

# Jackson County Agriculture and Natural Resources Newsletter

## Table of Contents

Page 1

Introduction

Page 2-3

Do Beef Prices Drive Consumption?

Page 3-4

Constructively Thankful

Page 4-6

3 Challenges in Ohio Sheep Production Systems

Page 6-7

Known Bale Weights are Critical this Year

Page 8

Nutrient Loss from Field Fires

Page 9

Are You Ready? All Antibiotics will be Prescription-only in 2023

Happy Holiday's, Jackson County! I hope everyone had a wonderful Thanksgiving and are ready for the season of cheer! I know personally, I am excited for warm cookies, family gatherings, and watching a relaxing fire in the fireplace.

In the month of November, the Jackson County Farmer's Club had Dr. Thomas Blaine speak on the topic of climate change and the impact it will have on agriculture. Overall, the presentation was a great success with positive reviews. We look forward to having more presenters like Dr. Blaine over the next year. The next Farmer's Club meeting will be December 19<sup>th</sup> at 6:30pm at the Scioto Township Fire Department (4701 State Route 776 Jackson, Ohio). This will be the Farmer's Club Christmas Meeting; they will have a Christmas dinner at a cost of \$10. Everyone and their family are welcome to attend, but **please register by December 12<sup>th</sup>**! To register, please call or email me at the extension office.

As I begin my first full year as the Jackson County Agriculture and Natural Resource Extension Educator, I have set one of my goals to visit 20 Jackson County farms by the end of April to get a firsthand look at the operations in Jackson County. If you, or someone you know, are interested in having me out to your farm, please let me know! I hope everyone has joyful holiday season.

Sincerely,

*Josh Winters*

**Josh Winters**

Jackson County Agriculture and Natural Resource Extension Educator

**The Ohio State University**

College of Food, Agriculture, and Environmental Sciences

17 Standpipe Rd., Jackson, OH 45640

740-286-5044 Office

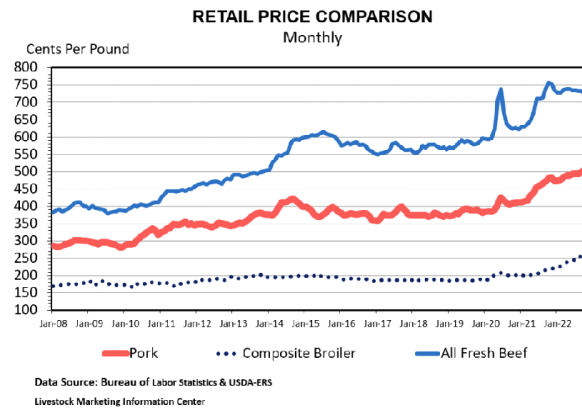
[winters.249@osu.edu](mailto:winters.249@osu.edu)

## ***Do Beef Prices Drive Consumption or Does Beef Consumption Drive Prices?***

By: Dr. Kenny Burdine, Extension Professor, Livestock Marketing, University of Kentucky

Source: <https://u.osu.edu/beef/2022/11/23/do-beef-prices-drive-consumption-or-does-beef-consumption-drive-prices/>

I open a lot of my Extension programs by showing the retail price chart seen below and discussing general trends in production levels for our three main meats (beef, pork, and chicken). By the end of 2022, pork production is going to be down year-over-year and the increase in broiler production is going to be relatively small. Beef production will actually be a little bit higher than last year, primarily due to very high cow and heifer slaughter. However, that trend is likely to reverse in a big way for 2023 and we should see a reduction in beef production of 5% or more.



As I walk through this discussion, someone in the audience will sometimes ask something like, “given that retail beef prices are already very high, and production is likely to get even smaller next year, will retail beef prices get so high that consumers move away from purchasing beef at the grocery store?” When this comes up, the person asking the question is genuinely concerned that beef could price itself off the average plate. I thought this idea would be worth discussing in this week’s article.

I want to begin by looking at this question from a slightly different angle. The question comes from the perspective that price is fixed and price is what determines consumption levels. At the individual household level, this is largely true. A consumer makes purchase decisions at a retail location based on the prices they see. If the beef product they wanted was higher than expected, and a better buy was perceived to be had on another product, that consumer may well choose to purchase a competing product. But, I like to think about this from more of a macro perspective.

