



Feeding Wheat to Beef Cattle

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With the recent news of wheat scab in this year's crop it is certain to be making its way into the beef industry as a feed ingredient. Questions have been emerging on how to effectively feed wheat to cattle as it is less commonly done today than in years past here in the state. This article will address some of the general issues with feeding uninfected wheat to cattle. Keep in mind that feeding mycotoxin infected wheat will differ from below as the inclusion rates may be dictated by the degree of infection and level of mycotoxins present.

Wheat is high in starch, moderate in crude protein, and low in fiber. The starch availability or rate of fermentation is greater than that of corn. The seed coat of wheat and smaller particle size reduces its digestibility unless the grain is processed. Rolling wheat has been shown to increase the digestibility of the grain. Therefore, it is recommended that wheat be processed to achieve coarse particles while avoiding very small particles and fines. Feeding is more difficult to manage with regards to reducing risk of ruminal upset in comparison to other grains such as oats or corn.

Rates of inclusion for wheat in moderate to high grain rations should be limited to 40% of the diet dry matter. It should be fed in combination with more slowly fermentable grains and/or more fibrous feedstuffs. As with any diet change, cattle should be adapted to the new feed ingredient through a work-up program. Start at lower levels, 10-15%, and increase them in a step-up fashion replacing some of the other grain or roughage. For example, start with 10% for 4-5 days, then 20% for 4-5 days, then 30% for 4-5 days and repeat until the desired level is achieved. The days required before increasing to the next level may vary and intakes should be stable before increasing to the next step. Previous research has shown that the daily intake of wheat-based rations is more volatile than with corn-based rations and may not be as high.

Limit feeding cows or stocker cattle is another viable option for wheat. The amount of wheat offered to cows should be limited to approximately 5 pounds. Stocker cattle should also be limited and research has indicated that supplementing at 0.37% of body weight (700 lb steer would be about 2.5-2.75 lbs) had no effect on forage intake. Other studies showed no effect on hay intake or fiber digestibility when wheat was offered at 0.67% of bodyweight and hay was limit-fed at 1.5% of bodyweight. Forage intake and fiber digestion were reduced when hay was offered ad libitum with wheat fed at 1.0% of body weight.

Caution is warranted in self-feeding situations and wheat is not recommended to be offered free-choice. Combining feed ingredients with slower rates of fermentation such as roughage and slower fermenting grains is recommended. Using an ionophore may aid in reducing overconsumption and subsequent acidosis for growing and finishing diets.

Including buffers (calcium carbonate/limestone, sodium bicarbonate, etc...) when cattle are being worked onto a high grain ration may reduce the risk of ruminal upset. Dietary calcium levels should be 0.7% with the majority of the calcium coming from feed-grade limestone. Wheat is not recommended to be used in self-fed creep rations to avoid the risk of bloat, foundering, and/or acidosis.