



Agricultural News

College of Agriculture,
Food and Environment

Cooperative Extension Service

Robbie Smith

Agent for Agriculture/
Natural Resources

Summer 2022

Rob's Report

CAIP Signups	2
Rinse & Return	3
Feeder Cattle Futures	4
Understanding A Seed Tag	7
Reviving Drought Stressed Pastures	8
Forage Seeding Chart	11
Assessing Potential Corn Yield Losses	12
Be Prepared for More Open Cows	14

Many of you may remember that this time last year we were in a war with a crawling army. Yes Armyworms were the talk of the ag and yard communities as the critters devoured pastures and lawns alike. Thankfully we won't be seeing a repeat of that devastation.

Unfortunately, this year it seems we are in the feast or famine mode. Extreme heat and no rain are making it necessary to look to the future on our corn crops and early beans. There is a need to make decisions on whether the crop has made enough to keep for harvest as a dry grain or if it needs to be ensiled or hayed now. See inside this newsletter for information on crop estimates on corn from Dr. Chad Lee.

Three weeks ago I was beginning to have conversations about feeding hay in August and September to cattle with the hope that we can build pastures going into the fall. Thankfully with the rains that discussion can be put on hold and our focus now should be on renovating pastures and hay fields that were damaged by the heat and drought. I know it is tough to think about renovation and sowing seeds in this cost environment but there may be light at the end of the tunnel for seed prices. See page 6 for some insight into why the seed prices are so high and why they could be coming down in the future months.

As always, we are here when you need us .



CAIP SIGNUPS

COUNTY AGRICULTURE IMPROVEMENT PROGRAM

Application
Period

**AUGUST 15TH
TO
SEPTEMBER 2ND**

Administered by
Nelson County Soil Conservation
2001 Buchanan Blvd.
Bardstown, KY 40004
(502) 348-3363 ext 3
Call Gale to sign up

Eligible Investment Areas:

- Agricultural Diversification
- Large Animal - Small Animal
- Farm Infrastructure
- Fencing & On-Farm Water
- Forage & Grain Improvement
- Innovative Ag. Systems
- On-Farm Energy
- Poultry & Other Fowl
- Technology & Leadership Development
- Value Added & Marketing



This year you will need to request an application from Soil Conservation during regular business hours. You will need to fill it out on your own and return it to the Conservation office



All applications are scored, based on the scoring criteria set by the Kentucky Agricultural Development Board.



This sign-up includes both CAIP and Next Gen CAIP (for folks under 40)



If you plan to sell or buy a bull in this program the animal will need to be genomically tested to qualify. Call Robbie Smith for details.



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

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, or physical or mental disability. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating.

LEXINGTON, KY 40546



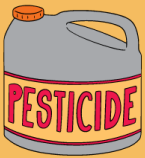
Disabilities
accommodated
with prior notification.



Rinse and Return

CHEMICAL CONTAINER RECYCLING PROGRAM

The Rinse and Return Program has collected 1,892,000 pounds of pesticide containers since its inception with more than 100 counties participating.



Rinse and Return

Due to the materials previously held by these pesticide containers they cannot be recycled with your ordinary household plastics. This program allows for the proper recycling of these pesticide containers.

How it Works

Once the pesticide container is emptied remove the top from the container and drain it for 30 seconds into the mixing tank. Next, fill the container 10% to 20% full of water, secure the top on the container, and swirl the container to rinse all inside surfaces. Now drain the rinse material into your tank from the container. Repeat this rinsing action two more times. Puncture the container on the bottom after draining is complete and bring it to the drop location.



End Products

Some of the end products include drainage pipe, highway sign posts, underground utility conduit, and wire/cable spool flanges.

Containers can be brought to the Nelson County Extension
Office on August 15th from 12:30 to 2:00pm
317 South Third Street
Bardstown KY 40004

