The Latest Across the Plains

Unused Feed

"Farming looks mighty easy when your plow is a pencil, and you're a thousand miles from the corn field."
-- Dwight D. Eisenhower

We are now accepting applications for our Beef Consultant Internship

The beef consultant intern will spend the summer travelling across the United States with each of our consultants, visiting a variety of farms, ranches, and feedlots from different parts of the country. The student will rotate between consultants every 3 to 5 days which will provide a unique opportunity to learn from the diverse specialties of our team. Room and board, along with mileage, will be reimbursed and a stipend will be provided.

Responsibilities will include:
Complete a special project assigned by consultants
Assist in research of livestock concerns
Support consultants by working on rations and performing clerical duties while on the road

Qualifications:
Strong verbal communication skills
Proficiency in Microsoft Word, Excel, and PowerPoint
Completed junior year of college with an interest in pursuing a graduate degree in ruminant nutrition

To Apply:
Please send cover letter and resume to Adam Schroeder at Adam.Schroeder@GPLC-inc.com.
Application deadline is **December 31, 2018** for Summer 2019.

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.

Calendar of Events

- **Dec 4** UNL Feeding Low-Quality Hay Workshop, Hartington, NE
- **Dec 3 - 6** ASTA's CSS & Seed Expo, Chicago, IL
- **Dec 4 - 6** Nebraska Power Farming Show, Lincoln, NE
- **Dec 4 - 7** Nebraska Cattlemen Annual Convention & Trade Show, Kearney, NE
- **Dec 6 - 8** Tulsa Farm Show, Tulsa, OK
- **Dec 11 - 13** Indiana Farm Equipment & Technology Expo, Indianapolis, IN
- **Dec 13 - 14** UNL Unit Cost of Production Workshop, Rushville, NE
- **Dec 19** Landlord-Tenant Farmland Rent Workshop, Beatrice, NE
- **Dec 24** Christmas Eve
- **Dec 25** Christmas Day
- **Dec 31** New Year's Eve
- **Jan 1** New Year's Day
- **Jan 3 - 5** Dakota Farm Show, Vermillion, SD
- **Jan 4 - 6** Missouri Cattle Industry Convention & Trade Show, Columbia, MO
- **Jan 9 - 10** Northern Illinois Farm Show, DeKalb, IL
- **Jan 15** Three State Beef Conference, Greenfield, IA
- **Jan 16** Three State Beef Conference, Savannah, MO
- **Jan 17** Three State Beef Conference, Syracuse, NE
- **Jan 29 - Jan 31** Iowa Power Farming Show, Des Moines, IA
- **Jan 29 - Feb 2** NCBA Cattle Industry Convention & Trade Show, New Orleans, LA
- **Feb 16—24** Nebraska Cattlemen's Classic Kearney, NE
- **Feb 26 - 28** Hawkeye Farm Show, Cedar Falls, IA

The Great Plains News Feed

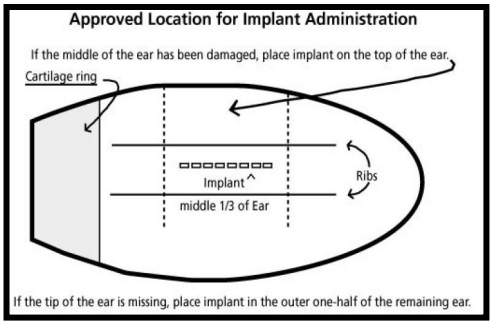
Getting the Most Out of Your Implant

Implants are one of the most profit-driving technologies available to cattle producers today. When implemented properly, implants contribute as high as a 14:1 return on investment (ROI). Two important things to consider, and review annually, when incorporating an implant protocol into your operation are selecting the correct implant program and using appropriate implanting techniques.

The fall newsletter provided a chart that outlined implants currently available, as well as suggested ways to incorporate them into your operation. There are two primary compounds found in implants; the first are estrogenic compounds that mimic the naturally occurring hormone estrogen and the second are androgenic compounds that mimic the naturally occurring hormone testosterone. These compounds slowly release hormone into the bloodstream over time. The length of time that an implant releases hormone is known as the payout period. As mentioned in last month's article, different implants are formulated to have different payout periods. In order for an implant to pay for itself and have the greatest ROI, the implant needs to match up with the number of days on feed and stage of production.

In order to determine which implant should be given and when, work backward from the day the cattle should be sent to slaughter or sold. If your implant is going to run out prior to the cattle being sold, consider re-implanting. It is common for cattle to receive 1 to 3 implants in their lifetime. Choosing the correct implant is a step in the right direction; however, the labeled payout period can be reduced if the implant is not administered appropriately.