Most economists would argue that consumption is primarily a measure of production levels, and those production levels are largely fixed in short run. The number of cattle on feed, and the eventual number that are harvested, really determine beef production for a given time period. That level of production will either be consumed domestically or exported. So, beef production really ends up determining how much beef is consumed in a given period of time. If beef consumption isn’t keeping pace with production, retailers and restaurants will adjust prices upward or downward such that the market clears.

If we go back to that individual at the grocery store, they may well purchase something different that week if they perceive beef prices to be too high relative to other products. If enough people do that, the retailer is sent a message and they have to adjust those prices in response. And this occurs at retail locations all across the county. Consumers send messages through their purchasing patterns. By looking at it this way, prices become a reflection of consumer willingness to pay for beef. If beef production increases, the additional

beef will be consumed. The question really comes down to what price level is needed to absorb the additional production. And if beef production decreases, prices likely have to adjust upward to ration out the tighter supply levels.

I walked through this simply to say that I view price as the more fluid element of this discussion. If retail beef prices are high, it is likely a reflection of the relative value consumers place on beef. If retail beef prices get “too high” consumers will respond and the prices will adjust accordingly. While price may determine consumption at the household level, I would argue that consumption determines price at the overall market level.

### ***Constructively Thankful***

By: Christine Gelley– OSU Extension Agriculture and Natural Resources Educator, Noble County, Ohio

Source: <https://u.osu.edu/beef/2022/11/23/constructively-thankful/>

In the season of Thanksgiving, we gravitate to each other to express gratitude for blessings of all kinds. It feels good to be thankful and to be with grateful people. I hope that as you prepare for the Thanksgiving holiday that you take the time to meditate on the blessings in your life and on the farm and that it fills you with satisfaction.

When listing our many blessings, we often skip expressing thankfulness toward are the learning experiences we gain through less than perfect scenarios. Yet, I think those scenarios are often more worthy of recognition than our obvious successes, because through challenges, we grow.

Along with your lists of blessings, I suggest making a list of things that went less than perfect in your operation this season, recognizing lessons learned in the process, and identifying ways to improve moving forward. It sounds a lot like “constructive criticism”, but I prefer to think of it as “constructive thankfulness”.

Here are some examples:

*“I am thankful that our new hayfield made 100 round bales this year. Next year, I’ll fertilize after first cutting and aim for 150 bales.”*

*“I am thankful I signed up for the spotted knapweed program so that I could get my herbicide cost reimbursed. Next year, I’ll scout for new seedlings and treat them in the rosette stage.”*

*“I’m thankful I had enough pasture for my animals to graze from March to September. Next year, I’ll stockpile some tall fescue and try to graze until December.”*

With constructive thankfulness you can turn shortcomings into goals. Every manager has room for improvements in their operation, but if you only focus on what needs to be improved, you will miss out on the joy and impact of what you already have and why you do what you do. Reflecting on your purpose and celebrating your successes will keep you motivated to improve.

To effectively track your successes and shortcomings, recordkeeping is essential. Day to day, week to week, month to month, and year to year, keeping track of what management strategies were employed, how, and why is critical for the health and wellness of our animals, our pastures, our families, and our economic standing. If you do not have a recordkeeping system you like, find one without delay.

Your system should allow you to document and track the following information:

- Farm maps including property lines, fence lines, water sources, access points, and buildings

- Equipment inventory and values
- Fuel inventory and cost
- Weather conditions
- Types of crops and acreage planted
- Any products applied to crops
- Types, number, and weight of animals
- Any product fed, applied, or administered to the animals
- Breeding records
- Sales records
- Crop and feed storage inventory
- Authorized farm personnel roles and contact information
- Insurance documents
- Tax documents
- Emergency contact information
- *More or less may be needed depending on your operation*

There are templates available for written records kept in a notebook, digital records kept on the computer, and mobile apps designed to use on your phone. Using a combination of multiple systems may be helpful. For assistance finding a recordkeeping method that works for you, reach out to your local OSU Extension personnel for advice. We can also help you set realistic goals for improvement.

