

# The Latest Across the Plains

Another season has gone by and now we will prepare for the upcoming holidays and delightful winter weather. We wish everyone the best this holiday season and hope everyone takes time to stop and enjoy family and friends. Have a safe and happy holiday and please find the enclosed calendar as a thank you from the staff at Great Plains Livestock Consulting, Inc.

## Timely Reminders

### General

- ◆ Contact us about feeding light weight corn. It still has good feed value or can be put up as high moisture corn, depending on moisture content, and priced better; talk with neighbors to see if they have any.
- ◆ Analyze winter feed supplies.

### Beef

- ◆ Prepare supplies and pen conditions for winter conditions.
- ◆ Keep pens scraped and get manure hauled to pastures.
- ◆ Evaluate bulls and begin to make bull buying decisions for next year.

### Unused Feed

“Speak your mind – but ride a fast horse.”

### 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.

### What's New in the Industry

EPA lowered the mandate for renewable fuels to be blended into gasoline in 2014.

### We want to hear from you...

Do you have a question you would like one of the nutritionists to address in depth in our newsletter? Just submit your question through our website [www.GPLC-Inc.com](http://www.GPLC-Inc.com) and we will get to work on it.

## Calendar of Events

- **Dec 2 - 4** Wyoming Stock Growers Assoc. Winter Roundup, Parkway Plaza, Casper, WY
- **Dec 3** Cattle Fax Outlook and Strategies Session, Denver, CO
- **Dec 3 - 5** Amarillo Farm & Ranch Show, Amarillo, TX

- **Dec 3 - 5** Greater Peoria Farm Show, Peoria, IL
- **Dec 3 - 5** Range Beef Cow Symposium, Rushmore Convention Center, Rapid City, SD
- **Dec 4 - 6** Nebraska Cattlemen Annual Convention and Trade Show, Kearney, NE

- **Dec 6 - 7** Missouri Livestock Symposium, Kirksville, MO
- **Dec 10 - 12** Nebraska Power Farming Show, Lincoln, NE
- **Dec 12 - 14** Tulsa Farm Show, Tulsa, OK
- **Dec 17 - 19** IN-LI Farm & Equip Show, Indianapolis, IN
- **Dec 25** Christmas





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## Proper Ration Preparation Prevents Poor Performance

By Zeb Prawl, M.S., Nutritionist

With the fall/winter season upon us, most of you are getting busy feeding everything from cows to finishing cattle. For those that mix their own feed rations, care should be taken to do a quality, consistent job at mixing feed. Making sure that one takes the proper amount of time to mix feed correctly can make all the difference in whether cattle perform well, or fall behind due to mixing errors. For those that mix feed year-round, it sometimes can become a monotonous job and the details sometimes start to be overlooked. For those that just drug their feed truck or wagon out of the barn after giving it a few months off, you might have forgotten what the details were from last year. In either case, it is very important to remind yourself every day of the importance of getting it right. If you were buying a commercially prepared feed from a feed mill, you would expect it to be exactly right and you shouldn't treat your own feed any differently.

One of the first things that you should do if you are getting back into mixing feed every day is make sure you have done the proper maintenance on your mixing equipment. If you are mixing feed all the time, then make sure you keep up the maintenance. One of the worst things that can happen when your pens are full of cattle is to have your feed truck or wagon break down and leave you without the ability to properly mix and deliver feed. Taking just one day off from feeding cattle properly can have disastrous results on cattle performance and health. Check your equipment periodically, clean it, and make repairs and adjustments as needed. A partial list of important items to check include the regular calibration of scales under the feed box, cleaning the inside of the feed box, including augers, paddles and unloading chutes, and making sure the knives are in good shape for grinding if you have a vertical mixer. Also make sure that all gear boxes and bearings are properly lubricated and chains are tight.

There are several things to prepare for in a feeding program that should occur long before the day your cattle show up. Some of the most important would include:

1. **Buy and/or raise good quality feedstuffs.** The quality of the finished feed is only as good as the individual components. If you are continuously searching for cheap ingredients and then changing your diets to utilize them, you not only may be sacrificing quality feed and performance, but also keeping cattle from gaining to their potential with constant changes in diet. Have your feeds tested, and then utilize those results when formulating the diets.
2. **Formulate diets correctly.** Cattle in different stages of production need different types of diets. The ration that is full of silage and hay might be adequate to maintain a cow, but will perform very poorly for the calves you are trying to background and grow efficiently. Know what type of cattle you are feeding and then seek out direction on how to best put the diets together to feed those cattle and achieve your stated performance goals.
3. **Follow directions precisely.** When mixing rations with big equipment, it is easy to add an extra 20 pounds of hay here, or 30

pounds of silage there. Do your best to make note of that and adjust the rest of the batch if needed. Some ingredients have very little room for error, especially when using supplements that are concentrated and might contain feed additives. Adding 200 pounds of a supplement when the ration only calls for 180 pounds could cause some serious problems when it comes to cattle performance. Additionally, it is costing you money and it won't be accounted for when figuring the feed bills. Either way, it is not helping your feeding program.

