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Kansas Custom Rates

In our most recent District Newsletter (read it at: <https://www.meadowlark.k-state.edu/news/index.html>), there's an article referencing the focus placed on evaluating lease agreements this time of year. For those doing or using any sort of custom farming, it's the time of year to take a look at those numbers as well.

Every other year, a custom rates survey is conducted in Kansas, the results of which are posted each spring at: <https://www.agmanager.info/machinery/papers/custom-rates-survey> . While they're the best information we have on custom rates, they aren't perfect. They can't be if you consider all the factors included in a custom rate. There's the 'easy to figure' ones like purchase price or interest or insurance, etc... Then there's the more difficult ones to account for like varying levels of efficiency between operators/equipment. Still, they are the very best number reflecting what producers are actually paying for custom machinery hire.

Like a good rental rate negotiation, custom rate discussions should include a hard look at what is 'fair and equitable'. If you're looking at custom rates, take a look at the published numbers above as well as a companion publication *entitled Custom Rates and the Total Cost to Own and Operate Farm Machinery in Kansas*. It shares results of a 2003 study of machinery ownership costs, plus how well custom rates really cover those costs - and the long-term ramifications of not looking further in to those costs. Request a copy of it from any District Office or see the link at <https://www.meadowlark.k-state.edu/crops-soils/index.html> .

Late-Season Turfgrass Nitrogen

Did you apply any fertilizer to your turfgrass in September? It's a pretty critical time for turf going in to fall dormancy – with a November application being a close second.

November applications don't help much with top growth. That's pretty well slowed in response to cool temperatures, even as plants are still making food in the form of carbohydrates via photosynthesis. Instead, November nitrogen applications boost the photosynthesis rate with excess food stored in plant crowns that will be called up on next spring to initiate green up and sustain it until an in-season application of fertilizer in May (May applications are preferred over early spring applications that tend to favor shoot growth over root growth). November-applied nitrogen is also great for improved winter hardiness, root growth and shoot density.

You don't need much. A pound to pound and a half of actual N (as a quickly available nitrogen source) per 1000 square feet is plenty.

Ross Mosteller

District Extension Agent
Livestock & Natural Resources

Economics of Winter Protein Supplementation

As promised last week, I'll dig into the economic side of protein supplementation for the cow herd today. Keep in mind I'm an animal scientist trying to do an economist's work, with lots of assumptions, so this might fail! I've had the opportunity to balance some rations recently, so the values used should be fairly reflective as of late October. I think you'll see that there is no one size fits all scenario when it comes to supplementation. Pricing on a per unit of protein consumed per day, does help compare apples to apples. So, let's dig in and review some options.

One of the more popular, low labor, self-regulating options to supplement on crop residue, dormant pasture or even hay are protein tubs. These are generally managed by placing one 200 or 250-pound tub per 20-30 head, with consumption rates ranging somewhere between ½ to 2 pound per head per day. That said, all tubs are not created equally! Protein content can range widely from something in the low teens to almost fifty percent. Protein sources also widely vary and many of the high percentage tubs have non-protein nitrogen (NPN) sources, such as urea, as a main ingredient. A general rule of thumb is that NPN should not consist of more than 1/3 of the total crude protein in the ration, so this is something to watch for carefully.

To look at an example; tub A is 30% protein, 200-pound tub, with about one third of the 30% as NPN, safely falling within guidelines. It retails for \$115, which converts to \$0.1725 per pound of protein. This should last a twenty-five head cow herd eight days at the one-pound consumption level, or \$14.38 per day for the herd. Tub B is a 16% protein, 200-pound tub that has no NPN. It retails for \$70, which is \$0.056 per pound of protein, which looks like the buy! However, consumption on this tub ranges between one and two pounds per day, which means it will last the same cowherd four days at the upper consumption level, or \$17.50 per day.

By using this method, you can compare the various protein percentage levels and purchase prices. Keep in mind, these two products may offer different fat or energy levels, vitamins and minerals, have safeguards for consumption and other products in the mix. All these factors need to be considered and weighed as you look a purchasing for your specific needs. For purposes today, we are evaluating them solely on protein percentage to the diet. The liquid-based supplements delivered in tanks can be evaluated in much the same way as cooked, poured or pressed tubs discussed here.

Other examples of protein supplements for the cow herd include; cubed "cake" products and by-product ingredients in meal form, like: distillers grain, wheat midds, soybean meal and corn gluten meal, to name a few. Again, each brings different levels of protein, price and other pros or cons to a complete ration. As discussed last week, these are best consumed daily, but can be delivered every other day to save on the labor cost that comes with them.

Rations I evaluated earlier this week looked at a corn-based supplement to cows consuming good quality dry grass hay. Soybean meal (SBM - 48%) and dry distillers grain (DDG - 29%) were compared, to bring rations to roughly the same crude protein percentage. Plugging in estimated prices, the SBM came in at roughly \$0.32/# protein/head/day and DDG at \$0.55/#protein/head/day, but total ration cost was \$0.14/head/day lower for the DDG ration due to the reduced amount of corn. For comparison sake to tubs...this DDG ration would calculate to \$13.75 per day protein supplement cost for the twenty-five head herd, not counting feed labor.

