

COSHOCTON COUNTY AGRICULTURE & NATURAL RESOURCES**May 18 (Edition #147)**

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Victory Garden Seed Distribution

Name that Tree Workshop Slated for June 29

Hello Coshocton County! The past ten days have allowed for some corn and soybeans to get planted across our county. State-wide, planting is lagging behind. It appears that this week's weather and into next week will give us some weather pockets to get more crops in. Of course, we always have to dance around rain this time of year (like today!). My hope is that much of the rain skirts around us so that planting can continue.

I am seeing a lot of poison hemlock growing along our roadsides and in non-cropland areas. Now is the time for control! Check out the second article in today's newsletter.

Friday we will be holding our next Farm Office Live webinar beginning at 10:00 a.m.---lots of great management information will be shared—you can catch the program from the tractor or watch a recording at go.osu.edu/farmoffice

Have a good and safe week!

Sincerely,

David L. Marrison

Coshocton County OSU Extension ANR Educator

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THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL,
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Cooler (not cold) and Active Weather Week Ahead

By: Aaron Wilson

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2022-14/cooler-not-cold-and-active-weather-week-ahead>

Climatologically, the monthly average temperature for April 2022 in Ohio was near the long-term mean, ranked as the 51st coolest April on record (1895-2022) and 42nd driest.

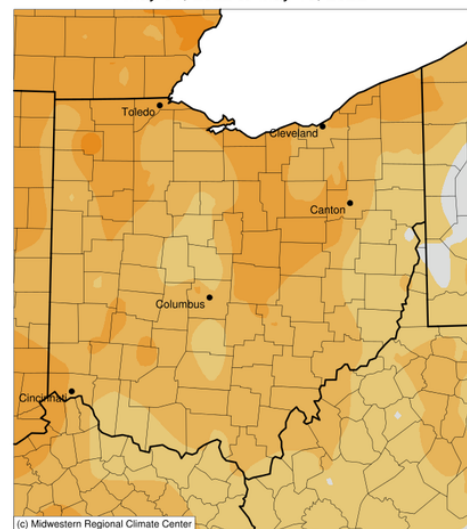
More recently, temperatures through the first half of May are running 1-5°F above the long-term mean (Fig. 1). This is largely the result of the 5- to 6-days last week spent in the low to mid 80s for highs. Overall, precipitation has been running greater than normal, except for a few counties near the Ohio River and in the far northeast. In fact, [CoCoRaHS](#) observations in Fayette County indicate that more than 9 inches of rain has fallen near Washington Court House over the last 30 days. For the latest up-to-date conditions, seasonal outlooks, and monthly climate summaries, please visit the [State Climate Office of Ohio](#)

Forecast

After a cool start on Tuesday morning, abundant sunshine should lift highs into the mid-60s across the Lake Erie shore to the upper 70s across southern counties. The next system moves in for Wednesday and Thursday, bringing scattered showers and storms and highs in the 70s. Strong southerly flow on Friday will bump temperatures well into the 80s, before a cold front moves through Ohio over the weekend enhancing the threat of showers and storms. The [Weather Prediction Center](#) is forecasting less than 0.50" across northeast Ohio to as much as 1.25" across the southwest over the next 7 days (Fig. 2).

The [Climate Prediction Center's](#) 6–10-day outlook for the period of May 26 – 28, 2022 and the [16-Day Rainfall Outlook from NOAA/NWS/Ohio River Forecast Center](#) lean toward below average temperatures and above average precipitation (Fig. 3).

Average Temperature (°F): Departure from 1991-2020 Normals
May 01, 2022 to May 16, 2022



Stations from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Midwest Regional Climate Center, cli-MATE: MRCC Application Tools Environment
Generated at: 5/16/2022 5:00:43 PM CDT

Figure 1). Differences from average temperature for May 1-16, 2022. Figure courtesy of the Midwest Regional Climate Center (<https://mrcc.purdue.edu/>).

Figure 2). Precipitation forecast from the Weather Prediction Center for 8pm Monday May 16 – 8pm Monday May 24.

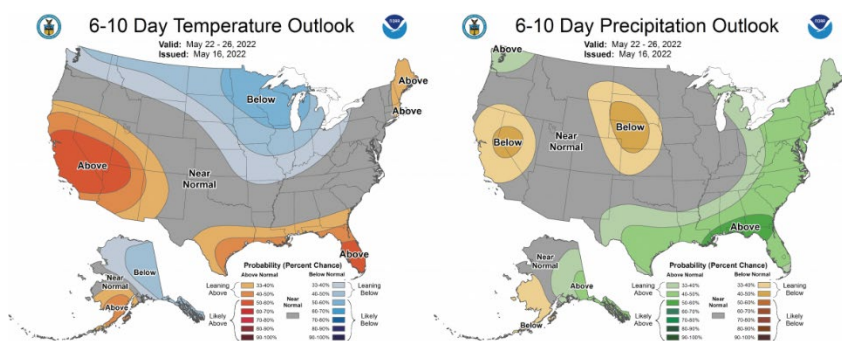
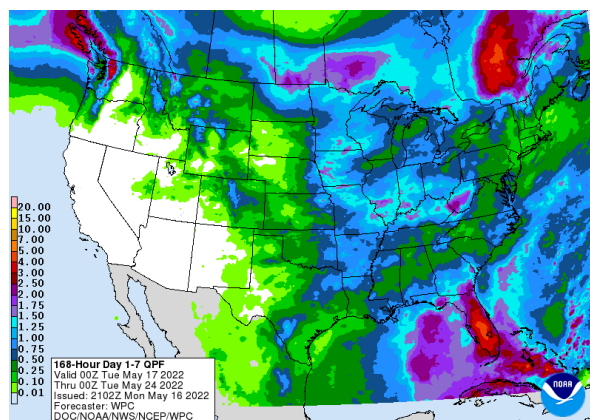


Figure 3) Climate Prediction Center 6-10 Day Outlook valid for May 22-26, 2022, for left) temperatures and right) precipitation. Colors represent the probability of below, normal, or above normal conditions.