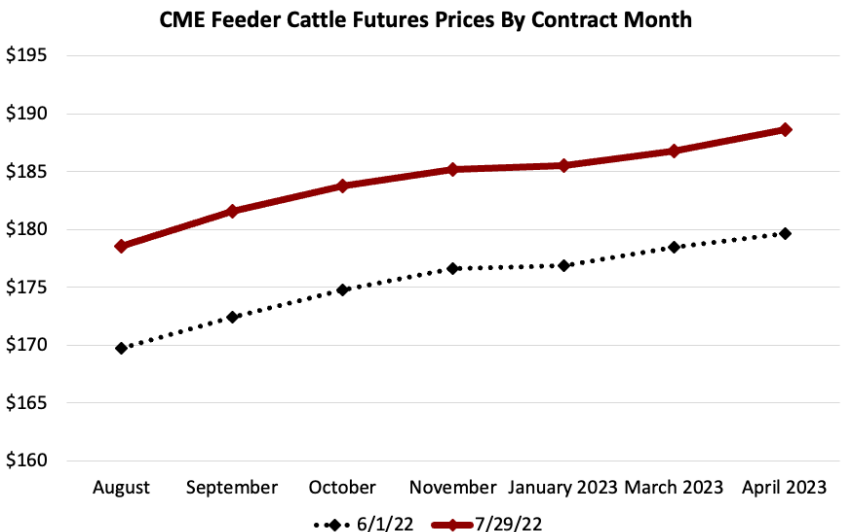
Feeder Cattle Futures

By Josh Maples

The July Cattle Inventory report continues to show a tightening supply of cattle. Tighter supplies are expected to be a main driver of stronger cattle prices over the next few years. The December Corn futures contract is down more than \$1 per bushel since mid-June which also has a positive impact on cattle market expectations. In this week's newsletter, we'll look at Feeder Cattle futures markets.

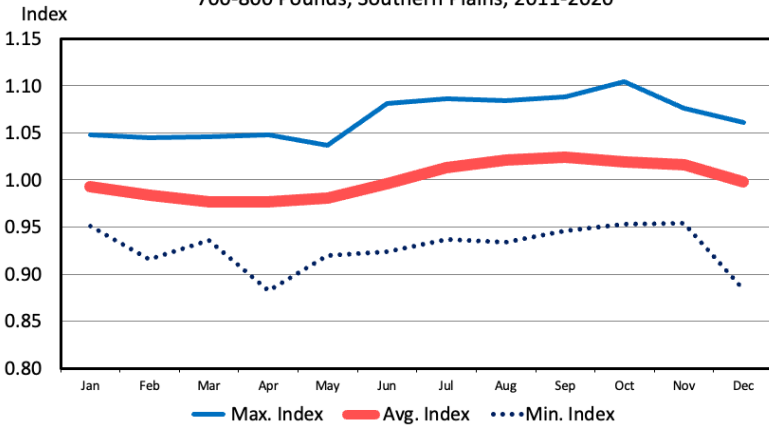
contracts reflect expected prices per hundred weight (CWT) for 700-899 pound feeder cattle within a 12 state region that includes the bulk of feeder cattle sales. There are separate contracts for different months in the future. For example, the "nearby," or closest to expiring, contract is the August 2022 contract. However, there are also other feeder cattle contracts currently trading, with the only difference being the expiration month.

The CME Feeder Cattle futures



SEASONAL PRICE INDEX – FEEDER STEERS

700-800 Pounds, Southern Plains, 2011-2020



Data Source: USDA-AMS, Compiled & Analysis by LMIC
Livestock Marketing Information Center

The chart to the left shows the actively trading contracts by expiration month through April 2023. Looking at contract prices across months allows us to consider market expectations for cattle markets into next year. The August 2022 contract is currently the lowest price of the set, and every consecutive contract is higher than the previous. This is a clear signal that traders are expecting feeder cattle prices to increase into 2023. It is also worth noting that a continued increase during the winter would happen at a time when feeder cattle prices typically face seasonal

pressure (chart above).

The solid line in the chart above represents contract prices as of last Friday. The dotted line represents prices from June 1st. Contract prices are up approximately \$10 per CWT across all contracts since June 1. The spring 2023 contracts are currently trading near \$190 which, if actually observed, would mean feeder cattle prices not seen since 2015. Strong market expectations also mean there may be some attractive risk management opportunities for producers depending on your goals.

Spring 2021 in Oregon was the driest and hottest spring on record. As a result, forage seed producers had an early harvest last year. In contrast, Spring 2022 in the Willamette Valley of Oregon, was one of the coolest and wettest years on record. Ninety percent of the cool season grass seed sold in the U.S. is grown in Oregon and adjoining states. Due to the wet, cool spring the Oregon forage seed harvest was 7-8 days later than normal. This late crop will make it difficult for our industry's seed processors, seed labs, and warehouses to get seed out to customers in a timely manner.