At a time when less than two percent of our population are farmers, we are especially thankful that there are still people who dedicate their lives to feeding others. We at OSU Extension are here to help you get through the day to day and improve along the way. Providing resources for recordkeeping is just one way we can say “Thank you!”. Have a Happy Thanksgiving!

### **3 Challenges in Ohio Sheep Production Systems**

By: Dr. Brady Campbell, Assistant Professor, OSU State Small Ruminant Extension Specialist

Source: <https://u.osu.edu/sheep/2022/11/15/3-challenges-faced-by-ohio-shepherds/>

Ohio sheep production faces many challenges, however, in my opinion, some of the greatest arise from environmental changes, land mass availability, and predators. To start, we’ll discuss the environmental challenges that producers commonly face. The biggest environmental challenge in my opinion is directly related to excessive rainfall that much of the state has experienced in the recent past. As of late, because of excessive and unpredictable rainfall events, both crop and livestock producers have been unable to harvest and store quality feedstuffs in a timely fashion. Arguably, the spring of 2020 alone presented the greatest challenge as excessive rain events led to delayed planting of crop fields, making of hay, in addition to resuming normal pasture grazing. As a result, crop planting and harvesting was delay, if at all. Excessive moisture in the fall of 2020 was just as challenging during harvest as it was during planting. As a result, issues with mold at harvest became a quick reality. Over the last 5 years, hay of adequate quality has become scarce, mainly due to delayed harvest resulting in the production of poor-quality hay as the result of increased forage maturity. Pastures in general also took a hard hit as excessive rainfall in the spring seemed to have drowned out pasture growth, thus resulting in a lack of a ‘spring flush’ as we

are normally accustomed to. In 2022, the saga continues. Pop up showers with enough moisture to ruin the chances of dry hay production seemed to foil the most well thought out plans. As we have discussed here in the past, prior to making hay you must decide if you will be putting it up wet or dry. Once the hay is cut, there is not turning back. Unfortunately, I've encounters phone calls over the past 2 years related to baleage that was made too wet because hay makers were trying to beat the rain. Furthermore, in the sheep industry, many producers rely on hay as a 'cheaper' feed source that can be easily acquired – especially when compared with the prices of by-products (i.e., soyhulls, DDGS, etc.) skyrocketing today. Now this isn't to say that hay can't be acquired, but hay of decent quality will come at a premium which presents itself as an additional challenge. Therefore, it is important to calculate your winter feed needs today, if not sooner. Trust me, you will thank yourself for buying your hay now, if needed, as compared with March of 2023. Aside from the effects directly related to plant growth and maturity, excessive rainfalls have increased the prevalence of hoof related issues (hoof rot and scald) and severity of parasitic infection. Wetter springs and summers when flocks are on pasture lead directly to these health-related issues. For those that have been tracking our weather patterns, I think that we can all agree that our seasons have changed. Therefore, we must learn how to adapt our production systems to fit current situations.

A second challenge Ohio shepherds face is purely based upon land mass availability. Whether your flock is housed in confinement, on pasture, or a combination of both, your operation will require land to feed your flock and or house them. Confined production systems may require less land due to the lack of extensive pastureland, but in return require a greater amount of labor to maintain. A vast majority of our state is intensively used for row crop production. However, in areas in which row crops are not practiced because of geographical challenges or the integration of agrivoltaics (the production of agricultural products in a solar system), sheep are able to be managed on pasture. Therefore, agricultural land is needed, either in the form of pastureland or crop ground, to produce feed for these livestock. In addition, with the concerns of water quality, it is becoming more challenging for our crop and livestock producers to produce their commodities. If ground near water ways and other water resources can no longer be used for agricultural practices, in order to continue raising the same number of livestock additional ground, which is already limited, will be needed.