Climate averages for this period include a high temperature range of 72-76°F, a low temperature range of 50-

55°F, and average weekly total precipitation of 0.85-1.15 inches.

Kill Poison Hemlock Now

By: [Christine Gelley](#), Agriculture and Natural Resources Educator, Noble County OSU Extension

Source: <https://u.osu.edu/beef/2022/05/18/kill-poison-hemlock-now/>

Poison hemlock is a concern in public right of ways, on the farm, and in the landscape! Poison hemlock has already emerged in a vegetative state around Noble County and beyond. Soon it will be bolting and blooming on stalks 6-10 feet tall. All parts of the plant are toxic to all classes of livestock if consumed and is prevalent along roadsides, ditches, and crop field borders. It is a biennial weed that does not flower in the first year of growth but flowers in the second year. The earlier you can address poison hemlock with mowing and/or herbicide application, the better your control methods will be.



Poison hemlock is related to Queen Anne's lace, but is much larger and taller, emerges earlier, and has purple spots on the stems. Another relative that is poisonous is wild parsnip, which looks similar to poison hemlock, but has yellow flowers. Giant hogweed is another relative of poison hemlock that is also toxic. All of these plants have umbel shaped clusters of flowers.

According to Joe Boggs of OSU Extension, "Poison hemlock plants contain highly toxic piperidine alkaloid compounds, including coniine and gamma-coniceine, which cause respiratory failure and death in mammals. The roots are more toxic than the leaves and stems; however, all parts of the plant including the seeds should be considered dangerous. The toxins must be ingested or enter through the eyes or nasal passages to induce poisoning; they do not cause skin rashes or blistering. Regardless, this plant should not be handled because sap on the skin can be rubbed into the eyes or accidentally ingested while handling food."

Treatment for poison hemlock includes aggressive mowing to prevent flowering and seed production or herbicide application. Some commonly available herbicides that are generally effective on this weed include glyphosate, 2, 4-D, Remedy Ultra, and Crossbow. All treatment methods are most effective when employed while plants are less than 2 feet tall.

Don't let poison hemlock gain ground on your property this season! If you see it, take steps to eliminate it. Learn more about poison hemlock identification, concerns, and control by watching the following video by OSU Extension on YouTube at: <https://youtu.be/XYiVgRoo29s>

Forage Harvest Management to Speed Drying and Storing High Quality Forage

By: Mark Sulc, Jason Hartschuh & Allen Gahler, OSU Extension

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2022-14/forage-harvest-management-speed-drying-and-store-high-quality>

First cutting should be taken very soon to achieve high quality forage, as seen by some of the estimated NDF levels in standing alfalfa crops around the state. Keep in mind that for dairy quality hay, alfalfa should be stored near 40% NDF and grass hay crops should have less than 55% NDF, which happens in the boot stage, or before the first flowering heads begin to emerge. Keep in mind also that the cutting, drying, and storing process results in raising NDF levels at least 3 NDF units above what it was in the standing crop at the time of cutting, and that assumes quick drying and ideal harvesting procedures.



So, it is time to be thinking about that first cutting and looking for weather windows of opportunity, especially along I-70 and south. Cutting forage for haylage or dry hay is certainly a gamble but waiting for the perfect stretch of weather can end up costing us through large reductions in forage quality as the crop matures and the fiber becomes less digestible.

Before cutting though, keep in mind that the soil should be firm enough to support equipment. Compaction damage has long-lasting effects on forage crops. We've seen many fields where stand loss in wheel tracks led to lower forage yields, weed invasion, and frustrating attempts to "fill in" the stand later.

Before cutting also keep in mind any harvest intervals required for any pesticides applied. We know some growers around the state have applied insecticides for alfalfa weevil control, so any pre-harvest intervals on the insecticide label have to be followed in order to feed the forage after harvesting.

This article summarizes proven techniques that can help speed up the process involved in storing good quality forage. While the weather limits how far we can push the limits, these techniques can help us improve the chances of success in those short windows of opportunity between rains, and hopefully avoid overly mature stored forages.

Haylage vs. Hay.

Consider making haylage/silage or baleage instead of dry hay. Haylage is preserved at higher moisture contents, so it is a lot quicker to get it to a proper dry matter content for safe preservation compared with dry hay. Proper dry matter content for chopping haylage or wrapping baleage can often be achieved within 24 hours or less compared with 3 to 5 days for dry hay.

"Hay in a day" is possible when making hay crop silage, under excellent drying conditions, which is less probably in spring than mid-summer. The forage is mowed first thing in the morning and laid in wide swaths to be raked in the late afternoon and chopped as haylage starting in early evening. Proper dry matter content for haylage ranges from 30 to 50% (50 to 70% moisture) depending on the structure used.

Wrapped baleage usually requires 24 hours to cure. Wrapped baleage should be dried to 40 to 55% dry matter (45 to 60% moisture).

Dry hay should be baled at 80 to 85% dry matter (15 to 20% moisture), depending on the size of the bale package. The larger and the denser the dry hay package, the drier it must be to avoid spoilage. For example, safe baling moistures for dry hay without preservatives are 18-20% for small square bales (80 to 82% dry matter), 18% or less for large round bales, and less than 17% for large square bales. See below for more information on baling with preservatives.

Mechanically Condition the Forage.

Faster drying of cut forage begins with using a well-adjusted mower-conditioner to cause crimping/cracking of the stem (roller conditioners) or abrasion to the stems (impeller conditioners). Adjust roller conditioners so at least 90% of the stems are either cracked or crimped (roller conditioners) or show some mechanical abrasion (impeller conditioners).

Some excellent guidelines for adjusting these mower conditioners can be found in an article by Dr. Ronald Schuler of the University of Wisconsin, available online at <https://fyi.extension.wisc.edu/forage/adjusting-the-conditioning-system-....>.

Consider Desiccants.

