

FEEDING WHEAT TO DAIRY COWS

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In Oklahoma, an abundant supply of wheat is generally available for livestock feeding. At times, the price is competitive with that of other feed grains used as an energy source in dairy rations. When this is the situation, wheat can be used to advantage in formulating high energy rations for lactating dairy cows; however, the limits on the extent to which other grains can be replaced by wheat in dairy rations have not been well defined. Much of the earlier work on the subject was conducted using cows producing considerably less milk and fed much less concentrates than is common in the industry today. Also, there is a lack of information concerning the feasibility of using wheat as a major component of a complete mixed ration where silage is the only forage.

A feeding trial is underway to compare the performance of lactating cows fed concentrate mixtures containing different amounts of wheat included in a complete ration with sorghum silage as the only forage. The concentrate mixtures contain 0, 40, and 60 % wheat, with the latter level representing the highest percent that can be used and still maintain protein, fiber and energy content of the total ration at an acceptable level. The rations were calculated to be isocaloric and isonitrogenous with wheat replacing some soybean meal as well as corn.

The rations consist of 55 % concentrates and 45 % forage on a dry basis. The respective rations are fed to individual cows in three portions at 8-hour intervals. A total of 21 cows in their second or greater lactation are being used in a switchback trial with three periods of 4 wks each. Measurement criteria are: milk yield and composition, feed intake, incidence of off-feed, weight change, body condition change, concentration of blood plasma urea, rumen pH, lactic acid and volatile fatty acids.

Data from the last two weeks of each period will be used for comparisons among treatments. To date, feed intake by cows fed the three rations appears to be similar. Also, no serious off-feed conditions or apparent digestive disturbances have been observed.

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