

VETERINARY CALL

by Bob Larson, Kansas State University

Winter Cow Syndrome

A good feed program and management strategy can help keep a cow's body weight up in the winter months.

“Winter cow syndrome” is a general term used to describe cows experiencing a significant decline in body weight and condition during winter months.

Older cows with missing or worn teeth, heifers still growing and cows with other disease problems such as pneumonia, liver disease or severe parasite load have increased risk for “winter cow syndrome.”

Mature dormant forage or hay harvested when the forage was mature tend to have high lignin content, low protein and few available calories. Because high-lignin/low-protein forages have a very slow passage rate through the digestive tract, cows eating these types of forages are able to consume much less forage per day compared to cows eating higher-quality forage. This combination of low intake and low available energy can result in cows losing weight rapidly, even when eating all they can consume.

In addition, mature forages are often borderline to deficient in phosphorus, calcium and vitamin A. If intake is decreased, dietary nutrients can drop below minimum levels needed for health and maintenance of body weight.

Vitamin A is the vitamin most likely to be deficient, and while

cattle grazing green forages can store vitamin A in the liver for two to four months, cows consuming dormant forage or poor-quality hay for several months can deplete these reserves.

Cows are able to withstand cold winter temperatures as long as they have a dry winter haircoat, adequate body fat and sufficient forage intake. However, prolonged periods of exposure to low wind-chill temperatures coupled with poor-quality forage can result in rapid weight loss. If cows are thin to start with, the combination of poor-quality forage and low environmental temperatures can result in thin cows deficient in minerals and vitamin A. These cows are often unable to rise (i.e., downer cows).

The likelihood a downer cow with “winter cow syndrome” returning to health is low to very low, depending on the severity of the weight loss, the current level of environmental stress and the availability of high-quality forages and supplements.

Preventing winter cow syndrome

The best strategy to prevent “winter cow syndrome” is twofold. First record “mouth” and body condition scores (BCS) in the fall. Cull any cows without sufficient

teeth. Separate thin cows and feed them so they are in adequate condition before winter.

Second, have a good forage management and winter supplementation plan to maintain body condition. On native range dormant winter forage will likely need protein supplementation to ensure adequate intake and digestibility. Energy may also need to be supplemented during periods of cold stress. Cows consuming high-quality hay may require no additional supplementation. However, if hay has adequate protein, an emphasis on energy supplementation may be required during periods of environmental stress. If low-protein hay is being fed, protein may need to be supplemented as well.

It is wise to have contingency plans for extreme weather events. Cows that have lost body condition during the winter should be separated from the herd and fed a higher energy diet. Extra feed should be available for periods of extended cold temperatures to avoid excessive weight loss. **AJ**

Editor's note: Robert L. Larson is a professor of production medicine and executive director of Veterinary Medicine Continuing Education at Kansas State University in Manhattan, Kan.