to cover the pile.

The craziest thing I saw as a rototiller being operated in a rice field that was flooded. Not sure if this is what happens in the spring, but I was told soil can be worked wet for rice.

Rice is grown in a greenhouse and transplanted into the field in Mid- to Late – May. Corn is planted Late April to Early May. Soybeans are planted Early – to Mid – May.

If you want to know more, feel free to contact me.



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C.O.R.N. Newsletter

https://agcrops.osu.edu/newsletter/corn-newsletter

Not available yet!

Other Articles

Researchers clear the path for 'designer' plants

New targets for gene editing could lead to more resilient crops

Date: November 18, 2019 Source: University of Georgia

Source: https://www.sciencedaily.com/releases/2019/11/191118140339.htm

A team of researchers at the University of Georgia has found a way to identify gene regulatory elements that could help produce "designer" plants and lead to improvements in food crops at a critical time. They published their findings in two separate papers in *Nature Plants*.

With the world population projected to reach 9.1 billion by 2050, world food production will need to rise by 70% and food production in the developing world will need to double, according to estimates from the Food and Agricultural Organization of the United Nations. Improvements in crop plants could play a key role in that effort.

The team, led by Bob Schmitz, demonstrated an ability to identify cis-regulatory elements, or CREs, in 13 plant species, including maize, rice, green beans and barley.

Cis-regulatory elements are regions of noncoding DNA that regulate neighboring genes. If a gene and its CRE can be identified, they can be treated as a modular unit, sometimes called a biobrick. Targeting CREs for editing offers a more refined tool than editing genes, according to Schmitz, associate professor of genetics in the Franklin College of Arts and Sciences.



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"Gene editing can be like a hammer. If you target the gene, you pretty much break it," he said. "Targeting CREs, which are involved in controlling gene expression -- how a particular characteristic appears -- allows you to turn gene expression up or down, similar to a dial. It gives us a tool to create a whole range of variation in expression of a gene."

Controlling a gene for leaf architecture, for example, might allow a plant breeder to choose the angle at which a leaf grows from a plant, which can play a significant role in the plant's light absorption and growth. Targeting the gene itself would provide two options: "on," where the leaf might grow at a 90-degree angle, and "off," where the leaf might grow straight down. But targeting the CRE instead of the gene would allow the grower to target a range of possibilities in between -- a 10-degree angle, a 25-degree angle, a 45-degree angle, etc.

Once biobricks have been created and screened for the desired output, they could be used to produce "designer" plants that possess desirable characteristics -- for example, salt-tolerant plants that can grow in a landscape with high salinity. The ability to design plants to grow in less-than-ideal landscapes will become more and more important as food growers strive to produce more in an environment facing increasing challenges, like drought and flooding.

Based on their success, the research team recently received a \$3.5 million grant from the National Science Foundation to investigate the role of CREs in legumes, including peanuts and soybeans.

Underlying the grant proposal and the papers are technological breakthroughs developed by Zefu Lu, Bill Ricci and Lexiang Ji.

"Zefu took a high-throughput method for identifying specific elements that was developed for animal cells and found a way to apply it to plant cells. It took a long time to address the significant barrier of plant organellar genomes, but now we're able to do what the animal field has been doing for a few years," Schmitz said.

"When people try to find trait/disease associations, they look for mutations in genes, but the work in animals has shown that these non-gene regions also possess mutations that affect the way in which a gene is expressed. The regions we're identifying with this method are revealing regulatory information for gene expression control, which traditionally has been challenging to detect compared to genes."

One of Ricci's contributions was developing a technique that shows the link between CREs and the gene they control.

"Typically CREs are located right next to the gene they control, but in plants with larger genomes -- soybeans, maize -- it's become clear that these controlling elements can appear very far away," Schmitz said. "In two-dimensional space something may appear far away, over many thousands of base pairs, but Bill's method shows that in three dimensions, it's actually positioned right next to the gene."

