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Meadowlark Extension District
Livestock and Natural Resources

Effects of Temperature and Temperature-Humidity Index on Pregnancy Rate in Beef Cows

Nebraska researchers reviewed ten years of calving records from a spring-calving beef cow herd (Angus/continental crossbreds) in southeast Nebraska to determine the effect of temperature and humidity on pregnancy rates in beef cows. This research suggested that conception rates are lower during summers when it is hot during the breeding season as compared to cooler summers.

These researchers found that for each degree increase in temperature during the first 30 days of the breeding season that pregnancy rate during these 30 days decreased by 1.08%. However, average temperature did not significantly affect pregnancy rate during the entire breeding season (63 day average). It was also reported that if the average temperature-humidity index (THI) was greater than 65 for the first 30 days of the breeding season that pregnancy rate was reduced by 1.6% per unit increase in THI above 65. THI did not affect pregnancy rate over the entire breeding season. These results indicate that beef cows can acclimate to high temperatures and humidity if given enough time with the bull (60 days or more in this data set). These data suggest that a 30 to 45 day breeding season may not allow cows to adjust to high temperatures and humidity thus pregnancy rate may be reduced. In cows with some Brahman influence, the negative impact of heat stress on pregnancy rate should be reduced.

Management steps that producers can take during the breeding season to minimize heat and humidity stress on cow herds include:

- Minimize cattle activity and movement during the breeding season. Nebraska feedlot research shows that moving cattle can increase body temperature by 1 to 1.5°F.
- If cattle must be worked or moved, do it early in the morning when it is cooler.
- Provide plenty of clean water.
- Provide shade or a place for cattle to cool off.
- Control flies to discourage physical activity associated with fighting flies.
- Black cattle are more susceptible to heat stress than lighter colored cattle.

David Hallauer, Agent
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Crop and Soils, Horticulture

Soybean Weed Control Demonstration Plot Tour – August 9th!

The ability of a weed to adapt to herbicide active ingredients is well documented. Glyphosate-resistant waterhemp is common in northeast Kansas and close relative Palmer amaranth has achieved the same resistance status in many areas as well. Sadly, they can't even claim the title of the most widespread glyphosate-resistant weed species in Kansas! That likely belongs to marehail!

Because of weed adaptations and the herbicide resistance that ensues, soybean growers have become increasingly creative when it comes to herbicide programs. With that in mind, before we even finish the 2017 growing season, it's time to look ahead to soybean herbicide programs for 2018! To start that discussion, the annual Meadowlark Extension District Demonstration Plot Tour this year will focus on soybean weed control.

This year's tour will be held on Wednesday, August 9th, 2017 at Domann Farms, one and a quarter miles north of Winchester on Saline Road. Refreshments will be available at 8:45 courtesy of local financial institutions First State Bank and Trust, Denison State Bank, Kendall State Bank, and Union State Bank. We'll discuss the current year's plot program as well as give an update of last year's results, followed by a brief overview of the six treatments in the plot (including combinations of: Ultra Blazer, Warrant, Prefix, glyphosate, Flexstar GT, and Cobra) by Northeast Area Extension Agronomist, Dr. Stu Duncan. He will be followed by K-State Research & Extension Weed Scientist Dr. Dallas Peterson. Dallas will discuss the control potential of these combinations as well as results from previous and ongoing KSU trials. He'll also share information on other potential products of interest and his observations of the new dicamba technology from the 2017 growing season.

RSVP is not required, but will help us to make sure we have adequate refreshments. Please do so by contacting the Oskaloosa Office of the Meadowlark Extension District at (785) 863-2212 or e-mail to dhallaue@ksu.edu. RSVP or not, we hope you'll plan to attend on August 9th!

Cindy Williams, Agent
Meadowlark Extension District
Food and Nutrition, FNP

Is It Safe to Re-can Already Canned Foods?

People often think that they can save money by buying larger containers of canned food, transferring the contents (or leftovers from the first one) to smaller jars and reprocessing it. Others wonder if this is a way to save leftovers from any size can for a longer time than they will keep in the refrigerator.

There are three main problems with doing this:

1. There are no safe tested process to do this. The way heat goes through a jar of already canned foods is different than fresh food. The food will become very soft and compact more. This could lead to underprocessing and spoilage.
2. There is not cost savings in re-canning foods.
3. The food quality will be greatly reduced. Nutrients will be lost and more textural changes will occur.

Bottom line, do not plan to re-can any food.

Navigating The World of Student Loans

Outstanding student loan debt was more than \$800 billion in 2010, overtaking credit card and auto loan debt for the first time.

So the acceptance letter came. You're going to college and couldn't be happier. For many, however, the excitement dims when the reality of paying for further education hits.

As state funding for higher education has dipped and tuition and fees have gone up, college students have increasingly turned to student loans to help pay for tuition, books and more. The good news is that such help is available, but understanding the long-term implications on a borrower's overall financial picture is critical, according to Elizabeth Kiss, associate professor of family studies and human services at Kansas State University. Student loan debt can affect careers, home ownership and overall wealth years after the last college exam is taken.

"Approximately 40 percent of undergraduate students received federal student loans in 2013-2014," said Kiss. "Student loan debt, as a proportion of American's debt, has increased over time. By 2013 it was 9 percent of the total debt of Americans, second only to mortgage debt."

An analysis of U.S. Department of Education data shows 30 percent of student loans in 2015 were either in deferment or forbearance, where borrowers have requested more time to pay them off or asked that the amount of the payment be temporarily reduced, 7 percent of student loans were in default.

Having student loan debt well into adulthood can hamper one's ability to buy a home, save for retirement or start a business, Kiss said.

"Keep in mind that there are three broad ways to pay for education and training beyond high school scholarships and grants," she said. "They are using savings, work-study or a job. In addition to student loans. Most students will use all three."

Critical moments in the decision-making process include evaluating post-high school options. Is a four-year school across the country the best choice? What about a community college 15 minutes from home? Public university or private college?

Would-be borrowers should understand what type of loan they are considering: private (commercial lenders or banks) or public (government) loans? Is the loan need based or non-need based? Borrowing and repayment options differ by the type of loan.

Knowing the long-term implications, Kiss said, including the repayment process, before signing loan documents.

Nancy Nelson, Agent
Meadowlark Extension District
Family Life

No news this week...