Suther's
Nutrition Management People
Quality
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Technical Bulletin
Liquid Feed Supplements

Liquid supplements have been used in beef production for many years. Recently new advances in technology enabled more complex mixes to provide safe, convenient and cost effective supplements to the industry. Liquid supplements have evolved to carry fats, proteins, minerals, vitamins, and non-nutritive additives.

Liquids are best used as a cost-effective carrier for micro-nutrients and protein. In addition, liquids have the ability to texturize the ration, control dust, improve palatability, and better disperse ingredients. Applying a liquid supplement to a complete feed will result in excellent dispersion of the minerals, vitamins, trace minerals, and ionophores. Separation due to over mixing or by cattle in the feed bunk should be minimized compared to pellets or other meal supplements. Many of the ingredients (ie. Minerals, ionophores, etc) are not extremely palatable and cattle will tend to sort those products out and consume them last or not at all.

Pritchard at South Dakota State University conducted a research trial in which he looked at the impact of supplement form and presented it in the South Dakota State University Beef Cattle Research Report (pg. 48-53). The trial consisted of steers (237head) on finishing diets (90% concentrate) for 105 days. The control diet consisted of supplemental protein, minerals, vitamins, monensin, and tylosin in pelleted form. The liquid (LS) diets (4 diets) contained supplemental vitamins, minerals and monensin in a liquid supplement while the protein and tylosin were included in a pellet. Over the course of the trial the steers on the liquid supplement gained 4.16lbs per day and the control steers gained 3.89lbs per day (P=0.0546). Steers on the LS also had a higher average dry matter intake (DMI) 23.4 lbs vs. 22.4 lbs compared to the control diet. This resulted in similar feed conversions. Pritchard suggested that the increase in ADG and DMI were a result of an increased uniformity of monensin dispersion in the feed and subsequently more uniform monensin consumption. Monensin can affect DMI by its dosage and consistency of intake. These differences resulted in cattle fed LS consuming 105 additional pounds of dry matter but, producing 28 additional pounds of beef. Assuming feed to cost $120/ton and live cattle worth $65.00/cwt, the steers fed the liquid diets would have made the producer an additional **$11.90/head**. Producers should place their numbers into this scenario and determine what it may mean to you.

SFB-111-10-05

Suther Feeds, Inc. 105 South Kansas Frankfort, Kansas 66427
800-633-4138