A third challenge that Ohio shepherds face are issues with predators (coyotes, domestic dogs, black headed vultures, and parasites). An easy management procedure to mitigate the losses associated with predators is to rear the animals indoors, however, as mentioned above, this requires a great deal of investment. Currently, there are programs and permits to help alleviate some of the pressures associated with wildlife predation. Coyotes can be removed via trapping or lethal termination, but both require time and investment in equipment. Because of their protection status, black headed vultures are protected by the migratory bird act. However, with the permission of the federal government permit, selected birds can be taken. Thankfully, during the first year, permit fees are waved. However, additional permits may come with a fee dependent upon government funding opportunities. An additional predator is the one producers don't commonly see, parasites. Damages and sustained infections caused by parasites can go unseen in flocks that are less frequently monitored. Appropriate management strategies needed to mitigate the effects of parasitism come with many costs as well.

Of these three major challenges listed above, many occur in other parts of the country and across the globe. For example, many sheep are raised in the state of Oregon. Sheep are grazed in the spring on fields of grasses that are used to produce forage seed in the fall. During the spring, excessive rainfall makes managing flocks a challenge, especially if these flocks are lambing on pasture or encounter serious health concerns. Other states out west deal with predator issues, but the predators that they deal with do differ. New Zealand is challenged with land mass availability. To overcome this, they focus on producing and managing high quality forage stands. Globally, I believe that land mass is not an issue

when it comes to sheep production. Look at parts of the western U.S. and Australia, there is plenty of space available for sheep production; rather, in these areas, nutrition is much sparser and therefore more land is required to rear the same number of sheep.

This isn't to say that Ohio shepherds or others across the world don't face additional challenges, but rather that from a 30,000 ft view, these hit as my top 3. If you are new to the sheep business or a seasoned veteran, feel free to connect with me to chat about your operation. I find that we in the agricultural community learn the most when we connect with one another. Until next time, Happy Shepherding!

### ***Known Bale Weights are Critical this Year***

By: Mike Rankin, Hay and Forage Grower Managing Editor

Source: <https://u.osu.edu/sheep/2022/11/15/known-bale-weights-are-critical-this-year/>

As a hay industry, there are still a number of hay sales that occur "by the bale." Yes, it's easier, but if the sale is made without factoring in bale weight and moisture, there's a good chance the buyer is paying either too much or not enough.

You've probably heard this issue reiterated many times over the years, but it's a safe bet that you've never heard it when the price of hay is as high as current values.

For a large swath of the western U.S., drought was the dominating factor during the past growing season. Many livestock producers know they will be short on winter hay or will cut it pretty close. Accurate inventories will no doubt mean the difference between having enough hay or having hungry, low-performing [livestock].

My point is that known, accurate bale weights have always been important, but they've never carried the degree of economic significance as this year. It's true whether you're selling or buying hay or feeding your own.

#### **Reasons abound**

There are a number of factors that can explain why two or more bales of equal size can have drastically different weights. These include:

- Bale density
- Bale moisture
- Time of sale
- Forage species (grass or legume)
- Forage maturity (percent leaves and stems)
- Model and age of the baler

It's fairly intuitive that the size of a bale will impact bale weight, but what may be overlooked is the degree of change that occurs when a bale is only 1 foot wider or 1 foot greater in diameter. The latter accounts for the largest change.

A bale that is 4 feet wide by 5 feet in diameter (4×5) has 80% of the volume of a 5×5 bale (see table below). However, a 5×4 bale has only 64% of the volume of a 5×5 bale. Those percentages also translate to differences in weight if all other factors are equal.

<b>Weight of large round bales at two moisture levels and densities</b>							
<b>Bale size</b>				<b>Bale wt. @ 10% moisture</b>		<b>Bale wt. @ 15% moisture</b>	
				<b>Density (dm/cu. ft.)</b>		<b>Density (dm/cu. ft.)</b>	
<b>Width</b>	<b>Diameter</b>	<b>Volume</b>		<b>10 lbs.</b>	<b>11 lbs.</b>	<b>10 lbs.</b>	<b>11 lbs.</b>
<b>ft.</b>	<b>ft.</b>	<b>cu. ft</b>	<b>% of 5x5</b>	<b>lbs.</b>	<b>lbs.</b>	<b>lbs.</b>	<b>lbs.</b>
4	4	50	51	559	614	591	650
4	5	79	80	873	960	924	1,016
4	6	113	115	1,257	1,382	1,331	1,464
5	4	63	64	698	768	739	813
5	5	98	100	1,091	1,200	1,155	1,270
5	6	141	144	1,571	1,728	1,663	1,830