Desiccants are chemicals applied when mowing the crop that increase the drying rate. The most effective desiccants contain potassium carbonate or sodium carbonate. They are more effective on legumes than grasses and most useful for making hay rather than silage or baleage. Desiccants work best under good drying conditions. They do not help increase drying rate when conditions are humid, damp, and cloudy, such as we can often experience in the spring. Consider the weather conditions before applying them.

Maximize Exposure to Sunlight.

I once heard someone say "You can't dry your laundry in a pile, so why do you expect to dry hay that way?" Exposure to the sun is the single most important weather factor to speed drying. Expose to sunshine as much of the cut forage as possible.

The swath width should be about 70% of the actual cut area. The current mowers on the market vary in how wide a windrow they can make, but even those that make narrow windrows have been modified to spread the windrow wider. Details can be found in articles at the Univ. of Wisconsin website mentioned above (see especially "Getting the Most from the Mower Conditioner" by Kevin Shinnery, <https://fyi.extension.wisc.edu/forage/getting-the-most-from-the-mower-conditioner/>).

Another way to spread out and aerate the crop for faster drying is with a tedder. Tedders are especially effective with grass crops. They can cause excessive leaf loss in legumes if used when the leaves are dry. Tedders can be a good option when the ground is damp, because the crop can be mowed into narrow windrows to allow more ground exposure to sunlight for a short time, and then once the soil has dried for a few hours to a day, the crop can be spread out with the tedder. Tedding twice may decrease drying time. Tedding shortly after mowing allows 100% ground coverage, then tedding the next day helps keep the crop off the ground. Be cautious to set the tedder properly so that dirt is not incorporated into the hay but all hay is lifted off the ground.

Take precautions to follow manufacturer recommendations on ground speed and RPM's when tedding. Many of the modern in-line "fluffer" type tedders are ground driven and operators often exceed recommended speeds, which can result in bunching and wrapping of the hay, which will increase drying time and make raking more difficult.

When making haylage, if drying conditions are good, rake multiple wide swaths into a windrow just before chopping. For hay, if drying conditions are good, merge or rake multiple wide swaths into a windrow the next morning when the forage is 40 to 60% moisture to avoid excessive leaf loss.

Research studies and experience have proven that drying forage in wide swaths can significantly speed up drying. Faster drying in wide swaths results in less chance of rain damage and studies by the University of Wisconsin showed that wide swaths (72% of the cut width) result in lower neutral detergent fiber (NDF) and higher energy in the stored forage.

Consider Preservatives.

Sometimes the rain just comes quicker than we have time for making dry hay. As mentioned above, making haylage helps us preserve good quality forage in those short rain-free windows. A second option is to use a preservative. The most effective preservatives are based on propionic acid, which is caustic to equipment, but many buffered propionic preservatives are available that minimize that problem.

Preservatives inhibit mold growth and allow safe baling at moisture contents a little higher than the normal range for dry hay. Carefully follow the preservative manufacturer's directions and application rates for the hay moisture content at baling. Be sure the application is uniform to avoid spots that spoil. Most products are effective when hay moisture is less than 25% but become less dependable between 25-30% moisture and do not work if hay moisture is over 30%. When utilizing preservatives, safe baling moisture can go up to 26% on small squares and round bales, but only 23% on large squares, according to label guidelines on most propionic acid-based products. Baling at these moistures requires properly calibrated equipment to apply the correct amounts of preservative, and it does not guarantee that bales will not generate internal heat.

While the acid works to limit the production of mold and fungal spores that can lead to additional heating, any type of bale made over 20% moisture always has the potential to heat. Although mold production may be limited, discoloration and caramelization of the higher moisture stems can still occur. This heating can also degrade proteins in the hay, reducing overall feed quality despite still helping to preserving the hay from

spoilage and hopefully making it safe to store indoors. Keep in mind that preservative treated hay should be fed within a year or less, as the preservative effect will wear off over time.

If baling on the wet side, watch those bales carefully! If hay is baled at higher moisture contents that are pushing the safe limits, keep a close watch on them for two to three weeks. Use a hay temperature probe and monitor the internal temperature of the hay during the first three weeks after baling. See the following article for more information on monitoring wet hay: <https://agcrops.osu.edu/newsletter/corn-newsletter/15-2021/hay-barn-fires-are-real-hazard>

We hope you have a successful and safe forage harvesting season this spring and throughout the growing season.

Ten Tips for Managing High Feed Prices

By: Dr. Katie VanValin, Assistant Extension Professor, University of Kentucky

Source: <https://u.osu.edu/beef/2022/05/18/10-tips-for-managing-high-feed-prices/>

We have all heard the phrase, “it’s the little things”. The saying applies to the beef industry as well. There is no single management practice, feed ration, or genetic trait that drives profitability. Profitability is really a summation of lots of little things coming together to create a profitable system. Whenever profitability is challenged whether from greater input prices like we are seeing now, or lower calf prices, I start to get questions about decreasing feed costs. This should come as no surprise, as feed costs are one of the biggest expenses facing beef cattle operations. Below is a list of some of those little things, that can really add up!

1) Preg checking: Our cows should be working for the operation. Thus, an open cow is one that is not pulling her weight on a cow-calf operation. Today producers have more options than ever before for preg checking their herds. New chute side blood tests can be completed right on the farm in about 10 minutes, there are also commercial labs that will run blood tests giving you results in just a couple of days, and of course there is always ultrasound which gives you a real time answer but does depend on scheduling and availability. Culling open cows not only decreases purchased feed costs but can also make our available forage resources go farther as well.

2) Buy in bulk: The ability to buy purchased feeds in bulk can allow producers to take advantage of bulk discounts offered by many feed retailers. Also having the ability to store feed on the farm can allow producers to purchase feed stuffs at the time that they are most economical as opposed to waiting until it is needed to be fed.

3) Get your hay tested: When talking with cow-calf producers about feed costs, one of the first things I ask them is, “Did you get your hay tested?”. Getting hay tested allows us to make strategic decisions about hay feeding. Cattle’s nutrient requirements fluctuate throughout the year, so making sure that hay with the highest energy and protein concentrations is fed to the cattle on our farm with the highest energy and protein requirements can go a long way in decreasing our supplemental feed costs. For example, hay test results from two different lots of hay are shown in the table 1.