All the rain has helped produce what looks to be an average to above average crop in the Pacific Northwest. It has also created above average weed seed pressure and producers are expecting a dirtier crop. This will force the seed processors to run slower, resulting in less seed cleaned per hour. Therefore, the supply of high quality, weed free seed will be more of a challenge this year. The forage seed crop report from Minnesota and Cana-

da is similar. They anticipate an average to above average crop and a later harvest due to cool weather. The upper Mid-West crop is forecasted to be a week to 2 weeks later than normal. Historical high seed prices, average to above average seed yields, high agricultural commodity prices, and uncertainties in the economy are just a few examples of why many are nervous about seed prices going forward. Growers will require higher prices for the 2022 crop, due to greater input costs, land rent increases, ROIs of competing crops and strong open market (not contracted seed) pricing.

There is a historically low seed carryover available in the Pacific Northwest this year. Much of the carryover inventory seems to be in the hands of consumer products/retail companies. Low carryover inventories, late harvest with processing delays, and freight challenges play a critical role in why we are anticipating seed availability limitations well into the fall season until inventories can be replen-

UNDERSTANDING A SEED TAG

GERMINATION RATE
Germination percentage by seed variety

VARIETY AND KIND
Variety and kinds of grass contained in the product

PURE SEED
Percentage by weight of each grass variety and kind

OTHER CROP SEED
Other seeds that comprises of 5% or less of the product

INERT MATTER
Non seed materials such as mulch or fertilizer

WEED SEED
Percentage of weed seed contained in the product identified by state

NOXIOUS WEEDS
Number of noxious weed seeds contained per pound. Noxious weeds are regulated and may be restricted by state.

GUARANTEED ANALYSIS
Guaranteed analysis for fertilizer containing products

LOT NUMBER
Production lot identification number

TEST DATE
Germination test date

SELL BY DATE
Sell by date variable by state

OneStep Complete Seeding Mixture
For Sun and Shade Areas .6 - 0 - 0 MAT: 100520281
Sun and Shade Mixture NET WT: 5 POUND

PURE SEED	VARIETY	KIND	GERMINATION	ORIGIN
4.00%	REBEL XTREME TALL FESCUE		85%	OR
1.80%	PENNINGTON ATF1376 TALL FESCUE		85%	OR
1.70%	VIRTUE II TALL FESCUE		85%	OR
1.00%	BLUE BONNET KENTUCKY BLUEGRASS		80%	WA
0.80%	PENNINGTON ASC295 RED FESCUE		85%	OR
0.70%	SURVIVOR CHEWINGS FESCUE		80%	OR

0.09% OTHER CROP SEED
89.90% INERT MATTER¹
0.01% WEED SEED

¹(CONSISTS OF 84.50% MULCH, 5.00% FERTILIZER, 0.40% INERT FROM SEED)

NOXIOUS WEED: NONE FOUND PER POUND

GUARANTEED ANALYSIS: .6 - 0 - 0

Total Nitrogen (N)..... 0.60%
0.60% Urea Nitrogen
Derived From: Urea
SOIL AMENDING GUARANTEED ANALYSIS
Active Ingredients:
84.50% Mulch
Soil Amendment Inert Ingredients:
10.50% Seed
5.00% Fertilizer

INFORMATION REGARDING THE CONTENTS AND LEVELS OF METALS IN THE PRODUCT IS AVAILABLE ON THE INTERNET AT: <http://www.aapfco.org/metals.htm>

LOT# MH14WWS001

TEST DATE 12-14

In AK, AZ, CA, CO, CT, DE, ID, IL, MD, MN
NC, ND, NE, NH, NJ, NV, NY, OH, OR, PA, SC
UT, VA, VT and WA SELL BY: 03/31/2016
In MA, MT, SD, WI and WY SELL BY: 12/31/2015
In FL SELL BY: 07/31/2015
In all other states SELL BY: 09/30/2015

GUARANTEED BY:
Pennington Seed, Inc. P.O. Box 338 Greenfield, MO 65661

PENNINGTON
THE GRASS SEED PEOPLE[®]

ished. As the grass seed supply chain starts to fill back up, we could see softer markets later this fall, but likely too late to

help seed prices for fall planting in KY.

Excerpted from the Mt. View Seed newsletter.

