

COSHOCTON COUNTY AGRICULTURE & NATURAL RESOURCES**September 25, 2019 Issue**

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Hello Coshocton County! It is a great week as the Coshocton County Fair begins on Friday. The fair has a special place in the hearts of many in Coshocton County. It will be a great time to catch up with neighbors, see some amazing youth in action, and to take in the sights, smells, and tastes of harvest season. I hope to see many of you there!

It is great to see some soybeans run this past week and I even see that some corn has been run as well. Weather extremes may be our new normal -from wet & flooding to now extremely dry.

Make sure to mark your calendars for the Fall Foliage & Farm Tour and for the November 2 "For the Love of Lamb Dinner." We are also working on a whole host of programs for later this fall and into winter. Stay tuned for these details!

See you at the fair!

Sincerely,

David Marrison

Coshocton County OSU Extension ANR Educator



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

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2020 Coshocton/Tuscarawas Lamb & Wool Queen Sought

The Coshocton and Tuscarawas Lamb and Fleece Improvement Committee is now accepting applications for the 2020 Coshocton/Tuscarawas Lamb and Wool Queen. The duties of the queen are to promote the lamb and wool industries at fairs and festivals and special events.

The application is available online at coshocton.osu.edu or tuscarawas.osu.edu. Applications are also available at both Extension offices. They are due October 18 and interviews will take place October 22 at the Coshocton Extension Office. Applications can be found on-line at Coshocton.osu.edu or Tuscarawas.osu.edu. For more information contact David Marrison at 740-622-2265 or marrison.2@osu.edu

Fall Foliage & Farm Tour Slated for October 19-20

OSU Extension, Coshocton Soil & Water Conservation District, and USDA Farm Service Agency will once again sponsor the drive-it-yourself **Fall Foliage & Farm Tour** on October 19-20, 2019. This year's tour will highlight the eastern section of Coshocton County. It will continue to focus on the history of the area as well as provide the opportunity for participants to have a variety of up close experiences at agricultural enterprises along the tour route.

Map pick up will be held once again at The Animal Boutique & Villas located at 23905 Airport Road, across from Walmart. Maps must be picked up 2 hours prior to the end of the tour. Maps are not available until Saturday morning. We ask that you stop to pick up your brochure and map so we can tally the number of tour participants. The tour is free, but donations are appreciated. Stops are open on Saturday, October 19, 10:00 a.m. to 5:00 p.m. and on Sunday, October 20, 12:00 to 5:00 p.m.



4th Annual "For the Love of Lamb" Dinner Slated for November 2

The Coshocton and Tuscarawas Lamb and Fleece Improvement Committee is hosting the 4th Annual **"For the Love of Lamb Dinner"** on Saturday, November 2 at 6:00 pm. The Chef Prepared Local Farm to Plate Dinner will be held at the Heritage Vineyard Winery near Warsaw. Tickets are \$25.

The meal will be prepared by Chef Mike Cichon and will highlight the versatility of delicious lamb. Chef Cichon will share his inspiration for the meal as well as tips for cooking with lamb. Wine tastings will be available and Heritage Vineyard wine can be purchased separately for dinner.



Raffle tickets for baskets filled with lamb and wool items are also available. Cost is \$1 per ticket or 6 for \$5. Raffle tickets may be purchased prior to the event, even if you do not attend the meal. Tickets may also be purchased at the dinner.

Meal tickets and raffle tickets may be purchased from the following committee members through October 25: Elaine Ashcraft at 740-622-1573, Nancy Wells at 740-754-1247, or David & Emily Marrison at 740-622-1179.

Healthy Living Demonstrations at the Coshocton County Fair

Join OSU Extension at the Coshocton County Fair for **Healthy Living Demonstrations on the Youth Building Stage**. Come and learn something new with us! The first demonstrations will be Saturday, September 28 starting with the "Blender Bike" at 11:00 AM. We will be making fruit smoothies with pedal power and talking about some fun and easy ways to eat more fruits and vegetables. Following at noon will be "Making Your Own Household Cleaner." If you are looking for cost effective and simpler ways to clean your home, then this talk is for you.

The “Blender Bike” will be back again on Sunday, September 29 at 1:00 PM. This will be followed by a “Dining with Diabetes Recipe” at 2:00 PM that shows counting carbohydrates can taste great. Then on Tuesday, October 1, please join Junior Fair participants as they showcase their cooking skills at the “Tasting Smorgasbord.” Tasting is open to the public beginning at 12:30 PM. This will be followed by the last demonstration of the week “Cooking with an Instant Pot.” If you are wondering what you can really do with these pots, come taste and see at 2:00 PM. All of these talks are free and open to all fairgoers.

Friends of the Coshocton County Jr Fair Livestock Auction

A new effort has begun to support the hard work of the 4-H and FFA Youth showing and selling their livestock projects by establishing a pool of funds that will increase the overall sales at the Junior Fair Livestock Auction.

Last year 368 young people sold animal projects at the fair. These young people are gaining experiences that will last a lifetime and will help equip them for their place in the workforce or raising their own family someday. Typically, the money the kids receive from the sale are used for helping to fund next year’s project and/or are saved for future educational needs after their graduation.

This fund will give individuals who haven’t been involved as auction buyers in recent years; and folks who participated in the Jr. Fair events in the past to “pay back” to the current group of youth with a contribution to this buyer’s pool. All funds contributed to this fund will be used to bid on, and, purchase livestock projects. Contributors to this fund will be listed after the fair in local media outlets. The Jr. Fair Livestock sale is the culmination of months of work raising and preparing their animal for the sale.

Contributions may be sent to: Friends of the Coshocton Cnty. Jr. Fair Livestock Auction c/o Peoples Bank, 200 Main St., Coshocton, OH 43812. Questions about this project may be directed to: Sally Ellis at 740-545-6002 / 740-202-3429 or Carol Hadrosky at 740-623-0672. See the attached flyer for more information.

Cattle Handling & Carcass Value

by: [Steve Boyles](#), OSU Beef Extension Specialist

Source: <http://u.osu.edu/beef/2019/09/25/cattle-handling-and-carcass-value/#more-7334>

Utilization of proper cattle handling is key. It can eliminate carcass bruising and the presence of dark cutters. Although the industry has observed a decrease in the presence of carcass bruising according to the 2016 National Beef Quality Audit results, the “2016 Lost Opportunities in Beef Production” publication indicated that carcass bruising cost the industry approximately \$62.15 million. Additionally, the presence of dark cutters cost the beef industry \$132 million.

These include the elimination of side and multiple brands, proper cattle handling/transport techniques and facility design, and the elimination of improper IM injections. Proper administration of animal health products, branding only in the shoulder or hip areas, marketing cattle at an optimum time, and reducing stress placed on when handling cattle are just some of the management practices that can help prevent quality defects and increase market value.

