Hello, Northeast Ohio Counties!

Warmer temperatures in the mix for this week! But of course rain is too. We had a huge turn-out for the malting barley meeting last Thursday and the Ashtabula County Dairy Banquet was a huge success.

We hope you have a great Easter Week and get a chance to relax with family and friends. It won’t be long until we are in the fields!

Lee Beers & David Marrison
Extension Educators
Ag & Natural Resources
Program Director Sought For 4-H Camp Whitewood

Camp Whitewood is seeking an enthusiastic, innovative Program Director to help build on our nearly 80-year history of providing positive youth development and camp programming. Covering 237 acres of protected forest and river valley, our campus is the ideal spot to spend time sharing the outdoors with youth. Under the supervision of the Executive Director, the Program Director will be responsible for promoting, creating, and implementing summer and school-year programming. Responsibilities include hiring and training seasonal staff, organizing and overseeing summer and spring/fall school year programs, maintenance and upkeep of camp program equipment and supplies, pursuing grant funding and new program additions to keep Camp Whitewood program offerings relevant and up to date. For a full job description, visit https://www.4hcampwhitewood.com/employment-opportunities.

Candidates must have or be obtaining a bachelor's degree in a related outdoor field, have relevant camp programming experience, and have or be able to obtain canoe/kayak, shooting sports and challenge course instructor certifications. This full-time position runs February through November and is renewable annually. Forward application including cover letter, resume and 3 references to Andy Hudak hudak.65@osu.edu. Applications will be accepted until April 9th at 5pm.

Sign up to Volunteer at Ashtabula County Ag Day

On May 11, 2018 nearly 1,100 members of the class of 2029 will be descending on the Ashtabula County Fairgrounds to participate in Ashtabula County’s “Ag Day.” Coordinated by OSU Extension and the Ashtabula County Farm Bureau, the primary goal of this event is to educate first graders on where their food comes from and to showcase the different types of agricultural commodities which are being produced in Ashtabula County.

Ashtabula County's Ag Day program has become a community supported effort as over 300 volunteers and donors help to make this day a reality for the students. The registration for volunteers is being conducted electronically this year. To ensure that you receive an Ag-Day t-shirt, please register to volunteer by April 1, 2018.

To register, access:

http://go.osu.edu/agday2018

Additional information about Ag Day can be received by calling the Ashtabula County Extension office at 440-576-9008.
Ag Issues in the Federal Spending Bill
By: Peggy Kirk Hall

Amidst a great deal of controversy, President Trump signed the “Consolidated Appropriations Act, 2018” on March 23. The omnibus $1.3 trillion spending package includes a number of provisions that affect agriculture, not all spending related. One glaring omission from the bill that agriculture wanted, however, was language allowing the EPA to withdraw the Waters of the United States (WOTUS) rule. Otherwise, the new law contains fixes and clarifications for several key legal issues agriculture has faced in the past year and funding for important agricultural programs.

Section 199A tax deduction revised

Sellers of grain who were hoping to capitalize on the IRC § 199A 20% gross sales deduction when selling grain to their cooperative will be disappointed that the spending bill has removed the deduction and that the removal is retroactive to January 1, 2018. Congress enacted new provisions that will address sales to cooperatives. According to my colleague and tax expert Kristine Tidgren at Iowa State, “the cooperative patron is subject to a new bifurcated calculation and a hybrid 199A deduction. Essentially, the fix gives the cooperative patron a deduction that blends the new 199A deduction with the old 199 DPAD deduction (all within the new 199A). Depending upon their individual situations, cooperative patrons may be advantaged, disadvantaged, or essentially treated the same by selling to a cooperative rather than selling to a non-cooperative.” Read more of Kristine’s analysis at http://www.calt.iastate.edu/blogpost/fix-grain-glitch-now-law

CERCLA emissions reporting for livestock goes away

The spending bill incorporates provisions of the “Fair Agricultural Reporting Methods Act” proposed earlier by a bi-partisan group of Senators concerned about a court ruling that subjected farms to air emissions reporting under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The EPA had delayed the reporting requirement to May 1, 2018. The reporting mandate is removed under the new law, however, which states that air emissions from animal waste at a farm are not subject to CERCLA reporting requirements, nor are emissions from the application, handling or storage of registered pesticides. A “farm” is an area used to produce crops or livestock that have a total value of $1,000 or more.

Electronic logging device rule further delayed

We’ve reported several times on the Electronic Logging Device (ELD) rule that would require commercial agricultural haulers to utilize electronic technology that automatically records hours-
of-service data. The Federal Motor Carrier Safety Administration (FMCSA) issued several waivers that delayed the requirement. The new spending bill effectively voids the ELD rule until September 30, 2018, by prohibiting the FMCSA from using its funds during that time to implement, administer, or enforce provisions regarding the use of electronic logging devices by operators of commercial motor vehicles transporting livestock or insects.

*County-level ACRE pilot program to be established*

The spending bill directs USDA to create a 2018 pilot program for county-level agriculture risk coverage (ARC) payments for the 2017 crop year. Farm Service Agency offices in each State will have the opportunity to provide agricultural producers a supplemental payment to ensure that there are not significant yield calculation disparities between comparable counties in the State.

*Rural broadband grant program funded*

The law allocates $600,000,000 for the USDA to conduct a new broadband loan and grant pilot program under the Rural Electrification Act. At least 90 percent of the households to be served by the project receiving a loan or grant under the pilot program must be in a rural area currently without sufficient access to broadband.