Table 1. Hay test results from two separate lots of hay.

	Dry-matter, %	CP, %	NDF, %	TDN, %
Hay A	87.1	7.7	65.5	52.9
Hay B	86.7	13.1	55.1	60.1

Assuming that we are feeding 1250 lb cows with a body condition score of 5, table 2 shows the amount dried distillers grains that would be required to meet the energy and protein requirements of these cows in either mid-gestation, late gestation, or lactation.

Table 2. DDGs needed to meet the protein and energy requirements based on stage of production

	Mid-gestation	Late-gestation	Lactation
Hay A	0	1	5.6
Hay B	0	0	0.7

Now, assuming that DDGS cost \$280/T, table 3, shows the cost to supplement 30 cows per day.

Table 3. Cost to supplement 30 cows per day with DDGS.

	Mid-gestation	Late-gestation	Lactation
Hay A	0	4.20	23.52
Hay B	0	0	2.94

These calculations show the importance of feeding the right hay, to the right cow, at the right time. Feeding Hay A during mid-gestation and saving hay B to be fed during lactation can have a drastic impact on the cost of supplementing the cow herd while also maintaining adequate body condition score. This calculation was simple and does not take into consideration things like environmental factors or age that can impact the energy and protein requirements of the cow herd. In Kentucky many of our county extension offices of hay testing probes and may offer assistance with submitting hay samples to the lab. Work with your county agent, or use the University of Kentucky Beef Cow Supplementation tool online to help make management decisions based on your hay test results

4) Compare costs based on nutrients: When comparing feed stuffs, it is critical that comparisons are being made apples to apples. It is not enough to just look at cost per lb or ton. There are many factors that can impact the cost per lb or ton of a feed ingredient. One of the biggest things to remember is that feed stuffs can have vastly different moisture contents, so how much of the feedstuff is actually water? For example, in Kentucky, stillage is a widely available feedstuff and has a moisture content of about 90-94%, whereas dried distiller grains would only have a moisture content of about 10-12%. It's reasonable to expect the price per ton for those high moisture feeds, to be less than drier feeds, but is it a better deal? To answer that question, we must compare the price of feeds on a cost per lb of protein or energy basis.

For example, consider dried distiller grains at 90% dry-matter, and 28% crude protein for \$280/T.

First calculate the lbs of CP in one ton of dried distiller grains (on a DM basis).

$2000 \text{ lb} * 0.90 = 1,800 \text{ lbs of DM in a Ton}; 1,800 \text{ lb DM} * 0.28 = 504 \text{ lbs of CP in ton.}$

Now calculate the cost per lb of nutrient. Divide the cost of the feed by the lbs of the nutrient in one ton.
 $\$280 (\$/\text{Ton}) / 504 (\text{lbs of CP/T}) = 0.56 / \text{lb CP.}$

Use this value when comparing feed stuffs to one another. Another important consideration is that sometimes we can't take full advantage of a feed stuff in a ration. For example whole cotton seeds are high in protein (~24%), but it is also very high in fat (~18%). Recently I was working on a ration for a producer, and whole cottonseed was less expensive than other protein sources when comparing them on the cost per lb of protein. However, because of the high fat content, inclusion of whole cottonseed in the diet must be limited. At the end of the day, the low inclusion level of whole cottonseed, prevented it from being a truly more economical option in this situation. Working with a nutritionist can be beneficial when evaluating the economics of feed ingredients.

5) Improve record keeping: The best cattle managers are often the best record keepers, and that is not coincidence. We can't manage what we do not measure. Record keeping allows us to truly track feed costs, it can be a great way to subjectively identify those less efficient cows in the herd. You know the one, she's had a few calves and she gets rebred, but a closer look at records might show that her calving interval is more like 425 days vs. the goal of 365 days. For example, if we had two 7-year-old cows and one had an average

calving interval of 370 days and the other 425 days, the cow with the shorter calving interval would have had 5 calves vs. only 4 calves for the cow with the longer calving interval.

Luckily, technology has allowed record keeping to be easier than ever! Many of these programs help producers track performance metrics, that can help to identify those less efficient or productive animals in the herd. The University of Kentucky has recently launched X10D, which is a new program that encompasses whole farm record keeping along with educational resources from University of Kentucky Cooperative Extension, and forums to connect with other producers. For more information about X10D, visit www.X10D.org, or ask your local county extension agent.

6) Cut the fluff: I'm talking about body condition score (BCS). Body condition score highly correlated to reproductive performance. Cows with a body condition score of less than 5, have a much lower chance of being bred. What about those heavy cows? Each BCS equal to about 75-100 lbs of live body weight. When cows' BCS increase their maintenance requirements increase, feed intake increases, and even their susceptibility to heat stress increases. Thus, the cost to maintain that cow at a BCS of 7 or 8 will be greater than if she were maintained at BCS 5 or 6. One solution for managing BCS of the cow herd is to sort cows by BCS. Keep those cows that are thinner or heavier separate from the rest of the herd. This allows us to feed those cattle either more or less energy and protein to increase or moderate their BCS.

7) Prevent feed waste: Feed wastage is just money wasted. Now, understand that we will always have some feed wastage but there are ways to limit this wastage and thus, limit the economic impact it has on the operation. Preventing feed wastage starts long before we start feeding. Storing hay under roof is one of the first things we can do to prevent wastage. For a 5 x 5 bale, 33% of the weight of that bale is found in the outermost 6". When bales are stored outside and on the ground, we can easily see weathering of that outer 6". Feed waste can also occur when feeding hay, using hay rings can help prevent some losses, but not all bale rings are created equal. Designs that have solid metal skirting around the bottom are better than those that are open.

