

The Latest Across the Plains

Unused Feed

“Do not pray for easy times, pray to be stronger. Do not pray for tasks equal to your powers, pray for powers equal to your tasks.” – John Kennedy

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.

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 and we will get to work on it.

Timely Reminders

- ◆ Clean water sources on a weekly basis.
- ◆ Keep an eye on commodity contract prices the next two months.
- ◆ Have us sample hay and silage (silage greater than 3 weeks after harvest).
- ◆ Start thinking about pre-weaning calf diets.
- ◆ Contact your nutritionist about running projections on growing or finishing cattle, beef or Holstein, to help plan feed-stuffs needs.

Feed the Rainbow

Holly Herr, along with her daughters Ellissyn and Lesley, pose next to a load of Skittles® used in their cattle rations.



Calendar of Events

- **July 19 - 21** Wisconsin Farm Technology Days, Sun Prairie, WI
- **July 22 - 24** Four State Farm Show, Pittsburg, KS
- **July 22 - 30** North Dakota State Fair, Minot, ND
- **July 22 - 31** Cheyenne Frontier Days, Cheyenne, WY
- **Aug 2 - 7** Dodge City Roundup Rodeo, Dodge City, KS
- **Aug 11 - 21** Iowa State Fair, Des Moines, IA
- **Aug 11 - 21** Missouri State Fair, Sedalia, MO
- **Aug 11 - 21** Illinois State Fair, Springfield, IL
- **Aug 12 - 20** Montana State Fair, Billings, MT
- **Aug 25 - Sept 5** Minnesota State Fair, St. Paul, MN
- **Aug 26 - Sept 5** Nebraska State Fair, Grand Island, NE
- **Aug 26 - Sept 5** Colorado State Fair, Pueblo, CO
- **Aug 30 - Sept 1** Farm Progress Show, Boone, IA
- **Sept 1 - 5** South Dakota State Fair, Huron, SD
- **Sept 5** Labor Day
- **Sept 9 - 18** Kansas State Fair, Hutchinson, KS
- **Oct 5 - 6** Eng Cow/Calf Symposium, Lincoln, NE



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Earlage for Starting, Growing and Finishing Cattle

By Dan Larson, Ph.D., Nutritionist

I am often asked about earlage, including the value of it as a feedstuff (which I can answer easily, great), the expected yield (which I cannot predict), and the mechanical aspects of harvesting (of which I have a reasonable understanding). Therefore, my research for this article is a compilation of field experience, many lab analyses and more than a few interviews with clients whom harvest earlage and have the practical knowledge. The purpose of this article is to help you, the producer, make the decision if you want to utilize earlage in your diets and then if you do, how you can harvest and store a high quality product.

We'll begin with the easy topic, nutritional quality and use. Earlage is most accurately defined as the chopped and ensiled ear of corn, including a portion of the husk and all the cob and kernels of corn. Snaplage is also a common term in many parts of the country, but is different from earlage in that the upper portion of the entire plant, including leaf, stem and ear are chopped and ensiled, resulting in a higher fiber, slightly lower energy product. For the purpose of this discussion, I will focus on earlage as described above.

The table below is an average of 20 earlage samples from the past year taken between eastern SD and western IL.

Measure	Value
Moisture	40.0%
Crude Protein	7.8%
NDF	17.4%
Starch	60.8%
NE _g	69 Mcal/cwt
FNDF	57.5%

These samples represent a nearly ideal average product, about 40% moisture, with adequate starch and low fiber (NDF) content. Based on this analysis, dietary inclusion of earlage will be about 60-65% of the as-fed diet for growing cattle and 40-45% of the as-fed diet for finishing cattle, assuming 65% dry matter of the total diet. Given the

luxury of preference, I utilize earlage as the sole source of corn for growing cattle and a major source of the corn, with additional shelled corn, for finishing cattle. We have also been experimenting with using earlage as the sole source of roughage in finishing diets, pushing earlage inclusion closer to 50-55% of the as fed diet, and the results appear very promising. When balanced correctly, earlage is a highly palatable feedstuff for starting, growing and finishing both beef and dairy/beef types of feedlot cattle. Not only is the kernel highly energetic, but the ensiling process also makes the cob somewhat digestible and a good source of rumen starch. Earlage is especially useful for finishing dairy/beef cattle, as it appears to improve palatability of the total mixed ration, without making the diet too high in moisture.

Earlage as a feedstuff is gaining in popularity throughout the Corn Belt; however, questions about earlage production are abundant. The major questions

appear to be when to harvest, how to harvest appropriately, what is the expected yield and is it cost effective compared to high moisture corn or corn silage. The question of when to harvest is relatively straightforward. Essentially, earlage should be harvested at black layer, similar to high moisture corn. At this stage, the kernel is about 30-35% moisture, with the plant matter being comparable, to slightly higher. There should be some green left in the bottom of the stalk when earlage is harvested, to help ensure the 35-40% moisture earlage product. Data from Pioneer suggest that earlage is roughly 20% cob/husk and 80% corn on a dry matter basis. The numbers summarized above indicate this is a bit low; it appears earlage is closer to 85% corn and 15% roughage. Thus if earlage is made from 150 bushel yield corn, the expected dry matter yield per acre will be about 4.5 tons per acre. If the earlage is harvested at 40% moisture, the total as fed yield per acre will be about 7.6 tons per acre. In order to calculate space requirements for storage, the estimate is about 32 lb of dry matter earlage per cubic foot. Therefore, if the yield is 4.5 tons of dry matter per acre, each acre of earlage will require 281 cubic feet of storage space. For a customized evaluation of your earlage crop, consult with your GPLC nutritionist. Pricing earlage is perhaps less straightforward and open to interpretation. An accurate price of earlage needs to be based off corn. If we began with \$4/bushel corn at 14% moisture (\$166/ton of dry matter), and assume that our earlage is 85% corn, then the earlage, based on corn, is worth \$141/ton of dry matter. Then we deflate the value of the earlage for its inherent moisture content (40%), the earlage is worth \$84.70/ton as-fed. This method is based off the value of the corn, and may not figure in any added cost of harvesting earlage over the cost of harvesting corn and each producer will need to figure that cost differential for themselves.

