

# The FARMACY

Agriculture &amp; Natural Resources Newsletter

April 2022

## From the Ag Agent's Desk:



**S**pring is in the air and lots of exciting things are happening at the Extension Office!

We've had a lot of soil tests coming in and I think it's

safe to say fertilizer prices and input costs are on everyone's mind. Firstly, this is definitely the year to soil test to get an idea of the nutrient levels of your farms to know if you really need any fertilizer. If you are using animal manure, consider getting it tested to know how much to apply based on your soil test. Secondly, if you were not able to make it to the Forage & Grain Update there was extensive discussion on fertilizer applications because of the increased cost. UK soil tests do provide a "maintenance" amount of fertilizer to be applied to carryover- this means in years like this with elevated prices that less fertilizer could be applied to still produce similar yields, depending on the crop. Unfortunately, nitrogen is not a fertilizer to go without because of its affect on yield but reduced amounts could be an option. If your phosphorous and potassium levels are medium to high on a soil test in your cool season grass pastures and hay fields- you could bypass applying

those fertilizers this year without affecting your yields. Changes to the soil test recommendation depends heavily on the crop! If you would like more information on adjusting the soil test recommendation please reach out, I'm happy to work with you to make a plan for fertilizer applications.

In my time as an Extension Agent, the majority of questions I get are checking into new products on the market to investigate if they actually do produce the results they say and if they are worth the added expense. With current economic times, researching new products is more important than ever- UK specialists conduct research trials and have the information for producers to help you determine if you want to make an investment into a new product. UK's research trial results are non-biased and great source of information.

On a lighter note, I'm excited to announce that Campbell County Extension has subscribed to the x10D app developed by UK Beef Specialist, Les Anderson, which enables producers to use this program for FREE! This program is a beef cattle management software program for recordkeeping, marketing cattle, and connecting with other farmers across the state. It's difficult to find a software

## Upcoming Dates:

**April 5 - 6:30 p.m.**

**Master Finisher- Field Day**

Asa Phillips Farm, Owenton, KY

See flyer on page 3

(transportation available)

**April 9 - by appointment only**

**Northern Kentucky Cattle**

**Association Bull Testing Clinic**

See flyer on page 9

**April 12- 6:30 p.m.**

**Managing Price Risk in Feeder**

**Cattle** - Kenny Burdine, UK Ag

Economic Specialist

Environmental Education Center

**April 19- 8:00 p.m.**

**Master Finisher** - Steve Higgins,

UK Director of Environmental

Compliance

Environmental Education Center

**May 5- 6:30 p.m.**

**Master Finisher- Field Day**

Alan Ahrman Farm, Alexandria, KY

See flyer on page 17

program or create one that fits the needs for cattle farmers at a reasonable cost so this is a huge opportunity for Campbell County beef producers!

Michelle Simon  
 Campbell County Extension Agent  
 for Agriculture and  
 Natural Resources

# 12-Point Checklist to Ensure Your Planter is Ready for the Field

Simer Virk and Wes Porter



**W**ith the 2022 planting season officially underway, we will start seeing more row-crop planters rolling in the fields in next few weeks. For growers to have a successful and stress-free planting season, it is important to make sure that planters are well maintained and ready to go before heading to the field. When it comes to planting, preparation is the key as any breakdowns in the field due to planter malfunction or planting mistakes can cost growers both valuable time and money. We all know that timely and uniform stand establishment is important to maximize yield potential early in the season and one of the main factors that can affect crop stand is planter setup and operation as it influences where and how uniformly seeds are placed in the soil. Spending time on planter setup and preparation to get it field ready goes long way for growers as it not only helps minimize downtime in the field but a successful crop stand also sets the stage for rest of the season.

Before heading to the field, here is a 12-point checklist for growers to consider to make sure that your

planter is well maintained and dialed in for peak performance during planting.

1. **Parallel Linkages** - Stand behind the row unit and wiggle it up and down and left and right to check for any play in the parallel arms, and adjust or replace linkages and bushings to make sure row units are secured nice and tight on the planter.
2. **Drive System** - Check all chains, idlers, sprockets and bushings, and replace any parts that are too worn. Make sure all drive chains are snug and do not have any unnecessary jump or vibration when operating. Lubricate all chains and sprockets before begin planting and regularly in the season. Additionally, check all drive system parts including flex drives, hydraulic drives and lines, and electrical drive systems including connectors and wires.
3. **Tire Pressure** - Check and maintain proper air pressure in the tires as recommended by the manufacturer based on the weight of the planter and

planting conditions in the field. Independent of drive system, improper tire pressure can have negative effects on seed placement due to improper levelling of the planter toolbar.

4. **Double Disc Openers** - Check that the double disc openers are still sharp and within the diameter tolerance outlined by the manufacturer. Replace if they are dull or worn more than half an inch of their original diameter. Perform a quick check using a business card to ensure adequate contact (1.75 to 2 inches) between the disc openers at the 4 o'clock position.
5. **Gauge Wheels** - Inspect the gauge wheels for any cracks or wear. Adjust the gauge wheels so that they run tight against the disc openers but just enough so they can easily be turned by hand with slight pressure. Gauge wheels should also move freely up and down without sticking in any position.
6. **Row Cleaners** - Check row-cleaners for any wear and replace any bearings if they are not turning freely. Floating type row cleaners should also travel up and down to effectively clear soil/crop residue out of the way.
7. **Seed Meters** - Inspect each seed meter thoroughly for any wear or damaged parts including vacuum seals, brushes, scrapers, and doubles eliminator. Ensure that the correct crop kit (for newer meters) is installed in the meter. If not utilizing a seed monitor (capable of by-row feedback) during planting, it is also recommended to run the

seed meters on a test stand to check performance and make any necessary adjustments.

8. **Seed Tube** - Check seed tubes for any cracks and wear at the bottom. Seed tubes should also be cleaned properly to clear any debris or obstructions (seed, cobweb, etc.). Make sure that the seed sensor is secured properly to the tube and working as intended.
9. **Closing Wheels** - Check that closing wheels are centered directly over the center of the row. Inspect closing wheels for any wear or play in the arms and replace parts or adjust as needed.
10. **Vacuum** - Inspect the whole vacuum system including hydraulic motor, fan and hoses for any wear, leaks or loose fittings. Check that vacuum hoses are attached properly to the manifold and to the seed meters on each row unit.
11. **Downforce** - For mechanical (spring type) systems, check all the components thoroughly and make sure different downforce adjustments can be made easily. For pneumatic or hydraulic systems, inspect all air or hydraulic connections carefully and perform a static diagnostic test to verify that the downforce system is functioning properly. This includes the compressor for air systems, in some cases it stays in the cab and can be neglected.
12. **Technology** - Check that the GPS receiver and planter display have the most recent firmware upgrades installed and are

functioning properly. Check if the GPS correction subscription services and any other display unlocks for advanced planting features are activated and paid for rest of the season. Perform a thorough inspection of all technology components including sensors, harnesses, ECU's and connections to ensure everything is connected and functioning properly. Also, make sure to back up planting data from the previous season on a

computer or an external storage device before start recording this year's data.