*Conservation funding maintained*

The spending bill maintains full funding levels for farm bill conservation programs and exempts farms participating in conservation programs from obtaining System for Award Management (SAM) and Data Universal Numbering System (DUNS) numbers. The Great Lakes Restoration Initiative received $300 million to carry out activities that would support the Initiative and the Great Lakes Water Quality Agreement, including grants for research, monitoring, outreach, and implementation.

*Research funding increased*

In stark contrast to significant cuts proposed by the White House, the spending bill contains the largest increase in research funding in over a decade. Research programs at the USDA would grow by $33 million, to $1.2 billion. The funding includes a $25 million increase to a $400 million budget for the Agriculture and Food Research Initiative (AFRI) established by the 2008 Farm Bill, surprisingly still $300 million shy of the 2008 Farm Bill’s proposed funding level.

Readers can dig into the 2,232 pages of the Consolidated Appropriations Act of 2018 here.
President Trump signed the Consolidated Appropriations Act, 2018, H.R. 1625, on March 23, 2018. At the end of the 2,232-page legislation, Congress included a section written to “fix” the “grain glitch.” This is, of course, the provision in the Tax Cuts and Jobs Act that provided significantly higher tax deductions (in most cases) to patrons who sold commodities to cooperatives rather than to non-cooperatives. You can read more detail about the original provision here.

The 17-page “fix,” while attempting to level the playing field, adds even more complexity to an already convoluted section of the new tax law, IRC § 199A. The fix retroactively takes effect, beginning January 1, 2018. This wipes from existence the provision giving cooperative patrons a 20-percent deduction based upon gross sales.

**Non-Coop Sales**
Under the fix, the tax benefit to farmers who sell grain, for example, to a non-cooperative does not change. They are generally entitled to the new 20 percent 199A deduction, calculated based upon their net income from the sale. Their overall 199A deduction is limited to 20 percent of taxable income (minus capital gains). It is also restricted by a wages/capital limitation if their income exceeds $157,000 for singles and $315,000 for those who are married filing jointly.

**Coop-Sales by Patrons**
The fix completely changes, however, the tax benefit offered to patrons who sell grain, for example, to their cooperative. Instead of the 20-percent deduction calculated based upon their gross sales, the cooperative patron is subject to a new *bifurcated* calculation and a hybrid 199A deduction. Essentially, the fix gives the cooperative patron a deduction that blends the new 199A deduction with the old 199 DPAD deduction (all within the new 199A).* Depending upon their individual situations, cooperative patrons may be advantaged, disadvantaged, or essentially treated the same by selling to a cooperative rather than selling to a non-cooperative. While the significant advantage is gone, the complexity certainly is not.

First, patrons calculate the 20 percent 199A deduction that would apply if they had sold the commodity to a non-cooperative. But they don’t stop there. The patron must then subtract from that initial 199A deduction amount whichever of the following is smaller: 9 percent of net income attributable to cooperative sale(s) OR
50 percent of W-2 wages they paid to earn that income from the cooperative

But we are still not done. Once that amount is backed out, patrons get to add an additional “DPAD-like” deduction (if any) passed through to them by the cooperative. The determination of the amount of this new “DPAD-like” deduction, which can range from 0 to 9 percent of the patron’s sales to the cooperative, is at the discretion of the cooperative, based upon a patron’s share of business. It is governed by language copied directly from the old DPAD provision. In any event, the overall amount a cooperative can choose to pass through to its members cannot exceed 50 percent of the value of the wages the cooperative pays to its employees. The farmer’s deduction cannot exceed taxable income (subtracting the 20 percent QBI deduction detailed above, but not subtracting capital gain).

**Deduction for Agricultural Cooperative**

The fix also significantly changes the deduction allowed to agricultural cooperatives themselves. Under the original 199A, the cooperative would have received its own 20-percent deduction, calculated based upon gross income minus qualified cooperative dividends paid. This deduction was also limited by a wages/capital restriction. Under the fix, this approach is replaced by a "DPAD-like" regime. The cooperative can take a deduction in an amount equal to 9 percent of “QPAI” (which includes PURPIM), limited by taxable income and 50 percent of W-2 wages paid. If the cooperative passes the "DPAD-like" deduction through to its patrons, it can still take its own "DPAD-like" deduction; however, it must reduce, in a corresponding amount, the deductions it could normally take for its payments to the patrons.

**Transition Rule**

The new law also includes a transition rule for farmers who receive a cooperative payment in 2018 that is attributable to QPAI for which the old DPAD deduction was applicable. This will include any QPAI attributable to a cooperative tax year beginning before 2018. See Section 101(c)(2). With the original DPAD gone in 2018, taxpayers were left to wonder how to report such DPAD allocations. The law clarifies that such farmers will still be able to take the old DPAD deduction in 2018, as long as it is attributable to QPAI which was allowed to the cooperative for a tax year beginning before 2018. No 199A deduction will be allowed for such payments. So it appears that some farmers in 2018 will have an old DPAD deduction, a "DPAD-like" 199A deduction, and a straight-up 199A deduction. Allocating expenses among the three may be interesting.

Pretty straightforward, huh? We will keep you posted as we better sort out how this will impact farmers. *It should be remembered that the 199A deduction only applies to pass-throughs and sole proprietors. Talk of a "DPAD-like" deduction does not mean that corporations are now eligible for this deduction.*
What’s in Your Easter Basket?

Author: Pat Brinkman, Family and Consumer Sciences Extension Educator, Ohio State University Extension. Reviewer: Shannon Carter, Family and Consumer Sciences Extension Educator, Ohio State University Extension

Easter is the second biggest candy holiday in the United States, as 87% of Americans will buy or create an Easter basket. Total annual spending on Easter candy has been $2.1 billion with over 120 million pounds of Easter candy purchased. Over 70% of the candy purchased is chocolate and 16 billion jelly beans are sold. All this candy adds up to a lot of sugar.