- Provide personnel with training/experience to properly handle and care for cattle.
- Make timely observations of cattle to ensure basic needs are being met.
- Provide facilities that allow safe, humane, and efficient movement and/or restraint of cattle.
- Use appropriate methods to humanely euthanize terminally sick or injured livestock.

Abuse of cattle is not acceptable under any circumstances. Provide personnel with training/experience to properly handle and care for cattle. Make timely observations of cattle to ensure basic needs are being met. Design, provide, and regularly inspect facilities (fences, corrals, load-outs, stations) to help ensure safe and easy animal movement and restraint. Keep feed and water handling equipment is clean. This information was derived from the National Beef Quality Assurance Manual located at BQA.org

Above Normal Temperatures Will Continue for Rest of September

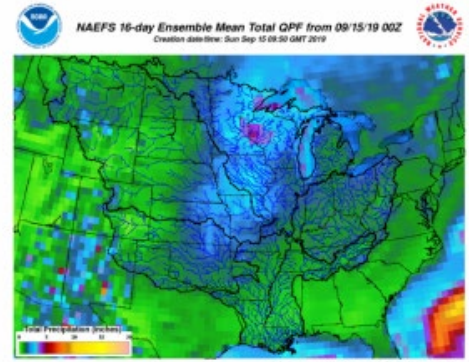
By: Jim Noel

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2019-31/above-normal-temperatures-will-continue-rest-september>

Originally Published on September 17, 2019

After a cooler start to September it was expected to be warmer than average and that has happened and will last the rest of the month. Highs will generally be in the 70s and 80s north half and in the upper 70s to near 90 range in the south half. Lows will generally be in the 50s and 60s. This will be several degrees above normal.

The first half of September was expected to be drier with a trend to normal or wetter weather in later September. Indications are that we will remain at or below normal rainfall for most of the state for the remainder of September. Over the next two weeks, rainfall is forecast to be mainly an inch or less with normal being 1.0-1.5 inches. The main rain areas will be off the southeast U.S. coast and in the upper Midwest as the attached two week rainfall graphic shows. High pressure will remain in control of a good portion of the southeast third of the U.S. as tropical activity off the U.S. Southeast Coast will help strengthen the high pressure in the Southeast.



inputs. Precision agriculture practices have shown to provide feedback to improve profitability and helping confirm the best practices and input selections for a farm operation.

Yield monitor best practices to use pre-harvest and during harvest

- Be sure to update firmware and/or software for the yield monitoring systems. If necessary, contact your equipment or technology service provider about available firmware updates and where they can be downloaded.
- Most yield monitors use a mass flow sensor at the top of the clean grain elevator. Due to the grain impact, the plate will wear to the point of developing a hole if it isn't replaced soon enough. The wear that occurs changes the reading from the mass flow sensor. Be sure to replace the plate if wear is evident. Don't neglect to recalibrate after replacing yield monitor components. This recalibration is necessary to ensure accuracy of the yield monitor. A more simple explanation is that a worn impact plate can result in an incorrect yield reading on your display. It is important to not overlook the yield mapping system as a worn component will throw off yield readings.
- Update and/or configure DGPS. Software related to auto-steer, yield monitors and other GPS-based systems require separate attention. Licenses must be renewed. Calibrations and parameters must be updated or confirmed — especially if the display in the combine cab was used for planting or spraying earlier in the year. It's necessary to meticulously switch every setting and value, from machine dimensions to type of crop and operation, so they are relevant to harvest operations.
- Check auto-steer operations and that previously used AB/guidance lines are available within the display. Remember, you may have to adjust sensitivity settings.
- It is also important to calibrate yield monitors for every crop, each season to ensure that all data being collected is as accurate as possible. The yield monitor needs to "be taught" how to convert the readings from the mass flow sensor into yield; therefore, it is necessary to show the yield monitor the range of yield conditions it will encounter throughout the season.
- It is wise to periodically check the calibration throughout the season to be sure the data being collected is still accurate.
- Grain moisture and density can vary between crop fields and, at times, vary significantly within a field. Accounting for changes in grain moisture and density improves the accuracy of yield estimates.
- Remember to recalibrate if harvest conditions change. For example, if: yield monitor components are replaced or adjusted; grain moistures increase or decrease by over 6% to 8%; or after a rain shower but still dry enough to harvest.
- The use of grain carts to calibrate yield monitors can be acceptable as long as it weighs accurately compared to certified scales. One should make sure the weigh wagon is on level ground (less than 2% slope) and stationary for a few seconds before documenting the weight.
- Bring along your field notes so you can review them during harvest as crop conditions vary or issues are observed.
- While harvest is a busy time, taking notes and images during harvest (especially if conducting on-farm research) can be valuable data when finally sitting down for post-harvest analysis and summary. We all forget, so notes and images can help document important information.

For more information on calibrating yield monitors, check out the Ohio State Precision Ag website at <https://digitalag.osu.edu/precision-ag> plus read the Extension Publication "Tips for Calibrating Grain Yield Monitors — Maximizing Value of Your Yield Data" at <https://ohioline.osu.edu/factsheet/anr-8>. This article was re-printed from the August 28, 2019 edition of the Ohio Country Journal.

Dry Down in Corn – What to Expect

By Peter Thomison

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2019-32/drydown-corn-%E2%80%93-what-to-expect>

Many corn growers may encounter slower than normal drydown this fall due to late crop development associated with June planting dates. Much of Ohio's late-planted corn may not achieve black layer until mid-October or later when drying conditions are less favorable for drydown. Once corn achieves physiological maturity (when kernels have obtained maximum dry weight and black layer has formed), it will normally dry approximately 3/4 to 1% per day during favorable drying weather (sunny and breezy) during the early warmer part of the harvest season from mid-September through late September. By early to mid-October, dry-down rates will usually drop to 1/2 to 3/4% per day. By late October to early November, field dry-down rates will usually drop to 1/4 to 1/2% per day and by mid-November, probably zero to 1/4% per day. By late November, drying rates will be negligible.



Estimating dry-down rates can also be considered in terms of Growing Degree Days (GDDs). Generally, it takes about 30 GDDs to lower grain moisture each point from 30% down to 25%. Drying from 25 to 20 percent requires about 45 GDDs per point of moisture. In October, we typically accumulate about 5 to 10 GDDs per day. However, note that the above estimates are based on generalizations, and it is likely that some hybrids may vary from this pattern of drydown. Some seed companies indicate considerably lower GDDs for grain moisture loss, i.e. 15 to 20 GDDs to lower grain moisture each point from 30% down to 25% and 20 to 30 GDDs per point from 25% to 20%.