Keep in mind that once in the field, growers should get out of the tractor and check seed depth, placement and seed-to-soil contact during the first pass, and adjust planter settings as needed to optimize planter performance within each field. Also, check all of these parameters anytime field conditions change drastically, and especially when changing crops.

COOPERATIVE EXTENSION



University of Kentucky  
College of Agriculture,  
Food and Environment



## Field Day #1

### Beef Cattle

# Master Finisher

## Program Field Day

### Tuesday, April 5, 2022



**Tuesday, April 5, 2022 - 6:30 p.m.**

**Asa Phillips Farm**  
2225 Hwy 127 N, Owenton, KY 41046

**Nutrition and Management Part 1**

**Farming Operation Highlights:**

- 1400 brood cows - Uses AI and Natural Service
- Uses combination of Pasture and Confinement to Wean Calves and Feed until finish weight
- Uses Unique Supplementation Ration in addition to Forages grown on farm
- Sells Finished Calves directly to packers on Potload trucks

**Registration is required**  
Call 859-572-2600 or online at <https://campbell.ca.uky.edu>



Cooperative Extension Service  
Agriculture and Natural Resources  
Family and Consumer Sciences  
4-H Youth Development  
Community and Economic Development

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LEXINGTON, KY 40546



Disabilities  
accommodated  
with prior notification.

## Ways to Minimize Brown Marmorated Stink Bug Damage

Source: Jonathan Larson, UK extension entomologist

**N**ot only do they stink, as their name suggests, but brown marmorated stink bugs can do a number on crops. No matter the size of your garden or field, you will need to take action to keep this pest at bay.

Brown marmorated stink bugs have been in the eastern half of the state for some time but have been appearing in an increasing number of Western Kentucky counties since 2019. While they look similar to native stink bugs, this invasive species has a brown, mottled top, a gray belly and white bands on their antennae.

These stink bugs will feed on all kinds of crops. Some of their favorites include tomatoes, sweet corn, peppers and eggplant. They also attack field crops like soybeans and ornamental trees like redbuds. Their feeding causes crop discoloration, makes the insides of crops corky and most importantly, inedible.

Due to their ability to quickly decimate crops, home gardeners and commercial growers should take action to



control brown marmorated stink bugs as soon as they appear. Because of their strong scent, you likely do not want to smash them. But if you do accidentally crush them, their scent will not attract other stink bugs to your crops. However, you can sweep them off of plants and

## Cow Prices Skyrocket

David Anderson, Professor and Extension Economist Livestock and Food Products Marketing, Dairy, Policy;  
Texas A&M Agrilife Extension

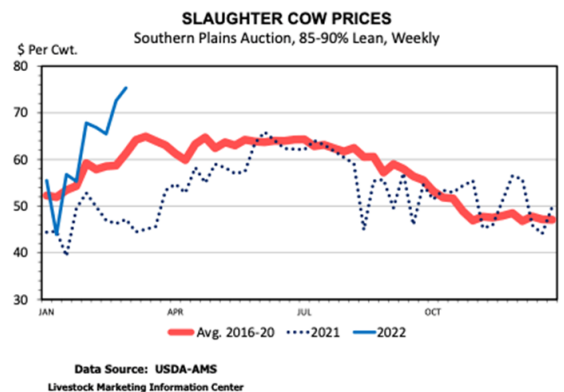
*Southern Ag Today*

**W**ar has contributed to cattle market uncertainty and sharply higher feed costs, record-high cattle on feed, and falling cutout values have hit heavy feeder prices hard. But, cull cow prices have continued to skyrocket since the beginning of the year, shooting past \$75 per cwt in the Southern Plains. A year ago, 85-90% lean cull cows averaged about \$46 per cwt.

Cow prices are increasing in spite of large cow slaughter. Cow slaughter during the first two weeks of February totaled 145,000 head, or more, per week. That is the largest weekly slaughter since December 2012. Beef cow slaughter is extremely large, rivaling peak Fall slaughter levels. This large beef cow slaughter is coinciding with seasonally large dairy cow slaughter, which typically peaks early in the year.

High cow beef prices are providing some insight into beef demand. Both the cow beef cutout and the wholesale 90 percent lean beef for ground beef are well above a year ago, at \$229 and \$284 per cwt, respectively. But, wholesale middle meat prices have dropped in recent weeks with both wholesale ribeye and strip loin prices lower than last year. Consumers may be shifting purchases to more ground beef and fewer steaks in response to high retail prices.

Increasing milk prices should slow dairy culling in the coming weeks. Beef cow culling is going to be greatly influenced by drought and costs. The rate of culling over the last year should have already moved older, less productive cows. Reduced dairy culling should pull down total cow slaughter and support prices in the coming weeks.



into buckets of soapy water to kill them in large numbers.

Homeowners can control the stink bugs when they are small with insecticidal soap or the larger stink bugs with products containing pyrethroids. You can also use physical exclusion methods like row covers or netting to exclude the stink bugs. Timing is everything with row covers as you don't want to hinder pollination by using them.

Commercial producers can focus their monitoring efforts along field edges, where the brown marmorated stink bug is most often found infiltrating. Pyrethroid products can also help in these situations.

Keep a close watch over your crops because you will likely see two generations of stink bugs during the summer. The first generation will appear in early summer and the second shows up in late summer or early fall.

When the weather gets cooler, you may start finding brown marmorated stink bugs in your home as they seek shelter from the colder temperatures.

## Just a reminder for beef cattle farmers:

Below are the recommended levels for free choice mineral- if you have a spring calving herd, now is the time to use high magnesium mineral to avoid grass tetany!

Be sure your mineral meets the recommended levels listed below and follow the label directions. A good mineral program goes a long ways in terms of growth, health and conception.