The point to all these numbers and scenarios is that you have to look at all factors, do some math and determine what is the best option for your particular operation. Dumping tubs out, once a week on corn stalks a half hour from home, may make more sense than feeding a cheaper corn/DDG ration to cows in a lot outside your kitchen window. Sharpen the pencil and do the math! Visit with your local Extension office if you need additional help and guidance.

Teresa Hatfield
District Extension Agent
Family and Community Wellness

Prepare Your Home for Winter to Reduce Heating Bills

Winter is just around the corner. Home heating bills take up a big chunk of the family budget. According to the U.S. Energy Information Administration, this year, the forecast predicts higher home heating fuel costs. The cost of heating oil is expected to rise by 27%; natural gas is expected to increase by 28%; electricity by 10%, and propane by 5% from October 2022 to March 2023. With the rising costs of everything, it is a good idea to take steps to help lower your energy cost this winter.

One of the first things you can do is get your furnace checked. Don't wait until it gets cold to schedule service. You will want to ensure your system is functioning properly before the cold weather hits. We have already had a few cold mornings, so it is better to prepare now. Your technician will check to ensure your pilot light and thermostat are in working good working order and change your air filter.

Consider dialing back your thermostat while you are away and set it at 68 degrees while you are home. Consider upgrading to a programable thermostat. Older adults should be careful not to turn down the thermostat too much, as this could lead to hyperthermia. Older people have a more difficult time regulating body temperature. Wear warm clothing even while inside and use a lap blanket.

Close off rooms you are not using and close the heating vents. Keep the basement door closed. You can also place a rolled towel under the door to avoid drafts. Open curtains on the south side of your home to let in the natural heat from the sun during the day and close the curtains at night to help keep the cold air out. Also, check to make sure your home is adequately insulated. Warm air rises and can escape through uninsulated attics.

Make sure not to waste energy through your windows. Fill gaps in your windows with weather stripping or caulking. You can also try window insulator kits, be sure to have two sets of hands for the job. A fireplace chimney can also waste energy. If you haven't or won't be using your fireplace, consider getting the chimney capped. If you plan on using it, make sure to inspect it before you use it this season. Check the seal on the damper and make it as tight as possible. Open dampers let out heat like an open window. Make sure to close them when you are not using your fireplace.

Consider washing your clothing at a lower temperature and doing larger loads at a time. Keep the temperature on the hot water tank set to 120° F; this will help save energy and prevent scalding. Doing this can save up to \$400 a year.

For the holidays use LED light strings, you can look for Energy Star-certified strings. Consider putting your holiday lights on a timer. Lower the thermostat as people arrive for holiday gatherings. Extra bodies and warm ovens will create excess heat.

These tips will help you reduce your heating costs this winter.

Resources: U.S. Energy Information Administration; National Institute on Aging

Cindy Williams

District Extension Agent
Family & Community Wellness

Hunting Food Safety

Hunting season is here, and with it comes the opportunity to eat game meat and wild birds. These are nutritious foods, and most are naturally lean because of the animals' diets and high levels of physical activity. (Two exceptions are duck and goose, which have higher levels of fat than other poultry.) Before eating wild game or birds, however, keep in mind special food safety points.

Handling in the Field and during Processing. Do you know if care was taken regarding safe handling of the meat? Was the animal or bird "field dressed" promptly? Was the meat protected from contamination? Was it cooled quickly, and kept cool during the drive home? If you are a hunter yourself, know how to ensure food safety in handling the meat of game animals and wild birds, both in the field and during processing.

Storage. If you will use it within three days, store game meat in the refrigerator. Keep raw meat and cooked meat separated to prevent cross contamination. Immediately freeze any extra meat. Prevent "freezer burn" by dividing meat into meal-size quantities and using moisture and vapor-proof containers or wrap. Press the air out of the packages before sealing, and label them with name of the contents and date. For best quality, use the frozen meat within one year.

Thawing. Thaw meat in a refrigerator, then cook the thawed meat into two days. Or, thaw it on the "defrost" setting in a microwave oven and then fully cook the meat immediately afterwards. Keep raw meat separate from cooked foods.

Preparation. Cook wild birds to at least 165°F., and game meats to at least 160°F. (Use a meat thermometer to check the internal temperature of the thickest part.) This will reduce your risk of getting a foodborne illness. Wild game tends to be drier and less tender than other meat, and other has a very distinctive flavor. To serve wild game that is juicy and tender, use a cooking method that adds liquids, such as stewing. You can reduce the "gamey" flavor by cutting the fat off game meats before cooking them. You can also mask that flavor by using extra spices or marinades. Marinating will also help tenderize the meat. Marinate all meats in the refrigerator.