What is in an Easter basket? According to the National Confectioners Association (NCA) the most popular items include:

- Easter candy/chocolate is 89%
- Non-edible items such as stuffed animals, markers, crayons, books, etc.is 79%
- Dark Chocolate or chocolate with added fruits and nuts (added benefits) is 46%
- Snack items like granola bars or dried fruit is in 44%
- Mints and gum is 35%

Are you wondering about those marshmallow chicks (Peeps) you see everywhere? It’s reported that 55% of Americans love them with 42% liking them fresh and 10% liking them stale. Yet, they are just made of sugar and food coloring.

With all that candy being sold, maybe it is time to rethink the Easter basket. Especially, since the USDA Dietary Guidelines recommends no more than 10% of our calories per day should come from added sugars. These recommendations are for everyone from children to senior adults. Maybe, it’s time we cut back on the amount of candy we buy.

What other options are there to put in the basket besides candy? Did you know 11% of families surveyed by NCA don’t add any candy to their baskets? Some suggestions to fill a basket include:

- Stuffed animals
- Markers, crayons, sidewalk chalk, water paints
- Reading or coloring books
- Outside play equipment – jump ropes, balls, noodles for the pool, Frisbees, swim goggles
- Bubbles and big wands for making bubbles
- Family board games
- New reusable water bottle
- Passes to do fun activities
- Religious items

One or two small candy items are fine. Healthy food items could include snack packs of nuts, dried fruits, small boxes of raisins, and trail mix.
Do some fun activities together as a family to celebrate the holiday, such as coloring eggs or having an egg hunt. These are popular activities, as 79% of parents/grandparents dye Easter eggs and 71% have a hunt or attend a hunt for either candy-filled eggs or real eggs.

References:


**Western Lake Erie Declared Impaired**

Source: Farm & Dairy

The Ohio EPA and Gov. John Kasich are declaring the open waters of Lake Erie’s Western Basin impaired for recreation, due to harmful algae and drinking water concerns related to the toxin microcystin. The announcement came March 22, and is the first time such a designation has been made. According to the Ohio EPA, Kasich sought input from Ohio State University’s Sea Grant college program, Bowling Green State University, the University of Toledo, as well as the National Oceanic and Atmospheric Administration and U.S. EPA.

“We have taken unprecedented steps in recent years to put Lake Erie on a better trajectory – including investing more than $3 billion to improve its water quality,” said Ohio EPA Director Craig Butler, in a released statement. “Governor Kasich takes his responsibility to protect the lake very seriously. While designating the open waters of the Western Basin as impaired does not provide, as some suggest, a magic bullet to improve the lake, the state remains committed to our obligations under the Clean Water Act and to examine emerging science and practices that we can put in place to help improve it.”

**What farmers are saying**
Farm groups responded with mixed reactions, as some had hoped their voluntary efforts would ward off, and even supersede, the need for a federal designation. The Ohio Corn & Wheat
Growers Association, along with the Ohio Soybean Association, said they are “disappointed with the decision,” following years of progress and private spending to improve water quality.

“Despite the emotional and political appeal of an impairment designation, it will do nothing to trigger additional federal dollars,” the groups said in a released statement. “It could force us to retrace our steps to rediscover what we already know from years of diligent work on this issue and could delay real solutions for the lake.”

The crop associations say the state should follow the path of *The Great Lakes Water Quality Agreement*, an agreement made between the United States and Canada was updated in 2012 to address harmful algae blooms. That agreement was the basis of the target set four years later by Ohio, Michigan and Canada of a 40 percent reduction in total phosphorous entering Lake Erie by 2025.

**What this means**
The Ohio Farm Bureau says the designation will have no immediate impact on water quality, or on farmers. “Our biggest worry is that the public may get the impression that this is the silver bullet that will eliminate harmful algal blooms. It won’t,” said Adam Sharp, the OFBF executive vice president. It does not create mandatory actions, nor does it provide federal money. It excludes Canada’s role in protecting the lake. It also will create a long and complicated bureaucratic process that may impede current progress on reducing harmful algal blooms.

Farm Bureau’s analysis suggests the regulatory and legal process could take 5 to 7 years before actual nutrient reduction steps would be taken. Further, uncertainty over what actions might be required in the distant future may cause municipalities, farmers and others in the regulated community to question their current efforts to improve water quality. “It’s hard to reach the goal line when no one can explain the rules or even tell you where the goal line is,” Sharp said.

**Which way to go**
Farm Bureau says it has never opposed the “declared” designation, but like the commodity groups, the OFBF has promoted the Great Lakes Water Quality Agreement as a preferable plan for improving water quality. Likewise, Farm Bureau said it “remains unconvinced that the impairment designation was necessary,” but vowed to continue working on solutions that benefit farmers and Lake Erie.

Some of the past and ongoing efforts include new laws that regulate nutrient runoff from farm fields, along with voluntary steps by farmers, and millions of dollars that have been donated to research and identify better farming practices.
On March 20, Farm Bureau joined with the Ohio Certified Crop Advisors, Ohio Federation of Soil and Water Conservation Districts, Ohio State University Extension and eight other farm organizations, to provide farmers with formal nutrient management plans that spell out specific steps to lessen nutrient runoff.

**Joe Bodnar Memorial Northern Classic Steer & Heifer Show to be held on Saturday, April 21**

The Ashtabula County Cattlemen’s Association will be sponsoring the 21st Annual Joe Bodnar Memorial Northern Classic Steer & Heifer Jackpot Show on Saturday, April 21 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 $35 per head is required. A $5 discount is being given for any entry received prior to April 13, 2018. 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. 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.