UK Beef IRM Mineral Recommendations (free-choice supplements for grazing beef cattle)			
			Date: January, 2021
Level	Basic Cow-Calf Mineral <sup>1</sup>	High Magnesium Mineral <sup>2</sup>	Stocker Mineral with Monensin <sup>3</sup>
Salt, %	22 - 25	15	22-26
Mg, % (from MgO)	2	12 <sup>4</sup>	0.15
Ca, % (minimum)	11	11.5	9
Ca, % (maximum)	12	13	10.5
P, %	4.0	6.0	6
K, %	0.5	0.1	0.8
S, % (maximum)	1.0	1.0	0.8
Cu, ppm <sup>5</sup>	1,600	1,400	2,000
Zn, ppm	3,200	3,000	4,000
Se, ppm <sup>6</sup> (See below)	35	26	35
I, ppm	65	50	60
Co, ppm	15	12	15
Manganese, ppm	3,750	3,700	3,000
Fe (iron) Added <sup>7</sup>	None	None	None
Vit A, IU/lb	150,000	100,000	150,000
Vit E, IU/lb	150	100	150
Monensin, grams/Ton <sup>8</sup>	None	None	1,620
Nutritional adequacy based on intake (oz/hd/day)	3	4	3
<sup>1</sup> Distillers dried grains (40 lb/ton), wet molasses (20 lb/ton), and mineral oil (20 lb/ton). <sup>2</sup> Distillers Dried Grains (no less than 150 and up to 250 lbs/ton as space allows), wet molasses (20 lbs/ton) and mineral oil (20 lbs/ton). (May substitute 50 lbs of dehy molasses for distillers grains to improve intake). To be fed when conditions for grass tetany exist. Formulated for cows during pre- and early lactation. <sup>3</sup> Contains Monocalcium phosphate 29.49%, Dried cane molasses 20%, Ground limestone 13.75%, cane molasses 3%, Distillers dried grains 5%, Mineral oil 1%. FDA approved free-choice formula. <sup>4</sup> Magnesium oxide should be the source of magnesium, not dolomitic limestone or magnesium mica. Prilled magnesium oxide is not available currently and has been removed as a recommendation. <sup>5</sup> Minimum one-fourth of copper in an "organic" (chelate, proteinate, etc.) form. No copper oxide shall be used. <sup>6</sup> Minimum of 50% of selenium shall come from selenium yeast product (i.e. Sel-Plex®). Three oz. supplement intake at 35 ppm or 4 oz. intake at 26 ppm provides 3 mg of selenium per head daily. <sup>7</sup> No iron oxide for coloring. <sup>8</sup> Three oz. supplement intake provides 152 mg of Monensin per head daily.			
<b>NOTES:</b> If an additional ingredient is needed to meet the 2,000 lb formula, we specify distillers dried grains with solubles. These products are not recommended for sheep, goats or Jersey cattle due to potential copper toxicity. Please note, the University of Kentucky has formulated these recommendations specifically for otherwise healthy cattle based upon National Research Council (NRC) guidelines for animal requirements, average forage analyses in Kentucky and research on mineral availability in forages. Actual forage levels may vary. If you have any concerns about the health or special needs of your herd, you should contact the Extension Service or your veterinarian. While the University provides these recommendations based upon currently available data, it assumes no responsibility for any errors on the part of the supplier or producer, including but not limited to mixing, handling, or other formulation errors.			

# Spring Is Coming ... So Is Alfalfa Weevil!

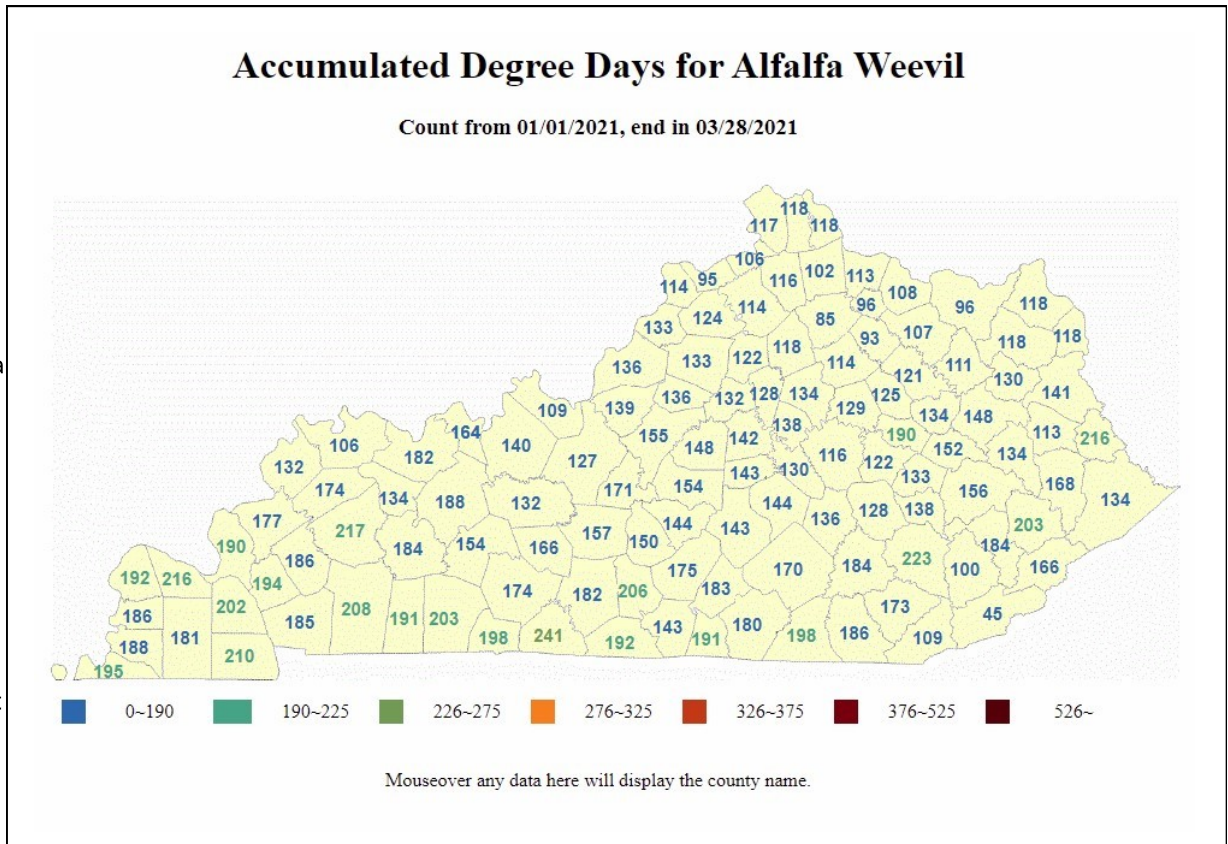
By Ric Bessin, Entomology Extension Specialist

The UK Ag Weather Center's degree day (DD) model for alfalfa weevil indicates that many counties in Kentucky are likely to exceed 190 DD (used as a starting point to begin scouting) by the third week of March. Once temperature accumulations reach 190 DD, growers are advised to look at their alfalfa fields and begin alfalfa weevil larval counts. So far,

degree day accumulations for this year are trending close to average for the last 10 years.

**Figure 1.** When degree day totals reach 190 DD, it is time to begin scouting for alfalfa weevil larvae. Scouting continues on at least on at least a weekly schedule until regrowth after the first cutting. Treat the DD totals for the counties as estimates.

Fall-laid alfalfa weevil eggs are the first to hatch in the spring. These eggs hatch earlier than those laid in the spring and 190 DD approximates when the first leaf feeding damage becomes noticeable. Temperature extremes during the winter help to limit the survival of alfalfa weevil eggs that were laid in stems in the fall. Damage by the young larvae will first appear as tiny pinholes in the leaves.



## Scouting

To scout for alfalfa weevil, use the stem sampling method. While walking in a "U" or "Z" pattern through a field, collect 30 alfalfa stems. Carefully cup the top of each stem in one hand and break it off the crown with your other hand; place it bud-end downward in a plastic bucket. Be sure your samples are at least 20 feet from the edge of a field so that they are representative of the entire interior of a field. Knock the stems in groups of 4 or 5 stems at a time against the inside of the bucket to dislodge the larvae. Count the number of larvae. Measure the length of 10 random alfalfa stems. If the field is close to harvest then harvest can be an alternative to spraying, but producers need to watch for damage to the regrowth. There are similar scouting

tables for regrowth after the first cutting.

