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Grass Growth and Development – Get...Ready...

It's easy to take perennial forage crops for granted. They green up when it gets warm. We graze or hay them. They go dormant in winter and do it all over again the next year. Production levels might be slightly different. Species composition may change slightly. Often, however, the changes are so slight we don't even notice much – until we do. An understanding of what's going on in those plants right now can help explain why we see changes from time to time.

As temperatures start to get warmer, cool season grasses (brome/fescue) are slowly emerging from dormancy. As they do so, they are using energy stored in roots to put out new leaves and tillers. As long as there's ample energy in the 'system', leaves come on until there is enough new foliage to support continued leaf growth *and* root energy replenishment. The plant is off and running and all is well.

Sometimes all is not well, however. We see lots of stands, particularly hayed stands, where phosphorous (and on an increasing basis, potassium) is low. Low phosphorous levels may mean less plants. Less plants means less production – and more opportunity for invasive species.

Maybe the stand didn't have enough time last fall to recover prior to dormancy (late haying, drought stress, grazing pressure, etc...) and not enough fall growth occurred to replenish root reserves. Greenup could be delayed and species that were just waiting for an opportunity to take off jump ahead of our more desirable species.

There may not be much you can do at this point, but observation is still in order. Do you see differences in greenup between stands? If so, why? Are weeds increasing in a particular part of the pasture or hay field? What does that then mean for management through the remainder of the season? Plan now to make observations that can help you enhance management going forward – instead of taking for granted the stand is going to do it all on its own.

Using a Soil Thermometer

Air temperature isn't a good indicator. The calendar isn't always the most reliable. If you want a (simple) tool to help you make good planting decisions – and help plants get off to a good start in the right conditions - get a soil thermometer.

We get away most of the time with planting cool season crops a little early. Radishes prefer a soil temperature of 45 F to get started. Peas will germinate and grow at 40 F. Warm season crops are a different story. Sweet corn and beans want soils at 55 F to germinate and peppers/cucumbers/melons like 60 F. Unlike cool season seeds that may push through, planting the seeds of warm season crops in to soils that are too cool may result in rot and transplant loss.

Simple as it may seem, taking soil temperature shouldn't be done without planning. Take temperatures from a depth of two and a half inches at mid-late morning. Shoot for 10-11 to avoid cool mornings and warm afternoons, but if that isn't feasible, take a reading before you leave in the morning and average it with the one you take when you get home. If you get consistent warming temperatures over a four to five day stretch – and a cold snap isn't on the horizon - it might be go time. Until then, practice just a little more patience.

For a planting guide, check out *Soil Temperature Conditions for Vegetable Seed Germination* at <https://tinyurl.com/1jw297zt> .

Ross Mosteller

District Extension Agent
Livestock & Natural Resources

What Can You Afford to Spend on a Bull?

In the past week or so, I've logged over 800 miles driving four states looking for a new heifer bull. Bull buying season is one of my favorite times of the year as all the catalogs, video links and sale days arrive. If you've been in the bull market, you'll note that prices have been strong and probably should be given input prices! I've been accused of being a tightwad, so I'm always looking for the best buy, but what is a target price to pay for your next herd sire?

This question is a classic, important, and timeless one. The bull's impact on a herd can have lasting effects for many generations, good or bad, especially in operations that retain replacement heifers. A "cheap" bull may end up costing in the long run or an expensive bull may not have as economically effective impact as a more moderately priced one. Of course, there are many factors and lots of unknowns in all of this that varies by operation. The old rule of thumb that seems to persist around this topic in many circles is "A bull should be worth the value of five weaned steers he sires". Three daughters sold as cow/calf pairs has also been tossed out in some conversations, so let do some cowboy math and see what we find.

Using the February 27, USDA Cattle Market from St. Joseph for Kansas market averages; 550-pound weaned steers traded around \$2.32 per pound to equate to \$1,276. Using our five head value, that would be \$6,380. Play this out on some heavier calves at weaning gets \$6,500 and \$6,937.50 for 650 (\$2/lb.) and 750 (\$1.85/lb.) pound steers, respectively. A regional sale barn's last market report from a special cow sale showed two-year-old cow/calf pairs bringing \$2,500. Using that cow/calf value times our three pair rate yields, \$7,500.

In the current market, using the rules of thumb presented, a good quality bull is worth somewhere between \$6,380 to \$7,500 to the average cattle operation. Where exactly in that range (or frankly outside of that range) you fall, depends on your marketing plan, genetic potential within your cowherd and the market situation at the time offspring will be sold. There really is probably not an exact number or formula that works for everyone, but this type of calculation can help you determine what range you can afford to pay as you get your bidder number. One other point to consider is that a 1,500-pound choice slaughter steer selling at last week's average of \$1.65 equals \$2,475, so searching for that \$2,500 breeding bull is likely an unreasonable expectation today.

Each operation has a different focus, marketing plan, capital/credit situation and end-goal in mind. One thing that cannot be over-stated is that genetics pay when you purchase a bull capable of improving genetic potential for the specific traits that will translate to added value at your intended marketing endpoint. Don't forget all the "benefits" that might come from the seedstock supplier. This can include things like: negative BVD-PI, genetic defect, homozygous polled, genomics (and other) tests; breeding season guarantees; free delivery and/or feeding until spring and a plethora of other offerings. Purchasing a bull with unknown genetic potential is often more of a gamble than it is worth, in writing the smaller check.