The final part of the story is harvesting and storing earlage. Typically, earlage is harvested with a snapping or picking head on a chopper. It is very important for the chopper to be equipped with a kernel processor and the ability to apply an inoculant to help ensure full and rapid fermentation. Doing so will produce the best quality feed for the best possible results. In contrast to earlage, some producers have produced snaplage by simply lifting the cutting head on a conventional silage chopper to leave the bottom 1/2 of the corn plant. However, as stated earlier, this strategy produces an ensilage with lower energy than earlage. Earlage can be stored in an upright silo, silage bag, or bunker. If earlage is to be stored in a bunker, it is critical to harvest it with at least 25% moisture to ensure a tight pack and appropriate fermentation. As with any ensilage, covering the bunker with a **PLASTIC** cover is essential. An oxygen barrier film is also very beneficial to ensure appropriate and complete fermentation. Due to the cost and labor of plastic bunker covers, producers have experimented with syrup, seeding small grains, and assorted other methods to cover and/or seal a bunker. Rest assured, none of these methods are as uniformly effective as a commercial bunker cover. The cost of the plastic is a small investment compared to the cost of shrink and spoilage in expensive feedstuffs.

Earlage is a high energy, palatable feedstuff with diverse applications in the cattle feeding industry. For those of you growing or finishing cattle, it deserves serious consideration in your production scheme. If you want a customized evaluation of earlage in your operation, please contact your GPLC nutritionist. 



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Your Most Important Resource

By Jeremy Martin, Ph.D., Nutritionist

On almost every operation I visit, the conversation will occasionally turn to labor – and the challenges of finding and keeping good employees. As an employer myself, I feel the same way at times. But I am happy to tell you we have assembled the most complete and self-motivated crew we have employed to date. While I am certainly not a professional occupational therapist, I would like to share some layman’s thoughts about how that came about.

The best definition of leadership I have found was written by Burke Teichert in his recent article “Want good employees? Here’s how to create them” published in BEEF magazine. This article is available online at: <http://beefmagazine.com/blog/want-good-employees-here-s-how-create-them>. I would encourage you to read this article along with Mr. Teichert’s other articles regarding employee and ranch management. Teichert defines leadership as: “Leadership is best gauged by the voluntary response of those being led.” What a great reminder that assembling a great team of employees requires dedication to becoming a great leader.

I do not personally believe anyone is born a great leader, or becomes one without much effort. Consequently, the first step is being willing to accept responsibility for developing your leadership skills if you are charged with the task of being an employer or manager. Ironically, another common conversation in rural America revolves around what the neighbors are doing and why. Think back on those conversations and you will realize not all of your peers are good employees for their own operations, and I assume they will not likely develop a good employee team until they become more effective themselves. I do not mean this to be critical of those folks or

their priorities, it is simply my opinion.

So, how do you generate the voluntary response, rather than having to tell your employees precisely when and what to do? I recently read a book entitled “Turn the Ship Around,” the story of Mr. David Marquette, retired US Navy Submarine Captain. I would also recommend this book to anyone with employees, it is worth the time to read. The book describes Captain Marquet’s true stories of converting a United States warship submarine crew from what he deems “leader-follower” to “leader-leader”.

The details of this transformation are best read in Marquet’s own words. But in short, the message is that an organization is stronger and more effective with greater employee morale and dedication when everyone has some responsibility for decisions and thus is a leader in their own right. Instead of the boss telling someone what to do, the employees should come to the boss with their intentions clearly stated and the boss simply has to confirm their intentions or discuss alternatives. This fosters the thought process of employees and engages them in their duties. Furthermore, the organization develops leaders with the ability to rapidly and easily step into place when personnel changes are inevitable. Basically, the boss can be absent and the organization and/or operations proceed normally. Just think how much peace of mind that would give you as an employer!

One of the core requirements for leader-leader style management to work is competency. However, I do not believe you should count on hiring employees with all the skills you need, but rather focus on hiring employees with a “can-do” attitude and willingness to learn. I know some of you are thinking that those people are hard to find – and maybe they are. But maybe our ability and desire to train people needs reevaluated. The fact is, it takes time and effort to train ourselves and our employees. We are all busy managing resources, but what resource do you have that is more critical to the success of your operation than people? Are you spending enough time managing your most important resource and refining your skills as a leader? 

International Relations

Great Plains Livestock Consulting, Inc. and Diamond V Mills, Inc. had the honor of hosting Mongolian delegates from Kerchin Cattle Industry Co., Ltd. and touring Tyler Burkey’s confined cow operation.





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Welcome, Chris Muegge!

Great Plains Livestock Consulting, Inc. would like to announce the addition of Chris Muegge, M.S. as our newest nutritionist! Chris was born and raised on a diversified livestock and crop operation in east-central Indiana. He attended Oklahoma State University, receiving his Bachelors of Animal Science degree in 2011. Upon graduation, Chris returned to Indiana to manage a feedlot and commercial cow-calf operation. During that time he worked with local producers to implement management and nutritional programs into their herds. This led him to return to graduate school at Purdue University and receive his Masters degree in 2015. There he focused on feedlot nutrition and the effects of fetal programming on progeny feedlot performance. Along with being a member of the Great Plains Livestock Consulting team, Chris also helps to manage his family's commercial cow-calf and bull development program.



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Autumn
2016