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Meadowlark Extension District
Livestock and Natural Resources

Baby Calves and Snow!

Recently a producer called to tell of the success he had noticed in using a warm water bath to revive newborn calves, which had been severely cold stressed. A quick check of the scientific data on that subject bears out his observation. Canadian animal scientists compared methods of reviving hypothermic or cold stressed baby calves. Heat production and rectal temperatures were measured in 19 newborn calves during hypothermia (cold stress) and recovery when four different means of assistance were provided. Hypothermia of 86 degrees F rectal temperature was induced by emersion in cold water. Calves were rewarmed in a 68 to 77 degree F air environment where thermal assistance was provided by added thermal insulation or by supplemental heat from infrared lamps. Other calves were rewarmed by immersion in warm water (100 degrees F), with or without a 40 cc drench of 20% ethanol in water. Normal rectal temperatures before cold stress were 103 degrees F. The time required to regain normal body temperature from a rectal temperature of 86 degrees F was longer for calves with added insulation and those exposed to heat lamps, than for the calves in the warm water and warm water plus the ethanol treatments. During recovery, the calves rewarmed with the added insulation and heat lamps produced more heat metabolically than the calves rewarmed in the warm water. Total heat production during recovery was nearly twice as great for the calves with added insulation, exposed to heat lamps than for the calves in warm water and in warm water plus an oral drench of ethanol, respectively. By immersion of cold stressed calves in warm water, normal body temperature was regained most rapidly and with minimal metabolic effort; no advantage was evident from oral administration of ethanol. When immersing baby calves, do not forget to support the head above the water, to avoid drowning.

If this means taking the newborn into the house, into your bathtub. Be sure to get prior approval, from the person in charge!

Source: Robinson and Young. University of Alberta. J. Anim. Sci., 1988.

David Hallauer, Agent
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Crop and Soils, Horticulture

Prescribed Burn Planning

With snow on the ground and feeding or calving taking the majority of your time, planning for a prescribed burn is probably the last thing on your mind! That's understandable – but it doesn't mean it's not time to plan! Start by asking yourself a few questions:

Do I need to burn? If there is no advantage to grass or livestock from a prescribed fire, does it need to occur? Cool season forages (brome and fescue) don't respond to fire like warm season species do. In fact, regular fire could harm the stand rather than encourage it. Even warm season forages don't *require* an annual prescribed burn to thrive.

In situations where brush control with fire is the intent, understanding the growth and development of those species is needed. Deciduous trees (hedge, locust, etc. don't leaf out until temperatures warm a little. That means that the low in the root energy reserve cycle doesn't occur when we are trying to burn a cool season pasture – typically early March. That means we often won't get very good control of those species. A fire about any time can control cedar trees, but it requires enough fuel for the fire to defoliate trees so they can't grow back. That takes a lot of fuel! Do you have enough fuel left to allow the fire to carry and do what you need it to do?

Are you prepared to burn? Check local regulations to gain an understanding of the requirements to initiate a burn. If a permit is required, what are the requirements? Make sure you understand all local regulations before initiating the burn.

Preparation also includes everything from equipment needed during the burn to preparation of the area to be burned. Make sure adequate fire breaks have been mowed or tilled. Take time to learn about fire behavior and the changes that occur based on topography and other obstacles. Know your pasture species! Most grasses will respond best to fire when they are anywhere from a half inch up to two inches tall. Knowing your grasses can give you a heads up on when that burn has to occur for best results from a grass response standpoint.

Make sure equipment is capable of controlling the fire. Use back burns when possible and be sure that you have a knowledgeable and capable crew in place to help. Prescribed burns are a great way to clean up unwanted brush and nuisance trees – but only if you are prepared to conduct the burn and are able to carry it out in such a manner that you received your desired outcome. Start planning now to determine if a prescribed burn is the best option. If it is, continue preparations to give you an effective – and SAFE! – prescribed burn

Cindy Williams, Agent
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Food and Nutrition, FNP

New Food Trends

At the start of each new year, a borage of food trends sweep in carrying broad promises of saving or restoring one's health with little to no effort. Some that come to mind include the kale-takeover, the quinoa craze and juicing. And while there are smidgen of truth behind all of these trends (kale is a highly nutritious vegetable; quinoa is a wonderful whole grain option; juicing does provide the consumer access to ample vitamins and minerals), their reputations tend to over promise but under-deliver, and the rising stars of these healthy foods tend to burn out quick.

There is one food trend lurching on the horizon, however, that may have some staying power. Not only is it supported by credible research from multiple studies, it's also readily available, always in-season, and highly affordable. What is this incredible food? It's actually a collection of foods known as pulses.

Pulses are legumes or more accurately, the edible seeds of legumes. These seeds are nutrient dense and include all varieties of dried beans, dried peas, lentils and chickpeas or garbanzo beans.

While pulses are a primary source of protein for most of the world's population, they are not used as often for protein in the United States. Most Americans depend on meat and fish sources for their protein. But there are some good reasons to substitute pulses for part of the protein you eat each week. For one, pulses cost much less per serving than meat does. A serving of pulses costs about 10 cents where meat costs vary from about 60 cents per serving for chicken up to \$1.50 per serving for beef.

So start off this new year and think about using pulses in your family meals. Happy and "healthy" new year to you and your family!

Nancy Nelson, Agent
Meadowlark Extension District
Family Life

Creating Consistency

We had a nice surprise at Christmas time, a visit from our grandson who was born in September, oh, and his parents. Being a first time grandparent has sparked my interest in the K-State Research & Extension publication series “Building Baby’s Brain.”

Besides the KSRE logo you will see a University of Georgia Extension logo on these as they were authored by Diane Bales and adapted in Kansas. The fact sheets are available at Extension Offices and also can be found on-line. One of the topics is creating consistency.

The developing brain thrives on repetition. When a baby experiences the same things over and over, the pathways of connections in her brain become stronger and more complex.

One of the best ways to provide repetition for the developing brain is to create consistency in the child’s world. When a child has experiences in a positive and predictable environment, her brain becomes wired to relate to others, regulate behavior, and learn. When a child experiences consistent care, she feels more secure because her basic needs are being met, and she has more energy to explore and learn.

What is consistency? Children develop emotional security when their world is nurturing, consistent, and predictable. As children experience the same routines over and over, the brain strengthens connections that will lead to trust and secure attachments. Children who live in consistent environment also learn to regulate their own emotions and behavior better, because they know that to expect of the world around them.

Consistency may include any or all of the following components:

Predictability. Doing things in predictable ways builds a baby’s trust of adults. It is important to give infants the security that comes from meeting her needs when she is hungry, sleepy, or in the mood to play.

Routines. Keeping the same general routine every day helps make the child’s world feel stable and predictable. Doing certain things in the same order at about the same time every day helps strengthen brain connections and builds the baby’s confidence because she knows what to expect in a situation. Even though young children cannot tell time, they remember the order in which things occur.

Keep the child environment in order. Order helps a child know what to expect which helps him feel secure and in control. He knows this toothbrush will be in the cup by the sink. He can find the blocks in the building center. He learns where to put things when he is finished with them so he can find them again later. Keeping the environment organized can reduce frustration and stress for children as well as adults.

Setting and enforcing rules. Rules help children learn acceptable and unacceptable behavior, practice self-control, and strengthen brain connections that will enable good decision-making as children grow. Rules need to be appropriate to the child’s age, and adults need to enforce rules consistently.