Past Ohio research evaluating corn drydown provides insight on effects of weather conditions on grain drying. During a warm, dry fall, grain moisture loss per day ranged from 0.76 to 0.92%. During a cool, wet fall, grain moisture loss per day ranged from 0.32 to 0.35%. Grain moisture losses based on GDDs ranged from 24 to 29 GDDs per percentage point of moisture (i.e., a loss of one percentage point of grain moisture per 24 to 29 GDDs) under warm dry fall conditions, whereas under cool wet fall conditions, moisture loss ranged from 20 to 22 GDDs. The number of GDDs associated with grain moisture loss was lower under cool, wet conditions than under warm, dry conditions.

Weather related crop stress may affect drydown this year. Dr. Bob Nielsen at Purdue University notes, "When areas of fields die prematurely due to stresses like drought, spatial variability for grain moisture at harvest can be dramatic and often creates challenges with the management of the grain dryer operation. This is especially true early in the harvest season when grain moistures of healthier areas of the field are in the low 20's. The spatial variability for grain moisture decreases later in the harvest season as grain moistures throughout the field settle to an equilibrium level (15% or less)."

Agronomists generally recommend that harvesting corn for dry grain storage should begin at about 24 to 25% grain moisture. Allowing corn to field dry below 20% risks yield losses from stalk lodging, ear drop, ear rots, insect feeding damage and wildlife damage.

For more on grain drydown, check out the following article by Dr. Nielsen.

Nielsen, R.L. 2018. Field Drydown of Mature Corn Grain. Corny News Network, Purdue Univ.

URL: <http://www.kingcorn.org/news/timeless/GrainDrying.html> [URL accessed Sept. 23, 2019].

Converting Wet Corn Weight to Dry Corn Weight

By: R.L. Bon Nielson, Purdue University

Source: <https://www.agry.purdue.edu/ext/corn/news/timeless/WaterShrink.html>

Corn is often harvested at grain moisture contents higher than the 15% moisture typically desired by grain buyers. Wetter grain obviously weighs more than drier grain and so grain buyers will "shrink" the weight of "wet" grain (greater than 15% moisture) to the equivalent weight of "dry" grain (15% moisture) and then divide that weight by 56 to calculate the market bushels of grain they will purchase from the grower.

The two sources of weight loss due to mechanical drying are 1) the weight of the moisture (water) removed by the drying process and 2) the anticipated weight loss resulting from the loss of dry matter that occurs during the grain drying and handling processes (e.g., broken kernels, fines, foreign materials). An exact value for the handling loss, sometimes called "invisible shrink", is difficult to predict and can vary significantly from one grain buyer to another. For a lengthier discussion on grain weight shrinkage due to mechanical drying, see [Hicks & Cloud, 1991](#).

The simple weight loss due to the removal of grain moisture represents the greatest percentage of the total grain weight shrinkage due to drying and is easily calculated using a handheld calculator or a smartphone calculator app. In general terms, you first convert the "wet" weight (greater than 15% moisture) to absolute dry weight (0% moisture). Then you convert the absolute dry weight back to a market-standard "dry" weight at 15% grain moisture.

Concept:

1. The initial percent dry matter content depends on the initial grain moisture content. For example, if the initial grain moisture content is 20%, then the initial percent dry matter content is 80% (e.g., $100\% - 20\%$).
2. If the desired ending grain moisture content is 15% (the typical market standard), then the desired ending percent dry matter content is 85% ($100\% - 15\%$).
3. Multiply the weight of the "wet" grain by the initial percent dry matter content, then divide the result by the desired ending percent dry matter content.

Example:

1. 100,000 lbs of grain at 20% moisture = 80,000 lbs of absolute dry matter (i.e., $100,000 \times 0.80$).
2. 80,000 lbs of absolute dry matter = 94,118 lbs of grain at 15% moisture (i.e., $80,000 / 0.85$).
3. 94,118 lbs of grain at 15% moisture = 1681 bu of grain at 15% moisture (i.e., $94,118 / 56$).

One take-home reminder from this little exercise is the fact that the grain trade allows you to sell water in the form of grain moisture... up to a maximum market-standard 15% grain moisture content (or 14% for long term storage). Take advantage of this fact and maximize your "sellable" grain weight by delivering corn grain to the elevator at moisture levels no lower than 15% moisture content. In other words, if you deliver corn to the elevator at grain moisture contents lower than 15%, you will be paid for fewer bushels than you otherwise could be paid for.

Related reading

Hicks, D.R. and H.A. Cloud. 1991. Calculating Grain Weight Shrinkage in Corn Due to Mechanical Drying. National Corn

Handbook Publication NCH-61. <https://www.extension.purdue.edu/extmedia/nch/nch-61.html> [URL accessed Sep 2019]

Nielsen, RL (Bob). 2018. Corn Grain Test Weight. Corny News Network, Purdue Extension. <http://www.kingcorn.org/news/timeless/TestWeight.html> [URL accessed Sep 2018]

Pryor, Randy, Paul Jasa, & Jenny Rees. 2017. Plan Harvest to Deliver Soybeans at the Optimum Moisture. Cropwatch, Univ Nebraska Extension. <http://cropwatch.unl.edu/2017/plan-harvest-deliver-soybean-optimum-moisture> [URL accessed Sep 2019]

Trendy Meatless Products

By: Emily Marrison

Originally published in Coshocton Tribune on September 15, 2019.

I'm pretty sure that no one has ever used the word "trendy" to describe me. When it comes to fashion, I choose classic over fads every time. However, as a food scientist I am always intrigued by what is coming along in food research and development.

One area that is certainly gaining more attention is "plant-based meat." As a university educator I strive to remain unbiased in the way that I educate and share information. Food is a realm where it is difficult to stay opinion-free. Meat by definition is sourced from an animal, not a plant. So how can these companies legally say "plant-based meat?" I guess that precedent was set with "plant-based milk" since soy juice and almond juice would be more accurate descriptions of the products. Milk comes from animals and specifically mammals.

Veggie burgers have been around for decades, so are these new products really any different? There are two companies that would answer that with a definite yes. Impossible Foods and Beyond Meat are two of the largest companies, but there are also other players. These companies are making products that will compete directly with meat. The idea is that these plant-based products look and smell and feel and taste like burgers, chicken and other meat products. Most of these products have been introduced through restaurants outlets, but they are in the news now because more of them will be sold in supermarkets.

One of the things that I find interesting is that these products are not being marketed towards vegetarians and vegans, which by the way, make up only 5 percent and 3 percent of the US population. These products are aimed at the other 92 percent. The "Impossible" products are made from soy and potato proteins and coconut and sunflower oils. The "Beyond" products are made from pea and rice proteins and canola and coconut oils.

The Impossible burgers also contain heme, which is an essential part of the flavor of meat. You may remember that hemoglobin is the iron containing protein molecule in our blood. It turns out that even plant cells need iron, so certain plant cells contain heme. So the scientists at Impossible Foods genetically engineered yeast to produce large amounts of heme that is then added to the plant-based products to make them taste more like meat. Fascinating.