4. **Add ingredients in the proper sequence.** There are many different types of feed mixers, and they require that feed be added to them in different orders. *For vertical mixers*, hay should be added first and allowed to properly grind if not ground already. After proper time has been allowed to grind the hay (which can take as long as 20-30 minutes for poorer or long stem type forages), then add silage and other wet feeds. Follow this with grains and other by-product commodities. Then add the supplement, and follow that with the liquids. *For horizontal mixers*, add your grain and dry by-products first, then your supplement, then dry hay, and wet ingredients last, including silage and/or wet by-products. Most mixers should be left to mix as you are adding ingredients. Make sure you allow for at least 3-4 minutes of mixing after the last ingredient is added.

Many different feeds can be mixed, but each will have its very own mixing characteristics. Long-stem or big-stem forages, uncured hays and baleage tend to be difficult to mix. Certain types of TMR mixers are better at handling these feeds, while other mixers will recommend that these feeds need to be processed before mixing. Know what your mixer is capable of handling and mixing and use it accordingly. If you are continually mixing high forage diets but your mixer is better suited for mixing high concentrate diets, then you might need to consider changing mixers. The result will be better mixed feed, less time trying to get it properly mixed, and most importantly, a consistently mixed diet that will give maximum feeding performance. Another important component to proper ration mixing is employee training. It should be a priority that everyone who mixes feed be given thorough instruction on not only how to mix feed, but the importance of it as well. If you need help in achieving any of your feed mixing preparation goals, give us a call and let us help you. 

## Annual Forage Crops: How Do They Compare?

By Luke Miller, M.S., Nutritionist

High land prices have caused the livestock industry to utilize resources more efficiently. As the demand for crop production acres increases each year, more restriction is put on the available hay supply. Furthermore, rising input prices have significantly added to the cost of harvesting corn for silage. Forage production is one of the most expensive components of a cow/calf or stocker operation. If dietary ingredients are priced on a per-unit energy basis, corn silage will often be the most expensive component in a ration, followed by hay. Utilizing winter and summer annual forages, in rotation with crop production or with one another, can be an economical option which will increase stocking rates and minimize the need for land set aside



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specifically for hay production.

## Summer Annuals

Warm season forages can be utilized as an alternative to corn silage. Although numerous varieties exist, these forages can be placed into four basic classifications;

**Forage Sorghums** – Typically provides the most tonnage. Will range in height from 7-13 feet and is typically utilized as silage. Leaf and stalk will be similar to corn silage. BMR (brown mid-rib) varieties are more highly digestible, but tend to have a higher percentage of lodging compared to some non-BMR varieties.

**Sudangrass** – Will typically grow to 4-7 feet tall, producing less tonnage than forage sorghum. Smaller stems make it more digestible, resulting in a better option for hay or grazing. However, it is often harvested for silage.

**Sorghum-Sudangrass Hybrids** – Intermediate in plant size and yield between sorghum and sudangrass. It can be used as haylage, pasture, or silage. Larger stems make drying difficult for hay production.

**Millet** – Typically grows up to 40" tall, and will have yeilds slightly lower than that of sudangrass. Millet generally is higher in protein and has similar energy values to forage sorghum and can be grazed, or harvested for hay or silage (depending on the variety).

Forage sorghums and sorghum-sudangrass typically will not begin to dry down until late in the year, usually after a killing frost (do not harvest within 10 days after a killing frost). Waiting this long to harvest will often diminish feed value because digestibility will substantially decrease as the plant matures. Ideally, forage sorghums need to be cut when grain is in the dough stage and then allowed to wilt to approximately 65% moisture, which generally takes 12-24 hours depending on plant maturity and weather. After some drying has occurred, silage can be chopped and either bagged or packed in a pit or drive-over pile. We recommend to always use an inoculant and to cover silage piles. We have also seen a great deal of success in summer annual forages baled at 50-65% moisture and wrapped.