**Sponsors for 2018 AG Day Sought**

On May 11, 2018 nearly 1,100 members of the class of 2029 will be descending on the Ashtabula County Fairgrounds to participate in Ashtabula County’s “Ag Day.” Coordinated by OSU Extension and the Ashtabula County Farm Bureau, the primary goal of this event is to educate first graders on where their food comes from and to showcase the different types of agricultural commodities which are being produced in Ashtabula County.

Ashtabula County’s Ag Day program has become a community supported effort as over 300 volunteers and donors help to make this day a reality for the students. The cost of hosting this event is nearly $20,000 (both monetary and in-kind) and without the support of many this program would not be possible. We are asking you to considering becoming a donor for the 2018 Ag Day. We are once again offering 5 levels of sponsorship:

- **Platinum Sponsorship** - $1,000 and over
- **Gold Sponsorship** - $500 to $999
- **Silver Sponsorship** - $250 to $499
- **Bronze Sponsorship** - $100 to $249
- **Friends of Ag Day** - $1 to $99

Our target date for sponsorships is April 1, 2018 – especially for our Platinum and Gold Sponsorships. We are asking all Ashtabula County farms, agribusinesses, and supporters of Ashtabula County Agriculture to consider making a donation to help us educate our youth about...
agriculture. Your gift to this program is 100% tax deductible. A sponsorship letter is included with this newsletter. If you are interested in volunteering at this year’s program or would like to be a sponsor, please contact Abbey Averill at 440-576-9008.

**Winter Wheat Stand Evaluation**

Author(s): Laura Lindsey, Ed Lentz, CCA  
Source: [https://agcrops.osu.edu/newsletter/corn-newsletter/2018-06/winter-wheat-stand-evaluation](https://agcrops.osu.edu/newsletter/corn-newsletter/2018-06/winter-wheat-stand-evaluation)

Feekes 5 growth stage (leaf sheaths strongly erect) is a good time to evaluate winter wheat stand. Over the past two years, with funding from the Ohio Small Grains Marketing Program, we evaluated the relationship between wheat stems (main stem + tillers) and yield.

Keep in Mind:
1. In our research, we counted the number of wheat stems which included both the main stem (main plant) and tillers. For example, in Figure 1, there are two stems.
2. Make sure to count the number of stems in several areas of the field.
3. In our research, stem counts at Feekes 5 growth stage predicted wheat yield better than stem counts at Feekes 6 growth stage (first node visible).

The relationship between the number of wheat stems and yield is shown in Table 1 and is based on the data shown in Figure 2.

<table>
<thead>
<tr>
<th>Wheat Grain Yield (bu/acre)</th>
<th>Wheat Stems in Square Foot (stems/ft²)</th>
<th>Wheat Stems in Linear Foot of Row (stems/foot of row)</th>
</tr>
</thead>
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<tr>
<td>100</td>
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<td>60</td>
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Proven Production Practices for Increasing Corn Yields and Profits

Author(s): Peter Thomison, Steve Culman

In the quest for high corn yields, considerable attention has been given to increasing various inputs, including seeding rates and fertilizers, narrowing row spacing, and making preventative applications of foliar fungicides, growth regulators and biological stimulants. However, the significant drop in crop net returns that’s occurred in recent years warrants developing strategies to lower input costs. An input that might have paid for itself with $5.50/bu corn may not at $3.75/bu corn. A practical and economic approach to achieving high yields is to follow proven cultural practices that enhance corn performance.

1. Know the yield potential of your fields, their yield history, and the soil type and its productivity.
2. Choose high yielding, adapted hybrids. Pick hybrids that have produced consistently high yields across a number of locations or years. Select hybrids with high ratings for foliar and stalk rot diseases when planting no-till or with reduced tillage, especially after corn. Select high yielding Bt rootworm resistant hybrids where is potential for the western corn rootworm damage.
3. Follow pest management practices that will provide effective, timely pest control – especially weed control.

Figure 2. Relationship between number of wheat stems in linear foot of row at Feekes 5 growth stage and wheat yield.
4. Aim to complete planting by May 10. If soil conditions are dry, begin planting before the optimum date but avoid early planting on poorly drained soils. If planting late (after May 25 in central Ohio) plant corn borer resistant Bt hybrids.

5. Follow practices that will enhance stand establishment. Adjust seeding depth according to soil conditions and monitor planting depth periodically during the planting operation and adjust for varying soil conditions. Make sure the planter is in good working order. Inspect and adjust the planter to improve stand establishment. Operate planters at speeds that will optimize seed placement. Uneven emergence affects crop performance because late emerging plants cannot compete with larger, early emerging plants.

6. Follow appropriate seeding rate recommendations. Final plant populations of 31 -33,000 plants/A are adequate for most production environments. Final populations of 23-24,000 plants/A are usually adequate for low yield, droughty soils.

7. Supply the most economical rate of nitrogen. Recommended N rates have been updated and will be made available at the end of March. Consider side-dressing and using an application method that will minimize the potential loss of N (incorporation/injection, stabilizers under high risk applications, etc.).


9. Perform tillage operations only when necessary and under proper soil conditions. Deep tillage should only be performed when a compacted zone is detected and soil conditions are dry (usually late summer).

10. Control traffic over field. Larger field equipment means greater chances of soil compaction. Use controlled traffic (driving over same tire tracks for field operations) to compromise only a small percentage of the field, leaving the majority of the field undisturbed. Maintaining soil physical structure is a long-term management strategy for productivity.

11. Take advantage of crop rotation - corn grown after soybeans will typically yield 10-15% more than corn grown after corn.