Nutritionally, the plant-based patties and other products are similar to higher fat containing and processed meat. Which, honestly, is not that great for you. Research supports that lean cuts of beef, pork and poultry are most appropriate for a well-balanced diet. This means they are part of the 5-6 ounces of total protein an adult should consume per day.

It is most interesting to me that when you look at the promotional and informational materials from these companies, nutrition is not the main reason for these products. They are addressing topics related to climate change, animal welfare, and over all "saving the world." The role of livestock in climate change would be a great research-based discussion to address in another column. Maybe we'll cover that as I talk about lab-grown meat in the near future. Did you know Winston Churchill predicted it in 1931? Again, fascinating.

Today I'll leave you with this quote from Seth Godin, ""Facts are irrelevant. What matters is what the consumer believes."

Emily Marrison is an OSU Extension Family & Consumer Sciences Educator and may be reached at 740-622-2265.

Eastern Ohio Beef & Forage School Begins October 1

By: [Clif Little](#), OSU Extension Educator, Guernsey County

Source: <http://u.osu.edu/beef/2019/09/11/eastern-ohio-beef-and-forage-school-begins-october-1/>

OSU Extension and the Eastern Agriculture Research Station has made plans for the 2019 Fall Beef School. The dates for the school are Tuesday, October 1, 8, and 15, starting at 6:00 p.m. to 8 pm. The programs will be held at the OSU Eastern Agricultural Research Station in Belle Valley, (16870 Bond Ridge Rd Caldwell, Ohio 43724). A meal will be provided with registration. The school has been designed to address practical issues facing beef producers.

The first night will cover cattle handling. The second night will cover winter feed supplementation. The last night will focus on cattle health management and beef production record keeping. The cost of the program is \$25, which covers registration for one or all three days. Registration deadline is September 27. Please register by completing and returning the registration form found with this newsletter.

Topsy-turvy Management Strategies

By David Marrison

Adapted from the originally published article in Farm & Dairy Newspaper, September 19, 2019

It is no secret that 2019 has been a challenging year for farmers. We are battling weather extremes, lower commodity prices, eroding capital and lower net farm income. Then throw in environmental concerns and trade issues and farmers have their hands full.

Recently, OSU Extension offered a Women in Agriculture dinner in Coshocton County and the theme of the evening's discussion for the evening was **"Managing Agriculture's Topsy-turvy Ride."** During this event as well as at the 2019 Farm Science Review, we looked at these challenges and discussed some ways to overcome them. Today, I would like to share some of the ideas expressed by farmers and teachers on how to mitigate the issues we are facing today.

PUSH THE PENCIL- One suggestion shared was to distance yourself from the bushels per acre or pounds of milk per cow mentality. While these are nice for bragging rights in the local coffee shop, does high production always guarantee higher profitability? Instead focus on the cost of production and the net rate of return per bushel, gallon, or hundred weight.

Additionally most people enjoy diving into their financial numbers as much as they like a root canal. But now is the time to complete an intensive financial analysis. Take time to critically analyze your variable and fixed costs. What sacred cows need to be put out to pasture? How do your costs compare to others? How can you be a price-enhancer, not a price-settler? OSU Extension's farm business analysis team is able to help farmers benchmark your operation. Check out farmprofitability.osu.edu for more information on how they can assist you.

ADAPT – As much as we love to talk about the weather, there is not much we can do to change it. So we must adapt to the new normal. How can you farm in tighter windows? What changes in equipment or production practices might need to be made? Should you use custom hire for certain farm tasks which need to be completed "on-time"? With our new weather extremes you need to be prepared for go-time so there is no down time.

"To strive, to seek, to find, and not to yield." Alfred Lord Tennyson

COMMUNICATE- When times are tough and difficult decisions have to be made, it is important that communication increase. What crucial conversations need to be happen in your family? What things can we do as a family to communicate better? What are the elephants in the room that we have been avoiding?

CARE - We all handle stress differently. How can we help each other with the rollercoaster? Make sure to take time for your physical and emotional health. Everyone needs some time off to re-charge. Even if it means a quick "one-tank" trip. When times are tough, we need to gather together more not less. Community is key.

SEEK EDUCATION – Make it a goal to strive for continual improvement. This could be through on-line courses, Extension meetings, and other educational events. How can you capitalize on the strengths and overcome the weaknesses? As you are adapting your operation, seek out mentors to assist you as you learn. New and beginning farmers can use their network to help offset their lack of experience. Continue to conduct your own on-farm research to identify the strengths and limitations of your farming operation.

CLOSING THOUGHTS- OSU Extension and the College of Food, Agricultural, and Environmental Sciences (CFAES) are here to help farmers and our communities as they face today's challenges. Check out go.osu.edu/agcrisis for more assistance and resources.

Ag Extension Talk

By: David L. Marrison

Originally Published in The Beacon, September 25, 2019

Hello Coshocton County! It is a great week as the Coshocton County Fair begins on Friday. The fair has a special place in the hearts of many in Coshocton County. It will be a great time to catch up with neighbors, see some amazing youth in action, and to take in the sights, smells, and tastes of harvest season.

Last week, the Ohio State's Farm Science Review was held in London, Ohio which nearly 115,000 people attended. We had a picture-perfect weather week and it was nice to see quite a few of our local farmers at the review.

During the review, I served as one of the moderators for the "Ask the Expert" sessions. Each day, experts were questioned on some of the hottest farm management issues that we are currently facing. Today, I would like to share some of the notes I jotted down during these sessions and remind you of the Coshocton County Fall Foliage & Farm Tour which will be here before we know it.

2020 Budgets & Land Rents- Barry Ward from OSU Extension was a panelist and was able to share his crop budget forecasts for 2020. Barry said to expect "more of the same" when it comes to input costs for corn, soybeans, and wheat in 2020. He cautioned farmers to keep their eyes on energy costs especially on fuel and fertilizer prices. He also shared that he expects land rentals to remain stable even though CAUV tax valuations should continue to decline.

Barry, reported that on average, after paying all the variable and fixed costs per acre, there will be \$136 per acre for corn; \$162 per acre for soybeans, and \$125 per acre for wheat left to cover land rent/expense and for family living withdrawal. These are much better numbers than the past few years but farmers should continue to examine their budgets to see where they can trim costs. Any producer who would like the OSU Extension's 2020 budget estimates for corn, soybean, and wheat should call the Coshocton County Extension office at 740-622-2265 or drop me an email at marrison.2@osu.edu and I will send them to you.

Grain Markets- Ben Brown, OSU Farm Management Specialist, also shared his thoughts on the corn and soybean markets. There is a lot of uncertainty in the markets due to the late planting of many crops in the Midwest. While we look good here locally, many farmers in the Midwest are praying for a late, frost-free fall to finish the corn and soybean crops. Because of this Ben anticipates the market will be stagnant until we get deeper into the fall unless the trade war with China is resolved. Most signals are indicating that the market will be tight or bearish for a-while. The key take away is to store grain and be ready to react in mid-winter.