Implanting procedures are extremely important in order to maintain efficacy of the implant. If implants are placed improperly or become infected, they will not release hormones as they were designed, which can greatly affect the potency. Infected implant sites can cause expelled implants or a quicker than normal payout resulting in bullers. Bullers can also be caused by implants that are crushed. To help prevent these issues, implants should be given with the gun designed for that implant, and guns should be kept in good repair with sharp needles. Implants should be placed in a clean, dry ear. If the calf's ear is caked in mud and/or manure, the ear needs be cleaned using a solution of Nolvasan® water and a scrub brush or currycomb chute-side. Upon determining that the ear is clean, the implant should be placed in the middle third of the ear, about halfway up from the tip to the head. Implants should be placed directly under the skin, taking care to avoid placing the implant in the actual cartilage of the ear. Once you withdraw the needle, take a moment to put pressure on the puncture site to help close up the hole. It's also good practice to feel the implant site to make sure that the implant was placed properly and no pellets were crushed.



The implant needle should be disinfected between each calf. This can be done by keeping a pan, such as a paint pan, with a sponge soaked in Nolvasan® water chute-side. After each calf is implanted simply swipe the needle across the sponge to disinfect. This will help reduce the chances of infection of the implant.

In conclusion, choosing the appropriate implant for your operation and utilizing proper techniques when administering an implant will help maximize implant return. Contact a consultant at Great Plains Livestock Consulting, Inc. for a customized implant program that works for your operation.

Grazing Corn Residue

Over the last decade, the agricultural industry experienced a period of high grain prices that resulted in the conversion of approximately 1.3 million acres of rangeland to farmland in the North Central United States. Today, approximately 90 million acres of corn are planted in the United States, with a majority of those acres located in the nation's heartland. Following grain harvest, corn fields contain residue consisting of grain, leaf, husk, cob and stalk. With harvested forages fed in the late fall and winter months representing a major cost for cattle producers, the abundance of corn residue available provides producers with an opportunity to lower their feed costs by utilizing the residue to extend the grazing season.

Grazing corn residue is a practice that is beneficial to both the farmer and rancher. The farmer is able to generate more income per acre, essentially double cropping the field. The rancher is able to maintain the cattle at a reduced cost to winter range or feeding them in a bunk. Cattle are able to obtain valuable nutrients from the residue that would otherwise be wasted; the nutrients are then returned to the soil in a form that is more easily utilized by the crops in the spring. Typically, cows will consume 25-50% of the residue available within 30-100 days, which leaves plenty of residue to control erosion from wind and water. In addition, the removal of the residue from the field allows for the ground to warm faster in the spring due to additional sun light reaching the ground.

Cattle are selective grazers; as such, they will select grain first, followed by the husk and leaf and finally the cob and stalk. As a result, the residue consumed is variable in nutrients from start to finish (70% TDN vs. 45% TDN, respectively). On average, cattle will select a diet that is 5.5% crude protein and 55% TDN. Therefore, dry, gestating cows may not need any supplement while grazing residue; however, heifers, lactating cows and calves will likely need a protein and/or energy supplement. Whether or not supplementation is needed is dependent upon the body condition of the cows at the beginning of the grazing period and the targeted gain prior to calving. Stocking rate will influence the supplementation strategy needed for cattle grazing corn residue.

Stocking rate can also have an impact on the amount of grain, husk and leaf cattle consume. Determining the correct stocking rate will help reduce the rate at which the most digestible nutrients are removed from the field. Cows should not be forced to eat the cobs and stalks. According to researchers at the University

of Nebraska, there are 16 lbs. of husk and leaf components per bushel of corn. Therefore, a field yielding 180 bu/acre produces 2,880 lbs. of leaf and husk per acre on a DM basis (180 bu/acre x 16 lb. of husk and leaf per bushel). If you assume 50% utilization, that would mean that there are 1,440 lbs. (2880 lbs. x 0.50) of husk and leaf components available for consumption. It has been estimated that a 1,000 lb. cow will eat 702 lb. of dry matter monthly, so a 1,200 lb. cow would consume 842 lbs. monthly (702 lbs. x 1.2 AU). Therefore, 1,440 lbs. of residue would be equivalent to roughly 1.7 AUM (1,440 lbs. of husk and leaf per acre at 50% utilization / 842 lbs. of feed per AUM), which would give you approximately 51 days of grazing (30 days in a month x 1.7 AU).