## Rotate Insecticide Modes of Action

If you do need to treat for alfalfa weevil larvae, keep in mind that insecticide resistance has been an issue in some areas. The best strategy to manage resistance is to use an insecticide only when necessary and to rotate modes of action each year. For many other pests, you would rotate insecticides more often, but alfalfa weevil has only one generation per year. To rotate modes of action, select insecticides that have a different IRAC group number on the label.

## Alfalfa Weevil Larvae Thresholds for Spraying 190 to 225 Degree Days

Average stem height (inches)	Number of alfalfa weevil larvae on 30 stems
2	27
4	67
6	100
8	130

Apply a long residual insecticide if the number of larvae is greater than the number in the table for the average height of alfalfa sampled.

Sample again in 2 days if the number is above 15 but less than the number in the table.

Sample in 7 days if the number is less than 15 in your sample of 30 stems.

## Alfalfa Weevil Larvae Thresholds for Spraying 226 to 275 Degree Days

Average stem height (inches)	Number of alfalfa weevil larvae on 30 stems
2	15
4	19
6	20

Apply a long residual insecticide if the larval number per 30 stems is greater than the number in the table above for the height of alfalfa sampled.

Sample again in 7 days if you find less than the number of larvae for the appropriate alfalfa height.

For degree day accumulations above 275 DD, use the economic threshold tables in *Alfalfa Weevil Field Sampling Program (ENTFACT 127)* or *Insecticide Recommendations for Alfalfa, Clover, And Pastures – 2022 (ENT-17)* to determine the need to spray the field for alfalfa weevil.

## All-weather surfaces can improve livestock mobility

Source: Steve Higgins, CAFE Director of Environmental Compliance

**A**s an attentive livestock producer, you have probably noticed your animals tend to follow the same paths to get food and water. Over time, these well-traveled paths start to lose their vegetation and erode the topsoil, particularly if they endure heavy traffic from large animals. Erosion not only wears away your topsoil, but it makes it difficult for livestock to continue to effortlessly move along these paths. In wet weather, these paths get slick and muddy and can become treacherous for animals.

You can help your animals move along these paths by installing all-weather surfaces, such as mechanical concrete. Mechanical concrete uses tires, geotextile fabric and dense-



grade aggregate stone to create a sturdy surface for animals to travel. Use a backhoe or trackhoe with a 36-inch bucket to create an 8-inch-deep trench down the well-traveled path and cover the trench with nonwoven geotextile fabric. The fabric provides

drainage, friction and overall path stability. Next, remove the sidewalls of the tires leaving the tread. Semitruck tires are the best size for this project. Once you install the tires in the path, cover them with dense-grade aggregate rock.

This pathway should last for many years and will allow your animals to use less energy moving around your farm.

You can get more information about installing these all-weather surfaces in the University of Kentucky Cooperative Extension publication AEN 165: Improving Cow Paths. It is available online at <http://www2.ca.uky.edu/agcomm/pubs/AEN/AEN165/AEN165.pdf>

## High-quality baleage demands timely cutting

By Amber Friedrichsen

**B**aleage has the potential to be a high-quality feedstuff that can reduce the need for supplementation in livestock diets. However, this high-moisture stored forage cannot attain its most desirable attributes without proper harvest, storage, and feedout practices.

Kim Mullenix, extension beef specialist with Auburn University, says baleage can be used to meet the nutritional requirements of most cow-calf operations. Before feeding baleage, it is necessary to test the forage to know if the amount of total digestible nutrients and crude protein are sufficient to meet animal needs. The best way to ensure adequate nutrients is to harvest forage at its optimal maturity.

"The nutritional quality of baleage will only be as good as the starting product," Mullenix asserts. "What goes in must come out, and putting up low-quality forage means a low-quality feed product."

Once forage is harvested, it is crucial to store it correctly to prevent spoilage and nutrient loss. Make bales at a moisture level between 40% and 60% and tightly wrap them with at least six layers of plastic.

Commercial enzymes and inoculants can also be used to quickly drop the pH in bales and enhance fermentation. While these additives can help preserve dry matter and



Feeding strategies can also affect baleage quality. Bales can be ground up and incorporated into a mixed ration, or they can be fed whole. In the latter case, Mullenix suggests utilizing a ring-

or cone-shaped feeder, trailer, or cradle to minimize waste. Only allot enough feed for one to two days, or just one day if feeding baleage in the summer.

### Feeding time

Baleage quality is still subject to decline after fermentation. Understanding a herd's dry matter intake is key to allocating an appropriate amount of forage and limiting waste.

"Many factors affect dry matter intake, including animal weight, stage of production, forage quality, and environmental conditions," Mullenix says. "A good rule of thumb is that a mature cow will consume about 2.5% of her body weight per day in dry matter."

Because of its high moisture content, it will take more baleage by weight to feed cattle compared to dry hay. For example, following Mullenix's recommendations, a 1,200-pound cow would need 30 pounds of dry matter per day. This can be achieved by feeding 60 pounds of baleage at 50% moisture, whereas it would only take 35 pounds of dry hay at 15% moisture to meet this requirement.

or cone-shaped feeder, trailer, or cradle to minimize waste. Only allot enough feed for one to two days, or just one day if feeding baleage in the summer.

Despite steps taken to prevent spoilage, there may still be some microbial growth during storage. Signs that harmful bacteria are present include bales that appear dark brown or black in color, are wet and slimy, or have a rancid smell. This feed will not be palatable to animals, but more importantly, it can be toxic and cause botulism.

"Clinical signs of botulism include brain inflammation, disorientation, impaired nervous system function, and continuous saliva," Mullenix states. "Contact a veterinarian immediately if these signs are observed."

White, pink, gray, and blue molds may also appear on the outer layers of baleage. Mullenix says this is common and has not been shown to negatively affect animal health. Even so, it is best to avoid feeding bales with excessive amounts of mold.



# Is your herd bull ready for breeding season? Is he sitting down on the job?



## Bull Breeding Soundness Examinations



**Saturday, April 9, 2022**  
**at Kenton County Fairgrounds**

**Cost per bull for examination**  
**\$25 for NKCA members - \$50 for non-members**  
*Vaccinations are additional*

- ☒ **Exams by licensed Veterinarians**
- ☒ **For all breeding age bulls (over 12 months old)**
- ☒ **Semen test**
- ☒ **Physical examinations**
- ☒ **Vaccinations and deworming available for extra charge**



**Jerry Brown**  
**Boone County Extension Agent**  
**for Agriculture**

**Please call the Boone County**  
**Extension Service at 859-586-6101**  
**By April 8 to schedule an appointment.**

*(program will be cancelled if there  
are less than 25 bulls)*

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LEXINGTON, KY 40546



Disabilities  
accommodated  
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# X10D: A New Era of Connectivity for the Beef Industry

Dr. Les Anderson, Extension Professor, University of Kentucky

Remember trying to find a remote location “back in the day”? To find a remote town in an unfamiliar place required work. First, we would likely ask our friends and neighbors if they knew of the place and could write down directions. The accuracy and dependability of these directions were quite variable. But it was cheap and obtaining the directions was easy. Sometimes, perhaps, we found a Road Atlas. For the younger generations, this was a hardcopy book or pamphlet that had the names of towns and the roads connecting them. Normally very accurate but not always simple to use and cost a few dollars. Then the journey began. Maybe you could drive right there but most often wrong turns and maybe even stopping to ask for directions. A few times.