Weather- OSU Climatologist, Aaron Wilson shared good news in that it looks like we are going to have continued good weather for the next few weeks. He also shared how weather extremes will be part of our new normal. One observation was that we have lost 5 days of field time both in the spring and fall due to changes in weather. So how can we farm in tighter weather windows? What changes in equipment or production practices might need to be made? With our new weather extremes you need to be prepared for go-time so there is no down time.

Fall Foliage & Farm Tour – Make sure to circle the weekend of October 19-20 on your calendar as OSU Extension, Coshocton Soil & Water Conservation District, and the USDA Farm Service Agency will once again sponsor the drive-it-yourself **Fall Foliage & Farm Tour**. This year's tour will highlight the eastern section of Coshocton County. The planning committee has a great tour set up for this year and attendees will learn more about pumpkins, dairy cows, grapes, and wine as well as see how cooperatives are an integral part of our agricultural industry.

Just a reminder that the tour map will not be released until that weekend. The map pick-up location will once again be at the Animal Boutique & Villas located at 23905 Airport Road across from Walmart. The stops will be open on Saturday, October 19 from 10:00 a.m. to 5:00 p.m. and on Sunday, October 20 from 12:00 to 5:00 p.m. I hope to see many of you on the tour.

Food for Thought- In honor of the many 4-H and FFA youth who will be showing at the Coshocton County fair, I would like to share a quote from Howard Cosell who stated "The ultimate victory in competition is derived from the inner satisfaction of knowing that you have done your best and that you have gotten the most out of what you had to give." Have a good and safe day!

Upcoming Program Dates

- Eastern Ohio Beef & Forage School- October 1, 8, & 15
- Fall Foliage & Farm Tour- October 19-20
- Love of Lamb Dinner- November 2
- Farmers Breakfast- November 12
- Ag Legal Workshop- December 9
- Farmers Breakfast- December 10

Check out upcoming programs at: go.osu.edu/coshoctonevents

Coshocton County

Fall Foliage & Farm Tour

49th Annual Drive-It-Yourself Tour

Details: Tour route maps are released on tour days. Maps are available on Saturday from 10:00 A.M. - 3:00 P.M. or Sunday from 12:00 P.M. - 3:00 P.M. at The Animal Boutique and Villas (across from Walmart) 23905 Airport Road Coshocton, Oh 43812

Cost: Free and open to the public. Donations are welcome.

Contact Information:

OSU Extension Coshocton County
724 S. 7th Street, Room 110
Coshocton, Oh 43812
740-622-2265 <http://coshocton.osu.edu>

Saturday, October 19
10:00 A.M.-5:00 P.M.

Sunday, October 20
12:00 P.M.-5:00 P.M.

2019 TOUR STOPS INCLUDE:

- ♦ *RC Flying Club*
 - ♦ *Dairy Farm*
 - ♦ *Fertilizer Facility*
 - ♦ *Pumpkin Farm*
 - ♦ *Two Wineries*
 - ♦ *Lunch Stop: First Baptist Church W. Lafayette, Ohio*
- ...and more!*





CORN PRODUCTION BUDGET- 2020

Conservation Tillage Practices: N-Source - NH3

Reflects 2000 acres, Conservation Tillage Corn/No-Till RR Soybeans

Updated:

9/23/2019

ITEM	EXPLANATION	YOUR PROD. NUMBERS	PRICE PER UNIT	YIELD (bu/A) ¹			YOUR BUDGET
				136	170	204	210
RECEIPTS							
Corn ¹			\$3.80 /bu	517.56	646.76	775.96	798.00
ARC/PLC Payment ²				0.00	0.00	0.00	0.00
Crop Insurance Indemnity				0.00	0.00	0.00	0.00
MFP				0.00	0.00	0.00	0.00
TOTAL RECEIPTS				517.56	646.76	775.96	798.00
VARIABLE COSTS							
Seed (kernels) ³	28000 32000 34000	34000	\$3.38 /1000	94.50	108.00	114.75	114.75
	Seed Cost Per Bag		\$270.00 /bag				
Fertilizer ⁴							
Starter Fertilizer				0.00	0.00	0.00	0.00
N (lbs.)	128.2 174.5 220.7	228.6	0.34 /lb	53.00	68.51	84.02	86.66
P ₂ O ₅ (lbs)	46.3 57.9 69.4	71.4	0.45 /lb	20.93	26.15	31.38	32.27
K ₂ O(lbs)	25.9 32.3 38.8	39.9	0.31 /lb	7.98	9.97	11.96	12.30
Lime(ton)	0.25	0.25	25 /ton	6.25	6.25	6.25	6.25
Chemicals ⁵	Herbicide			46.22	46.22	46.22	46.22
	Fungicide			0.00	0.00	0.00	0.00
	Insecticide			0.00	0.00	0.00	0.00
Drying ⁶	18.0 % moisture at harvest	0.041	/cent/bu/point	16.75	20.93	25.12	25.83
Hauling ⁷	\$0.172 /per bushel	30	miles	23.43	29.27	35.12	36.12
Fuel, Oil, Grease ⁸				13.75	13.75	13.75	13.75
Repairs ⁹				25.54	25.54	25.54	25.54
Crop Insurance ¹⁰				12.00	14.00	15.00	15.00
Miscellaneous ¹¹				5.10	5.10	5.10	5.10
Hired Custom Work ¹²				20.00	20.00	20.00	20.00
Hired Labor ¹³				0.00	0.00	0.00	0.00
Int. on Oper. Cap. ¹⁴	7 mo.	5.50%		9.41	10.57	11.52	11.64
TOTAL VARIABLE COSTS				354.86	404.27	445.72	451.43
	-Per Acre			2.61	2.38	2.18	2.15
	-Per Bushel						
FIXED COSTS							
Labor Charge ¹⁵	2.5 hours	15.00	/hr	37.50	37.50	37.50	37.50
Management Charge ¹⁶	5% of gross revenue			25.88	32.34	38.80	39.90
Mach. And Equip. Charge ¹⁷				75.22	75.22	75.22	75.22
Land Charge ¹⁸	Rent			145.00	187.00	235.00	235.00
Miscellaneous ¹⁹				22.80	22.80	22.80	22.80
TOTAL FIXED COSTS				306.40	354.86	409.32	410.42
TOTAL COSTS				661.26	759.13	855.04	861.85
	-Per Acre			4.86	4.46	4.19	4.10
	-Per Bushel						
RETURN ABOVE VARIABLE COSTS²⁰				162.70	242.49	330.24	346.57
RETURN ABOVE VARIABLE AND LAND COSTS				17.70	55.49	95.24	111.57
RETURN ABOVE TOTAL COSTS				-143.70	-112.37	-79.08	-63.85
RETURN TO LAND				1.30	74.63	155.92	171.15
RETURN TO LABOR AND MANAGEMENT				-80.32	-42.53	-2.78	13.55

RETURN TO LAND, LABOR AND MANAGEMENT	64.68	144.47	232.22	248.55
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Values highlighted in gold may be changed to assist in computing "Your Budget" Column using macros embeded within the spreadsheet.