Bale density, which typically ranges from 9 to 12 pounds per cubic foot, also plays a rather large role in final bale weight. In a 5×5 bale, the difference between 10 and 11 pounds of dry matter per square foot amounts to over 100 pounds per bale at both the 10% and 15% moisture levels. Missing the weight of a bale by 10% amounts to some pretty significant dollars when multiple tons are being purchased.

Forage moisture also plays a role in bale weight but to a lesser degree than bale density unless bales are extremely dry or wet. Wrapped bales, for example, can vary in moisture from 30% to over 60%. When purchasing bailage, it is always recommended to either weigh the bales or have a rock-solid moisture test.

Time of purchase impacts bale weight in two ways. First, if you're purchasing bales out of field, they are likely going to be at a higher moisture level and weight than they will be after being cured in storage. There is also a natural tendency for dry matter loss during storage that the buyer will incur if bales are purchased immediately after baling. As has been well documented by research, storage losses can range from below 5% to over 50%, depending on storage method.

Forage species can also come into play. Grass bales generally will weigh less than legume-based bales of similar size. This is because legumes such as alfalfa will make a denser bale than a grass species. In one Wisconsin study, the average weight of a 4×5 legume bale was 986 pounds. This compared to 846 pounds for grass bales of the same size.

Plant maturity impacts bale density and ultimately bale weight. Leaves generally pack better than stems, so as plants mature and develop a higher percentage of stems to leaves, bales generally become less dense and weigh less.

Finally, there are many models of balers of differing ages. This variation, coupled with operator experience, lends further variability into the bale density and weight discussion. Newer machines are able to make a much denser bale than most older ones.

Given the number of variables that determine the actual bale weight, buying and selling large round bales based on a weight guess is likely going to result in a transaction that is either above or below the already high market values of today. This can be extremely expensive for the buyer or seller, especially when a large number of tons are purchased over a period of time.

Weighing round bales might not be as convenient as not weighing them, but there are very few situations where a bale weight isn't attainable. Take the time to weigh bales (all or a few), regardless of size or shape, whenever a transaction is made. Also, don't guess when making inventory estimates of your own hay. That, too, could be an expensive error come next spring.

## ***Nutrient Loss from Field Fires***

By: Greg LaBarge

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2022-39/nutrient-loss-field-fires>

A dry fall has led to an increased number of field fires. Farmers have asked a few questions about how a field fire impacts nutrients. A quick review of several Extension resources gives us helpful information. There are two things to consider in assessing the actual losses. One, how completely did the fire consume the residue? Second, what is the coverage area? The highest losses will be when the residue is absent.

### ***What nutrients are lost?***

Nitrogen and sulfur are volatilized and lost when residue is burned. Our other macronutrients, phosphorus (P) and potassium (K) loss, generally have minimal losses. P and K will remain in the ash, and losses are related to any ash blown offsite.

### ***How much nutrient is lost per acre?***

The amount of nutrients lost is related to the amount of residue per acre and the nutrient content of the residue. The amount of stover produced is related to grain production. For corn, multiply the field yield in bushels @ 15% moisture by 47.6 to estimate the stover. For soybeans, multiply the field yield in bushels @ 13% moisture by 52.2 (Gelderman, 2009).

The amount of nitrogen in corn stover is 0.60%, and for soybean stover, 0.58%. The amount of sulfur in corn stover is 0.08%, and in soybean, 0.12% (Gelderman, 2009).

For example, a 180-bushel corn crop would have  $(180 * 47.6)$  8,600 pounds of stover. Therefore, the N content would be  $(8,600 * 0.006)$  52 pounds of N and  $(8,600 * 0.0008)$  7 pounds of sulfur. The estimated nutrient value of \$52 per acre for the N and \$3 per acre for the sulfur, based on 2023 fertilizer prices. Remember, these values would be a situation where the residue burned entirely, and only ash remains.

