



# Master Cattleman Quarterly

Oklahoma State University

## Cattle and Beef Markets Looking Brighter

*Derrell S. Peel, Extension Marketing Specialist*

After a tumultuous first half, cattle and beef markets are seeing improvement and more stability in the second half of 2020. Through the summer, feeder cattle prices have been grinding higher and in recent weeks, boxed beef and fed cattle prices have moved sharply higher.

Severe disruptions in cattle slaughter in April and May resulted in a large backlog of fed cattle and pushed carcass weights higher. Slaughter capacity has recovered and, since late June, has averaged just 0.5 percent below year earlier levels. Carcass weights have been higher year over year, even before COVID-19 impacted cattle slaughter, but especially since fed cattle backed up in the second quarter. Steer carcass weights, for example, have averaged over 32 pounds higher year over year so far this year. In recent weeks, beef production has been higher by nearly three percent year over year but is down about two percent for the year to date. Beef production is expected to be higher for the balance of the year and is projected to be another record annual total of 27.4 billion pounds.

With plentiful beef supplies and record supplies of pork and poultry as well, beef demand will be key for beef markets in the second half of the year. This includes both domestic and international demand. Although food service markets remain diminished and only slowly opening, total beef demand has remained strong this year. Weak macroeconomic conditions could put additional pressure on beef demand going forward.

Beef export forecasts for the year have been revised down with lower exports to three of the five largest beef export markets in the

second quarter. Total beef exports were down 23.1 percent in the second quarter. Beef exports to Japan, the largest beef export market, are still up 5.6 percent for the year to date, though down 4.1 percent in the second quarter. South Korea, number two for beef exports, is down 7.4 percent for the year following a 25.5 percent second quarter decrease year over year. Beef exports to Mexico are down 37.7 percent in the first half following a 67.1 percent second quarter decrease. Canada is up 12.0 percent for the year to date and is now the number three beef export destination. Hong Kong is down 8.0 percent for the year but combined China/Hong Kong beef exports are up fractionally for the first half of the year following sharply increased, but still small, beef exports to China.

Much uncertainty remains including ongoing COVID-19 impacts, a weak U.S. and global economy, a diminished food service sector and large supplies of all proteins. Nevertheless, there is reason for some optimism in cattle and beef markets. Cattle numbers continue to slowly tighten and will lead to reduced beef production in 2021. Feedgrain supplies will be ample and ration costs will be favorable for feedlots and support feeder cattle markets. Beef demand faces some threats but has been resilient so far providing encouragement going forward. Cattle producers should proceed with plans but with caution, using risk management as appropriate, and remain as flexible as possible to adjust production and marketing plans under extraordinarily dynamic economic conditions.

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## Vaccine Handling

Brian Freking, SE Area Livestock Specialist

Studies from the University of Arkansas<sup>1</sup>, the University of Nevada<sup>2</sup>, and the University of Idaho<sup>3</sup> have indicated that veterinary vaccine product efficacy is at risk due to improper handling and storage. Most animal vaccines require maintenance at refrigeration temperatures of 35-45°F. Yet these studies showed that anywhere from 25% to 76% of refrigerators used for vaccine storage in the livestock industry failed to maintain these temperatures.

In addition, other improper handling and storage procedures, including exposing vaccine to ultraviolet light from the sun or to temperature extremes and using improper injection techniques, can render vaccine less efficacious or even useless. Livestock do not gain immunity from vaccines that are damaged, destroyed, or altered through improper handling and storage practices.

Two common types of vaccine are killed (K) and modified live (MLV). Killed vaccines are made by growing an organism that is inactivated or killed by utilizing chemicals or heat. Modified-live vaccines are made with a virus or bacterium that is attenuated, or weakened, so the organism will not cause disease in most healthy animals but will still stimulate immunity. Killed vaccines are considered safer but typically not designed for long term immunity. Modified-live vaccines need to be reconstituted as they are not stable in solution. Therefore, when mixing MLV, you should use the product within 2 hours and it should be kept cool - thus the need for a cooler as a good management practice for storing syringe guns as shown. The advantage of MLV products is they generally promote a longer active immune response.

Refrigeration temperature monitors can be a good investment. Monitor and record temperatures at least weekly. Consider the age of the appliance and the location (barn, porch, or other storage areas) of the refrigerator. Refrigerator location can have a substantial impact on how efficiently the refrigerator operates. For example, a refrigerator kept in a non-insulated barn may be adversely affected by high and low ambient temperature extremes. These temperature extremes can damage products stored inside the refrigerator.

