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What a Cow Patty Can Tell You

Whether you are running a large cattle ranch or just a few in your backyard the nutrition and health of your cows is vital. One of the simplest methods for monitoring your animal’s diet is through their patties. Bulls, cows and calves all require different nutrition. By looking at their patties you can determine what they are eating and the forge quality of the grass is adequate.

A photo guide of the four stages of patties can give you an adequate idea of the quality of what your grass. A first stage patty will be very loose and usually in a splattered form with a very distinct green tint. This is the best stage for yearling cows and bulls because of the high protein needed for growth. In this stage your cow is receiving a crude protein level of 20% or higher and 70 to 80% of the grass eaten is digestible forage. The reason it takes a liquefied form is because the grass eaten is highly digestible and little fiber remains to give a more compact consistency. There is nothing to worry about unless you are raising dairy cows or cow calf pairs. In this stage the digestible protein and crude protein levels are too high. Recommended crude protein level for lactating cows is 16 to 18%. Because the grass it is so easily and quickly digested, the rumen does not have the proper amount of time to extract the proteins necessary for high quality milk. In this stage you will see bulls and cows in a very healthy and fit state but you will see milk production and calves growth decline. If your patties are in this stage, simply adding a high fiber feed to their diet may make it adequate for milk production.

The second stage has a very noticeable crater in the center of the patty. It is still soft and some green may still be visible. This is the ideal stage for maintaining mature cows, bulls, and cow calf pairs. In stage two your animals are receiving 10 to 17% crude protein and 61 to 67% digestibility. In this stage you will notice the poop is starting to hold a form. This is because fiber levels are rising as digestibility decreases. Also, during this stage your range land is producing the perfect balance of quality forage and supplements are unnecessary.

Stage three the patties will start to pile and folds will start to form and have darker brown color than the previous two stages. The crude protein will be at 6 to 9% and 58 to 63% digestible forage. At this stage the protein is at a level adequate for mature bulls and cows without calves. During the winter or breeding months it would be suggested to supplement small amounts of protein, but your range land is still producing at a manageable pace.

In stage four you will see the patties are really firm and stacked with a very dry appearance. In this stage your cows are receiving 5% or less crude protein and 56% or less digestible forage. If this is the case in your herd you will quickly see a decline in the physical appearance of your cows because this is an inadequate amount of protein for both grow and maintaining a healthy weight. Immediate action must be taken in this stage whether it be supplementing or moving your cattle.

The correlation between the photo guide and the content of a patty was made possible by the Near Infrared Reflectance Spectroscopy or NIRS. Through hundreds of samples the A&M team was able to put together this photo guide. The NIRS uses light waves reflected off special chemical bound associated with fiber. The light reflected is measured across an infrared band. The data received is then used to estimate the digestible forage in the rumen.

Now that we have a basic understanding of the four stages, let us look deeper into the reason for the different consistency and color of the patties. As mentioned in stage one the consistency is decided by the quality of the forage and color on available forage. As we all know cows are grazers and love to eat grass. Cows select their food on color, in their mind the greener the better. When the cow begins to graze he or she will immediately gravitate towards patches with the most green leaves. Then they will look for the green stalks which are their next preference. After that they’ll eat the dead leaves then the dead stalks. If your range land has a large quantity of green grass their patties will take a very noticeable green hew. If the grass is also good quality forage then it will give the patties a moist look whether it is as noticeable as stage one or more hidden like in stage three. The moistness comes from the amount of water in the leaves, the newer the leaf the more water it will contribute to the patty. Both of these reasons give the patty a shape and color, but fiber is what makes the body of the patty. If your animals were only receiving the newest greenest best quality forage they would produce nothing but a green liquid which sounds kind of gross and is not the best for the cow. When the cow is grazing the green leaves it will also pick up some of the stalks and surrounding dead leaves and these are what contribute to the fiber content. When the stalks and dry leaves have been broken down by the rumen the excess product which has no more nutritional value to the cow will be massed together along with the moisture and green leaves excess a patty is formed. If the cow consumes the proper amount of good quality and fair quality grass it will produce the best patty or stage two.

The patty does not just tip off the rancher to nutrition but also the health of the cow. Often times if the cow has an internal parasite such as ostertagia a parasite found in the digestive tract or stomach. Almost all cattle carry a few of these little worms but in large numbers the worms can be extremely dangers. These worms can cause diarrhea, wait-loss and even death. If the cows have large numbers of the ostertagia it can be identified by a dull hair coat but early detection can be in the patties. By the simple flotation method and examination of the solution the microscopic eggs can be found. The stage three larva can be seen by the naked eye in the patty. The worms spread when the eggs are passed with the feces they hatch and grow on the grass were they are then re eaten by the cow and the cycle continues.

In conclusion a patty is worth a thousand words. If you use this tool of fecal analysis which takes a simple flip of a patty, it can serve as early detection to disease and inadequate nutrition. And simply knowing can be the difference from a large money making operation and one on the brink of bankrupt. Look at the cow patty it may save you lot of time and money.

Work Cited

“NIRS Technology.” 2011. 18 January 2016 <<http://cnrit.tamu.edu/ganlab/pagesmith/6>.>

“Protein in Pastures.” 2016. 2 January 2016 <http://extension.psu.edu/animals/dairy/nutrition.>

“Bovine Parasites” 2015. 27 December 2015 <http://www.morrisvetcenter.com.>

“Forge Quality Photo Guide" 6 December 2015 <http://texasecr.tamu.edu.>