8) Keep back only what you need: Developing heifers can be a pricey undertaking. Keeping back only the number that you need can help to decrease the overall cost of developing heifers on the operation. However, sometimes it can still be advantageous to purchase bred heifers. I think about this, especially in years where forage resources may not be as abundant. We have truly been blessed here in the mid-south over the last several years, with at times having too much rain. However, years like 2012 are still in recent memory. This is a scenario that might require a little pencil pushing, but I encourage you to consider the costs of developing heifers on your operation vs. purchasing bred heifers. Also remember, that especially when input costs are high, keep back only what you need for your operation.

9) Extend the grazing season: Finding ways to extend the grazing season (efficiently), can be a great way to decrease your feed bill. One of the easiest ways to this is taking advantage of tall fescue's ability to stockpile. One common misconception when it comes to stockpiling fescue is that it requires nitrogen application. With today's nitrogen prices, that might sound like a deterrent. Although fescue responds well to nitrogen application, it will still stockpile (to a lesser degree) even without this step. Use strip grazing to efficiently utilize stockpiled tall fescue and extend the grazing season.

10) Don't cut the minerals: Minerals are a required nutrient, just like energy and protein. It can be easy to forget about minerals or cut back on mineral supplementation when feed costs increase. The problem with this is that many feedstuffs are deficient in at least one or more minerals. In Kentucky we are especially concerned with selenium and copper. These are the two most common deficiencies observed in cattle in the state. Supplements like white salt blocks and even trace mineralized salt blocks, simply do not have enough of these (and other) minerals to ensure that the animal's requirements are being met. Minerals are extremely important for optimal reproductive performance, and growth. Unfortunately, early mineral deficiencies can be difficult to diagnose. This is because at first symptoms of mineral deficiency are what we call sub-clinical. This means that we aren't losing cattle to mineral deficiencies and lab tests are not sensitive enough to detect these sub-clinical deficiencies. However, when herds have sub-clinical mineral deficiencies, we are undoubtedly leaving

performance on the table. To avoid, sub-clinical mineral deficiencies provide a good quality complete mineral supplement to the herd 365 days of the year. The University of Kentucky Beef IRM mineral recommendations are developed to give producers across the entire state a good starting place for selecting a good quality mineral supplement. Dr. Lehmkuhler and I meet at least once a year to discuss the mineral recommendations and take into consideration the latest mineral research, as well as economic and supply chain considerations when revising these recommendations.

This is by no means an exhaustive list of strategies to manage feed costs, but it is a start and should give producers some things to evaluate on their own operation. Remember the small things and manage the things that we can control on our operations to help improve profitability. If you have any questions about these strategies, please reach out to your local county extension office.

The Impact of U.S. Agricultural Exports on Jobs

by: Chris Zoller, Extension Educator, ANR, Tuscarawas

County <https://u.osu.edu/ohioagmanager/2022/05/09/the-impact-of-u-s-agricultural-exports-on-jobs/>

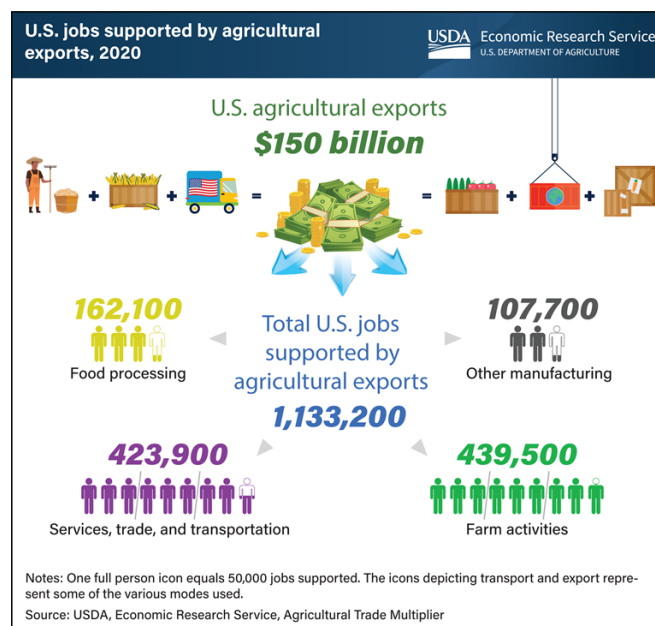
We are aware that agriculture is a competitive business that operated in a global environment. We understand the importance of global trade to market U.S. produced agricultural commodities. Have you ever considered how important exports of agricultural good produced in the U.S. are to maintaining jobs?

A recent USDA Economic Research Service (ERS) recently analyzed the importance of agricultural exports as it relates to jobs in 2020. The full report is available here:

<https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=103827&cpid=email>.

In 2020, U.S. agricultural exports were valued at more than \$150 billion and every \$1 billion of exports is estimated to create 7,550 jobs. Crop and livestock production account for the majority, supporting a total of 439,500 jobs. Jobs in this segment included labor provided by farm owners and family members, hired employees, and contract labor.

U.S. agricultural exports also supported 423,900 off-farm jobs in service, trade, and transportation of agricultural goods. Exports supported 162,100 food-processing jobs and 107,000 jobs in packaging, canning, and bottling. The graphic from USDA ERS further describes the importance of U.S. agricultural exports in creating and supporting jobs.



Will China Meet Their Growing Beef Demand by Raising it Themselves?

By: Dr. Andrew Griffith, Assistant Professor, Department of Agricultural and Resource Economics, University of Tennessee

Source: <https://u.osu.edu/beef/2022/05/18/will-china-meet-their-growing-beef-demand-by-raising-it-themselves/>

As China has completely changed their pork production and commercialized it, will they also attempt to revolutionize beef production in their country to meet growing beef demand?

As many readers are already aware, China pork production has shifted from back-yard production to a “hog hotel” style of production where hogs are produced in multistory buildings that rely heavily on feed grains. It has become evident that Chinese consumers have a strong taste for beef. Thus, this question was asked with the thought that China may attempt to ramp up domestic beef production.

There is certainly the possibility of the Chinese attempting this endeavor, but cattle production as we know it requires significantly more land resources. However, the Chinese have been known to be “innovative,” which means they could house animals and bring in more feed. The likelihood of this is relatively small at this point, but such a move would result in the need for more feed resources, which would drive corn prices higher.