This work -- the first time it has been applied to plants -- provided the foundation for the two papers published in *Nature Plants*, and Schmitz paid tribute to his team members' contributions.

"This is a group effort," he said. "Zefu, Bill and Lexiang were major drivers of this research."

"Widespread Long-range Cis-Regulatory Elements in the Maize Genome" provides genetic, epigenomic and functional molecular evidence supporting the widespread existence of long-distance loci that act as long-range CREs influencing if and how a gene in the maize genome is expressed.



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In "The prevalence, evolution and chromatin signatures of plant regulatory elements," the researchers identified thousands of CREs and revealed that long-distance CREs are prevalent in plants, especially in species with large and complex genomes. Additional results suggest that CREs function with distinct chromatin pathways to regulate gene expression.

The team's work will be shared via publicly available epigenome browsers that were developed by Brigitte Hofmeister, a recent Ph.D. graduate from the Schmitz Lab.

"Our studies are genome wide, and we do a lot of technique and technology development, but it's not useful if people can't access it," Schmitz said. "We provide epigenome browsers that allow people studying leaf architecture, for example, to access information on the specific genes or traits they're interested in."

Industry is also interested in CREs, according to Schmitz. Their editing pipeline is well established for genes, and the next obvious target for editing is CREs once they are located.

"It's not just academia using this for basic science," he said. "The applications of this approach to identify CREs will become commonplace in industry to improve crop performance."

Beyond the green revolution

Date: November 19, 2019

Source: International Institute for Applied Systems Analysis

Source: https://www.sciencedaily.com/releases/2019/11/191119105459.htm

There has been a substantial increase in food production over the last 50 years, but it has been accompanied by a narrowing in the diversity of cultivated crops. New research shows that diversifying crop production can make food supply more nutritious, reduce resource demand and greenhouse gas emissions, and enhance climate resilience without reducing calorie production or requiring more land.

The Green Revolution -- or Third Agricultural Revolution -- entailed a set of research technology transfer initiatives introduced between 1950 and the late 1960s. This markedly increased agricultural production across the globe, and particularly in the developing world, and promoted the use of high-yielding seed varieties, irrigation, fertilizers, and machinery, while emphasizing maximizing food calorie production, often at the expense of nutritional and environmental considerations. Since then, the diversity of cultivated crops has narrowed considerably, with many producers opting to shift away from more nutritious cereals to high-yielding crops like rice. This has in turn led to a triple burden of malnutrition, in which one in nine people in the world are undernourished, one in eight adults are obese, and one in five people are affected by some kind of micronutrient deficiency. According to the authors of a new study, strategies to enhance the sustainability of food systems require the quantification and assessment of tradeoffs and benefits across multiple dimensions.



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In their paper published in the *Proceedings of the National Academy of Sciences (PNAS)*, researchers from IIASA, and several institutions across the US and India, quantitatively assessed the outcomes of alternative production decisions across multiple objectives using India's rice dominated monsoon cereal production as an example, as India was one of the major beneficiaries of Green Revolution technologies.

Using a series of optimizations to maximize nutrient production (i.e., protein and iron), minimize greenhouse gas (GHG) emissions and resource use (i.e., water and energy), or maximize resilience to climate extremes, the researchers found that diversifying crop production in India would make the nation's food supply more nutritious, while reducing irrigation demand, energy use, and greenhouse gas emissions. The authors specifically recommend replacing some of the rice crops that is currently being cultivated in the country with nutritious coarse cereals like millets and sorghum, and argue that such diversification would also enhance the country's climate resilience without reducing calorie production or requiring more land. Researchers from IIASA contributed the design of the optimization model and the energy and GHG intensity assessments.

"To make agriculture more sustainable, it's important that we think beyond just increasing food supply and also find solutions that can benefit nutrition, farmers, and the environment. This study shows that there are real opportunities to do just that. India can sustainably enhance its food supply if farmers plant less rice and more nutritious and environmentally friendly crops such as finger millet, pearl millet, and sorghum," explains study lead author Kyle Davis, a postdoctoral research fellow at the Data Science Institute at Columbia University, New York.

