Ethyl Alcohol Supplement

NOT Beneficial to Cattle in Feedlot Tests

This trial was conducted to evaluate observations by a supplier of industrial alcohol indicating the possibility of a beneficial production response when feedlot cattle were given small amounts of ethanol in their water. The experiment was conducted for a 105-day period from July through October in 1962. Four pens of three Hereford steers received an identical ration with two pens (six steers) receiving alcohol in the water at a concentration providing 8 oz. of denatured ethanol per head daily. Dispensing apparatus was a 100-gallon tank supplied with a float valve and a small, 8 × 8 × 2-inch drinking pan to minimize evaporation. Water and the ethanol were added to the tank daily. Similar drinkers used in control pens were equipped with water meters to record water consumption.

Results of this trial (shown in the table) are on the basis of empty body weight—thus eliminating much variation due to digestive tract contents. There were no differences in the response of the steers as measured by average daily gain, energy gain per day, carcass yield, carcass fat percentage or corrected carcass weight (identical caloric content). The control steers each consumed over a pound more feed daily than those receiving the alcohol. This difference was statistically significant. However, if an amount of feed is added to the intake of the steers given the alcohol, which is equivalent in digestible energy to that received in the form of ethanol (shown in parentheses in the table) then the difference in feed intake is no longer at a significant level. Feed efficiency, either in terms of weight gain or energy gain per 100 pounds of feed, was essentially the same for each group of steers. These data support the conclusion that a small level of ethanol added to the drinking water of beef steers has no production value other than what might be expected on the basis of its energy content.

Water consumption of the steers given the alcohol was slightly above the intake of the control animals. The data indicate that most of this increase occurred during the first six weeks of the trial when the alcohol steers were consuming 1.9 gallons per head per day more than control steers. The reason for this initial difference in water intake is not known. It was apparent, however, that alcohol did not decrease water intake even though the odor of the denaturing materials (mercaptans) was easily detected at the water surface and generally offensive to the human sense of smell.

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