### ***What about organic matter effects?***

This is a difficult question since converting residue into organic matter is a continual soil process. The impact of a single year without residue added is challenging to evaluate with our current test. Sawyer estimated where crop residue was burned a value of \$1 per acre for organic matter loss in Iowa. Other research has estimated a range of \$2 in tilled and \$4 in no-till (Duiker and Lal 1999; Clapp et al. 2000) based on long-term tillage studies. One potential corrective action is to plant a cover crop. The cover can replace some lost residue and protect a field from erosion.



## ***Are You Ready? All Antibiotics will be Prescription-only in 2023***

By: Dr. Sandy Stuttgen, DVM US-Madison Division of Extension, Taylor County

<https://u.osu.edu/sheep/2022/11/29/are-you-ready-all-antibiotics-will-be-prescription-only-in-2023/>

The Food and Drug Administration Center for Veterinary Medicine's plan for supporting veterinary antimicrobial stewardship will be fully implemented in 2023 when all remaining over-the-counter antibiotics are switched to prescription-only status.

The medically important antibiotics (used by humans and animals) becoming prescription-only include injectable tylosin, injectable and intramammary penicillin, injectable and oral tetracycline, sulfadimethoxine and sulfamethazine, and cephalixin and cephalixin benzathine intramammary tubes. In addition, the OTC status of the swine antibiotics lincomycin and gentamicin is switching to prescription-only.



Vaccines, dewormers, injectable and oral nutritional supplements, ionophores, pro/prebiotics and topical non-antibiotic treatments will not require veterinary prescription.

The Center for Veterinary Medicine evaluates the safety of drugs used in food-producing animals, the impact drug residues have on human intestinal microflora, and the development of human antimicrobial resistance. Drug residues in meat, milk, eggs and honey from treated animals expose bacteria to trace amounts that don't kill them, but rather allow for the development of antibiotic resistance. Veterinarians are tasked to slow the rate of bacterial resistance by using antibiotics only when necessary to treat, control or prevent disease. Doing so preserves antibiotic efficacy for humans and animals.

Under the new rule, producers with a current veterinarian-client-patient relationship (VCPR) may purchase antibiotics directly from their veterinarian or from a distributor with the vet's prescription. Local distributors (for example, farm supply stores) are evaluating their ability to manage prescription pharmaceuticals in the future. Wisconsin Administrative Code updates will make it easier for veterinarians (within the context of the VCPR) to use telehealth technologies and dispense medication prescribed by another veterinarian.

The VCPR is the key that unlocks the medicine cabinet. Wisconsin Statutes' Chapter 89 defines the VCPR as the relationship between a licensed veterinarian, a client (who owns the animal) and the patient (the animal) in which all the following apply to the veterinarian:

- assumes responsibility for making medical judgments regarding patient, and client agrees to accept judgments and follow vet's instructions
- has sufficient knowledge of patient to initiate general or preliminary diagnosis because of recent exam or medically appropriate and timely visits to animal's premises
- is readily available for follow-up treatment patient may need, including adverse reactions to medications used or prescribed by veterinarian

Livestock veterinarians are in short supply in some areas of Wisconsin, so it is with urgency that I encourage all producers to develop their veterinary relationship. Engage a veterinarian today to visit your farm to advise treatment protocols and drug orders so you are prepared to treat your animals in a timely and effective manner.

**CFAES**

Monday  
December  
**19**

Time 6:30 pm – 8:30 p.m.

Scioto Township Fire  
Department  
4701 State Route 776 Jackson,  
Ohio 45640

## Jackson County Farmer's Club Christmas Meeting

The Jackson County Farmer's Club Christmas dinner will be served at a cost of \$10 starting at 6:30pm. Everyone is welcome to attend, but please call Josh Winters at 740-688-5029 to register. The deadline to register will be Monday, December 12th.



**THE OHIO STATE UNIVERSITY**

COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES

Register by  
**Monday December 12<sup>th</sup>,**  
**2022**

[Winters.249@osu.edu](mailto:Winters.249@osu.edu)

**740-688-5029**