### BQA Tips to Remember:

- Do NOT use vaccines that are or have been frozen
- Never enter the vaccine bottle with a used needle
- Practice good sanitation of equipment and the working environment
- Triple rinse repeating syringes with boiling water and don't use a disinfectant as this may inactivate vaccines following cleaning
- Record product lot numbers, administration dates, and withdrawal times
- READ AND FOLLOW LABEL INSTRUCTIONS
- Maintain vaccination records for a minimum of 3 years

<sup>1</sup>Troxel, T.R., and B.L. Barham. 2009. Case Study: The Temperature Variability of Refrigerators Storing Animal Health Products. *The Professional Animal Scientist* 25:202-206.

<sup>2</sup>Torrell, R. 2006. Back to Basics: Frozen Vaccines. *Angus Beef Bulletin* Oct.:72, 74

<sup>3</sup>Fife, T.E., J.B. Glaze, Jr., K.S. Jensen, N.Rimbey, S.L. Kane, S.D. Baker, J. Church, S.J. Etter, D. Gunn, G. Keetch, S. Nash, S. Williams, and R.L. Wilson. 2013. Animal Health Product Handling and Management by Idaho Producers and Retailers. *The Professional Animal Scientist* 29:313-320.



**Livestock Risk Protection**

Amy Hagerman, Oklahoma State University Assistant Professor

LRP for feeder cattle is an insurance product that protects against price declines. The insurance, subsidized by USDA Risk Management Agency (RMA), opened for applications on July 1, 2020. Policies are sold through RMA approved insurance agents for feeder cattle and fed cattle, but this article will focus on feeder cattle policies for cow-calf producers. In the 2020-2021 policy year there are a few changes that may work in your favor. Could LRP be a good choice for your operation this year?

The first consideration is what kind of protection a cattle operation needs. LRP only insures against price declines. The coverage levels range from 70% of the end value of the animals, up to 100%. Subsidies were increased in 2020 for coverage levels of 80% or greater by 5 percentage points. To get the exact subsidy for a specific policy, talk to an RMA approved insurance agent.

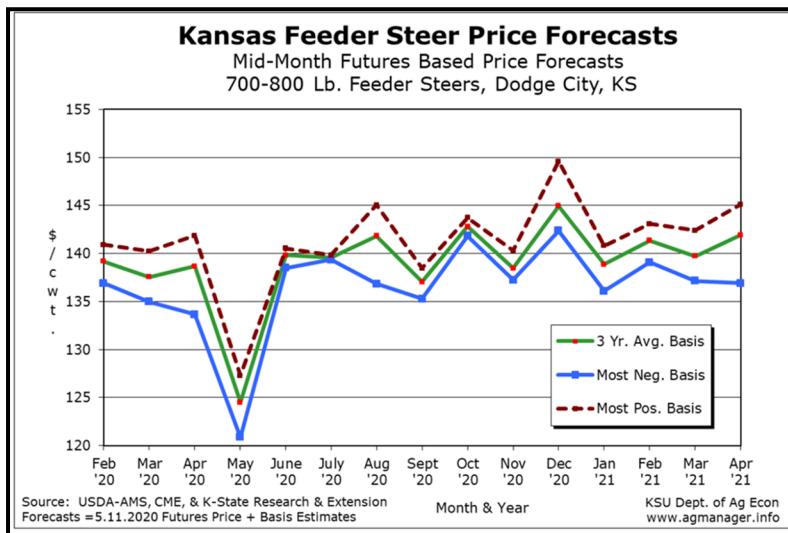
LRP policies are purchased for each state in which cattle are physically located, but are not based on the local cash price. Instead the actual end value of the animals is determined by the CME® Feeder Cattle Price Index. According to the CME, *“The Index is a seven-day weighted average and is defined as the total dollars sold during the seven-day period divided by the total pounds of feeder steers sold during the same seven-day period.”* The value of using a rolling weekly weight average is that it smooths out some of the local or daily volatility.

The second consideration is when insurance is needed. If the actual ending value at expiration is greater than the coverage price for the endorsement purchased, an indemnity is paid for the difference. LRP offers endorsements for 13, 17, 21, 26, 30, 34, 39, 43, 47, or 52 weeks.

The LRP requires a one-time application, but you can buy specific coverage endorsements in any month through the year from July 1, 2020 until June 1, 2021. NEW in 2020, producers will not have to pay the premium until the end of the endorsement period.

