

CATTLE HAIR COAT CONDITION CAN BE AN INDICATOR OF CATTLE HEALTH AND GROWTH

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How many times have you looked at a cow and thought about her hair coat? A bovine's hair coat can be more than just a fashion statement. When someone notices that a bovine "sure looks slick & shiny" or "has a rough appearance," those observations can actually be insights into the health of the animal.

A hair follicle requires an adequate supply of three nutrients to be healthy: protein, minerals, and vitamins. A lack of proper nourishment from any of these three nutrients can lead to lowered hair health. This may present itself in many ways. For instance, an animal may not properly shed hair as seasonal temperatures increase. In some cases, hair will be retained across the animal's body or in other instances it may only be retained in patches. In more extreme cases, alopecia (balding) may occur. In addition to hair loss, cattle may present with discoloring, also known as depigmentation. An example of this is when angus cattle develop a rusty or yellow tinge. The hair coat will have a dull appearance to it. Lastly, unhealthy hair will often become brittle and easy to break.

Protein, minerals, and vitamins are essential for healthy reproductive development, immune systems, and growth. Therefore, if you begin to observe the above hair conditions, these may be indicators of greater health problems within the animal. Research has even shown a link between hair health and calf growth.

Some common causes of cattle hair health problems:

(This list is not all inclusive but covers some of the more frequent issues)

Undernutrition – due to low feed intake or consumption of feed that was of very low quality. This often limits protein supply in the animal. This happens more commonly when feeding cattle during a drought or in winter months. It can also be of concern when cattle are overstocked on pasture or rangeland and are competing for limited forage.

Mineral Deficiencies – copper (Cu) is a mineral that often causes hair problems. We often see discoloring in cattle as a result of copper deficiencies in the diet. Other minerals whose deficiencies are commonly connected with hair health concerns are cobalt (Co), phosphorus (P), iodine (I), selenium (Se), and zinc (Zn).

Toxicity – when cattle consume something that is toxic to them it can cause hair coat health issues. Both plant and chemical toxins can be a problem. Additionally, the overconsumption of even essential elements can become an issue. Overconsumption of selenium and iodine are great examples of this.

Disease – many illnesses will affect cattle hair coats. When viral and bacterial infections occur in the animal, nutrients are reallocated to fight the invading disease, taking nutrients away from other functions. Internal lesions and abscesses may appear and lower hair quality.

Occasionally a disease will have a hair related tell, such as enteric disease in young calves. An example of this is salmonellosis which causes alopecia on the lower legs.

Parasitism – internal parasites, like the tape worm, can take away nutritive elements from the diet and restrict what the animal is receiving. External parasites, such as ringworm or mange, can affect the skin and cause alopecia.

I mentioned earlier in this article that research has shown a link between hair coat and animal growth. Researchers at the University of Missouri saw poorer performance among both cows and stocker yearlings that shed their winter hair coat later in the summer. Mississippi State University studies compared weaning weights of calves from fall calving cows and how those weights compared to hair shed off periods of the mother cow. Cows that shed their hair coat in March weaned calves that averaged 46 pounds more than the calves of cows that shed their hair coat in July. The same study also showed a 36 pound improvement in weaning weight of calves from cows that shed their hair in May when compared to calves of cows that shed their hair in July.

Geneticists have discovered that hair coat shedding among cattle is about 0.35 heritable when not interfered upon by external factors. Therefore, shedding is considered to be a moderately heritable trait. In application, this means that cattle breeders could selectively breed for this hair coat shedding in an effort to push up calf weaning weights.

As more information has been discovered in recent years about how hair coat is linked to both animal health and calf growth, various researchers have been developing scoring systems that cattle producers can use to evaluate their own herds. Currently there is both a 4-point and a 5-point hair coat scoring system. The 5-point system may be easier to learn: 1 = 100% shed, 2 = 75% shed, 3 = 50% shed, 4 = 25% shed, and 5 = full hair coat.