12. Monitor fields and troubleshoot yield-limiting factors throughout the season.

13. These are by no means the only management practices with which growers need to be concerned but they are keys to achieving high corn yields.
Last Chance Fertilizer and Pesticide Recertification
Do you still need to obtain recertification for your Pesticide Applicators License or Fertilizer Applicator Certification? OSU Extension is offering a last chance recertification session on March 29th at the Trumbull County Ag Center in Cortland, OH. Fertilizer Applicator recertification will be 5-6p.m. and will cost $10, followed by Pesticide Applicator Training from 6-9p.m. and will cost $45. Come for one or both to stay certified for another three years.

You can register online with a credit card at this link, http://www.cvent.com/d/vq7jg, or if you prefer to pay at the door please call 330-638-6783 to register over the phone. We are only able to accept cash or check for payment at the door. Materials may be limited so please register in advance to reserve your spot.

Maize Yield Potential
By Tracy Hmielowski
Source: https://dl.sciencesocieties.org/publications/csa/articles/63/3/8

Plant breeders have been enhancing desirable traits in crops like flavor, yield, and pest resistance since the birth of agriculture. Some of these transformations have dramatically changed the appearance of crops. One example is maize. Breeding practices have taken maize from a grass with little seed production to the top grain crop produced worldwide. Even with the high-yielding maize varieties available, there is great demand for maize to be used in food products, animal feed, and biofuel.

Increasing yield potential is a combination of genetics and management practices. Planting timing and spacing, the application of fertilizer, irrigation, and weather conditions throughout a season interact with genotypes. For maize, there are two main traits that breeders can focus on to increase maize production without increasing the number of acres planted. The first is increasing the number of kernels or kernel size of plants so that individual plants produce more grain. The second is to increase the density tolerance of plants, enabling farmers to decrease the spacing between plants and rows, such that more maize can be planted on existing cropland.

In recent history, density tolerance appears to have been the focus of breeding efforts. In the 1950s, planting densities of 30,000 plants/ha were the maximum, whereas currently, farmers
plant up to 80,000 plants/ha. Maize breeder and geneticist Elizabeth Lee, from the University of Guelph, points out that while density tolerance may have received most attention, other traits were also improved upon. One example is the stay-green trait, where plants have an extended growth period even in dry conditions.

“Stay green is basically a balancing of source and sink,” Lee explains. “The amount of carbon fixed during the grain period has been improved, which results in better stay green.” However, at the same time, kernel size and number have shown limited change and have not contributed to increased maize yields.

Lee and co-authors recently published an article in *Crop Science* (http://bit.ly/2Et6Nvh) to investigate if there is potential for breeders to increase both kernel size and number (referred to in the article as yield potential) as well as the density tolerance in future hybrids.

In this article, the researchers present the results of a series of experiments using commercially available hybrids as a starting point. “The experimental hybrids tested represented the four possible combinations of density tolerance and yield potential,” Lee explains. The researchers grew these hybrids in a range of densities over multiple years. Across hybrids and experimental conditions, they observed differences in maize yields and further investigated how yield was impacted by harvest index (ratio of grain yield to total biomass) and kernel set efficiency (number of kernels at harvest per gram of dry matter fixed per day at silking).

The researchers explain that the harvest index was not correlated with yield potential. This applied to genotypes with and without density tolerance. Kernel set efficiency was also investigated. Genotypes with high density tolerance had a static kernel set efficiency, regardless of the density they were planted at.

*Traits Controlled by Distinct Mechanisms*
From these results, the researchers concluded that the genetic and biological mechanisms that control these two traits are distinct. The results were not a surprise to the team.

“We knew that historically there were hybrids known as flex-ear hybrids that could take advantage of situations where there was a reduced plant stand,” Lee says. These flex-ear hybrids can produce a greater yield than fixed-ear varieties with fewer plants, so the research team had a hunch that the genes for kernel size and number were present and flexible in the commercial germplasm available.

“Genotypes possessing both attributes were easily identified in a segregating population, which is also evidence that genetic variation is still present for yield potential in the commercial germplasm pool,” the authors state in the article. Lee says that these results are “applicable to
environments where drought and high temperatures are not the main limitations of yield, which are Canada and the traditional U.S. Corn Belt in most growing seasons.”

The U.S. and Canada are major producers of maize, and while it has not been confirmed that maize has reached a yield plateau in North America, yield increases may be slowing. Research suggests that solar brightening is responsible for 27% of maize yield gains from 1984 to 2013.

Additionally, the yield gap has narrowed to less than 25% between observed and potential maize yields. If maize is nearing a plateau, this research will be important information for maize breeders as it demonstrates that breeders can focus on increasing kernel size or number without altering density tolerance to provide a way to continue to increase maize yields to meet future demands.

**Ashtabula County Agricultural Scholarship Applications Being Taken**

OSU Extension and the Ashtabula County Agricultural Scholarship Committee are pleased to announce that applications are now being accepted for a minimum of fourteen scholarships for the 2018-2019 school year to Ashtabula County students enrolled in either an accredited full four year college or an accredited two year technical institute.

The Ashtabula County Agricultural Scholarship Fund was founded on April 29, 1952 by a group of prominent countians to promote interest in the study of agriculture, family and consumer science, environmental sciences or natural resources in an accredited full four-year college or an accredited two-year technical institute. This fund awards scholarships to students (both graduate and undergraduate students) attending an accredited four-year college or two year technical school. Each year the general scholarship fund awards two to three $1,000 scholarships. The committee also works with local organizations and farm families to offer additional scholarships.

Both graduate and undergraduate students are encouraged to apply for the scholarships which they meet the eligibility requirements. The scholarships are for a one year period. A student may apply and be awarded a scholarship in three years from the scholarship fund.