My father-in-law always used to say that "a scrawny bull throws the best calves". I always took that to be a reference to myself and his grandkids, but I could have been wrong? My Dad took more of the approach that "a herd bull should look like a herd bull". Whatever your mentality or rules of thumb in herd sire selection are, take some time to run the numbers, determine needs and find that best value within those operational needs. All that said, don't be afraid to invest in quality genetics that will pay you back. Best of luck with your purchases!

Teresa Hatfield

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Family and Community Wellness

Spring Forward: Adjusting to Daylight Savings Time

On Sunday, March 12, at 2:00 a.m., we will move our clocks forward one hour and begin Daylight Savings Time (DST). This move can cause disruptions in our circadian rhythm resulting in the average person losing an hour of sleep. Sleep disruptions and lack of sleep can harm our health and reduce productivity. According to the American Academy of Sleep Medicine, “shifting from standard time to DST has been associated with increased cardiovascular morbidity, including the risk of myocardial infarction, stroke, and hospital admissions.” Moderately sleep-deprived people can also experience difficulties driving, such as slow reaction times, lack of alertness, and poor decision-making skills.

DST officially became law in 1918 during World War I. It has been tweaked and changed, including a year-long DST in 1974 during the energy crisis. In 2021 the U.S. Senate passed the Sunshine Protection Act of 2021, which would establish DST all year. The act requires approval by the U.S. House of Representatives, and thus far, action has been taken.

So how can you prepare to adjust to the change? Here are some tips for getting a good night’s sleep.

- Stick to a schedule: Try to go to bed and wake up at the same time each day. Adjust your schedule by waking up 15 to 20 minutes earlier a few days before the time change to account for the time change.
- Avoid caffeine and nicotine: Coffee, colas, and certain teas contain the stimulant caffeine, which can take six to eight hours to wear off. Nicotine is also a stimulant and can cause smokers to sleep lightly.
- Avoid alcoholic drinks before bed: Alcohol deprives a person of deep and REM sleep. Also, you can wake up in the middle of the night after the effects of the alcohol have worn off.
- Avoid large meals late at night: large meals can cause indigestion, affecting sleep.
- If possible, avoid medications that make it hard to sleep; check with your doctor if you believe a medicine you are taking could be disrupting your sleep.
- Don’t take a nap: Try not to nap while your body adjusts to the DST. If you need to nap, try not to take one after 3:00 p.m.
- Create a good sleeping environment: Get rid of things that can distract you, like, noise, light, and too warm of a temperature; select a comfortable pillow and mattress. Use the bedroom only for bedroom purposes.
- Try exercising during the day: Exercising for 30 minutes at least five days per week can help improve your sleep by helping to lower stress and anxiety. Be sure to exercise early enough in the day.

The twice-annual time change is often difficult for the first few weeks. The good news is that this time change means spring is just around the corner. Hopefully, the tips above will help you with your sleep hygiene all year round.

Resources: Sleep: Want it Need it Get it (KSRE); American Academy of Sleep Medicine

Cindy Williams

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Expensive Eggs Try Egg Substitutes

The price of eggs has consumers scratching them off their shopping list lately. Here are some options to replace eggs in your recipes based on what function the egg is providing.

- Boiled egg---use 2 ounces extra-firm tofu for each hard-boiled egg.
- Binding ingredients in baking---For each egg, use 1 tablespoon chia seeds or ground flax seeds with 3 tablespoons water, let stand 5 minutes. This makes a gel and helps hold ingredients together.
- Leavening in baking----Use the chia or flax seed mixture above plus ½ teaspoon baking powder for each egg.
- For moistness in baking---use ¼ cup applesauce, mashed banana, pureed avocado, pureed garbanzo beans, or silken tofu.

Buy eggs when they are on sale. Eggs can be stored for at least 1 month, covered in the refrigerator. You can also freeze them for later use.

- Preparation - Select fresh eggs and break each separately into a clean saucer. Examine each for freshness and remove any pieces of shell before mixing with other eggs.
- Whole Eggs - Thoroughly mix yolks and whites. Do not whip in air. To prevent graininess of the yolks, add 1-½ tablespoons sugar, 1-½ tablespoons corn syrup OR ½ teaspoon salt per cup whole eggs, depending on intended use. Strain through a sieve or colander to improve uniformity. Package, allowing ½-inch headspace. Seal and freeze.

Another method of freezing a whole-egg mixture is to use ice trays. Measure 3 tablespoons of egg mixture into each compartment of an ice tray. Freeze until solid. Remove frozen cubes, and package in moisture-vapor resistant containers. Seal and freeze. Three tablespoons of the egg mixture (one cube) equal one whole egg.

- Egg Yolks - Separate eggs. Stir yolks gently. To prevent graininess, add 1-½ tablespoons sugar, 1-½ tablespoons corn syrup OR ½ teaspoon salt per cup of egg yolks, depending on intended use. Strain through a sieve. Package, allowing ½-inch headspace. Seal and freeze. One tablespoon of the yolk mixture equals one egg yolk.
- Egg Whites - Gently mix whites; do not whip. Strain through a sieve. No sugar or salt is needed. Package, leaving ½-inch headspace. Seal and freeze. Two tablespoons of the egg-white mixture equal one egg white.

Freezing of egg information was extracted from "So Easy to Preserve, 6th ed. 2014. Bulletin 989, Cooperative Extension Service, The University of Georgia, Athens. Revised by Elizabeth L. Andres, Ph.D. and Judy A. Harrison, Ph.D., Extension Foods Specialists.