Let’s consider an example for a cow-calf producer with 150 stockers on small grains, and a breakeven selling price above total costs of \$143.76. Using the Kansas Feeder Cattle Forecast from Ag Manager (below), price may be at or below that level in March of 2021. So this producer may want to explore LRP as a way to protect against prices falling below the breakeven for his/her operation. Recall, the actual price isn’t based on the local cash price, but the feeder price index.

For simplicity, assume all 150 stockers are steers that are expected to weigh 750 pounds on average in March of 2021. As of August 10, the producer could buy an LRP policy on steers 600-900 pounds for 30 weeks



(March 8 closing date) and a 90% coverage level at a coverage price of \$143.15. However, the producer would still have to pay the premium on that policy of \$3.45 per cwt. The producer could bump up to 92% coverage and receive a \$145.35 coverage price for an additional \$0.57 per cwt in cost. Coverage could be continued up to 99% coverage with a coverage price of \$156.35 and a cost of \$8.32 per cwt.

LRP insurance will cover any size operation, and will protect against price declines. Consult a RMA approved insurance agent if you think LRP might be right for your operation. To find an approved agent, visit the RMA agent locator at: <https://rma.usda.gov/Information-Tools/Agent-Locator-Page>.

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**Beef Quality Assurance Program Earns Compliance With International Animal Welfare Standards**

*Bob Levalley, Oklahoma Beef Quality Assurance Coordinator*

The Checkoff-funded National Beef Quality Assurance (BQA) Program, managed nationally by the National Cattlemen's Beef Association (NCBA), and in Oklahoma by the Beef Council and OCES, is now recognized as meeting industry-leading animal welfare program standards. The U.S. Department of Agriculture (USDA) has reviewed and certified that the BQA program complies with the International Organization for Standardization (ISO) Animal Welfare Management/General Requirements and Guidance for Organizations in the Food Supply Chain. The ISO specification was developed in 2016 to provide a path for programs to show they are aligned with the principles of the World Organization of Animal Health (OIE) Terrestrial Animal Health Code and ensures the welfare of farm animals across the supply chain.

"USDA's affirmation that the program complies with ISO specifications is an important recognition of U.S. cattle producers' continued commitment to delivering a safe, high quality beef supply while maintaining the highest animal welfare standards," said Dr. Julia Herman, Beef Cattle Specialist Veterinarian for NCBA. Developed more than 30 years ago, the BQA program has become the industry standard for delivering education and resources to cattle producers. Much of the U.S. beef supply today is managed by

BQA-certified farmers and ranchers, according to the National BQA Database. By partnering with state programs across the country, the program reaches cattle producers on operations of all sizes, in all corners of the nation, with digital and in-person training and certification.

To earn certification for animal welfare standards, the BQA program underwent a thorough audit process which evaluated the program's principles, guidelines and standards across its many resources, including the BQA National Manual and Self-Assessments. This recognition means the BQA program is listed on USDA's Quality Assessment Division [website](#) as compliant with the ISO specification.

"BQA's recognition by USDA of ISO compliance clearly shows that animal welfare is a top priority for America's cattle producers and global consumers can rest assured that the American beef they consume is produced in accordance with the highest animal welfare standards in the world," said Kent Bacus, NCBA senior director of international trade and market access.

OQBN now requires BQA certification. Questions? Contact OQBN Coordinator Jeff Robe at [jerobe@okstate.edu](mailto:jerobe@okstate.edu).

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**Pastureland Values in Oklahoma**

*Roger Sahs, Oklahoma State University Extension Specialist*

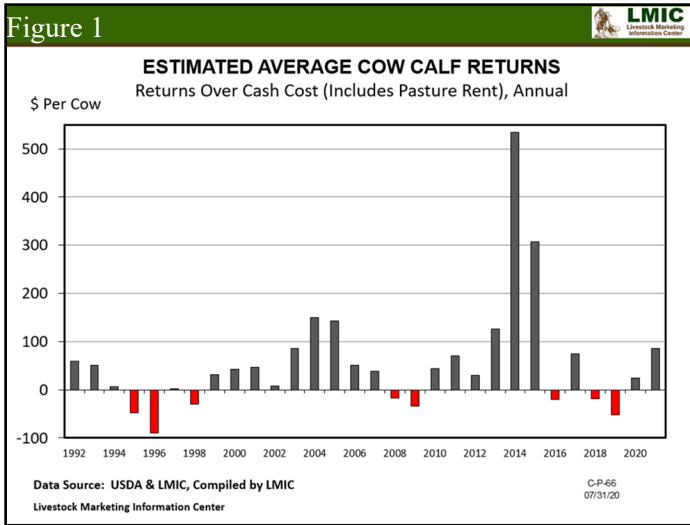
The latest trends and patterns in Oklahoma's agricultural real estate landscape have been updated through 2019 and can be found at <http://agecon.okstate.edu/oklandvalues>. Statewide statistics, regional comparisons, and county summaries are presented in chart and tabular form. Per acre values shown for cropland and pasture are the averages of tracts comprised of 85%+ cropland and pasture, respectively. The Farm Credit Associations of Oklahoma provided information covering over 1500 sales tracts that were considered representative of the 2019 agricultural land market. These market-based estimates provide a perspective into the characteristics of recent sales as well as benchmark indicators for studying trends over time.