Application forms with complete instructions for applying are now available and can be received by stopping in at the Ashtabula County Extension Office or by calling 440-576-9008. Applications can be accessed at: [http://go.osu.edu/agscholarship](http://go.osu.edu/agscholarship). The application deadline is May 1 and no late applications will be considered. More information can also be obtained by emailing ashtabulacountyagscholarship@gmail.com
Workers’ Compensation Group Safety Meeting
The Northeast Counties Farm Bureau will be hosting a Workers’ Compensation Safety Meeting on March 27 from 6:00 to 9:00 p.m. at Saint Mary’s Church located at 103 N Maple Street in Orwell, Ohio from 6:00 to 9:00 p.m.

This meeting is being held for the OFBF Workers’ Compensation Group Rating Program members and others who would be interested in the safety presentation. Tentative Topics are: Tractor & Equipment Safety; Fire Prevention and Stress Management. A very important aspect of reducing Workers’ Compensation premiums is to reduce the number of claims/accidents within the group. This can be accomplished by each member doing his or her own part to ensure a safe work environment.

There is no registration fee for Farm Bureau members with all others at $10 per person. Reservations are required by March 23 by calling 440-426-2195.

OSU Extension to Host 5th Annual East Ohio Women in Agriculture Conference
Ohio State University (OSU) Extension will host the 5th Annual East Ohio Women in Agriculture Conference. The conference is planned for Friday, April 6 from 9:00 a.m. – 3:45 p.m. at the RG Drage Career Technical Center, 2800 Richville Drive SE in Massillon. All women and young women (high school age) who are interested, involved in, or want to become involved with food, agricultural, or natural resources production or small business are encouraged to attend. Interested individuals can register for the conference on-line at go.osu.edu/eowia2018. Cost of the conference is $55 for adult participants and $30 for students. Conference fee includes conference participation, continental breakfast, lunch and conference handouts. A special discount is available for those women and students who also plant to attend the Northeast Ohio Small Farm Conference on Saturday, April 7. Deadline for registration is Friday, March 23. For more information contact the OSU Extension Holmes County Office at 330-674-3015.

2018 NE Ohio Living Your Small Farm Dream Conference
The 2018 NE Ohio Living Your Small Farm Dream conference will be held on Saturday, April 7 at the RG Drage Career Center, located at 2800 Richville Drive SW in Massillon Ohio. The conference provides education and topics of interest for small farm and rural landowners. Participants will walk away from the conference with knowledge and ideas of how to improve existing enterprises or marketing opportunities. For those who have some acreage but don’t yet know what to do with it, the conference is an opportunity to consider possibilities, gather information and make contacts.
Conference registration is $60/person or, if attending the Women in Agriculture Conference at the same location on April 6, plus the Small Farm Conference on April 7; $100 for a combined registration. Student discounts are $30 for attending the small farm conference alone or $50 if attending both the Women in Agriculture and the Small Farm conference. Pre-registration for both the Small Farm conference and the Women in Agriculture conference is due March 23. On-line registration is available at go.osu.edu/NESmallFarmReg. A Living the Small Farm Dream conference brochure that lists session topics and presentation times along with a mail-in registration form, and a document with descriptions of all the presentation topics is available at go.osu.edu/NEOHSmallFarms.

2018-2019 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 2018-2019 school year. One $1,000 scholarship will be awarded to a deserving 2018 High School Senior who will be attending an accredited full four year college or an accredited two year technical institute in 2018-2019. 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. Applications must be received by the Ashtabula County Cattlemen’s Association by Monday, April 16, 2018 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.

Hydrangea School to be Held on April 26, 2018
The Ashtabula County Extension office is pleased to be offering a Hydrangea School on Thursday, April 26, 2018 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.
Hello, Ashtabula County! I am pleased to report the 68th Annual Ashtabula County Dairy Banquet held on Saturday, March 24 at the Jefferson Community Center in Jefferson, Ohio with 90 persons in attendance was a super event! The participants were treated to a wonderful meal followed by an awards program to recognize the achievements of our local dairy farms from the past year.

We were very pleased that Ashtabula County Commissioner Casey Kozlowski was in attendance and provided the crowd with an Ashtabula County legislative update. Nicole Mann also provided an update to the crowd on her election as the 2018 Ohio Ayrshire Queen last month. Congratulations to Nicole for being elected to this position and we wish her luck as she represents the Ayshire Association during the upcoming year.

The highlight of the banquet was the crowning of the 2018 Ashtabula County Dairy Princess. Congratulations to Allison Graves, daughter of April and Adam Graves of New Lyme Township, for being selected as the 2018 Ashtabula County Dairy Princess. Kassidy Brinker, daughter of Jason Brinker and Jodi Brinker of Jefferson, was chosen as the runner-up. Both girls had top-notch interviews and speeches to the crowd. Congratulations to both young ladies for their exceptional representation in this competition. A special thank you is given to Teresa Polchin who served as the 2017 Ashtabula County Dairy Princess. Teresa did a great job representing our dairy industry over the past 12 months.

To kick off the recognition program, the dairy board presented three Ohio Elite Awards. Once again this year, we had three of our Ashtabula County dairy farm families recognized for being the best of the best in Ohio. Congratulations to Alfa-Creek Brown Swiss Farm of Andover.

Northeast Ohio Agriculture

Ohio State University Extension
Ashtabula and Trumbull Counties
Township for being the 1st place Brown Swiss herd in Ohio. Not to be outdone, Bossy Way Farm of New Lyme Township and Alfa-Creek Farms of Andover Township and were recognized for placing as the 14th and 17th place Holstein herds in the state of Ohio for 2017. Congratulations to the Boggs and Zaebst families for their incredible achievements.

