

# The Latest Across the Plains

## Unused Feed

“Success is no accident. It is hard work, perseverance, learning, studying, sacrifice, and most of all, love of what you are doing.” — Pele

## 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.

## Beef Facts

- ◆ 1.1 lbs. of meat from an implanted steer contains 7 ng of estrogen, 1.1 lb. of tofu contains 113,500,500 ng of estrogen.

## Timely Reminders

- ◆ With the uncertainty around coronavirus, consider staying slightly long on mineral and other ingredients (like distillers grains) in case they become in short supply or prices increase.
- ◆ Keep pens box scraped.
- ◆ Haul manure whenever possible.
- ◆ Have your calving facilities and OB equipment ready.
- ◆ Have the right mineral for your cows' stage of production.
- ◆ Prepare now so your Hi-mag and Fly control minerals are on hand.
- ◆ Semen check bulls and make sure they are in adequate body condition.
- ◆ If you are in a high anaplasmosis area, begin talking to your vet now about a VFD.
- ◆ Target a BCS of 5.0-5.5 on mature cows and 5.5-6.0 on heifers at calving.
- ◆ Be sure to adjust cow nutrition to match requirements as they calve.
- ◆ Make sure waterers are clean and in good working order.
- ◆ Decide which implant you will use on calves.



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## Implants for suckling calves: Synovex® C & Synovex® ONE GRASS

With this year's calving season underway, it is a good time to start thinking about ways to maximize gains on calves throughout the year. Nutrition, vaccinations, parasite control and implants can all contribute to improved health and weaning weights of this year's calf crop. Implants have the largest return on investment of any technology available for beef producers today. Research has consistently shown that implants increase sellable weight.

Implanting suckling calves can add 10 to 40 pounds to weaning weights when used correctly. With the cost of an implant being approximately \$1.5-\$5 per head, it only takes a few pounds to pay for the cost of the implant and the corresponding labor. Adequate nutrients and quality grass combined with proper implanting procedures are necessities for realizing the potential of an implant. For more information on proper implanting protocols, please re-visit our December-January 2018 Newsletter article on our website ([www.gplc-inc.com](http://www.gplc-inc.com)).

One common misconception of implanting suckling calves is that implanted calves will bring less dollars at the sale barn than non-implanted calves. A study conducted by Rogers et al. (2015) evaluated 27,746 lots of calves to determine whether implanting impacted the sale price of weaned calves at the auction barn. Researchers found that there were no differences between the sale price of implanted and non-implanted calves (Table 1). Therefore, inferior weight gains due to not implanting calves puts producers in a game-losing position compared to producers who chose to implant their suckling calves.

Table. 1. Effect of implant status on the sale price of beef calves marketed through a livestock video auction from 2010 to 2013. (Adapted from Rogers et al. 2015)

Implant Status	No. of Lots	Sale Price/cwt., \$	P-Value
2010			
Implanted	2,123	114.99	0.53
Not Implanted	5,355	114.91	
2011			
Implanted	2,126	141.45	0.39
Not Implanted	4,882	141.28	
2012			
Implanted	1,940	163.07	0.64
Not Implanted	4,429	162.96	
2013			
Implanted	1,997	162.05	0.12
Not Implanted	4,894	162.45	



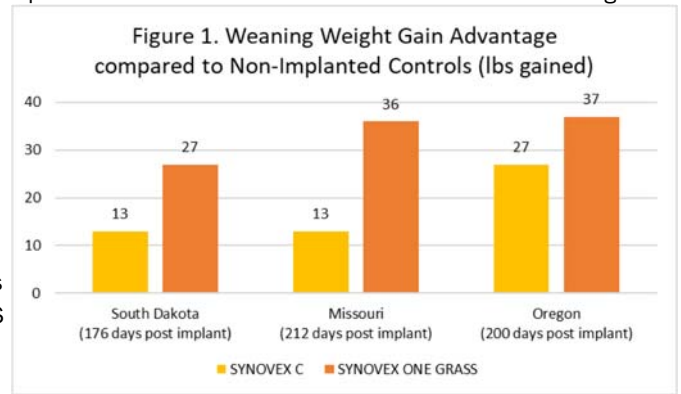
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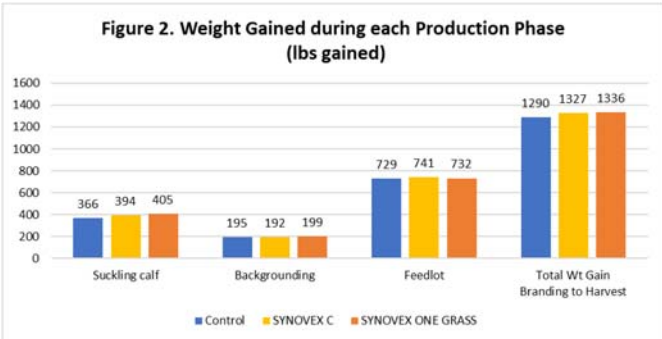
Another hesitation of implanting nursing calves is that a calthood implant might negatively impact subsequent finishing performance or replacement heifer reproduction. It is important to read and follow label instructions and recommended guidelines. If you have questions, please let your GPLC nutritionist know. Implant strategies should always start with the least aggressive implants for nursing calves followed by the most aggressive implants during finishing. Research has indicated that a properly managed suckling implant program does not have a negative impact on subsequent performance or carcass quality and increased gain is generally additive. (Duckett and Andrae, 2001; Pritchard et al., 2015).