But technology has really changed our ability to navigate the world. Today, type an address in your phone, leave the sound on, and you will get turn by turn navigation to your goal. If you want to eat, type in “restaurant near me” and you will get a ton of choices. And directions to get there!

It struck me the other day that the beef industry is similar in some ways to navigation. Most beef producers have goals, targets for their enterprise. Even though the lifestyle is likely the biggest draw to raising cattle, I think many producers would like to profit. But their path to profitability is like navigation from



“back in the day”. According to the USDA, nearly 100% of cattle producers say they take records but only 3% use electronic methods for data collection and management. I know a lot of producers and I think these numbers are pretty accurate. Most write things down, but few write everything down. We get weaning weights, sometimes, cow weights occasionally. Maybe vaccination dates. Seems like we are trying to reach a destination with handwritten directions to the beginning of the trip, but the last few turns are left out!

In 2014 the KADB funded the UK Farm Program, a cooperative effort of UK Beef Extension and Kentucky Beef Network. This program was designed to provide participants with modern beef practices, demonstrate their adoption into these farms, and then document the outcomes. Since we had as many as 147 farms in this program at one time, we needed a tool to help us

with data collection and management. We found several options in the industry but, frankly, they were all too expensive and far too complicated. So, we decided to make our own.

Thanks again to the KADB, we received funding to develop new program to help cattle producers “navigate” to higher revenue and profits. This new app is X10D (pronounced “extend”). X10D is a cloud-based web/app interface and can be used

on any device (iOS, Android, PC). X10D is designed to conveniently connect cattle producers with the information they need for their operation to grow and thrive. X10D has three major components; Learn, Connect, Manage.

The Learn component is the users connection to the Cooperative Extension Service. Educational content will be pushed to the system and available to users on any device in a fast, simple, convenient, searchable format. State and local events will be publicized, and all users will have access to unbiased information from a trusted source. It will take some time to populate the database with educational content, but it will be worth the wait. The Connect component is an exclusive social media feed designed strictly for beef cattle producers, agribusinesses, extension professionals, and veterinarians in each county. Users can post questions, events, comments, sale

items, or items for purchase to other users in their county. Both components connect users with information.

The Manage component helps users collect and manage data from their beef cattle operations. Depending upon the size of your herd, setup will take a little time. Typically, it takes about 1-2 hours to input the animals in a normal 30 cow herd. Once your herd is in the system, collection and reporting are incredibly easy. Data input and recording is simple with

most inputs requiring fewer than 10 button pushes and takes less than 30 seconds to enter. Reports are even easier as most can be obtained in fewer than 4 button pushes and less than 20 seconds. Imagine spending less than 1 minute a day recording your management data and yet having all that data available anytime, anywhere, on any device.

If interested, you can go to the website, [x10d.org](http://x10d.org), and sign up for the PC version or download the app from google play or the Apple

appstore. Campbell County Extension District Board has provided funding for farmers to use the app for free. Please reach out to Michelle Simon if you are interested in subscribing and using the program.

Fast, convenient access to information can put the world at your fingertips. The beef industry has lagged behind but no longer. Give X10D a try. We are confident you will see a difference.

## JOIN OR RENEW YOUR MEMBERSHIP TODAY



**KENTUCKY  
CATTLEMEN'S  
ASSOCIATION**

**I'm a member because...**

KCA President **Cary King:**  
**I have seen how important it is to have an organization like ours to represent us at local, state, and national level.**



Membership in the Campbell County Cattle Association automatically makes you a member of the Kentucky Cattlemen's Association- these organizations are open to any individual that has an interest in the cattle industry of Kentucky. Campbell County Cattle Association is one of 99 Cattlemen's Association Chapters that represent beef producers across the state and serve as a link between local associations and KCA. The Kentucky Cattlemen's Association works diligently to work with legislators to provide answers and solutions to protect cattlemen and the cattle industry. They also work with dieticians and nutritionists to promote beef as a healthy product for consumers.

By joining the Campbell County Cattle Association and KCA you will receive these benefits in addition to receiving the monthly newsletter, Cow Country News.

# Beef Cattle Numbers Continue to Decline

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

**U**SDA-NASS released their January 1, 2022, cattle inventory estimates on January 31<sup>st</sup>. Beef cow slaughter was significantly higher in 2021, so expectations were for continued contraction of cattle inventory. The USDA report confirmed that and provided



were down by more than 191 thousand from 2021, which is about 3%. This suggests continued contraction is likely during 2022. Of course, weather will play a key role as well.

The Kentucky estimates were also interesting, and many people

some perspective on the magnitude of these decreases. Total cattle and calves were down by 2%, which was a slightly larger decrease than pre-report estimates. As an economist in a predominantly feeder cattle state, I tend to pay more attention to the number of beef cows in the US, which was down by about 2% as well.

An important note to the report was that the January 1, 2021, beef cow inventory estimate was revised downward by over 300 thousand cows, which is about 1%. Perhaps a better way to put beef cow numbers in perspective is to consider the total change in beef cow inventory over the last three years. From the recent high in 2019, beef cow inventory is down by more than 1.5 million head, which is about 5% of the total cowherd. Put

simply, calf crops are getting smaller and will continue to do so in the coming year, which is bullish for feeder cattle markets. The following chart plots US beef cow inventory going back to 1970.

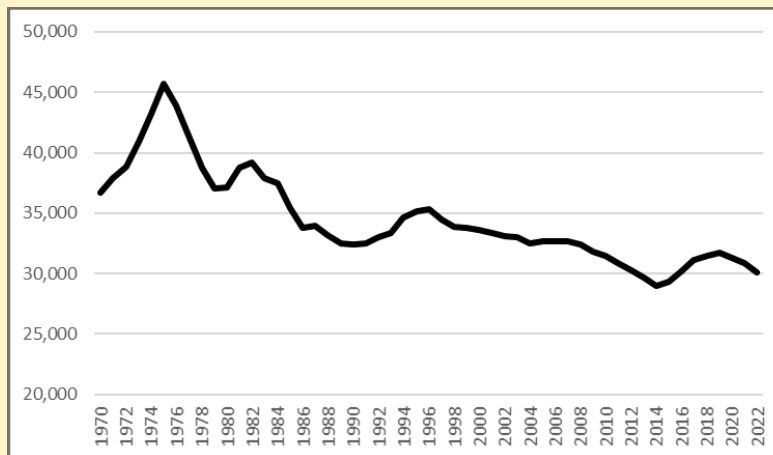
had commented to me on how many cows had moved through auctions last year. USDA estimated a decrease in Kentucky beef cow numbers of 0.7% during 2021. There was also a slight decrease in the January 2021 beef cow inventory

estimate. I would not have been surprised if the beef cow inventory was even lower in Kentucky, but this does put the cowherd in the Commonwealth at the smallest level seen since 1968. Heifer retention was also estimated to be down by more than 7% in our state.

