

# The Latest Across the Plains

***The GPLC Team would like to wish you and your family a Merry Christmas and a Happy New Year!***

## ***Unused Feed***

Thanks be to God for his indescribable gift! - 2 Corinthians 9:15

## ***Save Money \$\$\$ Test Your Feeds***

Tests are relatively inexpensive, usually costing less than \$18, for the information derived. Contact our office to set up an appointment to have us pull feed samples if we have not done so yet.

## ***Timely Reminders***

- ◆ Prepare adequate wind shelter and protection from winter elements. A dry, clean hair coat reduces maintenance energy requirements.
- ◆ Analyze winter feed supplies.
- ◆ Keep pens scraped and get manure hauled to fields.
- ◆ Make sure waterers are clean and in good working order.
- ◆ Keep an eye on breakeven projections for cattle placed on feed.
- ◆ Monitor BCS of cows monthly.
- ◆ Contact your nutritionist about running projections on growing or finishing cattle, beef or Holstein, to help plan feedstuff needs.
- ◆ Remember to provide bedding for mature bulls. Frozen testicles are a major reason for BSE failure.
- ◆ Use an internal parasite control product (white de-wormer) in both cows and calves after freeze up/dormancy occurs.
- ◆ Its easier to put BCS on cows in the 2nd trimester, rather than the 3rd. Consider increasing BCS now if needed.

## **Calendar of Events**

- **Dec. 7-9** Nebraska Ag Expo, Lincoln, NE
- **Dec. 2-11** National Finals Rodeo, Las Vegas NV
- **Dec. 6 - Dec 9** CSS & Seed Expo, Chicago, IL
- **Dec. 9-11** Tulsa Farm Show, Tulsa, OK
- **Dec. 13-16** Indiana Farm Equipment & Technology Expo, Westfield, IN
- **Dec. 24** Christmas Eve
- **Dec. 25** Christmas Day
- **Dec. 31** New Year's Eve
- **Jan. 1** New Year's Day
- **Jan. 4 - 6** Dakota Farm Show, Vermillion, SD
- **Jan. 8 - 23** National Western Stock Show, Denver, CO
- **Feb. 1 - 2** Iowa Power Farming Show, Des Moines, IA
- **Feb. 1 - 3** Iowa Ag Expo, Des Moines, IA
- **Feb. 1 - 3** Cattle Industry Convention & NCBA Trade Show, Houston, TX
- **Feb. 10 - 27** San Antonio Stock Show & Rodeo, Sant Antonio, TX
- **Feb. 25 - 26** Western Farm Show, Kansas City, MO

## Small Grain Silages

Small grain silages such as barley, wheat, oats, triticale and rye have become popular among many producers over the years. Small grains can be incorporated into farming systems as cover crops to help reduce the amount of bare ground present, as well as provide a forage option for either stockpile or swath grazing, hay, haylage, silage, or a combination of these. Regardless of why they are being produced, small grain silages offer a good alternative forage option for cattle producers.

The first and likely most logical question is, how do small grain silages compare to corn silage? Table 1 outlines the average nutrient composition of corn silage and commonly fed small grain silages. Table 2 depicts the feeding value of small grain silages compared to corn silage. It is important to note that both tables are averages that can vary significantly depending on the growing conditions from year to year and how the silage was managed. Feed samples should be taken yearly to help ensure rations are balanced appropriately to optimize cattle performance.

The next obvious question is, what targets need to be hit to produce high quality small grain silage? You should aim at putting up small grain silages at 60-70% moisture (30-40% dry matter).

Cut length at harvest should be 3/8 to 1/2 inch to achieve adequate packing density in the bunker. Small grains should be cut at the boot stage of growth and then allowed to wilt in the field. If the heads are allowed to fill, the quality of the roughage is reduced, so try to harvest them as the head emerges. Silage needs to be tightly packed in either a bag or bunker to eliminate the presence of oxygen and should be covered to minimize shrink. Due to the hollow stems,

it is much more difficult to achieve an adequate packing density with small grains than it is with corn or sorghum silages, so storing in a bag may be preferred for longer-term storage. Inoculants should be added to the small grain silage pile to enrich the fermentative environment by reducing silage pH.

Baleage, or haylage, is another viable option for small grain forages. The primary difference between baling high moisture forages and chopping for silage is the moisture component. Haylage should be put up slightly drier than silage, with an optimal range of 45-60% moisture (40-55% dry matter). There is usually additional harvesting and feeding costs associated with baleage compared to chopped silage, but it is also a very effective tool on many operations.

Small grains (most notably oats) are notorious for accumulating nitrates when growing under stressed conditions like excessive rain after a dry period. Ensiling small grains that are high in nitrates versus baling them for dry forage will reduce nitrate levels by 40 to 60%. This is due to some of the nitrates being utilized by the bacteria during the ensiling process.

