

Feed Uses for Barley

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Abstract

Cereal grains with their high starch content are fed to livestock predominantly as a source of energy for rapid growth or high milk yield and also for subsistence in times of poor pasture availability. Results from the Premium Grains for Livestock Program show there are large variations across cereal grain species, cultivars, individual grain samples and animal types in the energy released during digestion and in the amount of grain eaten. The digestive system of an animal has a major effect on the energy value of individual barley samples. Some samples provide more energy for ruminants but less for pigs and poultry, and vice versa. Several grain characteristics that contribute to these differences have been identified. Chemical composition of the grain and nature of the endosperm cell walls have a major impact on the energy made available to different animal types. The rate of starch digestion and chances of causing acidosis are important characteristics for determining the energy value of barley for ruminants. Specific grain characteristics that could be included in barley breeding programs for different types of livestock production have been identified. NIR calibrations have been developed for many of these characteristics and should result in more effective evaluation of grains within breeding programs and for sale to the livestock industries.

Full Text

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