Resolving the Drainage Problems that Surface with Spring Rains

By: Peggy Kirk Hall, Associate Professor, Agricultural & Resource Law Wednesday, May 18th, 2022

Source: <https://farmoffice.osu.edu/blog/wed-05182022-1018am/resolving-drainage-problems-surface-spring-rains>

We can count on legal questions about surface water drainage to flow steadily in the Spring, and this year is no exception. Spring rains can cause drainage changes made on one person’s land to show up as harm on another’s land. When that happens, is the person who altered the flow of surface water liable for that harm? Possibly. Here is a reminder of how Ohio law deals with surface water drainage problems and allocates liability for drainage interferences, followed by guidance on how to deal with a drainage dispute.

Ohio law allows landowners to change surface water drainage

Back in 1980, the Ohio Supreme Court adopted a new rule for resolving surface water disputes in the case of *McGlashan v. Spade Rockledge*. Previous Ohio law treated water as a “common enemy” to be pushed onto others, then absolutely prohibited any land changes that would increase surface water drainage for lower landowners. In *McGlashan*, the Court replaced these old laws with the “reasonable use rule” that remains the law in Ohio. The rule states that landowners do have a right to interfere with the natural flow of surface waters on their property, even if those changes are to the detriment of other landowners. But the right to alter drainage is limited to only those actions that are “reasonable.”



Drainage changes must be “reasonable”

Although it allows drainage changes, the reasonable use doctrine also states that landowners incur liability when their interference with surface water drainage is “unreasonable.” What does that mean? The law contains factors that help clarify when an interference is unreasonable, a determination made on a case-by-case basis. The factors attempt to balance the need for the land use change that altered drainage against the negative impacts that change has on other landowners. A court will examine four factors to determine whether the drainage change is unreasonable: the utility of the land use, the gravity of the harm, the practicality of avoiding that harm, and unfairness to other landowners. For example, if a land use change has low utility but causes drainage harm to other landowners, or the landowner could take measures to prevent unfair harm to others, a court might deem the landowner’s interference with drainage as “unreasonable.”

What to do if a neighbor’s drainage is causing harm?

The unfortunate reality of the reasonable use doctrine is that it requires litigation, forcing the harmed party to file an action claiming that the neighbor has acted unreasonably. Before jumping into litigation, other actions might resolve the problem. An important first step is to understand the physical nature of the problem. Can the cause of the increased flow be remedied with physical changes? Is there a simple change that could reduce the interference, or is there need for a larger-scale drainage solution? Identifying the source of the harm and the magnitude of the drainage need can lead to solutions. Involving the local soil and water conservation district or a drainage engineer might be necessary.

Based on the significance of the solutions necessary to eliminate the problem, several options are available:

- If identified changes would remedy the problem, a talk with a drainage expert or a letter from an attorney explaining the reasonable use doctrine and demanding the changes could encourage the offending landowner to resolve the problem. If the landowner still refuses to remedy the problem, litigation is the last resort. The threat of litigation often spurs people into action.

- Sometimes the issue is one that requires collaboration by multiple landowners. Identifying a solution and sharing its costs among landowners, based on acreage draining into the area, can be a way to solve the problem.
- For more substantial drainage problems, a petition for a drainage improvement with the soil and water conservation district or the county engineer might be necessary. Petitioned drainage improvements involve all landowners in the affected area and are financed through assessments on land within that area. A visit with those agencies would determine whether a petition improvement is necessary and if so, how to proceed with the petition.
- For smaller fixes, a landowner always has the option of filing a claim for damages through the small claims court. The estimated damages or repairs must fall below the \$6,000 limit for small claims. A landowner can make the claim without the assistance of an attorney, and the dispute could be resolved more quickly through this forum.

As the Spring rains continue, keep in mind that the reasonable use doctrine sets a guideline for Ohio landowners: make only reasonable changes to your surface water drainage and don't cause an unreasonable drainage problem for your neighbors. Where changes and interferences are unreasonable and landowners are unwilling to resolve them, the reasonable use doctrine is the last resort that provides the legal remedy for resolving the problem. For more information on Ohio drainage law, refer to our law bulletin on [Surface Water Drainage Rights](#).

Farm Office Live Webinar This Friday

The OSU Extension Farm Office Team will be holding a **Farm Office Live Webinar** on Friday, May 20 from 10:00 to 11:30 a.m.

The goal of the monthly Farm Office Live webinar is to provide the latest outlook and updates on ag law, farm management, ag economics, farm business analysis and other issues dealt with in your farm office. Targeted to farmers and agri-business stakeholders, OSU Extension specialists digest the latest news and information and present it in an easy-to-understand format.

CFAES Join us for the next **FARM OFFICE LIVE**
May Topics:
 > Input Costs & Crop Profitability Update
 > Ohio Labor Update: Summer 2022 - from special guest Margaret Jodlowski, MSc., Ph.D.
 > Legislative Update & Ohio Legislature Website Tour
 > Long Term Care
 > Federal Farm Program Update
 > Dianne's Farm Management Tips
 Register or watch replays at go.osu.edu/farmofficelive
 Register once and receive links to join future programs
 Each session includes timely updates and Q&A time on topics of interest.
OSU Extension's Farm Office Team
 Peggy Kirk Hall
 David Marrison
 Dianne Shoemaker
 Barry Ward
 Robert Moore
 Jeff Lewis
May 20th 10:00 – 11:30 AM
 Save the date!
 We will be back May 20, 10-11:30 am
 Farm Office - Your farm's ag law and farm management resource partner.
farmoffice.osu.edu
 THE OHIO STATE UNIVERSITY
 COLUMBUS

The topics for the May 20 workshop include

- INPUT COSTS & CROP PROFITABILITY UPDATE: Barry Ward
- OHIO LABOR UPDATE: SUMMER 2022: Margaret Jodlowski
- LEGISLATIVE UPDATE & OHIO LEGISLATURE WEBSITE TOUR: Peggy Kirk Hall
- LONG TERM CARE: Robert Moore
- FEDERAL FARM PROGRAM UPDATE: David Marrison
- DIANNE'S FARM MANAGEMENT TIPS: Diane Shoemaker

To register, visit the [Farm Office Live registration site](#) at https://osu.zoom.us/webinar/register/WN_8abbbMu0RdC-oPB5DFuB3w.