The recent performance by the livestock economy (namely cattle) and future earnings expectations carry a great deal of weight on the pastureland market in Oklahoma. Pasture values grew a modest 2.1% last year on top of 1.6% in 2018. According to the OSU study, this is the sixth consecutive year that pastureland has outperformed cropland on a percentage basis. Given the recent effects of COVID-19 and heavy beef supplies, one might expect some downward pressure in the markets going forward. Fortunately, the status of the state's forage base looks very good at this point, providing sufficient grazing conditions and an opportunity to build hay inventories. In addition, we remain in a subdued interest rate environment that provides support by lowering operating costs and makes it easier to finance major capital purchases

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Pastureland Values in Oklahoma (cont.)

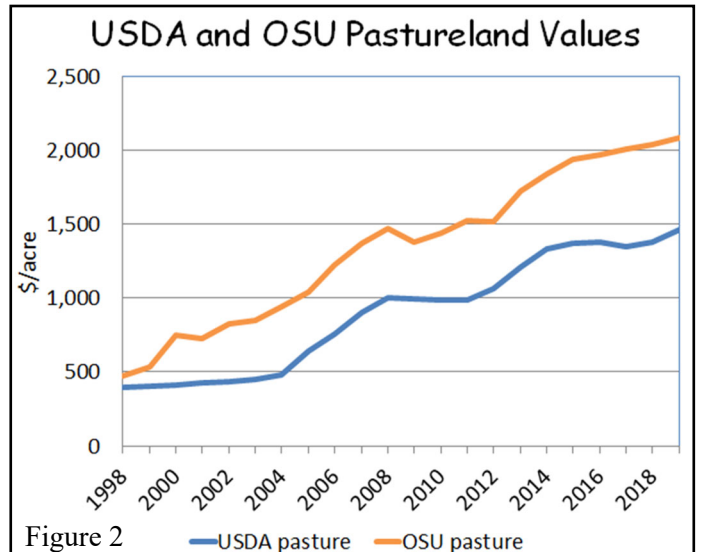
such as farmland. Returns in the cow-calf sector are expected to improve going into 2021, according to the Livestock Marketing Information Center (See Figure 1).



These positive factors will lend a hand in providing stability to the land markets into the foreseeable future.

There are additional sources of land value information available that provide further insight into the markets. In Figure 2, the OSU study and USDA (<https://www.nass.usda.gov/>) pastureland trends are similar, but the price levels are different. Our estimates are developed from a market-based sample of the land transfer market in Oklahoma in contrast to the survey-based impressions of the market by the USDA. Typically around 80% of the pastureland tracts in the annual OSU study are less than 200 acres in size and are priced several hundred dollars

higher than larger tracts. As a result, the OSU estimates are higher than USDA. And it is important to note that just because the 2019 statewide average was up does not necessarily mean that the land parcel you own performed in the same manner. The change in pastureland values has not been uniform across the state as tract quality plus



local demand fundamentals all influence the regional markets. Thus, the overall average may not be reflective of any one market.

In conclusion, cattle prices and resulting farm income, and the financial health of prospective buyers will all determine pastureland trends in 2020 and beyond. Federal assistance will help going forward, but much depends on where the economy lands after the initial COVID-19 fallout. Obviously, it is a situation that bears watching