Reviving Drought Stressed Pastures

by Chris Teutsch (First appeared in Cow Country News)

Reviving Drought Stressed Pastures A very hot and dry early summer combined with overgrazing has significantly reduced pasture growth and vigor in many areas of Kentucky. Fortunately recent rains will be of great benefit. And drought stressed pastures often look worse than they really are. This is especially true for pastures that were well managed prior to drought. In many cases pastures can be revived without reseeding. The key element is rainfall. On the flipside, pastures that have been grazed closely and continuously prior to drought often do not fare as well during and after drought. The following are some considerations for reviving drought stressed pastures. Rest pastures during and after drought. Close the gates! The worst possible thing that we can do during and after a drought is to allow livestock access to all the pastures. During a drought, confining animals to one pasture and

feeding hay limits damage to a single pasture and allows the other pastures to adapted to the drought stress. Following a drought, it is important to keep those animals confined to the sacrifice while other pastures recover. This allows pasture plants to rebuild their photosynthetic factory (leaf canopy) and store up sugars and carbohydrates before the winter months. The stockpiled growth that accumulates during this recovery period can then be used for grazing during the winter months after plants have gone dormant. Fertilize pastures according to soil test. Fertilizing pastures this fall can help to strengthen plants and get them ready to grow next spring. Adjust the soil pH to 6.0 to 6.4, apply phosphorus and potassium according to your soil test, and apply 50-60 lb nitrogen/A in midAugust to early-September for stockpiling.

(Continued on page 9)

(Continued from page 8)

Alternatively, a smaller amount of nitrogen (30 to 40 lb/A) in November or early December can be applied to enhance spring growth. A late-season nitrogen application will not produce a great deal of fall growth, but it will stimulate tiller production and root growth. Pasture growth will start earlier in the spring stands will be thicker.

Interseed legumes into thin stands. Legumes such as red and white clover, and alfalfa are important components of sustainable grassland ecosystems. They form a symbiotic relationship with rhizobium bacteria in which nitrogen from the air is fixed into a plant available form. They also dilute the toxin in tall fescue infected with the toxic endophyte and in some cases may even reverse the negative effects of the endophyte. Pasture sod suppressed by drought and overgrazing provide a perfect opportunity for interseeding clover and alfalfa. Legumes can be either drilled in the fall or spring or frost seeded in late

winter. Frost seeding works best with red and white clover and annual lespedeza. Alfalfa is better established using a no-till drill. For more information on selecting varieties and overseeding contact your local extension agent or visit the UK Forages Webpage at <http://forages.ca.uky.edu/>. Plant winter annuals. In some cases, drilling cool season annuals, such as small gains, annual ryegrass, and brassicas into dormant sods can be cost effective. In this situation, sods are normally in very poor condition and there are simply not enough remaining plants to actively compete with the cool-season annuals. However, interseeding cool-season annuals into a dormant sod that was well managed prior to the drought does not normally work as well as expected. This is due to the fact that the ground is very dry and when the rain finally comes the seed not only starts to germinate and grow, but so does the dormant sod. An established fescue sod has an

(Continued on page 10)

(Continued from page 9)

extensive root system that competes well for limited moisture. On the other hand, newly established seedlings have a very small root system and are at a serious disadvantage when competing for water and light with an established fescue sod. The best place for cool-season annuals is on cropland or areas that had summer annuals that has already been harvested or grazed. In general production on these areas will be greater due to the absence competition. In order to optimize late fall and early winter production, these mixtures should be seeded in mid to late-August, given soil moisture is adequate for germination and emergence. Include brassicas in mixture. Rape and turnips can be planted in late summer to provide late fall and early winter grazing. All brassicas require well-drained, fertile soils and a near neutral pH for optimum production. Strip grazing is needed to maximize utilization of brassicas.

Brassicas can be 90% digestible and can cause health disorders if not properly managed. Problems can be avoided by following several commonsense recommendations: 1) introduce animals to brassica pastures slowly, 2) never turn hungry animals that are not adapted into brassica pastures, 3) brassicas should not make up more 75% of diet, and 4) plant a mixture of brassicas and cool season annual grasses, 5) allow access to grass pasture or dry hay at all times. It is important to remember that drought alone rarely kills well managed pasture plants. In most cases pastures can be revived with rain, rest, and a little fertilizer. Weakened sods provide a prime opportunity for incorporating legumes in established pastureland. With a little tender loving care and rainfall this year's drought stressed pastures will be next year's green meadows. ~Chris Teutsch, from Cow Country News.