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These cells may be input manually, but macros will be overwritten!

Values highlighted in gray are stand alone cells that require direct input from the user.

¹ Yield is based on Ohio Ag Stats Trend Yield for Ohio (1970-Present), plus and minus 20%

Price is based on current CME December Futures less \$0.20 basis

² Assumes a PLC Program Choice, 50/50 Corn/Soybean Program Acres, payment on 85% of program acres.

³ Seed price based on traited seed corn, 80,000 kernels/bag.

Includes seed treatment at low level.

⁴ Assumes only maintenance application of fertilizer needed, corn-soybean rotation, 3.8 O.M., 20 CEC, and soil test values of 25 ppm P/A and 125 ppm K/A.

Fertilizer prices vary over time and by area. Check with local sources for current prices.

Assumes NH₃(82-0-0): 550 /ton MAP(11-52-0): 470 /ton Potash(0-0-60): 370 /ton

N cost includes cost of N-Serve.

⁵ Based on use of: preplant Corvus plus atrazine, post glyphosate with ammonium sulfate (AMS).

⁶ Drying costs are based on Ohio Farm Custom Rates - 6.3 cents per bushel per point of moisture removed - 3% moisture removed

⁷ Hauling based on Ohio Farm Custom Rates charge per bushel - Farm to Market

⁸ See 'machinery costs' tab for specific calculations. Lubrication costs are assumed to be 10% of fuel costs

⁹ See 'machinery costs' tab for specific calculations.

¹⁰ Crop Insurance: Revenue Protection (with Trend Adjusted Yield Endorsement), Basic (without SCO), 75% coverage level.

¹¹ Includes marketing, farm insurance, dues and professional fees, supplies, utilities, soil tests, small tools, software/hardware, business use of vehicle, transport of supplies and equipment, etc...

¹² Includes hired custom operations for dry bulk fertilizer application and anhydrous ammonia (NH₃) application

¹³ Part or all of labor may be a variable cost if paid labor varies with acres farmed.

Labor is considered a fixed cost if labor costs do not change with acres farmed.

Labor rate includes cash wages plus benefits.

¹⁴ Interest on all variable costs, except drying, hauling and crop insurance

¹⁵ Part or all of labor may be a variable cost if paid labor varies with acres farmed.

Labor is considered a fixed cost if labor costs do not change with acres farmed.

Labor rate includes cash wages plus benefits.

¹⁶ Management Charge is calculated as 5% of total receipts.

¹⁷ Machinery and Equipment Charge Reflects 2000 acres, conservation tillage corn/no-till RR soybean rotation.

See 'machinery costs' tab for specific calculations.

¹⁸ Average based on "Ohio Cropland Values and Cash Rents" factsheet found at: <http://ohioline.osu.edu/>

Land charges vary throughout the state, check your local rates.

¹⁹ Includes marketing, farm insurance, dues and professional fees, supplies, utilities, soil tests, small tools, software/hardware, business use of vehicle, transport of supplies and equipment, etc...

²⁰ Return Above Variable Costs equals total receipts minus total variable costs.

Return Above Variable and Land Costs equals total receipts minus total variable and land costs.

Return Above Total Costs equals total receipts minus total costs.

Return to Land equals total receipts minus total costs except land costs.

Return to Labor and Management equals total receipts minus total expenses except operator labor and management cost.

Return to Land, Labor and Management equals total receipts minus total expenses

except operator labor and management and land costs.

Authors: Barry Ward, Leader, Production Business Management

Peter Thomison, Extension Corn Specialist; Mark Loux, Extension Specialist, Weed Management in Field Crops

Jeff Stachler, Extension Educator, OSU Extension Auglaize County



SOYBEAN PRODUCTION BUDGET (Roundup Ready) - 2020

No-Tillage Practices

Reflects 2000 acres, Conservation Tillage Corn/No-Till RR Soybeans

Updated:

9/23/2019

ITEM	EXPLANATION	YOUR PROD. NUMBERS	PRICE PER UNIT	YIELD (bu/A) ¹			YOUR BUDGET
				41	52	62	65
RECEIPTS							
Soybeans ¹			\$8.80 bu	362.56	453.20	543.84	572.00
ARC/PLC Payment ²				0.00	0.00	0.00	0.00
Crop Insurance Indemnity				0.00	0.00	0.00	0.00
MFP				0.00	0.00	0.00	0.00
TOTAL RECEIPTS				362.56	453.20	543.84	572.00
VARIABLE COSTS							
Seed ³	170000 seeds	170000	0.428 /1000	72.76	72.76	72.76	72.76
Fertilizer ⁴	/acre		seeds				
P2O5(lbs)	32.96 41.2 49.44	52	0.45 lb	14.90	18.62	22.34	23.50
K2O(lbs)	44.496 55.62 66.744	70.2	0.31 lb	13.72	17.15	20.58	21.65
Lime(ton)	0.25	0.25	25 ton	6.25	6.25	6.25	6.25
Chemicals ⁵	Herbicide			41.99	41.99	41.99	41.99
	Insecticide			0.00	0.00	0.00	0.00
	Fungicide			0.00	0.00	0.00	0.00
Hauling ⁶	\$0.172 /per bushel		30 miles	7.09	8.86	10.63	11.18
Fuel, Oil, Grease ⁷				11.58	11.58	11.58	11.58
Repairs ⁸				21.60	21.60	21.60	21.60
Crop Insurance ⁹				7.00	7.50	8.00	8.00
Miscellaneous ¹⁰				3.40	3.40	3.40	3.40
Hired Custom Work ¹¹				6.30	6.30	6.30	6.30
Hired Labor ¹²				0.00	0.00	0.00	0.00
Int. on Oper. Cap. ¹³	6 mo.		5.50%	5.29	5.49	5.69	5.75
TOTAL VARIABLE COSTS	-Per Acre			211.88	221.50	231.12	233.95
	-Per Bushel			5.14	4.30	3.74	3.60
FIXED COSTS							
Labor Charge ¹⁴	1.5 hours		15.00 /hr	22.50	22.50	22.50	22.50
Management Charge ¹⁵	5% of gross income			18.13	22.66	27.19	28.60
Mach. and Equip. Charge ¹⁶				59.20	59.20	59.20	59.20
Land Charge ¹⁷				145.00	187.00	235.00	235.00
Miscellaneous ¹⁸				14.70	14.70	14.70	14.70
TOTAL FIXED COSTS				259.52	306.06	358.59	360.00
TOTAL COSTS	-Per Acre			471.40	527.55	589.71	593.95
	-Per Bushel			11.44	10.24	9.54	9.14
RETURN ABOVE VARIABLE COSTS¹⁹				150.68	231.70	312.72	338.05
RETURN ABOVE VARIABLE AND LAND COSTS				5.68	44.70	77.72	103.05
RETURN ABOVE TOTAL COSTS				-108.84	-74.35	-45.87	-21.95
RETURN TO LAND				36.16	112.65	189.13	213.05
RETURN TO LABOR AND MANAGEMENT				-68.21	-29.19	3.82	29.15
RETURN TO LAND, LABOR, AND MANAGEMENT				76.79	157.81	238.82	264.15

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Values highlighted in gray are stand alone cells that require direct input from the user.