The authors found that planting more coarse cereals could on average increase available protein by 1% to 5%; increase iron supply by between 5% and 49%; increase climate resilience (1% to 13% fewer calories would be lost during times of drought); and reduce GHG emissions by 2% to 13%. The diversification of crops would also decrease the demand for irrigation water by 3% to 21% and reduce energy use by 2% to 12%, while maintaining calorie production and using the same amount of cropland.

"One key insight from this study was that despite coarse grains having lower yields on average, there are enough regions where this is not the case. A non-trivial shift away from rice can therefore occur without reducing overall production," says study coauthor Narasimha Rao, a researcher in the IIASA Energy Program, who is also on the faculty of the Yale University School of Forestry and Environmental Studies.

The authors point out that the Indian Government is currently promoting the increased production and consumption of these nutri-cereals -- efforts that they say will be important to protect farmers' livelihoods and increase the cultural acceptability of these grains. With nearly 200 million undernourished people in India, alongside widespread groundwater depletion and the need to adapt to climate change, increasing the supply of nutri-cereals may be an important part of improving the country's food security.

Ohio Ag Law Blog--Ohio Legislation on the Move

By:Ellen Essman, , Senior Research Associate , Senior Research Associate Thursday, November 14th, 2019 Source: https://farmoffice.osu.edu/blog/thu-11142019-900am/ohio-ag-law-blog-ohio-legislation-move-0



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We haven't done a legislative update in a while—so what's been going on in the Ohio General Assembly? Without further ado, here is an update on some notable ag-related bills that have recently passed one of the houses, been discussed in committee, or been introduced.

• House Bill 7, "Create water quality protection and preservation"

This bill passed the House in June, but the Senate Finance Committee had a hearing on it just last month. HB 7 would create both the H2Ohio Trust Fund and the H2Ohio Advisory Council. To explain these entities in the simplest terms, the H2Ohio Advisory Council would decide how to spend the money in the H2Ohio Trust Fund. The money could be used for grants, loans, and remediation projects to address water quality priorities in the state, to fund research concerning water quality, to encourage cooperation in addressing water quality problems among various groups, and for priorities identified by the Ohio Lake Erie commission. The Council would be made up of the following: the directors of the Ohio Department of Agriculture (ODA), the Ohio Environmental Protection Agency (OEPA), and the Ohio Department of Natural Resources (ODNR) the executive director of the Ohio Lake Erie commission, one state senator from each party appointed by the President of the Senate, one state representative from each party appointed by the Speaker of the House, and appointees from the Governor to represent counties, municipal corporations, public health, business or tourism, agriculture, statewide environmental advocacy organizations, and institutions of higher education. Under HB 7, the ODA, OEPA, and ODNR would have to submit an annual plan to be accepted or rejected by the Council, which would detail how the agencies planned to use their money from the Fund. You can find the bill in its current form here.

• House Bill 24, "Revise Humane Society law"

HB 24 passed the House unanimously on October 30, and has since been referred to the Senate Committee on Agriculture & Natural Resources. The bill would revise procedures for humane society operations and require humane society agents to successfully complete training in order to serve. Importantly, HB 24 would allow law enforcement officers to seize and impound *any* animal the officer has probable cause to believe is the subject of an animal cruelty offense. Currently, the ability to seize and impound only applies to companion animals such as dogs and cats. You can read HB 24 here.

• House Bill 160, "Revise alcoholic ice cream law"

Since our last legislative update, HB 160 has passed the House and is currently in Agriculture & Natural Resources Committee in the Senate. At present, those wishing to sell ice cream containing alcohol must in Ohio obtain an A-5 liquor permit and can only sell the ice cream at the site of manufacture, and that site must be in an election precinct that allows for on- and off-premises consumption of alcohol. This bill would allow the ice cream maker to sell to consumers for off-premises enjoyment and to retailers who are authorized to sell alcohol. To read the bill, click here.