OQBN Sales Dates			
Location	Sale Date	45-Day Wean Date	60-Day Wean Date
OKC West (El Reno)	<b>Weekly:</b> Oct 13, 2020 – Feb 2, 2021	<b>Weekly:</b> Aug. 20, 2020 – Dec. 20, 2020	<b>Weekly:</b> Aug. 14, 2020 – Dec. 5, 2020
Cherokee Sales	Nov 4, 2020	Sept 20, 2020	Sept. 5, 2020
McAlester Stockyards	Nov. 10, 2020 Nov. 17, 2020	Sept 26, 2020 Oct. 3, 2020	Sept 11, 2020 Sept 18, 2020
Payne Co. Stockyards	Nov. 18, 2020	Oct. 4, 2020	Sept. 19, 2020
Woodward Livestock	Nov. 19, 2020	Oct. 4, 2020	Sept. 20, 2020
Southern Plains Livestock	Nov. 21, 2020	Oct. 7, 2020	Sept. 22, 2020

## Extending the Grazing Season with Cool Season Annual Grasses.

Paul Beck, Department of Animal and Food Sciences

Extending your grazing season reduces operating costs and increases profitability of the cattle operation compared with feeding hay. There are many options to extend your grazing season including grazing deferred dormant pastures, stockpiling introduced grasses by applying nitrogen fertilizer late in the growing season and allowing pastures to accumulate until needed in the late fall and early winter, or planting alternative annual forage crops to fill in the forage production gaps. Using cool-season annual grasses (I am going to use the abbreviation CSA from now on) is my personal favorite option.

There are several ways to go about planting CSA and several different species that can be planted, they all have advantages and disadvantages. In Oklahoma, crop fields are abundant in many of our livestock producing areas, it is an age-old process to use wheat planted in the fall for forage in the late fall and winter with removal of cattle leading up to harvest of the grain. In many instances it is more profitable to use the forage through graze out than harvesting the grain. Planting date and what is planted are influenced by the harvest vs no harvest decision. It is commonly recommended that wheat planted only for grain be planted in mid-October, dual purpose wheat used for both grazing and harvest be planted in mid-September, and graze out wheat can be planted in early September. The earlier the planting date the more fall forage is produced and the earlier cattle can graze pastures.

Of course fields planted for wheat grain production should only be planted to wheat, but there are many options available in graze out fields. Here are some common options:

Wheat – Wheat is very popular as both a forage and grain crop. Wheat is best adapted to loam to clay loam soils with a minimum pH of 5.5. It is tolerant of cold and dry weather conditions making it suitable for some of the harsher environments found in the more western regions of production.

Cereal Rye - Rye has the greatest cold-tolerance of the cool season annual grasses with the earliest seasonal

forage production. It is also the highest producer of forage biomass but, it is lower in nutritive value than other cool season annual grasses. Compared to wheat, rye is more adapted to sandy acidic soils and will produce grazeable forage earlier in the fall. With earlier seasonal production, rye will begin to go reproductive and lose forage quality earlier in the spring than other cool season annual forages. This makes rye an excellent crop to double crop with a summer annual forage such as crabgrass.

Oats - Oat forage has the highest nutritive value of all small grains. It is an excellent producer of early forage biomass and will perform best on lighter textured soils. The major drawback to the use of oats is cold tolerance.

Triticale - Triticale is a hybrid cross of wheat and rye. Forage production is higher than wheat and nutritive value is greater than rye. It produces a large broad leaf that is grazed well by livestock. Triticale is a versatile crop that can be used for grazing, hay and silage. Under the right growing conditions and management, triticale can be harvested more than once. Triticale will tolerate more acidic soils than will wheat.

Annual ryegrass - Annual ryegrass is a wonderful high-quality, high-producing forage grass. However, it is a pesky weed in grain producing areas. Annual ryegrass can be seeded as a monoculture at a seeding rate of 20 lb/ac and is very easy to establish by broadcasting and harrowing the area.

**Interseeding CSA into Pastures.** Along with planting in dedicated crop fields, CSA are commonly planted into permanent warm-season pastures and this provides that largest number of acres utilized for grazing cool-season annuals in the central and eastern areas of the state. Because these pastures are being managed for multiple uses, productivity is generally less for each season compared with pastures managed for single purposes. For instance, because pastures are planted into existing warm-season perennial sods managed for haying or grazing, cool-season annual plantings must be delayed until the growth of warm-season pastures decreases in the fall,

Extending the Grazing Season with Cool Season Annual Grasses. (cont.)

which decreases potential fall forage production. Also, growth of cool-season annuals during late spring will delay warm-season forage production.

**Timing.** Planting cool-season annuals should be delayed until warm-season forage growth slows in the fall. If warm-season grasses are still actively growing they will compete with the cool-season annual seedlings for sunlight, water and nutrients. Cool season seedlings can easily get shaded out decreasing the eventual stand of cool season annuals and decreasing forage yield. When nighttime temperatures get below 60° F for several nights in a row growth of warm-season grasses slows considerably.