Four Reasons to Introduce Wool into Your Garden

(Previously published online: [American Wool: May 12, 2021](#))

If you're looking to reap the full benefits of your garden, then you're tending to your plot, planting your crop, or planning for next year's bloom, gardening is truly a year-round activity. Whether you have a garden in a window planter, a small terrace, raised beds, or even in a large portion of your yard — you can benefit from using wool to help your plants thrive.

The pandemic has driven many cultural and behavioral shifts; primarily, that families are spending more time at their homes and have started new hobbies or picked up old ones. USA today found that gardening as a hobby

is booming! So, we talked with Albert Wilde, owner of Wild Valley Farms, and 6th generation sheep rancher in Croydon, Utah about how wool comes into play in the flourishing field of gardening.

“Typically, when you shear a sheep you have what’s called ‘waste wool’” Wilde starts off, “this is wool that’s from the belly or hindside of the sheep and it’s often discolored, thin, and generally not considered valuable.” With waste wool making up to 20% of the total take from each sheep, Wilde thought just maybe it could be put to good use. After working with a host of universities and consultants to validate his suspicion that wool could bring value to any garden, the idea “just kind of took off from there.

Benefits of using ‘waste wool’ in the garden:

- Reduced grow time for vegetables
- Water savings
- Softens hard clay soils
- Pest control
- All-natural/organic properties
- And perhaps most importantly, sheep ranchers who had been selling waste wool for as little as \$0.05/lb. could now get more than 10x that



With a patent, Wilde has brought to market wool pellets — similar to manure pellets you might be more familiar with, but these are made up of 100% American wool, smaller than the size of a dime, and are used to help nourish plants of all kinds. While still not the norm, using wool in the garden is starting to gain some traction. The University of Vermont Center for Sustainable Agriculture is currently [working on a study](#) that involves using pelletized wool in the garden to reduce phosphorus and sequester carbon, keeping phosphorus run-off out of Vermont’s waterways. There’s no doubt that using wool in the garden has many benefits, here are 4 things you should know about using wool in your garden.

Wool as Fertilizer

In conjunction with [Utah State University Extension](#), Wilde developed wool pellets initially as a fertilizer for plants. “Plants need Nitrogen, Phosphorus, and Potassium to grow. But they need Nitrogen the most” says Wilde. If you’re helping your garden to grow using compost, you might be getting 1-2% Nitrogen. If you’re using poultry manure fertilizer you might be getting 4.5% Nitrogen. “With sheep’s wool, you’re getting between 9.3% – 14% Nitrogen.” When Wilde and his team starting testing the impact of such high Nitrogen numbers, they found that with typical fertilizer, Greenhouses could bring organic tomatoes from seed to market-ready in about 76 days, but with wool pellets and their Nitrogen punch, you could bring tomatoes market-ready in as little as 38 days! So, pop some wool pellets in with your seeds and get ready to watch your garden grow.

Mulching with wool

The Garden Club in Newton, Iowa doesn’t waste any time getting out to the farm when Regina Frahm calls. Regina, a sheep rancher sells her belly and backend wool to the local garden club to use as mulch in their gardens. “It’s amazing, it really helps keep the moisture in” says Frahm. When the Garden Club drives out to Frahm’s farm they buy what would have been the discarded wool by the trash bag full. Laying down raw wool on your garden bed retains moisture and stops weeds from sprouting — two key components of traditional mulch. A central complaint when using straw mulch is that it breaks down too quickly, allowing for weeds to grow and leaving the soil exposed, while wool mulch traditionally lasts a minimum of two years. And while not quite as effective as plastic paper to keep weeds at bay... you are using a 100% natural ingredient that simply biodegrades back into the earth once it’s served its mulching purpose. Frahm says, “the gardeners are happy, and we’ve used every single bit of the fleece from each animal.”

Wool to aid in pest control

“It helps with slug control, because slugs don’t like to crawl over the wool” says Wilde. Even though it feels really, really soft to us, wool has scales that look barbed to a slug. You’ll need a microscope to verify this fact, but trust us when we say a slug sees crawling over a barbed surface as a major deterrent. And anecdotally,

Wilde has heard numerous stories about wool protecting against Aphids. “It’s really interesting,” says Wilde, “Plants like strawberries might have been healthier due to the wool being used as fertilizer, and that’s what actually keeps the Aphids away... because healthier plants are less susceptible to disease or pests.” Wilde does have another project in the works centered around wool and pest control. Currently the project is in the midst of trials and testing, but Wilde assures us that things are moving in a positive direction and if we check back soon, he’ll be able to share even more about the benefits of wool when it comes to using it to aid in pest control.

Wool and water

Everyone is looking for that magic thing that will allow them to go on vacation and come home to living, breathing plants. And Wilde thinks wool might be the key. Ever heard of a Wilt Study? We hadn’t either, until Wilde filled us in. Basically, a Wilt Study is when you see how long it takes a plant to begin to wilt and then eventually die, without the reintroduction of water. Wilde and his team conducted one study in 4” pots and this is what they found:

- Traditional soil had wilting plants on days 1 and 2, and dead plants on days 5 and 6
- Soil married with wool had wilting plants on days 7 and 8, and then dead plants on day 14

“What’s happening here,” says Wilde, “is that because wool can hold between 20-30x its own weight in water, and then release it slowly, it’s allowing these plants to continuously have access to water, without overwatering them.” That’s the key here — a lot of materials can hold water next to the roots of a plant, but so far, wool is the clear leader for slowly releasing that water to each plant when it needs it. “Traditionally you have to keep adding more and more water to keep plants healthy,” he says, “but with wool, you can actually conserve water with better results for the plants.” Opting to mix wool pellets in with your plant’s soil can allow you to go seven days without having to worry about your plant starting to wilt and die.