Forage Seeding Chart

Fescue

Prime time to seed is August 15th thru September 15th. Rate is 15 to 25 pounds per acre at a 1/4 to 1/2 inch deep

Alfalfa

Should be sown in the fall between Aug. 1st and Sept. 15. The rate is 15 to 20 lbs per acre and should be planted at a depth of 1/4 - 1/2

Orchardgrass

Prime time to seed is August 15th thru September 15th. Rate is 15 to 25 pounds per acre at a 1/4 to 1/2 inch deep

Timothy

Should be sown between Aug. 20 and Oct. 1. The rate should be 6-8 lbs per acre and planted at a depth of 1/4 - 1/2

Annual Ryegrass

For winter grazing it should be sown between August 15th and October 1st. 20 to 30 lbs per acre at 1/4 to 1/2 inches deep

Winter Wheat & Oats

Should be planted for forages between Oct 1 and October 15. The rate should be 2 to 2.5 bushels per acres at a depth of 1-2 inches



For the entire AGR 18 (Grain and Forage Crop Guide) scan the QR code to the left

Assessing Potential Corn Yield Losses by Dr. Chad Lee

Even with the rains near the end of last week, corn in some fields has been severely damaged by a lack of water. Some farmers are calling insurance adjusters trying to decide if they can cut the corn for silage to get some-thing from their crop. In most cases, the farmer would have to leave a strip or strips of corn in the field for yield estimates later.

The concern with this is that the corn could end up doing better than expected. A farmer's worst-case scenario is cutting the corn for silage, leaving those strips of standing corn, and having rains that turn the crop around and yield 71% of the 5-year average, and the field was insured at 70% of the 5-year average.

If possible, let the corn get through pollination. Corn ears with less than 400 kernels per ear likely have yield loss. Corn with 300 kernels or less will likely have yield losses that trigger crop insurance. Table 1 below lists the yield components that

make yield, including ears per acre, kernels per ear and kernel size (listed as kernels/ bushel). Ears per acre and kernels per ear determines the number of kernels per acre. Kernels per acre divided by Kernels per bushel equals bushels per acre.

Table 1 includes three kernel sizes, 80, 90, and 100 thousand kernels per bushel. Good weather during seed fill will usually get most corn-fields close to 80 thousand

kernels per bushel. Very stressful conditions will result in smaller kernel sizes and get corn-fields closer to 100,000 kernels per bushel.

A corn crop cannot makeup yield for very low kernel numbers. For example, if a corn field only has 200 kernels per ear, but has a good seed filling weather, it may

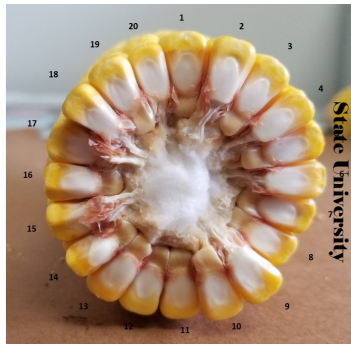


Photo from North Carolina State University

(Continued on page 13)

(Continued from page 12)

have larger kernels. However, yields may only get to 75 bushels per acre. Conversely, if a corn field has 400 kernels per ear, but poor seed fill conditions, the field might yield 120 bushels per acre.

Estimating yield is not an exact sci-

ence. The farmer probably needs to grab 20 or more ears in a field to estimate kernel numbers per ear. The estimate is only as good as sampling area. If the farmer chooses the worst spot of the field or the best spot of the field, that will skew the estimate yield one way or the other.

A. Yield Estimates for Average Kernel Size (80,000 kernels per bushel)						
ears/acre	x	kernels/ear	÷	kernels/bushel	=	Bu/A
25,000	x	200	÷	80,000	=	63
25,000	x	300	÷	80,000	=	94
25,000	x	400	÷	80,000	=	125
25,000	x	500	÷	80,000	=	156
25,000	x	600	÷	80,000	=	188
30,000	x	200	÷	80,000	=	75
30,000	x	300	÷	80,000	=	113
30,000	x	400	÷	80,000	=	150
30,000	x	500	÷	80,000	=	188
30,000	x	600	÷	80,000	=	225
B. Yield Estimates for Small Kernel Size (90,000 kernels per bushel)						
ears/acre	x	kernels/ear	÷	kernels/bushel	=	Bu/A
25,000	x	200	÷	90,000	=	56
25,000	x	300	÷	90,000	=	83
25,000	x	400	÷	90,000	=	111
25,000	x	500	÷	90,000	=	139
25,000	x	600	÷	90,000	=	167
30,000	x	200	÷	90,000	=	67
30,000	x	300	÷	90,000	=	100
30,000	x	400	÷	90,000	=	133
30,000	x	500	÷	90,000	=	167
30,000	x	600	÷	90,000	=	200
C. Yield Estimates for Very Small Kernel Size (100,000 kernels per bushel)						
ears/acre	x	kernels/ear	÷	kernels/bushel	=	Bu/A
25,000	x	200	÷	100,000	=	50
25,000	x	300	÷	100,000	=	75
25,000	x	400	÷	100,000	=	100
25,000	x	500	÷	100,000	=	125
25,000	x	600	÷	100,000	=	150
30,000	x	200	÷	100,000	=	60
30,000	x	300	÷	100,000	=	90
30,000	x	400	÷	100,000	=	120
30,000	x	500	÷	100,000	=	150
30,000	x	600	÷	100,000	=	180