¹ Yield is based on Ohio Ag Stats Trend Yield for Ohio (1970-Present), plus and minus 20%

Price is based on current CME November Futures less \$0.30 basis

² Assumes a PLC Program Choice, 50/50 Corn/Soybean Program Acres, payment on 85% of program acres.

³ Seed costs are per 1000 seeds, treated.

⁴ Assumes only maintenance application of fertilizer needed, corn-soybean rotation, 3.8 O.M., 20 CEC, and soil test values of 25 ppm P/A and 125 ppm K/A.

Fertilizer prices vary over time and by area. Check with local sources for current prices.

Assumes MAP(11-52-0): 470 /ton Potash(0-0-60): 370 /ton

⁵ Based on use of: fall applied glyphosate plus 2,4-D with ammonium sulfate (AMS), preplant Valor XLT & metribuzin w/ AMS post glyphosate with MSO and AMS. Glyphosate tolerant soybeans are often used in part as a tool for perennial weed control. While this intrinsic value is not included in the budget, it should be considered when exploring opportunities with glyphosate tolerant soybeans.

⁶ Hauling based on Ohio Farm Custom Rates charge per bushel - Farm to Market

⁷ See 'machinery costs' tab for specific calculations. Lubrication costs are assumed to be 10% of fuel costs

⁸ See 'machinery costs' tab for specific calculations.

⁹ Crop Insurance: Revenue Protection (with Trend Adjusted Yield Endorsement), Basic (without SCO), 75% coverage level.

¹⁰ Includes marketing, farm insurance, dues and professional fees, supplies, utilities, soil tests, small tools, software/hardware, business use of vehicle, transport of supplies and equipment, etc...

¹¹ Includes hired custom operations for dry bulk fertilizer application

¹² Part or all of labor may be a variable cost if paid labor varies with acres farmed.

Labor is considered a fixed cost if labor costs do not change with acres farmed.

Labor rate includes cash wages plus benefits.

¹³ Interest on all variable costs, except hauling and crop insurance

¹⁴ Part or all of labor may be a variable cost if paid labor varies with acres farmed.

Labor is considered a fixed cost if labor costs do not change with acres farmed.

Labor rate includes cash wages plus benefits.

¹⁵ Management Charge is calculated as 5% of total receipts.

¹⁶ Machinery and Equipment Charge Reflects 2000 acres, conservation tillage corn/no-till RR soybean rotation.

See 'machinery costs' tab for specific calculations.

¹⁷ Average based on "Ohio Cropland Values and Cash Rents" factsheet found at: <http://ohioline.osu.edu/>

Land charges vary throughout the state, check your local rates.

¹⁸ Includes marketing, farm insurance, dues and professional fees, supplies, utilities, soil tests, small tools, software/hardware, business use of vehicle, transport of supplies and equipment, etc...

¹⁹ Return Above Variable Costs equals total receipts minus total variable costs.

Return Above Variable and Land Costs equals total receipts minus total variable and land costs.

Return Above Total Costs equals total receipts minus total costs.

Return to Land equals total receipts minus total costs except land costs.

Return to Labor and Management equals total receipts minus total expenses except operator labor and management cost.

Return to Land, Labor and Management equals total receipts minus total expenses

except operator labor and management and land costs.

Authors: Barry Ward, Leader, Production Business Management

Laura Lindsey, Extension Soybean and Small Grain Specialist, Mark Loux, Extension Specialist - Weed Management in Field Crops

WHEAT PRODUCTION BUDGET (Grain and Straw) - 2020

Conservation Tillage Practices

Reflects 2000 acres, Conservation Tillage Wheat/Corn/No-Till RR Soybeans

Updated:

9/23/2019

ITEM	EXPLANATION	YOUR PROD. NUMBERS	PRICE PER UNIT	YIELD (bu/A)			YOUR BUDGET
				60	75	90	92
RECEIPTS							
Wheat (Grain Only) ¹			\$4.80 /bu	288.96	361.44	433.92	441.60
ARC/PLC Payment ²				24.26	30.33	36.40	37.41
Crop Insurance Indemnity				0.00	0.00	0.00	0.00
Grower or Market Premium				0.00	0.00	0.00	0.00
TOTAL WHEAT RECEIPTS				313.22	391.77	470.32	479.01
VARIABLE COSTS							
Seed	1,400,000 seeds	1,400,000	0.0310 /1000	43.40	43.40	43.40	43.40
Fertilizer ³							
N (lbs.)	57.9 84.3 110.7	113.5	0.402 /lb	23.24	33.86	44.48	45.60
P ₂ O ₅ (lbs)	29.5 36.9 44.3	45.1	0.452 /lb	13.33	16.67	20.02	20.37
K ₂ O(lbs)	14.4 18.1 21.7	22.1	0.308 /lb	4.45	5.57	6.69	6.81
Lime(ton)	0.25	25	/ton	6.25	6.25	6.25	6.25
Chemicals ⁴	Herbicide			14.65	14.65	14.65	14.65
	Insecticide			0.00	0.00	0.00	0.00
	Fungicide			0.00	0.00	0.00	0.00
Hauling ⁵	\$0.172 /per bushel	30	miles	10.35	12.95	15.55	15.82
Fuel, Oil, Grease ⁶				12.05	12.05	12.05	12.05
Repairs ⁷				21.13	21.13	21.13	21.13
Crop Insurance ⁸				6.00	6.50	7.00	7.00
Miscellaneous ⁹				3.00	3.00	3.00	3.00
Hired Custom Work ¹⁰				13.50	13.50	13.50	13.50
Hired Labor ¹¹				0.00	0.00	0.00	0.00
Int. on Oper. Cap. ¹²	9 mo.	5.50%		6.39	7.02	7.64	7.70
TOTAL VARIABLE COSTS	-Per Acre			177.76	196.55	215.35	217.29
	-Per Bushel			2.95	2.61	2.38	2.36
FIXED COSTS							
Labor Charge ¹³	1.5 hours	15.00	/hr	22.50	22.50	22.50	22.50
Management Charge ¹⁴	5% of gross revenue			14.45	18.07	21.70	22.08
Mach. And Equip. Charge ¹⁵				57.89	57.89	57.89	57.89
Land Charge ¹⁶				145.00	187.00	235.00	235.00
Miscellaneous ¹⁷				12.10	12.10	12.10	12.10
TOTAL FIXED COSTS				251.94	297.56	349.18	349.57
TOTAL COSTS (Grain Only)	-Per Acre			429.69	494.11	564.54	566.86
	-Per Bushel			8.55	7.57	7.04	7.02
RETURN ABOVE VARIABLE COSTS¹⁸				135.46	195.22	254.97	261.72
RETURN ABOVE VARIABLE AND LAND COSTS				-9.54	8.22	19.97	26.72
RETURN ABOVE TOTAL COSTS				-116.47	-102.34	-94.21	-87.85
RETURN TO LAND				28.53	84.66	140.79	147.15
RETURN TO LABOR AND MANAGEMENT				-79.52	-61.77	-50.02	-43.27
RETURN TO LAND, LABOR AND MANAGEMENT				65.48	125.23	184.98	191.73