Research has shown that application of a light rate of glyphosate or paraquat will force the warm-season grasses into a fall dormancy, allowing for earlier planting dates without the worry of competition for emerging cool-season annual seedlings. Research at the University of Arkansas found that planting wheat and ryegrass into a warm-season grass sod of crabgrass and bermudagrass in mid-September following an application of 1 pint of glyphosate per acre increased forage yield in January by 1,400 pounds per acre compared with planting in mid-October with or without herbicide.

The figure below shows the seasonal forage yields of small grains planted in dedicated crop fields compared with CSA interseeded into permanent warm-season pasture during a single year in research trials across Arkansas. The crop fields were planted either by conventional tillage or no-till in early September. The interseeded CSA were either planted in late-September in a dry seedbed or planted to either a mixture of small grains and ryegrass or ryegrass alone in November after the first rainfalls of the fall in late October. The dedicated crop fields were ready for grazing in early November, while grazing of even the earliest planted interseeded CSA were delayed by about a month to early December. Interseeding into warm-season grass sod in early November delayed grazing until early January, while relying only on annual ryegrass delayed any utilization until February. Depending on the livestock grazing the forages and management goals, any of these options can be invaluable. Early pasture is highly valuable for stocker calves weaned in the fall, but spring calving cowherds may not need the high-quality forages until the start of calving so later planting of annual ryegrass would ideally fit that system.

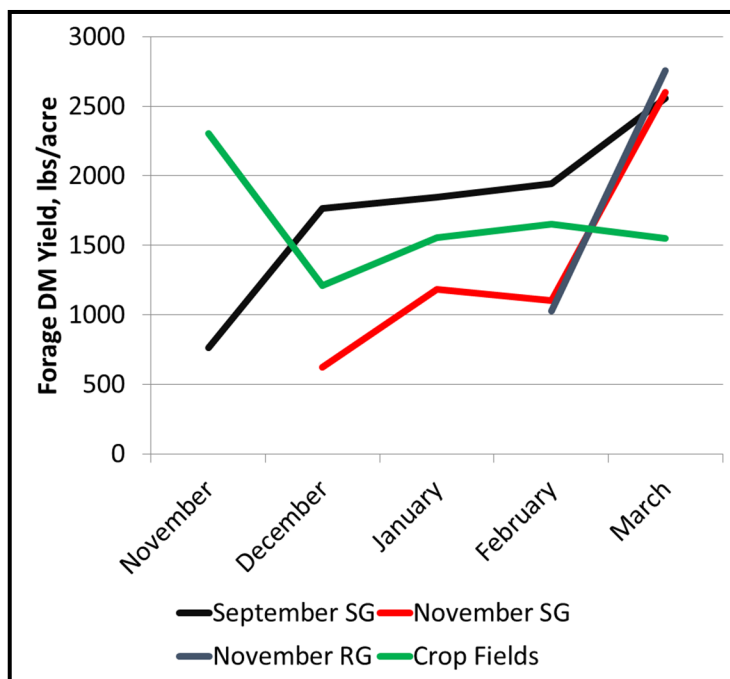


Figure 1. Forage yield of small grains planted in crop fields versus small grains interseeded in September or November or ryegrass only interseeded in November.

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### On-Line Survey on Beef Cattle Production

Amanda Upton is a graduate student in Agricultural Economics working with Drs. Courtney Bir and Eric DeVuyst to better understand decisions surrounding calving data and the potential economic and health impacts of that decision.. Please consider helping her by participating in her current project. They hope to collect input from beef producers, large animal veterinarians, and feedlot operators across the state to help inform our economic model. The findings will be used to analyze the impacts of alternative calving dates and help producers make in-

formed decisions. Your participation will help her get the largest possible sample size for more accurate results. You can complete the survey through the link below. Your responses will be anonymous and the study is important for future extension programming. The producer survey can be reached easily via this link: [https://okstatecasnr.az1.qualtrics.com/jfe/form/SV\\_9LA6Iarng2USXNb](https://okstatecasnr.az1.qualtrics.com/jfe/form/SV_9LA6Iarng2USXNb). Thank you!

Kellie Curry Raper  
Agricultural Economics Dept.  
514 AGH  
Stillwater, OK 74078  
[kellie.raper@okstate.edu](mailto:kellie.raper@okstate.edu)

David Lalman  
201 Animal Science  
[david.lalman@okstate.edu](mailto:david.lalman@okstate.edu)



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