The cattle on feed estimate from this report is also worth discussion and stands out a bit as it shows a

slight increase from last January. For perspective, I would point back to the January Cattle on Feed report, which reflects on-feed inventories at

**January 1 US Beef Cow Inventory (1970 to 2022)**  
(1,000 head)



Source: USDA-NASS and Livestock Marketing Information Center

Heifer retention is also important as it provides some perspective on future trends in beef cow inventory. January heifer retention estimates

feedyards with one-time capacity over 1,000 head. First, heifers on feed were higher in that report, which is consistent with fewer heifers being held for replacement and continues to point to a decreasing cow herd going forward. More females are moving into the beef system. Secondly, and probably most significantly, December placements were up 6% in 2021. But the largest increases were in the lower placement weight categories, which suggests they may be more a function of dry conditions in the Southern Plains forcing producers to move cattle out of wheat grazing programs. If this is the case, those are cattle that would have been placed on feed this spring, so it speaks more to the timing of their placement, than total cattle supply.

The USDA report is summarized in the table below and the full report can be accessed at: <https://downloads.usda.library.cornell.edu/usda-esmis/files/h702q636h/pn89f870n/jw828f69f/catl0122.pdf>

### USDA January 1, 2022 Cattle Inventory Estimates

	2021	2022	2022 as % of
All Cattle and Calves	93,789.5	91,901.6	98
Cows and Heifers That Have	40,286.0	39,500.1	98
Beef Cows	30,843.6	30,125.1	98
Milk Cows	9,442.4	9,375.0	99
Heifers 500 Pounds and Over	20,200.1	19,776.0	98
For Beef Cow Replacement	5,803.1	5,611.5	97
For Milk Cow Replacement	4,608.5	4,450.6	97
Other Heifers	9,788.5	9,713.9	99
Steers 500 Pounds and Over	16,787.8	16,579.7	99
Bulls 500 Pounds and Over	2,210.5	2,109.6	95
Calves Under 500 Pounds	14,305.1	13,936.2	97
Cattle on Feed	14,667.4	14,692.6	100
	2020	2021	2021 as % of
Calf Crop	35,495.5	35,085.4	99

Source: NASS, USDA

### Campbell County Ag Resources

#### Farm Service Agency

Farm Serial Number  
Contact: Mike Benton  
**(859) 586- 6175**  
6028 Camp Ernst Road,  
Burlington, KY 41005

#### Soil Conservation (CAIP Administrator)

NRCS officer: Ian Young  
County Contact: Linda Grizzell  
**(859) 635- 9587**  
8350 E Main St,  
Alexandria, KY 41001

#### Kentucky Division of Forestry

**(502) 564- 4496**  
300 Sower Road  
Frankfort, KY 40601

#### Kentucky Office of Agricultural Policy (KADF)

404 Ann Street  
Frankfort, Kentucky 40601  
**(502) 564-4627**  
Agpolicy.ky.gov/funds

#### Kentucky Center for Agriculture and Rural Development

**(859) 550-3972**  
411 Ring Road  
Elizabethtown, KY 42701  
Kcard.info

#### Dead Animal Removal

Shiple & Sons  
(513) 734- 1818  
Conboy Enterprises  
(859) 221- 6998  
Countryside Industries  
(859) 421- 1867

#### Kentucky Department of Agriculture

**(502) 573-0282**  
107 Corporate Drive,  
Frankfort, KY 40601

#### KY Division of Water (502) 564-3410

300 Sower Road,  
Frankfort, KY 40601

#### Fish & Wildlife

Regional Biologist  
Clay Smitson  
(859) 576-2885

#### Center for Crop Diversification

**(859) 218-4384**  
uky.edu/ccd

## Are Hay Preservative Applicators Worth It?

Source: UK Forage News

**W**eather during harvest can be the biggest challenge in putting up high-quality hay. If hay is still a bit wet but a storm is coming and you want to get it baled and stored before the rain, you might consider using inoculants and hay preservatives. If used correctly, these additives can be beneficial.

Ideal storage moisture depends on bale size. According to agronomy extension specialists at South Dakota State University, small square bales should be baled/stored at about 18%-20% moisture and larger bales about 3%-5% dryer to prevent heating and mold. When moisture levels exceed these ranges, a hay preservative or inoculant may be appropriate, but if moisture reaches more than 30%, these won't help.

There are several products designed to help keep hay from heating and spoiling. Bacterial inoculants add more "good" bacteria to aid fermentation and improve aerobic stability (stopping mold growth). These bacteria occur naturally in many plants; inoculants simply add more.

They work best on hay that is wetter than good baling conditions, but less than 25% moisture. Inoculants should be applied uniformly as hay is baled and before any rain gets on it. They help protect against small moisture changes (3%-5% higher than you would typically bale) to reduce or stop mold growth, improve hay quality and palatability, and maintain green color.

Hay preservatives are different than inoculants and different than desiccants, which are drying agents applied at cutting to increase drying rate. Preservatives are applied to hay

as it is baled to minimize spoilage during storage. Both products are usually applied through a spray system, either on the mower (for desiccants) or on the baler (for preservatives).

A preservative can be applied through spray nozzles fastened above the pickup attachment on the baler, which is common for large round balers, or discharged directly onto the hay within the bale chamber for small or large square bales. Preservatives prevent heating of hay baled at higher moistures by inhibiting growth of aerobic microbes. They allow hay to be baled sooner, reducing the time it lies in the field exposed to precipitation risk.

Preservatives are cost-effective if used as needed to prevent rain damage, when applied uniformly to the windrow as it enters the baler. The most effective preservatives for alfalfa are organic acids, mainly propionate (propionic acid) and acetate (acetic acid).

Effective application relies on using proper rate (dependent on moisture content and size of bale) and quality of forage. Preservatives containing high amounts of propionic acid are generally effective in reducing spontaneous heating in moist hay, but ammonium propionate (buffered propionic acid) is often recommended because it's less caustic. The preservative should be sprayed using the most uniform application possible.

Small bales ranging from 20%-25% moisture should be treated with approximately 0.5% propionic acid. A 1% increase in application rate may be needed for hay with 25%-

30% moisture. Many studies have shown no benefit from preservatives used on hay that's over 30% moisture.

Research has shown that propionic acid, as well as buffered propionic acid, is not harmful to animals. Since propionic acid can be corrosive to equipment, buffered acids and salts of acids have been developed to help overcome some of these issues. Both propionic acid and buffered forms may cause some hay discoloration but help protect feed value.

Even though hay might be higher-quality/higher-value when preservatives are used judiciously, some producers are hesitant to invest in preservative applicators, thinking these are too expensive or too complicated. "They are more affordable and simpler than you may think," says Andrew Frankenfield, agronomy extension educator, Penn State Extension. "With challenges of making dry hay, this may be a change you can't afford not to make." Many times, hay is almost ready to bale but a little tough and you go ahead and bale it and hope it doesn't mold. "These are the times you wish you had a preservative applicator, so you could bale and not have problems." Yet you hesitate to buy one, thinking applicators are too expensive if you are only baling a couple thousand small square bales a year.

