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MAGNETS CAN HELP PREVENT HARDWARE DISEASE IN CATTLE HERDS by Curt Larson

Cattle commonly swallow foreign objects, such as nails and wire, found in the field or their feed. These objects do not always cause problems, but they can cause a disease commonly known as hardware disease. Foreign objects ingested by cattle make their way into the animal's rumen and reticulum. Sometimes, the animal's body will push the objects into the peritoneal cavity, causing severe inflammation (hardware disease). In extreme cases, a sharp, metal object can damage the animal's abdomen wall and pierce the heart sac, causing pericarditis. Typical signs of hardware disease are poor appetite, lack of movement and indigestion. If the animal's heart is damaged, fluid can build up and cause abnormal heart sounds.

It is unlikely that an animal will fully recover from hardware disease, and slaughter may be suggested. If the animal is a dairy cow or highly valuable for breeding purposes, there are a couple treatment options. The animal's front legs may be raised 6 to 8 inches off the ground to stop the object from moving further into the abdomen. This needs to be done continuously for 10 to 20 days. Antibiotics can be given to slow the infection. It is also possible to manually remove the foreign objects by making an incision into the rumen wall.

The best way to deal with hardware disease is prevention.

Most grain elevators and feed dealers run their feed under magnets to catch any hardware. However, some objects may not be picked up. Cow magnets, which are administered like a pill, are also used to collect metal in the reticulum.

Here at the Noble Foundation, we use a grinder and feed boxes to feed cattle. We decided to do a test to see how much, if any, hardware is found in our feed. We placed three magnets on two feed box chutes and poured two types of feed, a pelleted receiving ration and a commodity mix in pellet form. These feeds were put in the feed box and poured directly into a feed bunk. No prior mixing was done on our part after purchasing. Our initial findings showed magnets picked up some pellets that contained metal flakes. The magnets also picked up metal not from the feed, including metal pieces from inside the rusted feed box, bolts, nails and welding rods.

The cattle magnets on the feed box chutes work but can easily fall off during use. We are working to mount permanent magnets to the chutes, so they will be more stable and have a better chance of catching more unwanted objects. We are also in the process of installing magnets on our mixer wagon. While grinding hay, we did our magnet test and found pieces of rake teeth, fence posts and wire that was picked up by the hay baler. When feeding without the magnets, we weren't finding many objects in the feed bunks. This tells us the objects we are catching now were going somewhere else – more than likely into the cattle's stomach.

CONSULTANT OFFERS STRATEGIES FOR CATTLE MARKETING DECISIONS

By Dan Childs

The cattle industry has experienced plenty of grief since the market started its downward spiral in June 2015. Feeder cattle prices declined nearly 40 percent during the six-month period, ending just before Christmas 2015, resulting in a roughly \$600 per head lower price for a 750-pound feeder steer. Today, many cattle producers' balance sheets indicate a lower net worth than a year earlier. What is the best strategy going forward to regain profitability or at a minimum stop the bleeding of balance sheets?

Cow-calf producers who have spring-calving herds are facing decisions on what to do with the calves. Many options are available. A selected list include 1) strip and sell, 2) precondition 45 to 60 days and sell, and 3) retain ownership through spring. Currently, the March 2017 Feeder Cattle futures contract is trading at a \$10 per hundredweight discount to the September 2016 Feeder Cattle futures contract. It is difficult to gain cattle cheap enough to overcome that kind of price decline. Without getting too deep in the weeds discussing assumptions, my calculations reveal that a bawling 5-weight steer will net roughly \$750 per head in early October. If that calf was preconditioned, gained 1.67 pounds per day for 60 days and was sold in early December, the value increases to more than \$900 per head. Again, that is based on current Feeder Cattle futures quotes. Does that strategy make a producer any more money? It depends, but likely turning a bawling calf into a yearling, then selling it will generate a favorable rate of return.

What about retaining ownership of the animal until early March and selling the calf at 850 pounds? Turning a profit from this strategy is a bit more of a stretch, but it is doable assuming one can keep the cost of gain in check. Futures quotes indicate a value of gain near 60 cents per pound. If you have your own small grain pasture or access to 30-cents-to-35-cents cost of gain, it can work. The key to making money on retained ownership to 850 pounds is keeping cost of gain much lower than the 60 cents per pound value of gain.

Purchasing calves this fall for a winter stocker enterprise also has fairly thin margins projected. It appears a strategy worth considering is waiting until late 2016 or early 2017 before buying the calves. Most of the \$10 per hundredweight adjustment from September 2016 to next March through May 2017 is completed by year end. Therefore, by waiting, a stocker producer can buy and sell on a nearly flat market, which allows for a much higher value of gain. The higher value of gain provides more potential margin if cost of gain is monitored and kept relatively low.

In summary, if you have home-raised calves to market this fall, the best strategy is to turn the bawling calf into a yearling and sell immediately. Marketing the calf through a value-added sale would be even better. If you are buying stocker calves, plan to acquire them later in the year or early next year to minimize the negative buy/sell price spread. Individuals with unique situations and/or conditions could experience different outcomes than discussed here. Risk management should be a consideration when contemplating retained ownership. And as always, market conditions can change, sometimes quite rapidly, that could positively or negatively impact the result of these strategies. Calf prices have experienced considerable volatility in recent months. There is no reason to think volatility will lessen in the future. Astute producers will want to monitor markets closely as marketing decisions draw closer.

REGIONAL RANCHERS SHOULD RECONSIDER DEFAULT FALL-CALVING by Clay Wright

When I was in the Texas Christian University Ranch Management Program, long-time program director John Merrill referred to the unchanging absolutes in cow-calf production as "hitching posts."