Letting the cow harvest the residue is generally more economical than mechanically harvesting it. Essentially, the cow acts as the swather, baler, grinder, and feed wagon, while also acting as the bedding blower, compost turner, and manure spreader. Additionally, grazing crop residue disperses the disease load and the soil is better for their feet than hard pen surfaces. Lastly, cattle do not actually remove nutrients from the field as opposed to bailing the residue. In instances where supplementation is needed, they will actually add more nutrients back to the soil than what the residue would have provided.

A common rebuttal when corn stalk grazing is suggested is that the fields do not have any fences. A single strand of smooth wire and an electric fencer is a very effective method of containing livestock, both young and old, in a field without permanent fences. It is inexpensive and fast to install and remove. It can also be used to cross-fence fields to better utilize the crop residue.

Water may also be an issue; however, there are many ways to supply adequate amounts to the cattle. Tanks can be filled using an irrigation well. In the case of dryland acres, a neighboring pasture or pond may be available. If not, drilling a domestic well may be able to pay for itself depending on the size of field and the depth of the water table. The last option would be hauling water to the cows (gestating cow – 8 gal/day, lactating cow – 15 gal/day). To estimate water needs, please refer to our water intake card. Contact your consultant or the office staff if you don't have one.

Contrary to popular belief, grazing crop residue is not a detriment to crop yields in the following year(s). In fact, yields in some cases are increased by grazing crop residues. The first two tables are from fields that would be a heavier soil similar to the corn belt, while the third table is representative of a sandier type of soil. The following three tables are from Effect of Corn Residue Removal on Subsequent Crop Yields in the University of Nebraska 2015 Beef Cattle Report. Table 1 compares two fields in an annual corn and soybean rotation over a 16-year period. The grazed field had similar corn yields to the field that was ungrazed; however, there was a 1.5 bu/ac improvement in soybean yield from the field that was grazed compared to the field that was ungrazed. In addition, for nine years of this experiment (1997-2006) three tillage methods were evaluated within the spring grazed and ungrazed treatments: no-till, ridge-till, or spring disk-till. There was no interaction between tillage and spring grazing which suggests that spring grazing has the same effect on yield, regardless of tillage method used.

Table 1. Effect of grazing corn residue in the spring over a 16-year period.

	Ungrazed	Spring Grazed	SEM [1]	*P*-Value [2]
Corn, bu/ac	214	214	2.6	0.96
Soybean, bu/ac	57.8[b]	59.3[a]	0.54	0.03

[1]Yields are based on 13% moisture for soybeans and 15.5% moisture for corn grain.
[2]Means with differing superscripts in a row are different ($P < 0.05$).

Table 2 compares three fields in an annual corn and soybean rotation over a 10-year period. One field was ungrazed, the second was grazed in the spring, and the third was grazed in the fall. Corn yields were not significantly affected; however, soybean yields were increased on fall grazed fields compared to fields that were ungrazed or spring grazed. There were no differences between the spring grazed and the ungrazed fields.

Table 2. Effect of grazing corn residue in the fall/winter or spring over a 10-year period on corn and soybean yields[1]

	Ungrazed	Spring Grazed	Fall Grazed	SEM[1]	*P*-Value[2]
Corn, bu/ac	207	209	211	3.9	0.55
Soybean, bu/ac	62.1[b]	63.5[b]	65.5[a]	0.54	< 0.01

[1]Yields are based on 13% moisture for soybeans and 15.5% moisture for corn grain.
[2]Means with differing superscripts in a row are different ($P < 0.05$).

Table 3 compares three fields in a continuous corn production system and grazed at different stocking rates over a 5-year period. The first field was ungrazed, the second was stocked at 1 AUM/ac, and the third was stocked at 2 AUM/ac. No significant differences in corn yields were observed due to grazing system; however, there was a numerical trend for increased corn yields as stocking rate increased.

Table 3. Effect of corn residue removal on corn yield[1] over a 5 year period.

	Ungrazed	Fall Graze[2]	Fall Graze[3]	Baled	SEM[1]	*P*-Value
Corn, bu/ac	148	152	155	147	6.7	0.16

[1]Yields are based on 15.5% moisture.
[2]1 AUM/acre
[3]2 AUM/acre

In summary, grazing crop residue is beneficial to the farmer by producing an additional source of income from the land. Grazing crop residue is beneficial to the soil and crops by allowing additional sunlight to reach the ground in the spring and to increase the rate of breakdown of crop residues without removal of nutrients. It is beneficial to the rancher by lowering the carrying cost of cattle to be held over for grass or lowering the cost of gains on weaned calves. Grazing is beneficial to the animals by dispersing disease load and providing a softer surface for the animals to be housed.

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