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Effect of Yeast Supplement on Performance of Steer Calves

Abstract

The effect of Proponse[®] 1 yeast supplement fed to newly arrived steers was evaluated at the ISU Armstrong Research Farm near Lewis, Iowa. Four pens of approximately 32 head were fed similar diets with 2 pens receiving yeast supplement and 2 pens not. Calves were weighed on delivery to the feedlot and allocated on weight and sire. Calves were on test 34 days. There was no effect on daily gain or feed to gain. Dry matter intake trended higher for the yeast supplemented calves ($P=.10$). These data suggest that yeast supplement may improve dry matter intake in newly arrived feedlot calves. Yeast supplements have been evaluated in dairy cattle but have not been evaluated in newly arrived feedlot calves.

Keywords

Animal Science

Disciplines

Agricultural Science | Agriculture | Animal Sciences

Effect of Yeast Supplement on Performance of Steer Calves

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Introduction

The effect of Proponse^{®1} yeast supplement fed to newly arrived steers was evaluated at the ISU Armstrong Research Farm near Lewis, Iowa. Four pens of approximately 32 head were fed similar diets with 2 pens receiving yeast supplement and 2 pens not. Calves were weighed on delivery to the feedlot and allocated on weight and sire. Calves were on test 34 days. There was no effect on daily gain or feed to gain. Dry matter intake trended higher for the yeast supplemented calves ($P=.10$). These data suggest that yeast supplement may improve dry matter intake in newly arrived feedlot calves. Yeast supplements have been evaluated in dairy cattle but have not been evaluated in newly arrived feedlot calves.

Materials and Methods

One hundred twenty-nine steers were fed in pens, with and without yeast supplement. The facility contains 4 pens designed to accommodate 40 head each. Two pens were fed Proponse[®] yeast supplement and 2 pens served as controls over a 34-day period.

The first ration used for the first 6 days in this study averaged 14.9% crude protein, 52% concentrate, and NEg of .47 Mcal/lb on a dry

matter basis. The ration used for the last 6 days in this study averaged 14.3% crude protein, 78% concentrate, and NEg of .58 Mcal/lb on a dry matter basis. The ration used for the entire 34-day study averaged 14.4% crude protein, 66% concentrate, and NEg of .53 Mcal/lb on a dry matter basis.

All steers were weighed 2 consecutive days, and the weights averaged to determine their final trial weight. Individual performance and pen data were analyzed using the GLM procedure of SAS.

Results

Performance and efficiency response to Proponse[®] yeast supplement by pen is shown in Table 1. Although there were apparent numerical responses in daily gain and feed efficiency within periods, these means were not significantly different. Daily dry matter feed intake was improved at the $P=>.10$ level (16.67 vs. 17.20 lb dry matter/head/day) by feeding Proponse[®] yeast supplement as a feed additive for newly arrived steers.

This study demonstrates the potential of Proponse[®] yeast supplement as a feed additive for newly arrived steers. The improvement in dry matter intake justifies the continued evaluation of yeast supplementation in feedlot rations.

Table 1. Dry matter percentages of ration fed to newly arrived steers for 34 days.

Feedstuff	Control Ration	Yeast Sup. Ration
Shell corn	59.1%	58.6%
Alfalfa-brome hay	29.5%	29.4%
Protein supplement	5.4%	5.4%
Oats	3.8%	3.9%
Soybean oil meal	2.2%	2.2%
Yeast supplement	0%	.7%

Table 2. Intake and efficiency of pens with and without Proponse[®] yeast supplement.

	Control	Yeast
No pens	2	2
No of steers	65	64
Initial weight	505	504
Final weight	633	635
Overall		
Dry matter intake, lb ^a	16.67	17.20
ADG, lb.	3.78	3.87
Feed/gain	4.42	4.44

^aMeans differ (P < .10)

¹Proponse yeast supplement contains brewer's yeast (*Saccharomyces cerevisiae*), manufactured for Consolidated Nutrition, L.C., Omaha, Nebraska.