There are multiple implants available for suckling calves, one of which is Synovex® C. Synovex® C is a conventional implant designed for suckling calves 45 days or older, up to 400 lb., containing 100 mg of progesterone and 10 mg of estradiol benzoate. A longer acting implant that has shown positive results when used in suckling calves is Synovex® ONE GRASS. The Synovex® ONE GRASS implant is an extended duration implant tailored to pasture steers and heifers. It delivers the proven 10:1 ratio of TBA:E2 (150 mg of trenbolone acetate and 21 mg of estradiol benzoate equivalent to 15 mg E2) with a patented polymer barrier that extends the formulation payout up to 200 days. This extended duration fits well with the age that most calves are weaned at, approximately 200 days. The longer payout also enhances operational efficiency by delivering implant performance almost twice as long as conventional implants, providing flexibility to graze beyond the time conventional implants run out. Although both Synovex® products can be administered with the Synovex® Revolver, an additional adapter needs to be used with this device when administering the Synovex® ONE GRASS implant.

Three studies evaluated growth performance of 632 suckling beef steers receiving a Synovex® ONE GRASS implant, Synovex® C implant or no implant. Studies were conducted in 3 different locations: South Dakota, Missouri and Oregon. Growth performance was compared after a 176- to 212-day post-implant pasture season. Across the 3 studies (Figure 1), calves implanted with Synovex® ONE GRASS averaged 27 to 37 lbs. more in final weight than non-implanted controls during the season, while calves implanted with Synovex® C averaged final weights that were 13 to 27 lb greater than controls. Both implants offer cattle producers attractive performance alternatives. Synovex® ONE GRASS delivered gain benefits approximately double (1.8-times) that induced by the Synovex® C implant. Use of long-duration Synovex® ONE GRASS implants may help cow/calf producers more fully exploit the growth capability of their suckling calves, and thus optimize profit potential.



Subsequent feedlot performance and carcass quality of the suckling calves from one location (Oregon) was investigated. Calves of three suckling treatments (nonimplant control, Synovex® C and Synovex® ONE GRASS), were processed and fed in a commercial feedlot under their normal operational procedures. All treatments were backgrounded for 85 days and implanted with Synovex® Choice. Upon arrival at the feedlot, all animals were implanted with Synovex® ONE FEEDLOT. Cattle were on feed for 183 days. Total lifetime gain (Figure 2) was 37 lb more for calves implanted with Synovex® C and 46 lb for calves implanted with Synovex® ONE GRASS. There was no negative impact on feedlot performance or carcass traits (ribeye area, back fat, marbling score and quality grade) when suckling steers were implanted with either Synovex® C or Synovex® ONE GRASS. The cattle not implanted as a suckling calf did not ever catch up in weight compared to their suckling calf-implanted contemporaries all the way to harvest.



For cattle producers focused on efficient utilization of their resources and labor, implanting suckling calves provides a clear opportunity to optimize the pounds of beef produced and associated profit potentials. However, producers should know that using higher potency implants in suckling calves could potentially cause calves to exhibit more muscle mass and a stouter, less refined look. Additionally, it is important to know that Synovex® ONE GRASS is strictly for terminal steers and heifers, it should not be used on heifers intended to be used for replacements. If you would like to discuss what implant protocols would work best for your operation, we would be happy to assist you.

## Calf Scours: A Review

As beef producers, we work hard all year long managing and caring for cattle. Part of the reward to countless hours and diligent efforts is seeing results come to life in calving season. Something about a newborn calf joining mom for that first nurturing moment brings hope, even when all else may seem awry. Through mud and snow, empty coffee pots at wee hours of the morning and downside markets, we strive because our passion is to do so. Our job does not stop when the calf is safe with mother. Unfortunately, with every new beginning we are faced with opportunities for insult that we must have a contingency plan for. Calthood scours is a thief we are all familiar with. In this article, we will discuss how it pertains to the cow-calf producer. By identifying 1) what scours is; 2) what causes it; 3) how to prevent it; and 4) how to treat it, we will develop tools needed to construct best management practices impacting our bottom line.

