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Abstract

Thirty-nine Angus, Hereford, and part Simmental bulls were tested 140 days (December 18, 1973 to May 6,1974) for weight gained. Bulls were divided into four groups and fed four different rations that had been formulated for two energy levels (high and medium) and two sources of roughage (corn silage or oats and prairie hay). Average daily gains (lbs.) on the four rations were: high energy silage, 3.48; high energy oats and prairie hay, 3.27; low energy silage, 2.58; and low energy oats and prairie hay, 3.41.

Keywords

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Energy Levels and Roughage Sources for Bulls on 140-Day Test

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Summary

Thirty-nine Angus, Hereford, and part Simmental bulls were tested 140 days (December 18, 1973 to May 6, 1974) for weight gained. Bulls were divided into four groups and fed four different rations that had been formulated for two energy levels (high and medium) and two sources of roughage (corn silage or oats and prairie hay).

Average daily gains (lbs.) on the four rations were: high energy silage, 3.48; high energy oats and prairie hay, 3.27; low energy silage, 2.58; and low energy oats and prairie hay, 3.41.

Introduction

Each year many bulls are performance tested in Kansas to identify prospective herd sires with superior genetic material for beef production. Difference of opinion exists regarding management during the tests. Such things as feeds used in ration formulation and energy levels for gain are controversial.

This test compared two levels of energy and two sources of roughage in formulated rations for a 140-day test.

Experimental Procedure

Forty bulls (11 Angus, 6 Hereford, and 23 part Simmental) produced in the Kansas State University teaching herd and the cow confinement herd were randomly allotted by breed to four different rations (table 23.1). One bull was removed from the test during a brief pre-test period.

Prairie hay was chopped to two inch lengths so that all rations were completely mixed. Bulls were fed twice daily to consumption.

Results

Bull performances are reported in table 23.3. Bulls on ration C gained at a lower rate than expected probably due to random error caused by poor gaining bulls. The test is being repeated.

Table 23.1. Compositions[a] of rations for 140-day Weight-gaining Test by Beef Bulls.

Ingredient	Ration A	B	C	D
Rolled milo	68.3	68.3	6.7	16.7
Supplement[b]	16.7	16.7	16.7	16.7
Corn silage	15.0	--	76.6	--
Chopped prairie hay	--	7.5	--	33.3
Rolled oats	--	7.5	--	33.3
NE^{c}	90.6	89.9	75.8	74.9
NE_p^{mc}	58.4	58.0	45.5	45.3

[a]Percentage of feedstuffs on dry matter basis.

[b]Formulation given in table 23.2.

[c]Calculated.

Table 23.2. Composition of Supplement Used with all Rations in Weight-gaining Test.

Ingredient (lbs./ton)	Rations A&B	C	D
Soybean oil meal	1330.0	1686.0	1176.0
Milo	511.3	189.3	694.3
Dicalcium phosphate	16.0	54.0	10.0
Calcium carbonate	80.0	8.0	57.0
Salt	30.0	30.0	30.0
Fat	20.0	20.0	20.0
Trace minerals	5.0	5.0	5.0
Vitamin A	3.0	3.0	3.0
Aurofac-10	4.7	4.7	4.7

Table 23.3. Performances of Bulls on Indicated Rations During 140-day Test.

	Ration[a]			
	A	B	C	D
No. of bulls	10	9	10	10
Avg. wt. 12/18, lb.	711.5	691.7	689.5	645.5
Avg. age 12/18, days	280.2	286.4	279.6	280.1
Avg. wt. 5/7, lb.	1198	1150	1050	1123
A.D.G., lbs.	3.48	3.27	2.58	3.41

[a]Rations listed in table 23.1.