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### **Early Losses**

Many producers are delaying breeding season this year to try and avoid severe winter weather. As we approach the breeding season, cows and heifers are faced with a variety of stressors from the metabolic pressure of providing for a calf to changes in environment. Stress during early pregnancy is well documented to cause embryonic death and loss of pregnancy. However, making strategic management decisions during the fragile 2 months after breeding can help minimize those losses.

Transporting cows to summer pasture oftentimes coincides with the breeding season. Especially, if cows or heifers are artificially inseminated and need to be near working facilities during that time. It is important to plan transportation, or other stressors, strategically to prevent early pregnancy loss and reducing overall pregnancy rates.

Research conducted at Colorado State University has found that transporting cattle between days 5 and 42 post insemination can result in a 10% reduction in pregnancy. When cattle are loaded into a trailer and transported to a new place, they may become stressed and release a cascade of hormones that can alter the uterine environment making it less ideal for supporting a pregnancy. Prior to day 5, the embryo is still in the oviduct and protected from changes in the uterine environment. After day 42, the embryo has implanted into the uterine wall and is less susceptible to changes in environment. While transporting on days 5 to 42 pose the greatest risk, waiting to haul cows and heifers until a week or two after day 42 may help prevent late embryonic loss. Some general guidelines for when to transport pregnant cows and heifers post breeding:

Recommended time to haul: Days 1 - 4 or after day 60

Risk of pregnancy loss: Days 5 - 55 or 60

Another key to minimizing pregnancy loss when transportation is necessary, is to avoid hauling cows on excessively hot days (approximately 90° - 110° and 40% humidity or more). Research conducted at Oklahoma State University found that cows exposed to heat stress 8 – 16 days after breeding, had decreased progesterone concentration, increased prostaglandin concentrations, and reduced embryonic weights. A 2 - 2.5 degree increase in rectal temperature (representative measurement of body temperature) for as little as 9 hours has been found to reduce embryo development. Planning to haul cows on days with more moderate temperatures can help reduce stress on heifers and cows and ultimately prevent early pregnancy loss.

It is well established that deficiencies in protein and energy at breeding time has detrimental effects on fertility. Traditionally, it is recommended that cows should be at a BCS of 5 and 1<sup>st</sup> calf heifers should be at a BCS of 6 at calving for optimal reproductive performance. Managing cows and heifers to be on a positive plane of nutrition at the time of breeding is essential for the establishment of pregnancy. Studies at University of Nebraska have found that thin cows, that are on an increasing plane of nutrition and gaining weight, can have equivalent pregnancy rates as cows in moderate condition that are maintaining their body weight at breeding. However, thin cows that are determined to be losing condition can have a reduction in pregnancy rates up to 30% which may be a result of embryonic loss or anestrus at the time of breeding. Having a sound nutritional program is key to optimizing reproductive function during the breeding season.

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## **Ticks**

With three main tick species affect humans in Kansas – lone star, American dog, and blacklegged dog tick – it’s no surprise to find tick ‘season’ can last for most of the year when the life cycles of the three species are considered. Even so, summer tends to be the time when habitat is available - and we’re out in it - making tick ‘management’ all the more important.

The ticks of medical importance are all known as three host ticks, with different life stages feeding on three separate hosts as they advance through the various stages of their life cycle. That means they’ve adaptable to various environments, requiring a multi-faceted management approach.

Start with preventative measures to reduce tick exposure by keeping grass/weeds around the home clipped short, avoiding tall grassy areas, weeds, and brush when possible. Outdoor acaricide products (pesticides) can be used for areas considered chronic tick issues, but are typically not recommended if only variable pressure is present. When applying an acaricide, always read and follow label directions.

Personal protection is important as well. If you can’t avoid grass/weedy areas, wear light colored clothing so you can see ticks before they find skin to latch on to. Repellants containing DEET and permethrin can both work well at keeping ticks (and mosquitos) at bay. Always read and follow label directions as permethrin-based repellants cannot be applied directly to skin. Once you have returned from areas where you might have been exposed to ticks, inspect skin and remove ticks immediately (ticks removed within the first several hours after attachment are less likely to transmit pathogens). After that – monitor. If you develop a rash/fever within 14 days of tick removal, see a doctor immediately.

What’s the best way to remove a tick? For best results, use fine forceps or tweezers and grasp as close to the skin as possible. Slowly pull the tick straight away from the skin using steady pressure, not twisting/jerking to avoid detaching the head portion in the skin. Save ticks in a vial of alcohol labeled with the date. If flu-like symptoms occur 10-14 days after removal, see a physician immediately and take the tick with you to share with them for identification.

We can’t eliminate ticks in our environment, but they can be managed – at least to a degree. For information on this common summer pest, check out Ticks in Kansas, available online at <https://bookstore.ksre.ksu.edu/pubs/mf2653.pdf> or upon request from any District Extension Office.

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Cindy Williams  
Meadowlark Extension District  
Food, Nutrition, Health, and Safety

No news this week.

May 28, 2021

Nancy Nelson  
Meadowlark Extension District  
Family Life

No news this week.