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Abstract

Forty-eight Charolais crossbred steers were fed sprouted or nonsprouted milo for 139 days in a finishing study. Steers fed sprouted milo (51% sprout damage, 60 lb. per bu.) were 28 lb. heavier (P<.10) and gained 8.4% faster (P<.10) while consuming 2.7% less (P>.10) feed per pound of gain. Sprout damaged milo had no significant (P>.10) effect on carcass characteristics. These data indicate that cattle fed sprouted milo should perform as well or better than those fed nonsprouted milo.

Keywords

Kansas Agricultural Experiment Station contribution; no. 88-363-S; Cattlemen's Day, 1988; Report of progress (Kansas State University. Agricultural Experiment Station and Cooperative Extension Service); 539; Beef; Feedlot performance; Steers; Sprout-damaged milo

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Feedlot Performance by Steers Fed Sprout-Damaged Milo

Kenneth P. Coffey and Lyle W. Lomas[1]

Summary

Forty-eight Charolais crossbred steers were fed sprouted or nonsprouted milo for 139 days in a finishing study. Steers fed sprouted milo (51% sprout damage, 60 lb. per bu.) were 28 lb. heavier ($P<.10$) and gained 8.4% faster ($P<.10$) while consuming 2.7% less ($P>.10$) feed per pound of gain. Sprout damaged milo had no significant ($P>.10$) effect on carcass characteristics. These data indicate that cattle fed sprouted milo should perform as well or better than those fed nonsprouted milo.

Introduction

Excessive rain and flooding in Southeast Kansas in the fall of 1986 caused considerable damage to unharvested milo. Much of the milo crop sprouted while still in the head. Grain dealers substantially discounted sprouted milo, resulting in an immense economic loss to area milo producers. Many producers chose to feed the milo rather than accept the reduced price. Such decisions stimulated many questions concerning the feeding value of the sprouted grain. This project was conducted to answer some of those questions.

Experimental Procedure

Forty-eight Charolais crossbred steers were randomly allotted by weight into six pens, each containing eight head. The pens were then randomly assigned to receive finishing diets containing sprouted or unsprouted milo. Both sprouted and unsprouted milo were Hogemeyer 688 red milo. The sprouted milo contained 51% sprout-damaged kernels. Both diets consisted of 74% milo, 20% corn silage and 6% supplement on a dry matter basis. The supplement contained soybean meal and monensin (Rumensin®) (22.5 g/ton of complete diet). All steers were dewormed, implanted with Ralgro®, and vaccinated for IBR, PI_3, Vibrio, Lepto 5, and 7-way blackleg, and were fed the respective diets from November 13, 1986 to April 1, 1987. At the end of the 139-day feeding period, the cattle were slaughtered and carcass data were obtained.

Results

Steers fed sprouted milo gained 28 lb more ($P<.10$) and 8.4% faster ($P<.10$) than those fed unsprouted milo (Table 29.1). Quality grades, yield grades and backfats of steers fed sprouted milo tended to be greater ($P>.10$) than those of steers fed unsprouted milo. Steers fed sprouted milo consumed 5.3% more feed than those fed

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unsprouted milo but required 2.7% less feed to produce each pound of gain. Feedlot performance of steers fed both types of milo was lower than expected, probably because of extremely muddy conditions during the experiment.

These data indicate that sprout damaged milo is an acceptable feed source for finishing cattle. However, grain quality should still be considered. The milo used in this study had a test weight greater than 60 lb/per bu., even though it was sprouted. Because sprout damage (51%) was not exceptionally severe, and the test weight was high, we cannot project how cattle might perform on more severely damaged milo.

Table 29.1. Feedlot Performance and Carcass Characteristics of Steers Offered Sprouted and Unsprouted Milo in a Finishing Ration

Item	Sprouted	Unsprouted
No. Steers	24	24
Initial wt., lb.	828	829
Final wt., lb.	1206[a]	1178[b]
Total gain, lb.	378[a]	350[b]
Daily gain, lb.	2.72[a]	2.51[b]
Dry matter intake, lb/day	24.3	23.1
Feed/gain	8.93	9.18
Hot carcass wt., lb.	730	718
Dressing %	60.5	60.9
Quality grade[c]	11.1	10.5
Backfat, in.	.37	.33
Ribeye area, in^2	13.1	13.6
Yield grade	2.0	1.7

[a,b]Means within the same row with unlike superscripts differ (P<.10).

[c]Low choice = 10; Average choice = 11, etc.