Be Prepared for More Open Cows

by Dr. Les Anderson

Shew, it's been a rough summer. On top of high fuel costs, current inflation, and high input costs, beef producers have had to deal with drought and extreme heat. Heat stress is normal for cattle in Kentucky because most of our cattle graze endophyte-infected fescue but the early onset this summer may cause some serious issues with pregnancy rates and calving rates. Heat stress has profound impacts on many biological processes that can lead to poor reproductive rates. Prior to estrus, heat stress reduces follicle growth, hormone production, and oocyte (the egg) competency. Combined, this reduces fertilization rates. Once fertilized, heat stress also reduces the growth of the newly formed embryo. This reduction in the growth of an embryo is likely the result of increased cell death and/or a smaller corpus luteum (CL) that produces less progesterone. This reduced growth rate and increased embryonic cell death leads to more embryos lost during the first week of gestation. Unfortunately, heat stress continues to impact embryonic growth through the first 21 days which also increases the loss of these early pregnancies. Issues with heat stress continue throughout

gestation. Exposure of early pregnancies (day 24-45) to heat stress reduces fetal growth and can result in the loss of up to 20% of these pregnancies. Heat stress reduces placental efficiency meaning the placenta has a reduced ability to deliver nutrients to the developing fetus. Toward the end of pregnancy, extreme heat stress can impact placental hormone production which can lead not only to premature



calving but also to drastically reduced development of the mammary glands impacting lactation. So, heat stress impacts beef females from the beginning to the end of pregnancy. Ugh. What does this mean for beef producers right now? First and foremost, have pregnancy diagnosed in your herd. Contact your herd veterinarian to set up a palpation or ultrasound. Pregnancy can also be diagnosed by taking a blood sample and either mailing the samples to a diagnostic lab or by using

(Continued from page 14)

the new chute-side blood test kit from IDEXX (test is called Alertys and they are available from most veterinary supply companies). The blood tests are accurate but consultation with your herd veterinarian is always recommended. Pregnancy rate can dip to as low as 50-60% when prolonged heat stress occurs during the breeding season. What options does a producer have if a breeding disaster occurs? If you have a split calving season or calve year-round, the decision to keep or cull open females is a little easier. Simply roll cows younger than 5 years old over to the next breeding season. The decision is harder if you only have cows calving in the spring. Currently, cull cow prices are high and many market analysts suggest that cull cow prices may remain high this fall. If the cost of replacement breeding stock remains reasonable, then the optimum decision would be to cull and replace for this year. Most years, the decision to cull open cows isn't easy. Some would argue to cull all females that cannot conceive in her environment because her genetics did not match her environment or level of management. But genetics for reproduction are lowly heritable, so genetics are a very small contributor to reproductive failure. Also, if you only have a drought and excessive heat stress once every 5-10 years, should

you penalize a cow whose genetics match the environment most of the time? To make the decision even more challenging, often cows that are culled are replaced with bred two-year olds, who are inherently reproductively inefficient, will require additional feed inputs, and may take two years to reach optimum productivity. In the long run, what really costs more? Interesting problem to think about and certainly not one answer for all producers. The markets, and where we are in the cattle marketing cycle, should impact the decision. Currently, cow numbers are extremely low in the US which normally results in higher calf prices. I got some incredible advice from an experienced beef producer a few years ago. Pap had run over 1,000 cows for decades and his strategy was when prices are high, own as many cows as you can and sell as many calves as you can. Extend the calving season if you need to because every calf sold was profitable. Pap didn't care to keep open females at all. However, when prices were low, Pap controlled the calving season tightly and culled cows that didn't conceive. Pap's philosophy was when times were lean be efficient and when times were good, be productive. Good advice. It appears we are in an excellent position in the cow cycle with low number and impending higher feeder calf prices. Might be time to keep as many as you can afford to prepare you to take advantage of the higher cattle prices on the horizon.

HK Cooperative Extension Service

Nelson County

317 S 3rd St
Bardstown, KY 40004

Phone: 502-348-9204

RETURN SERVICE REQUESTED