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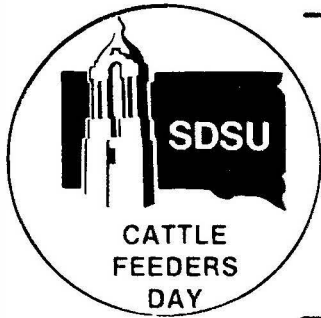
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THE EFFECT OF GROWTH PROMOTING IMPLANTS ON FEEDLOT PERFORMANCE BY GELBVIEW BULLS

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Summary

Ninety-two Gelbvieh bulls were randomly allocated into four treatment groups of 23 bulls each. The bulls were weighed, implanted with either Ralgro, Synovex-S, Synovex-H or not implanted (control group) and placed on an 82% high moisture corn ration for 212 days. Feedlot performance data were collected for the four groups. Bulls implanted with Synovex-H had the highest average daily gains. Overall implanted groups were slightly higher in average daily gain than the nonimplanted control group. Feed consumed per lb of body weight gained indicated little differences with Synovex-S and Synovex-H being slightly better than Ralgro or control groups. It appears that there may be some benefit from implanting bulls in both average daily gain and feed efficiency, but the response will not be as great as for heifers or steers.

Introduction

The effects of growth promoting implants on feedlot steers and heifers are well documented. These implants improve the rate of growth and postweaning feed efficiency of steers and heifers. Information concerning the value of implanting feedlot bulls is less well known. This knowledge will become more important in the future as more efficient ways of raising feedlot cattle are used. Feeding bulls is one of these ways. As feeding bulls becomes more popular, information on the effects of implanting will become more important. This research was designed to provide some insight into implanting bulls.

The objective of this research was to determine the effect on feedlot performance of implanting various growth promotants in young bulls. Responses to these various implants by bulls were compared to a control group of bulls to determine the differences in feedlot performance. These comparisons provide information to help determine the most effective methods of bull feeding.

Procedures

Ninety-two Gelbvieh bulls were purchased at Highmore, South Dakota and trucked to the Southeast South Dakota Cornbelt Agricultural Research Center at Beresford, South Dakota. The ninety-two Gelbvieh bulls were randomly allotted into four treatment groups of 23 bulls each. The bulls were weighed, (average 524 lb) implanted and placed in feedlot pens. The four

treatment groups were (A) control (no implants), (B) implanted with Synovex-S, (C) implanted with Synovex-H and (D) implanted with Ralgro. All bulls were fed the ration presented in table 1 consisting of (dry matter) basis 15% corn silage, 82% high moisture corn and a 3% protein supplement (35% crude protein, 400 g/ton monensin and 180 g/ton of tylosin). On the 16th of December 1981 the trial began. The bulls were initially fed a ration on a dry matter basis (DMB) of 32% high moisture corn, 60% corn silage and 8% supplement for 1 week. At the beginning of week 2 the ration was changed to high moisture corn, 40% corn silage and 8% supplement. In week 3 the ration was increased to include 72% high moisture corn, 23% corn silage and 5% supplement. At week 4 bulls were consuming the final ration of 82% high moisture corn, 15% corn silage and 3% protein supplement. The trial was concluded on July 29, 1982, when the bulls were marketed.

Feedlot performance for the period was monitored by monthly weighings of individual bulls and measurement of pen feed consumption. Carcass data were taken upon slaughter and will be reported later.

Bulls were managed specifically to minimize aggressive behavior. The bulls were purchased from one herd and when randomly allotted into the four groups, bulls from various groups were then never allowed to mix. This prevents much of the undesirable behavior often exhibited by feedlot bulls.

Results

Average daily gains and feed efficiency data are presented in table 2. In general, the results show increased performance by the implanted groups over the control group in average daily gain but no clear cut trend in feed efficiency. The highest average daily gains were achieved by the bulls implanted with Synovex-H. The other implants did not result in average daily gains that were different than for the control group. The pounds of dry feed consumed per pound of body weight gained showed little difference between all groups. None of the measures of feed efficiency were greatly different, with Ralgro groups tending to be the least efficient and the Synovex-H the most. From this trial the implantation of bulls with Synovex-H appeared best and implantation with any of the three studied would probably be beneficial. Response to implanting bulls did not appear to be as strong or consistent as responses of steers and heifers.

TABLE 1. PROXIMATE ANALYSIS OF FEEDLOT RATION
USED ON A DRY MATTER BASIS

Item	% in ration
Dry matter	66.1
Crude protein	11.3
Crude fiber	6.5
Ether extract	3.7
Ash	3.0
Nitrogen free extract	75.5

TABLE 2. FEEDLOT PERFORMANCE OF BULLS BY TREATMENT
(DECEMBER 16, 1981 - JULY 19, 1982 - 202 DAYS)

Item	Implants			
	Control	Ralgro	Synovex-H	Synovex-S
No. of animals	23	23	23	23
Initial wt, lb	507	534	543	524
Final wt, lb	1120	1156	1203	1173
Weight gain, lb	613	622	660	649
Avg daily gain, lb	2.8	2.9	3.0	2.9
Avg daily intake, lb DMB	19.6	19.9	20.5	20.3
Feed/gain, lb	6.7	6.8	6.6	6.6