If you’ve been wanting a green thumb and are looking for a more organic way to help your garden thrive, consider introducing wool. Wool is listed as an organic material on the [National Organic Program](#) (NOP) and is a natural, renewable, biodegradable, and durable fiber. Beyond all the benefits listed above, consider using wool in your garden to support American sheep ranchers and maybe in the not-so-distant future people won’t be using the term ‘waste wool’ at all, perhaps we’ll just call it garden wool.

Victory Garden Seeds Distribution

OSU Extension in Coshocton County and the Coshocton County Master Gardener Volunteers are once again participating in the state of Ohio’s Victory Garden seed distribution. Coshocton County is one of 42 counties across Ohio selected to be part of this distribution. Coshocton County was allocated 500 packets of seeds to distribute to our community. Each of these packets contains lettuce, carrots, cucumber, and sunflower.

Victory Gardens originated during World War I as an answer to a severe food shortage at the time.

The idea was wildly successful, growing an army of amateur gardeners and serving to boost morale and patriotism across our Country. Although there’s no food shortage now, ODA and OSU Extension are reviving the effort to once again encourage people to plant seeds, realize the fruits of their labor, and share with others if inspired.

The victory garden seed packets are now available at the Extension Office located in Room 110 at 724 South 7th Street in Coshocton. These packets are being distributed on a first come, first served basis. The Extension office is open Monday through Friday from 8:00 a.m. to 12 noon and from 1:00 to 5:00 p.m. Along with the seed packets, you will also receive a packet of Extension factsheets which will assist you as you grow your lettuce, cucumbers, carrots, and sunflowers.



“Name that Tree” Workshop Slated for June 29

Have a tree that you pass on a regular basis that you always wonder ‘what is that? Or do you own a woodland and want to know exactly what trees you have? If so, OSU Extension and Clary Gardens will be hosting a **“Name that Tree Program”** on Wednesday, June 29 from 10:00 to 3:00 p.m. at Clary Gardens located at 588 West Chestnut Street in Coshocton, Ohio. This one-day workshop is designed to give participants in-depth training and practice on identifying trees using leaves and other common characteristics. The class begins in a new outdoor event pavilion with some introductory identification clues and samples that we use to work through a dichotomous key. The afternoon is spent out in the woods practicing (expect moderate walking). The registration fee for this program is \$40 per person. This registration fee includes the program, light refreshments, lunch, and handouts. There is limited seating so pre-registration is due by June 21. For more information about this program, contact the Coshocton County Extension office at 740-622-2265.



“Farming looks mighty easy when your plow is a pencil and you're a thousand miles from the corn field.”

Dwight D. Eisenhower



THE FARM OFFICE TEAM PRESENTS:

FARM OFFICE LIVE!

Farm Office Live provides the latest outlook and updates on ag law, farm management, ag economics, farm business analysis and other issues dealt with in your farm office. Targeted to farmers and agri-business stakeholders, our specialists digest the latest news and information and present it in an easy-to-understand format.

DATE: May 20, 2022

TIME: 10:00 - 11:30 a.m.

LOCATION: Zoom Webinar

Register or watch replays at go.osu.edu/farmofficelive.

Farm Office Live will return live from Farm Science Review on September 22, 2022 at 10:00 a.m.



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TOPICS INCLUDE

**INPUT COSTS & CROP
PROFITABILITY UPDATE**

Barry Ward

**OHIO LABOR UPDATE:
SUMMER 2022**

Margaret Jodlowski, MSc.,
Ph.D

**LEGISLATIVE UPDATE & OHIO
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**FEDERAL FARM PROGRAM
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"Name That Tree" Workshop

Wednesday, June 29, 2022

10:00 a.m. to 3:00 p.m.

Clary Gardens

588 West Chestnut Street

Coshocton, Ohio 43812



Have a tree that you pass on a regular basis that you always wonder 'what is that? Own a woodland and want to know exactly what trees you have? Then this **Name That Tree Workshop** is for you! This one-day workshop is designed to give participants in-depth training and practice on identifying trees using leaves and other common characteristics. The class begins in a new outdoor event pavilion with some introductory identification clues and samples that we use to work through a dichotomous key. The afternoon is spent out in the woods practicing (expect moderate walking). This workshop is being co-hosted by OSU Extension and Clary Gardens

Class Agenda

9:30 a.m.	Registration
10:00 a.m.	Introduction to Tree ID
11:15 a.m.	Using a Key to ID
12:00 noon	Lunch (provided)
1:00 p.m.	Hands-On ID in the Woods
3:00 p.m.	Wrap-Up & Adjourn

REGISTRATION INFORMATION: The registration fee of \$40 includes the program, light refreshments, lunch, and handouts. **There is limited seating so pre-registration is due by June 21.**

Name(s) _____

Address _____

Email _____ Phone _____

\$40 per person registration **_____ # of attendees @ \$40 each**

Please make checks payable to OSU Extension and mail to OSU Extension, 724 South 7th Street, Room 110, Coshocton, Ohio 43812. For more information, call 740-622-2265.





OSU EXTENSION - WAYNE COUNTY PRESENTS

Small Grains Field Day

Attention all Small Grain Producers. Are you interested in learning more about wheat cultivars, updates on grain variety trials, disease and insect management, barley for brewing and how to identify wheat quality? Please join us!

This event is free to attend thanks to the generosity of the Ohio Corn and Wheat Board. Lunch will be provided.

RSVP is required for lunch orders by June 7.

REGISTER: go.osu.edu/small-grains-field-day or call 330-264-8722

DATE: June 14, 2022

TIME: 8:30AM-2:30PM

LOCATION: OSU Schaffter and Snyder Farms

3230 Oil City Rd.

Wooster, OH 44691



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Topics Include:

Wheat Cultivars

Small Grain Variety Trial
Updates

Seeding Rates

Small Grain Disease and
Insect Management

Barley for Brewing

Wheat Quality

EVENT SPONSOR:

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