The top Ashtabula County Holstein Herd Award went to Bossy’s Way Farm of New Lyme Township, the top county Jersey Herd went to Ringbyre Jersey Farm of Monroe Township, and the top Brown Swiss Herd went to Alfa-Creek Brown Swiss of Andover Township. Ringbyre Jersey Farm won the 2017 Low Somatic Cell Milk Quality Award and the Most Improved Herd rotating trophy was awarded to the Gaylord Millard & Son Dairy of Pierpont Township. The Millard herd improved over 1,100 pounds of milk per cow last year.

Four farms were recognized for having top cows in Ashtabula County by breed and age. Alfa Creek Brown Swiss received all four Brown Swiss awards and Alfa-Creek Farms won four Crossbred Awards, two Holstein Awards and all four Red & White Holstein Awards. Ringbyre Jersey swept all four Jersey Awards and Bossy’s Way Farm won two Holstein Awards.

Congratulations to Alfa-Creek Farms for having the top producing cow in 2017. This award-winning cow produced 45,848 pounds of milk which is over 5,300 gallons of milk! To put this number in perspective, the average cow in Ashtabula County gives about 22,000 pounds of milk each year. This cow produced more than double the average. That is a lot of leche!

Congratulations to Lindsey Gray for being re-elected and to Brad Parker for being elected to two-year terms on the Dairy Service Unit Board of Directors. Tom Coltman of Wayne Township retired from the board and we thank him for his service. I thank each of our directors for all they do for our dairy industry.

We are extremely grateful to the following businesses who supported this year’s banquet. Ashtabula County Holstein Club; Autozone of Jefferson; Bossy’s Way Farm; Brinker Dairy Farm; Centerra Co-op; Charlies Andover Auto Parts; Cold Springs Milk Cartage; Countryside Veterinary Service; Dave Ballentine’s Pest Control; Bossy’s Way Farm; Brinker Dairy; Chery Valley Processing; Conneautville’s Farm Exchange; Farm Credit Services; Kalas Farms; George Kalas, Sr; Kalmbach Feed; WG Dairy; Orchard Creek Soaps; Paul Robinson & Company; Pine Grove Jersey Farm; Piper Processing; Ringbyre Jersey Farm; Rowdy Cow Creamery; Springer Dairy Farm; Katie Stokes; and Westford Milling Company.

Ashtabula County dairy farmers, we are proud of each of you! This banquet is just a small way of saying thank you for your hard work in helping to feed our growing population. You are indeed a special group. To close, I would like to share a quote from Albert Einstein who stated, “Try not to become a man of success, but rather try to become a man of value.” Have a good and safe day.
Upcoming Extension Program Dates

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

Last Chance Fertilizer and Pesticide Recertification
Thursday, March 29, 2018

21st Annual Joe Bodnar Memorial Northern Classic Steer & Heifer Show
Saturday, April 21, 2018

Hydrangea Workshop
Thursday, April 26, 2018

Women in Agriculture Programs
April 28, 2018
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Last Chance Pesticide & Fertilizer Recertification

Thursday,
March 29, 2018
5:00 p.m. – 9:00 p.m.

Trumbull County Ag Center
520 West Main Street
Cortland, OH 44410

Fertilizer Recertification - 5-6p.m. - $10
Pesticide Recertification - 6-9p.m. -$45
Call 330-638-6783 for more information

Does your Private Pesticide Applicators license or Fertilizer Applicator certificate expire on March 31, 2018? If so, this will be your last opportunity to re-certify this year before it expires. Once expired you will need to contact the Ohio Department of Agriculture to retake the exams to obtain your license. Don’t let that happen! We will be offering Fertilizer Applicator recertification from 5-6p.m. followed by Pesticide Applicator recertification from 6-9p.m. Stay for one, or both!

To register please visit http://www.cvent.com/d/vgq7jg to pay via check or credit card. If you do not have internet access you can also register by completing the form on the back of this flyer and mailing with payment to OSU Extension Trumbull County, 520 West Main Street, Cortland, OH 44410. Please make checks payable to OSU Extension. You can also call our office at 330-638-6783 to register if you would like to pay at the door.
Last Chance Recertification  
March 29, 2018  
Trumbull County Extension

Name ___________________________________________________
Address ___________________________________________________
City __________________ State ______   Zip_________________
Phone ______________________ Email  ______________________

Number of People Attending:

Private Applicator Recertification   ____ X $45 per person = $_______
Fertilizer Applicator Recertification ____ X $10 per person = $_______
Total                                  = $_______

Please make checks payable to: OSU Extension

Mail registration to: OSU Extension Trumbull County, 520 West Main Street, Cortland, OH 44410

Contact Lee Beers at 330-638-6783 or beers.66@osu.edu for more information.
This program is sponsored by Sage’s Apples and Ohio State University Extension Geauga County. Erik Draper, Horticulture Extension Educator and the “Ole Sage Crew” will be “cutting loose” on pruning techniques.

This will be a hands-on, get yourself dirty, workshop! We will prune peach and apple trees, and small fruits like blueberries, blackberries, raspberries, and grapes. Bring your own pruners, loppers or saws and dress for the weather. Participation is expected and is a big part of the learn-as-you-lop-it fun!

To register, or if you have any questions, please call the Extension office at 440-834-4656. Mail your payment to OSU Extension, P.O. Box 387, Burton, OH 44021.