Forage sorghum tends to have similar dry matter yield to non-irrigated corn silage, and is significantly more drought tolerant. Furthermore, a large amount of data exists showing the digestibility of forage sorghum (both BMR and some non-BMR varieties) is equal to or greater than corn silage. Although forage sorghum and sudangrass hybrids do not contain the grain component associated with corn silage, cattle tend to gain better and have improved feed efficiencies on the alternative forage varieties. When forage sorghum was compared to corn silage as the sole roughage source for feedlot heifers in a Texas A&M study, a 0.3 pound improvement in gain and a 7% improvement in feed efficiency was reported in the cattle on the forage sorghum diet.

A 2008 report from Dr. Curt Lucy (University of GA) analyzed input cost comparisons between corn silage and sorghum silage. Input costs from the report were as follows: diesel=\$4/gal, N=\$0.75/lb, P=\$0.90/lb, K=\$0.60/lb, lime=\$35/ton. This report showed a pre-harvest cost savings of nearly \$130/acre for dry land sorghum silage compared to dry land corn silage. Input cost savings of irrigated silages was \$120/acre compared to sorghum. Furthermore, sorghum seed cost is roughly 15% that of corn silage.

The primary concern associated with sorghum and sudangrass forages is prussic acid (cyanide gas). Plants should never be grazed if less than 18" tall, and caution should be taken in the event of a stress period such as drought or within 10 days after a killing frost. Any event which retards plant growth of warm season annuals will cause prussic acid to be released. When prussic acid is released in the rumen, it is absorbed into the blood-

stream and binds to hemoglobin. By doing so it greatly reduces the oxygen carrying capacity of blood and causes the animal to suffocate, resulting in fatality typically within a few minutes. Most prussic acid will be lost through the curing and fermentation process and is therefore seldom a problem in harvested forages. Never enter a silo for the first 2-3 weeks after harvesting sorghum or sudangrass for silage as cyanide gas can be lingering in the air as a by-product of the fermentation process taking place. This gas IS deadly and has an odor similar to that of almonds. Prussic acid does not occur in millet or corn silage.

## Winter Annuals

Winter annual forages can be a viable option for a crop rotation program. Small grains planted in the fall provide effective cover crop, increase soil organic matter, and can be an economical option to increase forage production. Winter annuals include but are not limited to; ryegrass, wheat, triticale, oats, barley, turnips and radishes. These forages can be grazed in both late fall and early spring, or can be harvested as hay, haylage, or silage. Yields will typically be around 2 ton of dry matter per acre. If harvested in the boot stage, TDN and crude protein values will be about 62% and 13% respectively. Harvesting in the dough stage will result in approximately a 3% decrease in protein due to plant maturity, but similar energy values are often observed due to an increase in grain.

A number of different seeding methods can be utilized to establish a stand of winter annuals. If tillage equipment is available, light preparation of a seed-bed and planting small grains at a depth between 0.5"-1.0" is recommended. Mixing seed with fertilizer and broadcasting with a spreader is an effective method often used by those with limited planting equipment. Over-seeding with a no-till drill is also an effective method, but be sure to minimize residue with a burndown herbicide, by taking off a late hay crop, or grazing closely prior to seeding. Good seed-soil contact is critical, especially when trying to establish oats or wheat. Planting dates and rates will vary depending on your location and the specific forage or mixture you are working with.

Both summer and winter annual forages will typically contain 15-25% more energy than dry hay. This can reduce the amount of purchased feed needed to meet energy demands. Furthermore, feeding high moisture forages as baleage or silage will result in less feed waste compared to dry hay fed free-choice in a bale ring. Gestating cows in fall and early winter have the lowest energy demands of their production cycle. This is a great time to put additional weight on cows and get them in condition for spring calving. Depending on the diet, this can also be an optimal time to reduce expenses by limit feeding cows a higher energy ration. For example, 25 pounds of dry matter of a 0.6 Mcal/lb NEm ration will supply the same amount of energy as 30 pounds of dry matter of a 0.5 Mcal/lb NEm ration. Several studies have shown that limit feeding cattle will result in an improvement in feed efficiency. Limit fed cattle have a slower passage rate, and therefore, are able to utilize the feed they are consuming more effectively due to increased digestibility.

The extent which you are able to utilize alternative forages will depend a great deal on your location and production system. However, they could be a useful tool to place in your tool box. I credit the many producers who are already thinking outside the box and trying various combinations and varieties in their forage production system. If you would like to discuss some options that may fit your operation feel free to reach out to one of our nutritionists and we'll be glad to assist you any way we can.





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