"You can buy a 25-gallon baler liquid applicator for around 500 dollars. These are not complicated – just a small electric sprayer you mount on the baler," he says. You also need a baler-mounted moisture tester so you can assess moisture of the hay

as you bale it. "A moisture tester can be purchased for 350 to 500 dollars. For less than 1,000 dollars you can outfit your baler with ability to apply a hay preservative when conditions are not perfect and get the hay off the field before rain destroys quality."

If you want something fancier, you can spend several thousand dollars for fully automatic controls. These systems have a monitor that regulates flow of the preservative depending on moisture content of the hay, and with use of an electric eye, the applicator turns off and on when hay is flowing through the baler pickup. You can get the same results, however, with cheaper models.

"Consider the value of 5 acres of hay that you don't get baled because of rain. It could have been worth 2,500 dollars [\$250 a ton times 2 tons per acre times 5 acres], but now is only worth about half as much – maybe 125 dollars a ton and valued at 1,250 dollars. The 1,250 dollar lost could have paid for the applicator, moisture tester and preservative, and you'd still have money left in your pocket," says Frankenfield.

"You can buy various types of preservatives in multiple unit sizes. One product for example: If you buy



a 50-gallon drum [450 pounds], [it] costs about 450 dollars or one dollar per pound. If you buy a 275-gallon tote [2,380 pounds], it costs about 2,000 dollars or 84 cents per pound," he says.

He gives examples, looking at stem moisture, application rates for small square or round bales and application costs per ton (based on \$1 per pound). When stem moisture is 22% and under, preservative should be applied at 4 pounds per ton, at a cost of \$4 per ton. Stem moisture of 23% to 25% would require 8 pounds per ton, or \$8 a ton. Stem moisture of 27% to 30% would require 16 pounds per ton, at \$16 per ton. Anything above 30% moisture should not be baled. For larger square bales: stem moisture of 22% and under requires 6 pounds per ton, or \$6; stem moisture of 23% to 26% requires 10 pounds per ton. If moisture is 27% or above, do not bale.

When calculating how much preservative to apply, he says it's like calibrating a sprayer, but instead of

gallons per acre, you calculate pounds per ton. "Figure out how many tons per hour you bale. Count the number of small square bales you make in three minutes. Let's say it's 15 bales. Weigh several bales to get average weight. If they are 40 pounds and you bale 15 bales in

3 minutes, in an hour of baling you'd bale 300 bales with average weight of 40 pounds. 40 [pounds] times 300 [bales] equals 12,000 pounds per hour or 6 tons per hour."

In this scenario, to apply 4 pounds of preservative per ton, you'd need 24 pounds per hour. "If the preservative weighs 9 pounds per gallon, that's 2.7 gallons per hour or 0.045 gallons per minute. The preservative is slightly heavier than water," he says. "In this example we would use one TP110050 spray tip at 35-40 psi to achieve our desired 4 pounds of preservative per ton of hay. If we need 8 pounds per ton, we can turn on a second spray tip or replace the single TP110050 tip with a tip with twice the output, such as TP11001," says Frankenfield.

The applicator for your baler may pay for itself the first year you install it. ~ Health Smith Thomas for Progressive Forage. For recent issues of Progression Forage, go to their website or sign up to receive regular issues at <https://www.progressiveforage.com/>

# Estrous Synchronization in Natural Cattle Breeding Programs

Brooks Warner, Extension Educator, Agriculture and Natural Resources, Ohio State University Extension

Birth Date	Weight Difference
Calf born on day 1 vs day 21	+50 pounds
Calf born on day 1 vs day 42	+100 pounds
Calf born on day 1 vs day 60	+150 pounds

Calves born in a shortened calving season will be heavier, and more uniform in size and weight.

Estrus synchronization often is used in the artificial insemination industry.

Typically, we do not talk about synchronization with natural service operations. However, it still can be a very useful management technique in natural service situations.

A common question is “can my bull effectively breed each cow or heifer when everyone comes into heat at once?”. The answer is yes. Bulls should have experience, about 3+ years, have a BCS of at least 6, and have a scrotal circumference of at least 34cm. The bull should have also been through a breeding soundness exam. If the bull has each of these characteristics, he will be able to breed eleven cows per day.

The economic implications of synchronization can be seen when you bring a pot load of calves to market. Larger groups of like type and like size cattle bring more money. The value difference in pot load-sized groups of calves versus smaller groups can be seen nearly daily in sales across the state and the U.S.. The table above shows the potential of different sized calves born to cows that were not

synchronized and outlines calf weights between calves born in the first cycle vs. calves born in subsequent cycles. Obviously, calves born in a shortened calving season will be more uniform in size and weight.

For example, during the week of Oct. 26, 2021, two groups of steers that were the same breed and color with similar management were sold at the same sale on the same day. One group of fourteen steers weighed 588 pounds and brought 150.50 per hundredweight (cwt) for a total value of about \$885 per head.

Another group of ninety steers weighed 589 pounds and brought 164.25 per cwt. That’s a total value of about \$967 per head. That is a difference of \$82 dollars per head just for having a pot load of calves.

One of the ways to make your calf crop more similar in weight is synchronization, whether you employ artificial insemination (AI) or natural breeding.

In this article, we are going to discuss estrus synchronization in natural breeding programs. Three protocols we will discuss the details and pros and cons of are: 1. prostaglandins. 2. MGA and 3. use of CIDRs

## Prostaglandins

Prostaglandins terminate the normal cycle and allow the cow to ovulate and start a new cycle. Using prostaglandins is the cheapest and

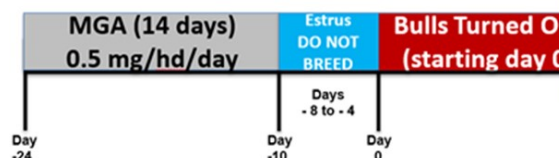
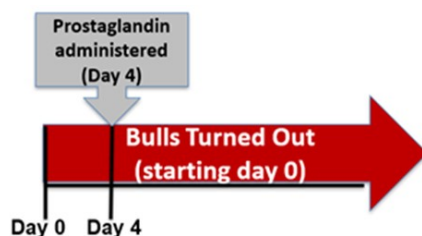
lowest input way to synchronize estrus in your herd. Prostaglandin protocols are approved for use in mature cows and heifers. Cows only need to be sent through the chute once, and the drug is relatively inexpensive.

However, while using prostaglandins in cattle, you could see ineffectiveness in anestrus cows (those not showing heat) and prepubescent heifers (not sexually mature). For prostaglandins to be effective, cattle will need to have a body condition score of at least 5 and be showing signs of estrus.

The protocol for using prostaglandin is turn your bull out at normal time (day zero) and females will be given one shot of prostaglandin on day four. Below is a table that explains when to turn out the bull and administer prostaglandin to achieve your desired calving date.