Registration fee is $20 per person/couple
Includes refreshments, handouts and a half peck of apples

Registration Form - March In and Prune Out 2018
Name_________________________________________________________________________________
Address________________________________________________________________________________
City_________________________State_________________Zip________________Phone________________
Number Attending x $20 per person/couple = $__________________
To: Supporters of Ashtabula County Agriculture  
From: David L. Marrison  
Re: Sponsorship of 2018 Ag Day  

On May 11, 2018 nearly 1,100 members of the class of 2029 will be descending on the Ashtabula County Fairgrounds to participate in Ashtabula County’s “Ag Day.” Coordinated by OSU Extension and the Ashtabula County Farm Bureau, the primary goal of this event is to educate first graders on where their food comes from and to showcase the different types of agricultural commodities which are being produced in Ashtabula County.

During this interactive day, students will be able to get up close and personal with farm animals, crops, fruits, and vegetables at interactive stations relating to our county’s agriculture.

The students:
- Will learn about bees, dairy cows, sheep, horses, beef cows, goats, pigs, alpacas, chickens, ducks, and turkeys.
- Make their own home-made butter and tried their hand at milking a cow.
- Learn how seeds are planted to give us an array of tasty fruit and vegetables and how they are processed into foods that we enjoy.
- Learn what type of machinery is used in agriculture.
- Learn the importance of healthy nutrition and exercise.

Ashtabula County’s Ag Day program has become a community supported effort as over 300 volunteers and donors help to make this day a reality for the students. The cost of hosting this event is nearly $20,000 (both monetary and in-kind) and without the support of many this program would not be possible. We are asking you to considering becoming a donor for the 2018 Ag Day. We are once again offering 5 levels of sponsorship:

- Platinum Sponsorship - $1,000 and over
- Gold Sponsorship - $500 to $999
- Silver Sponsorship - $250 to $499
- Bronze Sponsorship - $100 to $249
- Friends of Ag Day - $1 to $99

Our target date for sponsorships is April 1, 2018 – especially for our Platinum and Gold Sponsorships. We are asking all Ashtabula County farms, agribusinesses, and supporters of Ashtabula County Agriculture to consider making a donation to help us educate our youth about agriculture. Your gift to this program is 100% tax deductible. Donors are recognized in a variety of manners (see back for more details). If you are interested in helping with this year’s program or would like to be a sponsor, please contact Abbey Averill at 440-576-9008.

Yes, I would like to be a sponsor of the 2018 Ag Day!

Sponsor Name(s) ________________________________________________________________

Address ________________________________________________________________

Phone _________________________ Email _________________________________________

$______ Platinum $______ Gold $______ Silver $______ Bronze $______ Friends of Ag Day

_____ In-Kind, I can offer the following in-kind support ____________________________

Make checks payable to: OSU Extension  
Return to: OSU Extension, 39 Wall Street, Jefferson, OH 44047  
For More Information: 440-576-9008
There are many ways to become a sponsor for this event. Your support of the Ashtabula County Ag Day can be provided through a monetary donation or through an in-kind donation. Listed below is how your company's donation will be recognized by the committee and some ideas for donation opportunities.

**Platinum Sponsorship - $1,000 and over**
- Company/Individual name on back of shirt which all volunteers wear.
- Sign at the 12 interactive stations.
- Listed in the donor brochure sent home to every student's home.
- On sponsorship list for media publication.
- Recognition at Ag Day for being a sponsor.
- **Ideas for in-kind donation** - Sponsor three or more classrooms from your local school or help sponsor the bus transportation ($3,500 total for busing) or sponsor the “Adventures in Agriculture with Chris Clover” coloring book ($1,500). Donate an agricultural based-giveaway valued over $1,000. For example, an Ag Day lunch box for every student.

**Gold Sponsorship - $500 to $999**
- Company/Individual name on back of shirt which all volunteers wear.
- Sign at all 12 interactive stations.
- Listed in the donor brochure sent home to every student’s home.
- On sponsorship list for media publication.
- Recognition at Ag Day for being a sponsor.
- **Ideas for in-kind donation** - Sponsor two classrooms from your local school or sponsor your local school’s busing. Donate an agricultural based-giveaway valued over $500, provide milk and ice cream for each student, sponsor the dwarf cherry tomato plants to be taken home by every student or help provide lunch for the over 300 volunteers. Donate reusable Ag Day tote bag for each classroom.

**Silver Sponsorship - $250 to $499**
- Listed in the donor brochure sent home to every student’s home.
- On sponsorship list for media publication.
- Recognition at Ag Day for being a sponsor.
- **Ideas for in-kind donation** - Sponsor a classroom from your local school. Donate an agricultural based-giveaway valued over $250, sponsor the supplies needed for one of the stations (example: whipping cream to make the homemade butter), or sponsor the Callie the Cow milking station.

**Bronze Sponsorship - $100 to $249**
- Listed in the donor brochure sent home to every student’s home.
- On sponsorship list for media publication.
- Recognition at Ag Day for being a sponsor.
- **Ideas for in-kind donation** - Donate an agricultural based-giveaway valued over $100. We can use money to purchase program supplies (example: potatoes, carrots, flower pots, soil) for the 12 interactive stations.

**Friends of Ag Day - $1 to $99**
- Listed in the donor brochure sent home to every student’s home.
- On sponsorship list for media publication.
- Recognition at Ag Day for being a sponsor.
- **Ideas for in-kind donation** - Sponsor a child to attend - $25. Donate an agricultural based-giveaway valued up to $99. We can use money to purchased program supplies (example: hand sanitizers for the 12 interactive stations).

**Volunteerism** - We need over 300 volunteers to help with this program. Your company can provide volunteers to be presenters at one of the 12 interactive stations, be a group leader to lead a classroom from station to station, or help with safety coordination or in logistics. Contact Abbey Averill at OSU Extension at 440-576-9008 for more details on volunteer opportunities.