Hitching Post One (HP1)

A cow's primary purpose is to bring a live calf to the weaning pen every 365 days. It is more economically important than the calf's weaning weight or subsequent performance. The producer must provide the right environment for the cow to meet that expectation, which includes providing adequate nutrition, a comprehensive herd health program and bull management. In my experience, inadequate nutrition is the most common cause of failure in reproductive performance.

Hitching Post Two (HP2)

A thin or underfed cow will not rebreed until she is in adequate body condition and/or on a nutrition plan that meets her nutritional needs.

Hitching Post Three (HP3)

Grazing is the most economical means of providing a cow's nutritional needs. The less supplemental feed and hay needed, the more potential for profit in the long-run.

Hitching Post Four (HP4)

The first three hitching posts are intricately linked with a fourth. A cow's nutritional requirements vary during the year and are driven mainly by her reproduction stage, from her lowest needs after weaning and in mid-gestation to her highest needs after calving when she reaches peak lactation. A cow's protein needs likely double and energy needs can increase one-and-a-half times between these two periods.

An operation is most successful when it matches the cows' nutritional needs to the quality and quantity of the forage base through appropriate stocking rate and grazing management. The interconnectivity and applicability of these "hitching posts" apply to all operations, regardless of calving season.

Most of the producers I've worked with calve in the spring. They understand the "hitching posts" and that the warm-season perennial forage base in the Southern Great Plains fits that timing best (HP3). Despite the potential for lower conception rates in the heat of summer and the traditional decline in calf prices at weaning in the fall, these producers maintain profitability primarily by minimizing winter feed costs (HP4). They also manage calf marketing to mitigate the low, seasonal calf prices.

Fall-calving producers fall into one of two scenarios. First are those who deliberately and successfully manage for a fall-calving herd. Often, they are top-level, low-cost, efficient producers with warm-season forages, or they have a cool-season perennial forage base that reduces winter feed costs for a lactating cow (HP4). These producers capitalize on the several advantages to fall-calving. Fall-born calves are old enough to take advantage of the high-quality forage flush from early spring to weaning in early summer and usually wean heavier. A second advantage is the price for weaned calves is historically higher in early summer than in the fall for spring-born calves. Then, there are producers who spring-calve for all the right reasons but manage a fall-calving herd to slide in open cows. Historically, the advice has been to sell open cows, which I usually still recommend. There are value-added practices to marketing cull cows that should be considered. Even when the economics support giving an open cow another chance to breed versus replacing her, there's rarely any consideration given to the possibility she will fail to breed again. If a cow is open due to poor management, sliding her to a fall-calving herd won't make a difference until management improves. If the producer did his/her part, the cow could be too big or produce too much milk or she could simply be infertile. Regardless, if she misses once she gives up 15 to 20 percent of her lifetime production potential, and it'll take up to three of her contemporaries to pay her way. Give careful consideration to the economics of a default fall-calving herd.

HERBICIDE CHOICES AFFECT COVER CROP OPTIONS, MANAGEMENT

By [James Locke](#)

In recent years, the use of cover crops has seen a significant resurgence. Cover crops can provide many benefits to pasture and cropping systems. They can provide additional grazing outside the primary growing season, weed suppression and a living mulch to protect the soil from erosion. Depending on the cover crop species, they can add nitrogen to the soil and recycle nutrients from deeper layers of the soil profile. They can also improve soil health, structure and water holding capacity. While cover crops have the potential for all these benefits, they also add another layer of complexity to the production system. Cover crop plant selection, establishment, residue management, water use and weed management must all be taken into consideration when adding them to the production system.

Unfortunately, many herbicides used in pasture and crop production have soil residual activity that can carry over to cause damage or stand failure for the subsequent cover crop. The primary resource for knowing if a herbicide may have activity on the intended cover crop is the Rotational Crop or Replanting section of the herbicide label. The wide variety of species used for cover crops presents a particular challenge since there is a good chance the label will not specifically address the cover crop(s) being considered. In lieu of specific label guidance, a general rule of thumb is: if an herbicide has soil activity on weeds that are similar to the cover crop, it will likely have activity on the cover crop. In some situations, performing a soil bioassay is the only way to be reasonably sure it is safe to plant the cover crop. Many herbicide labels include specific instructions for how to conduct a soil bioassay, or a general method is available at [A Quick Test for Herbicide Carry-over in the Soil](#).

While the herbicide label provides a good starting point for estimating the risk of carry-over to the cover crops, several factors affect whether the herbicide may break down faster or slower. Microbial activity is a primary driver of breakdown for many herbicides, so rainfall and temperature are often the most important factors. Warm, moist soil conditions favor enhanced microbial activity and faster breakdown; cool, dry conditions reduce microbial activity, resulting in longer herbicide persistence. Soil pH may also affect length of persistence. Some herbicides, particularly the sulfonylureas (Ally, Glean, Finesse, etc.), persist much longer at higher pH levels. Soil type and organic matter can also affect herbicide persistence. Soils with a high clay or organic matter content can bind with herbicides and prevent microbes from breaking them down. The herbicides may then be released over a longer time period and affect subsequent crops. Consider all these factors when estimating how long your herbicide may persist.

So, how do you use this information to make decisions about your cover crop options? First, determine if the expected benefit of the cover crop is worth more than not using the ideal herbicide in the preceding cash crop. If the expected cover crop benefits are more valuable than the expected weed control from the planned herbicide, change the weed management plan to use herbicides with no, or shorter, soil residual so you can use the cover crops of choice. If the expected weed control from the planned herbicide is more valuable, choose species for the cover crop blend that will be tolerant of the herbicide residue.

Cover crops have the potential to be a valuable component of production systems. Do not let the wrong herbicide and cover crop combination diminish that opportunity.

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