### What Exactly is Calf Scours?

According to veterinarians with the University of Nebraska, calf scours likely causes more financial burden to cow-calf producers than any other problems in their herd. The costs incurred can be direct (labor, treatment, lab fees, death loss, etc.) or indirect (less pounds weaned, lost performance, subsequent secondary infection such as respiratory disease, etc.) Scours is most often a symptom of underlying disease or disorder manifesting as diarrhea. It is also commonly called enteritis, or inflammation of the gastrointestinal tract. Neonatal death loss is usually due to a combination



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## Common Symptoms of Calf Scours

- Bright yellow or white feces
- Weakness
- Dirty tail from loose stools
- Depressed, not nursing
- Calves with sunken eyes
- Reduced skin turgor
- Fever
- Fast/slow breathing
- Weight loss
- Collapse

of dehydration, shock, acid/base balance issues and electrolyte loss through frequent diarrhea

### What Causes Calf Scours?

Scours itself is not a disease, but a process thereof that can have many causes. Any factor that increases secretion or decreases absorption of fluid across the intestinal wall can lead to development of scours. These causes are often broken down into two categories: 1) infectious; and 2) noninfectious. You may have heard noninfectious causes referred to as “predisposing” or “contributing” factors.

### Infectious Causes

According to veterinarians at North Dakota State University, major infectious causes of scours are listed below:

- Bacterial:** *Escherichia coli*, *Salmonella spp.*, *Clostridium perfringens*, and others
- Viral:** coronavirus, rotavirus, BVD virus, and IBR virus
- Protozoan:** *Cryptosporidium* (please note *crypto* is zoonotic and can be transferred to humans) and coccidia
- Yeasts and molds:** Often associated with lesions in the gastrointestinal tract of scouring calves but are not considered primary causes

### Noninfectious causes

Noninfectious causes usually relate to management. The most notable relationships between management and calf scours include nutritional deficiency, severe environmental conditions, and inadequate attention to newborns. Often, combinations of these factors can be conducive to scour outbreaks.

Gestating cow nutrition has a direct impact on calf health, especially during the third trimester. Body condition score (BCS) at calving has been shown to have a linear relationship to calf serum immunoglobulin concentration. Colostral immunoglobulins are important antibody-containing proteins that promote calf immunity. Table 1 illustrates the relationship between cow BCS and calf serum immunoglobulin concentration.

	Cow Body Condition Score				P-value
	3	4	5	6	
Calf serum IgM (mg/dl)	146	157	193	304	0.05
Calf serum IgG (mg/dl)	1998	2179	2310	2346	0.23

Adapted from Odde, 1997, Proceedings Bovine Connection to Profit.

The take home message here is more immunoglobulin results in increased protection from disease in calves. Of course, you need calves that are up and nursing to take advantage of high-quality colostrum.

Data from the USDA-ARS in Miles City, MT summarized the impacts of nutrition on calf health. Calves from cows on a higher plane of nutrition vs calves from cows on a lower plane of nutrition had reduced incidence of and death loss from scours (33% and 0%) vs (52% and 19%), respectively. Summarizing these results suggests that cow nutrition has an impact on colostrum quality and quantity. At the end of the day, adequate nutrition cannot be stressed enough. If you have questions or concerns, please do not hesitate to contact your GPLC, Inc. nutritionist for science-based advice.

## Environmental Conditions to Consider

- Muddy lots
- Frequent bedding
- Crowded conditions
- Severe inclement weather
- Calving cows and heifers together
- Same wintering and calving area
- Sanitation
- Other sources of stress

Severe environmental conditions contributes to incidence of scours. These environmental conditions may or may not be under our control. Of the ones we can control, we must do so to the best of our ability. Management allows us to reduce opportunity for exposure to infectious causes and limit stress.

Calving season is a stressful time. Some calves may require no extra attention, some may need little help, and some may need intense intervention. Difficulty birthing and extreme weather conditions may lead to more time needed per calf. Calves are born with no antibodies to fight scours or other disease processes. Acquired immunity has one source – nursing soon after birth to receive vital colostrum. Efforts to prevent

scours through cow vaccination is money down the drain without colostrum. Make sure your calves receive colostrum!

### Preventing Calf Scours

Making a long story short, many of the management recommendations listed above hold true for preventing scours in newborns. Please contact your GPLC nutritionist for advice in feeding and managing your cow herd to control scours. Tying cause to prevention, we cannot ignore the fact that interaction exists between noninfectious and infectious causes. The compelling argument is that efforts to prevent infection do not work without controlling noninfectious components. We must implement and use year-round best management practices that work. Outside of these, we recommend consulting your veterinarian about a vaccination program for your herd. If you have questions, please let us know. We are here to help!

### Treating Calf Scours

Regardless of cause, treatment protocols for scours are similar. First and foremost, manage hydration, acidosis, and electrolyte loss. Dry electrolyte powders mixed with water for supplemental hydration are one consideration. Sanitize all equipment after use to prevent spreading disease. Watch for hypothermia in dehydrated calves and use external heat as needed. Do not discourage or withhold nursing. Finally, consult with your veterinarian relative to diagnosis and judicious use of antibiotics.

### Conclusion

The season is here. Fill up that coffee pot, and let’s move forward learning from our past. Educate yourself on the topic-at-hand. Ask questions. Identify opportunities that may lead to incidences of scours; infectious and noninfectious. Continue your incessant diligence, and watch those calves come to life. Remember, we are here for you!





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Spring  
2020