Calving Date	MGA		Turn In Bull Date
	Start	End	
February 6	April 6	April 20	April 30
March 1	April 28	May 12	May 22
April 1	May 31	June 13	June 23

Calving Date	Turn In Bull Date	Prostaglandin Administration Date
February 6	April 30	May 4
March 1	May 22	May 26
April 1	June 23	June 27



## MGA

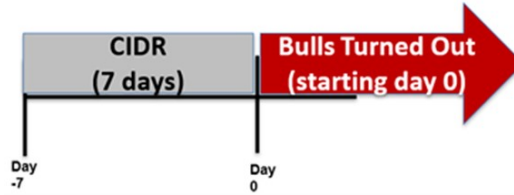
MGA (Melengesterol Acetate) is a product that can be fed as an additive and contains progestin. **MGA is labeled for suppression of estrus in heifers and is not approved for use in mature cows.**

MGA is to be fed to heifers for fourteen consecutive days, and after the withdrawal of ten days, heifers



will start estrus two to six days later. This will be a subfertile estrus and heifers should not be bred. The bull should be turned out with the heifers after day ten of the withdrawal period. MGA can be a good option for cattle producers without a cattle handling facility.

Calving Date	CIDR		Turn In Bull Date
	Insert	Remove	
February 6	April 24	April 30	April 30
March 1	May 16	May 22	May 22
April 1	June 17	June 23	June 23



MGA can be a challenge to use because for it to work, each heifer must be fed half a milligram of MGA per day for fourteen days. Careful feed bunk management must occur. If you have greedy eaters, you may consider separating them to ensure other heifers have a chance to consume the half milligram per day. Below is a table describing when to feed MGA and turn the bull in for desired calving date.

### CIDR Protocol

The use of a CIDR is another way to synchronize estrus. CIDRs are vaginal inserts that contain progesterone. They work by mimicking a corpus luteum. The CIDR produces a low amount of progesterone that prevents estrus from occurring.

CIDRs are inserted and seven days later are removed from the cow. The bull can be turned in with the females on day seven, when the CIDR is pulled, and females should be in heat one to ten days later.

The use of CIDRs is the most expensive option and requires the female to be sent through the chute twice, to insert and remove the CIDR. However, this is the most effective tool in jump starting estrous in females and can be effective in females that are not

cycling and/or are thin (less than body condition score 4).

Estrous Synchronization in Natural breeding cattle programs can positively affect the Ohio cattle producers bottom line, through allowing producers to market calves of like type and size at the sale barn. Estrous Synchronization also helps producers save time and energy by shortening the calving season. As the producer, consider which method of Estrous Synchronization works best for your cattle operation.

## Field Day #2

### Beef Cattle

# Master Finisher

## Program Field Day

COOPERATIVE EXTENSION



Thursday, May 5, 2022



Thursday, May 5, 2022 - 6:30 p.m.

Alan Ahrman Farm

661 Kenton Station Road, Alexandria, KY 41001

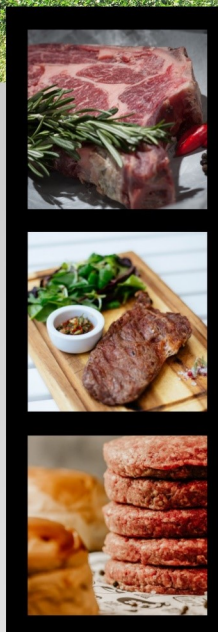
Nutrition and Management Part 2

#### Farming Operation Highlights:

- Hay Sampling and Balancing Rations
- Weigh Calves on a Regular Basis
- Benefits of a good Vaccination Program
- Proper Facilities for Backgrounding and Finishing
- Use of Cameras to Monitor Herd during Calving Season
- Increased Production from Finishing 3 Beeves in a year, to 25 per year, in 3 years

Registration is required

Call 859-572-2600 or online at <https://campbell.ca.uky.edu>



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CAMPBELL COUNTY

# FARMERS MARKET

**2022**

**UK** University of Kentucky  
College of Agriculture,  
Food and Environment  
Cooperative Extension Service

Large variety of home grown produce, breads, honey and other KY Proud commodities. For more information, call 859-572-2600.



**Highland Heights\*— Tuesdays**

Senior Citizens Activity Center  
3504 Alexandria Pike  
**May 17 thru October 25**  
3:00 p.m. to 6:00 p.m.

**Fort Thomas\*\*— Wednesdays**

Mess Hall in Tower Park  
801 Cochran Avenue  
**March 23 thru December 14**  
3:00 p.m. to 6:00 p.m.  
*Hours extend to 7:00 p.m. June-September  
(Senior shopping begins at 2:45 p.m.)*

**Alexandria\*— Fridays**

Southern Lanes Sports Center  
7634 Alexandria Pike  
**May 20 thru October 28**  
3:00 p.m. to 6:00 p.m.

**Newport\*— Saturdays**

Next to Pepper Pod Restaurant  
709 Monmouth Street  
**May 21 thru October 29**  
9:00 a.m. to 12 noon

- \* Accepts WIC, SNAP and Senior Farmer's Market Nutrition Program
- \*\* Accepts SNAP only Supplemental Nutrition Assistance Program



Campbell County  
**Farmers Market**

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LEXINGTON, KY 40546





## Fall Slaw

Servings:6

Serving Size:3/4 cup



### Ingredients:

- 1 cup shredded purple or green cabbage
- 10 ounces fresh Brussels sprouts, shredded
- 1 Granny Smith apple, diced
- ½ cup celery, diced
- 1 yellow bell pepper, diced
- ½ cup dried cranberries
- ¼ cup raw, shelled sunflower seeds
- 2 tablespoons honey
- ¼ cup olive oil
- 2 tablespoons fresh lemon juice
- 1 teaspoon celery seeds

### Directions:

1. In a large bowl, combine cabbage and next six ingredients.
2. In a small bowl, whisk honey with remaining ingredients. Pour over cabbage mixture and toss to coat.

**Source:** Leslie McCammish, Senior Extension Associate for Kentucky Nutrition Education Program, University of Kentucky Cooperative Extension Service

### Nutrition facts per serving:

220 calories; 12g total fat; 1.5g saturated fat; 0g trans fat; 0mg cholesterol; 25mg sodium; 27g carbohydrate; 4g fiber; 19g sugar; 3g protein; 8% Daily Value of vitamin A; 180% Daily Value of vitamin C; 4% Daily Value of calcium; 4% Daily Value of iron

# Managing Price Risk in Feeder Cattle

## Featured topics:

- The basics of futures markets
- Understanding basis
- Hedging with futures
- Setting price floors with put options
- Livestock Risk Protection (LRP) Insurance



**Tuesday, April 12, 2022 - 6:30 p.m.**

**Environmental Education Center  
at A.J. Jolly Park**

1261 Race Track Road, Alexandria, KY 41001

**Speaker: Kenny Burdine, UK Ag Economics Specialist**

## Registration:

Call 859-572-2600 or online at  
<https://campbell.ca.uky.edu>

*Michelle Simon*

Michelle Simon  
Campbell County Extension Agent for Agriculture  
and Natural Resources

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Disabilities  
accommodated  
with prior notification.