WHEAT STRAW		Tons Straw / Acre							
RECEIPTS (Straw Only)	1.2	1.5	1.8	1.5	120	/ton			
Small Squares / Acre	53	67	80	67	2.75	/bale	146.67	183.33	220.00
VARIABLE COSTS (Straw Only)									
Fertilizer ³									
P ₂ O ₅ (lbs)	3.6	4.5	5.4	4.5	0.452	/lb	1.63	2.03	2.44
K ₂ O(lbs)	24.0	30.0	36.0	30.0	0.308	/lb	7.40	9.25	11.10
Hired Custom Work ¹⁰							114.97	141.63	168.30
Hired Labor ¹¹							0.00	0.00	0.00
Int. on Oper. Cap. ¹²		3	mo.		5.50%		0.12	0.16	0.19
TOTAL VARIABLE COSTS- Per Acre							123.99	152.92	181.84
FIXED COSTS (Straw Only)									
Labor Charge ⁹		0.5	hours		15.00	/hour	7.50	7.50	7.50
Management Charge ¹⁰		5%	of gross revenue				7.33	9.17	11.00
Miscellaneous ¹⁷							2.20	2.20	2.20
TOTAL FIXED COSTS							17.03	18.87	20.70
TOTAL COSTS (Straw Only)- Per Acre							141.03	171.78	202.54
RETURN TO LABOR AND MANAGEMENT (Straw Only)¹³							20.47	28.22	35.96
RETURN ABOVE VARIABLE COSTS (Straw Only)							22.67	30.42	38.16
RETURN ABOVE TOTAL COSTS (Straw Only)							5.64	11.55	17.46

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Values highlighted in gray are stand alone cells that require direct input from the user.

¹ Price is based on current CME September Futures contract price less 0.20 basis

² Assumes a PLC Program Choice, 40/40/20 Corn/Soybean/Wheat Program Acres, payment on 85% of program acres.

³ Assumes only maintenance application of fertilizer needed, soil test values of 25 PPM P/A and 125 PPM K/A, and 20 CEC. Fertilizer prices vary over time and by area.

Fertilizer amounts and costs listed are amounts in addition to fertilizer amounts listed for wheat.

Assumes UAN(28-0-0): **225** /ton MAP(11-52-0): **470** /ton Potash(0-0-60): **370** /ton

⁴ Based on use of Spring application of 0.6 oz of Harmony Extra SG TotalSol, 1 pint of 2,4-D (4 lb/gal) and (non-ionic surfactant) NIS

⁵ Hauling based on Ohio Farm Custom Rates charge per bushel - Farm to Market

⁶ See 'machinery costs' tab for specific calculations. Lubrication costs are assumed to be 10% of fuel costs

⁷ See 'machinery costs' tab for specific calculations.

⁸ Crop Insurance: Revenue Protection (with Trend Adjusted Yield Endorsement), Basic (without SCO), 75% coverage level.

⁹ Includes marketing, farm insurance, dues and professional fees, supplies, utilities, soil tests, small tools, software/hardware, business use of vehicle, transport of supplies and equipment, etc...

¹⁰ Includes hired custom operations for grain: dry bulk fertilizer application and liquid fertilizer application for straw: raking per acre and bale, load, haul and store per bale

¹¹ Part or all of labor may be a variable cost if paid labor varies with acres farmed. It's a fixed cost if labor costs do not change with acres farmed.

¹² Interest on all variable costs, except hauling and crop insurance

¹³ Part or all of labor may be a variable cost if paid labor varies with acres farmed. It's a fixed cost if labor costs do not change with acres farmed.

¹⁴ Management Charge is calculated as 5% of total receipts.

¹² Average based on "Ohio Cropland Values and Cash Rents" factsheet found at: <http://ohioline.osu.edu/> Land charges vary throughout the state, check your local rates.

¹³ Return Above Variable Costs equals total receipts minus total variable costs.

Return Above Variable and Land Costs equals total receipts minus total variable and land costs.

Return Above Total Costs equals total receipts minus total costs.

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Return to Land, Labor and Management equals total receipts minus total expenses except operator labor and management and land costs.

Authors: Barry Ward, Leader, Production Business Management; Laura Lindsey, Extension Soybean and Small Grain Specialist,

Mark Loux, Extension Specialist - Weed Management in Field Crops

OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER
OHIO STATE UNIVERSITY EXTENSION

Beef and Forage School

Oct 1, 8, 15, 2019 — 6:00 to 8:00 p.m.

Eastern Ag Research Station

Dinner Served at 6:00 p.m.

Date & Location	Topic	Presenter
October 1 Ag Research Station	<ul style="list-style-type: none">Beef Cattle Handling	- Dr. Steve Boyles, OSU Beef Specialist
October 8 Ag Research Station	<ul style="list-style-type: none">Winter Supplementation	- Dr. Steve Boyles, OSU Beef Specialist
October 15 Ag Research Station	<ul style="list-style-type: none">Vet NightCows with No CrownsBeef Production Records	<ul style="list-style-type: none">- Dr. Justin Kieffer, OSU Veterinarian- Christine Gelley, Dan Lima, Catelyn Turner, OSU Extension Educators- Bev & Bruce Riddle, Cattle Producers



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

Sponsored by:
OSU Ag Research and Development Center; OSU Extension Offices
in Belmont, Guernsey, Monroe, Noble Counties.

Beef School— one price to come to one or all programs. No Refunds.

Return this section with fee
required by Sept 27

**Make checks payable
& send to:**

OSU Extension
PO Box 300
Old Washington, OH 43768

attending_____

@ "\$25 for one or all days"=

TOTAL \$ enclosed_____

I/We will be attending:
(check all that apply)

____ Oct. 1

____ Oct. 8

____ Oct. 15

Name

Address

Phone

**Directions to OSU Extension Regional Office & Eastern
Agriculture Research Center:**

**Travel I-77 to Exit 28 (Belle Valley). Turn east onto St. Rt.
821 and travel approx. one mile. Turn left onto St. Rt. 215
and travel one mile. The regional office is on the left and the
research farm is on the right.**