Incorporating small grains into a cropping system helps retain soil moisture, incorporates more organic matter into the soil, minimizes wind and rain erosion, and increases the annual forage yield for the same acres of land in a year. On the livestock side of things, small grains provide an alternative forage option for producers

**Table 1. Nutrient composition of various silages.<sup>1</sup>**

Feed	DM	CP	TDN	NDF	ADF
Corn Silage	33	8	68	43	25
Barley Silage	33	12	61	55	35
Oat Silage	34	12	58	59	38
Wheat Silage	34	13	59	57	37
Triticale Silage	33	14	58	59	39
Rye Silage	36	14	59	58	37

<sup>1</sup>Adapted from the 2016 Beef NRC.

**Table 2. Feeding value of small grain silages for growing and backgrounding cattle compared to whole plant corn silage<sup>1</sup>.**

Small Grain Silage	Feeding Value
Barley	90-100%
Wheat	70-90%
Oats	60-80%
Triticale	50-70%
Rye	50-65%

<sup>1</sup>Adapted from K State Small Grain Cereals for Forage MF-1072.

whether it be as silage or haylage. This forage can be fed to cattle to prolong pasture turnout and carryover can aid producers in getting through a particularly dry year by stretching resources. As with the incorporation of any new venture in an ag operation, producers need to weigh the added inputs for producing another crop within the same production year against the potential gains seen from animal performance and forage alternatives. If you are contemplating adding small grain silages to your operation, be sure to contact a GPLC consultant today to discuss what options will work best for your operation!

## Winter Tetany

As we move into the winter season, tetany is likely not at the forefront of your mind since it is typically something we worry about prior to pasture turnout in the spring. However, winter tetany can occur in cattle fed harvested forages that are low in Magnesium (Mg) or for cattle grazing small grain forages (wheat, rye, triticale and others) during the winter months.

Unlike other minerals, mature animals are unable to mobilize their Mg stores during times of deficiency. Consequently, they rely on the dietary supply of Mg to maintain adequate circulation throughout the body. As a result, mature cattle (especially lactating females) are more susceptible to winter tetany than young cattle that can mobilize up to 30% of their skeletal Mg stores.

Muscle tetany or hypomagnesemic tetany is the involuntary contraction of muscles due to low Mg concentrations in blood plasma and cerebrospinal fluid. Magnesium is essential for muscle relaxation and nerve impulses, therefore low Mg concentration in the blood inhibits muscles from relaxing properly. In addition to low Mg levels, a disproportionate ratio of Calcium (Ca), Potassium (K) and Mg can also result in muscle tetany. Both Ca and K play a vital role in muscle contractions, consequently high levels of Ca and/or K without adequate Mg can prevent the muscles from contracting.

Signs of winter tetany in beef animals include muscle twitching in the face, shoulder, or flank, excessive salivation, staggering, the grinding of teeth, nervousness, reduced feed intake, and reduced milk production. If any of these symptoms are observed, producers need to act fast to get some form of magnesium into the animal quickly. A commonly used treatment for tetany is to IV the animal with Calcium Magnesium. Other treatment strategies include drenching the animal or giving the animal an enema with a Mg source. The key is to have the Mg enter the bloodstream rapidly.

Small grain, grass, and alfalfa hays tend to be lower in Mg. Special consideration should also be taken when utilizing forages that were fertilized with poultry litter or swine manure as they can be very high in K. To ensure your rations are properly balanced it is good practice to routinely test your feed inventory. When taking a forage sample, it is important to identify and test lots separately. A lot will consist of hay which has been produced from the same cutting, field, and stage of maturity. A minimum of 10 cores or samples should be collected; however, more is optimal. If testing baled hay or other forages, a core sampler or probe is a must and will aid in reducing sampling error because it takes a cross-section of the bale. Grab samples are not ideal but can work if necessary for ground or loose hay. Be sure to take several sub-samples and mix and combine them well before taking the final sample that will be submitted. Forages should be tested to determine their levels of Mg, Ca, and K, in addition to other nutrients. If analysis determines that a forage is less than 0.15% Mg, then the forage is low in magnesium. If Ca is also less than 0.4% and K is greater than 2.5%, then that forage has the potential of causing winter tetany in beef animals if other management steps are not taken. A high-quality mineral program can counteract forages that are low in Mg, and you should always have adequate salt available to cattle as sodium aids in the transport of dietary Mg to the cells.

As previously stated, several management strategies can be employed to prevent winter tetany in the beef herd. First, all feeds fed over the winter months should have nutrient analysis conducted to ensure a properly balanced ration is being fed. Secondly, if you have harvested forages that have the potential to cause tetany, one of our nutritionists would gladly discuss a good mineral program for you. Lastly, you should always make sure to provide cattle with adequate salt to maximize Mg uptake by the cells. Remember, preventing the problem is much easier than treating cattle after they already have clinical symptoms.

# Winter 2021

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Just submit your question to [info@gplc-inc.com](mailto:info@gplc-inc.com) and we will get to work on it.