1995

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CATTLE 95-13

Summary

Seventy-two yearling steers (initial weight 793 lb) were allotted to 8 pens and self-fed a finishing diet consisting of 91% whole shelled corn and 9% pelleted supplement without or with Yea-Sacc (11 g per day). Feed was provided to each pen approximately every 3 days in amounts necessary to provide constant access during the 109-day trial. No treatment differences were detected for any of the feedlot performance or carcass characteristics measured. The occurrence of acidosis was high in both treatments as evidenced by the higher percentage of abscessed livers (40%). The feeding of Yea-Sacc did not have any beneficial effect in these circumstances.

Key Words: Yeast, Steers, Feedlot Performance, Carcass Traits

Introduction

Many direct-fed microbial products have been introduced into the market place over the past decade. Although evidence for a positive effect on animal performance has existed for many years, adoption has been slow. This is probably due to the lack of performance data indicating in which specific production situations the various products are or are not effective. A previous study at SDSU indicated that the feeding of a yeast strain specifically selected to compliment high grain diets (Yea-Sacc, Alltech, Inc., USA) was effective in improving gain of yearling steers fed a 90% concentrate, 10% roughage diet once daily.

The objective of this study was to determine if this same yeast product could positively affect feedlot performance and/or carcass characteristics of yearling steers self-fed an all-concentrate finishing diet.

Materials and Methods

Seventy-two yearling steers were selected from a larger group that had been used on a previous growing study. Additional processing was not necessary with the exception that a Revalor[3] implant was given at the beginning of the study. The steers were randomly allotted to 8 pens and fed a whole shelled corn finishing diet without (CONT) or with Yea-Sacc (YS; 11 g per day). Diet composition is presented in Table 1. The amount of the finishing diet was initially restricted to 10 lb per day and gradually increased to ad libitum over a 15-day period. Ad libitum grass hay was provided separately through day 15 and then removed. For the remainder of the study, feed was provided approximately every 3 days in amounts necessary to provide constant access to feed to simulate the use of a self-feeder. The steers were housed in semi-confinement on cement for the 109-day trial. Feed bunks were under a roof. YS was not fed from day 103 through 109 because supplies were depleted and could not readily be replaced.

Initial weights were determined after overnight removal of feed and water. The final weights were based on hot carcass weight divided by a constant dressing percent. Feedlot performance data were analyzed on a pen basis as a completely random design. Carcass data

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Table 1. Test diet composition (dry matter basis)[a]

Item	Percent
Whole shelled corn	90.90
Soybean meal	3.40
Ground corn	2.10
Limestone	1.20
Urea	.80
Trace mineral salt	.50
Potassium chloride	.50
Dicalcium phosphate	.50
Premix[b]	.10

[a]Formulated to contain 12% crude protein, .55% Ca, .42% P and .65% K.
[b]Provided 237 mg Rumensin and 43,000 IU supplemental vitamin A per day. Yea-Sacc was provided at 11 g per day to treated calves. The supplement was pelleted.

were analyzed using individual animal measurements. Percentage of choice, percentage of yield grades 1 and 2 and percentage of abscessed livers were tested by chi-square analysis.

Results and Discussion

Performance and carcass data are presented in Table 2. No treatment differences were detected for any of the feedlot performance or carcass characteristics measured ($P>.10$). The occurrence of acidosis was high in both treatments as evidenced by the percentage of abscessed livers (at least 40%). This is greater than the occurrence in the previous study (15%) in which a positive response to YS feeding was found. The feeding of YS did not have any beneficial effect in these circumstances.

Table 2. Feedlot performance and carcass data

	Treatment		
Item	Control	Yea-Sacc	SE
No. of steers	36	36	
Dry matter intake, lb/day	19.5	19.5	.20
Wt gain, lb/day	3.36	3.28	.071
Feed:gain	5.81	5.96	.127
Hot carcass wt, lb	695	690	4.6
Choice, %	71	61	
Yield 1 and 2, %	58	70	
Abscessed livers, %	40	43	