• House Bill 168, "Establish affirmative defense-certain hazardous substance release"

This bill was passed in the House back in May, but there have been several committee hearings on it this fall. HB 168 would provide a bona fide prospective purchaser of a facility that was contaminated with hazardous substances before the purchase with immunity from liability to the state in a civil action. In other words, the bona fide prospective purchaser would not have the responsibility of paying the state of Ohio for their investigations and remediation of the facility. In order to claim this immunity, the purchaser



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would have to show that they fall under the definition of a bona fide prospective purchaser, that the state's cause of action rests upon the person's status as an owner or operator of the facility, and that the person does not impede a response action or natural resource restoration at the facility. You can find the bill and related information here.

- House Bill 183, "Allow tax credits to assist beginning farmers"
 - House Bill 183 was discussed in the House Agriculture & Rural Development Committee on November 12. This bill would authorize a nonrefundable income tax credit for beginning farmers who attend a financial management program. Another nonrefundable tax credit would be available for individuals or businesses that sell or rent farmland, livestock, buildings, or equipment to beginning farmers. ODA would be in charge of certifying individuals as "beginning farmers" and approving eligible financial management programs. HB 183 is available here. A companion bill (SB 159) has been introduced in the Senate and referred to the Ways & Means Committee, but no committee hearings have taken place.
- House Bill 373, "Eliminate apprentice/special auctioneer licenses/other changes"

 HB 373 was introduced on October 22, and the House Agriculture & Rural Development Committee held a hearing on it on November 12. This bill would make numerous changes to laws applicable to auctioneers. For instance, it would eliminate the requirement that a person must serve as an apprentice auctioneer prior to becoming an auctioneer; instead, it would require applicants for an auctioneers' license to pass a course. The bill would also require licensed auctioneers to complete eight continuing education hours prior to renewing their license. HB 373 would give ODA the authority to regulate online auctions conducted by a human licensed auctioneer, and would require people auctioning real or personal property on the internet to be licensed as an auctioneer. To read the bill in its entirety and see all the changes it would make, click here.
- Senate Bill 2, "Create watershed planning structure"
 - Since our last legislative post, SB 2 has passed the Senate and is now in the House Energy and Natural Resources Committee. If passed, this bill would do four main things. First, it would create the Statewide Watershed Planning and Management Program, which would be tasked with improving and protecting the watersheds in the state, and would be administered by the ODA director. Under this program, the director of ODA would have to categorize watersheds in Ohio and appoint watershed planning and management coordinators in each watershed region. The coordinators would work with soil and water conservation districts to identify water quality impairment, and to gather information on conservation practices. Second, the bill states the General Assembly's intent to work with agricultural, conservation, and environmental organizations and universities to create a certification program for farmers, where the farmers would use practices meant to minimize negative water quality impacts. Third, SB 2 charges ODA, with help from the Lake Erie Commission and the Ohio Soil and Water Conservation Commission, to start a watershed pilot program that would help farmers, agricultural retailers, and soil and water conservation districts in reducing phosphorus. Finally, the bill would allow regional water and sewer districts to make loans and grants and to enter into cooperative agreements with any person or corporation, and would allow districts to offer discounted rentals or charges to people with low or moderate incomes, as well as to people who qualify for the homestead exemption. The text of SB 2 is available here.
- Senate Bill 234, "Regards regulation of wind farms and wind turbine setbacks"



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Senate Bill 234 was just introduced on November 6, 2019. The bill would give voters in the unincorporated areas of townships the power to have a referendum vote on certificates or amendments to economically significant and large wind farms issued by the Ohio Power and Siting Board. The voters could approve or reject the certificate for a new wind farm or an amendment to an existing certificate by majority vote. The bill would also change minimum setback distances for wind farms might be measured. SB 234 is available here. A companion bill was also recently introduced in the House. HB 401 can be found here.

Prepared by Jeff Stachler Ohio State University Agriculture and Natural Resources Extension Educator, Auglaize County