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March 1955

AGRICULTURAL EXPERIMENT STATION of The Alabama Polytechnic Institute, Auburn, Ala.

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THREE-YEARS' RESULTS FROM CREEP-FEEDING EXPERIMENT

Black Belt Substation, 1952-54

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Does it pay to creep feed calves that have good milking dams? This question has been raised by Black Belt commercial beef cattle producers who have well-bred herds of beef cows.

The cow-and-calf program now followed by many commercial beef producers of Alabama is based on practices found to be profitable at the Black Belt Substation. Cattlemen in the region who have used the recommended practices have developed good producing herds. Calves from these herds carry slaughter finish at weaning age and are in demand by packer buyers.

The program resulted from pasture and forage plant studies, fertilizer experiments, and work on pasture and herd management. This research showed that it is quite practicable to produce weanling calves carrying slaughter finish on grasses, clovers, and their mothers' milk. The cow-and-calf program emphasizes the following:

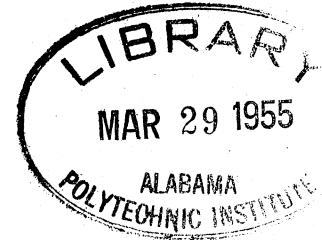
- (1) Use good sires out of good milking dams.
- (2) Retain in the herd only those cows that produce heavy, high quality, fat calves.
- (3) Select herd replacements from the fattest heifers at weaning age.
- (4) Graze the dams and their calves on good, well-fertilized pastures and forages.

During recent years, there has been considerable interest in creep feeding in the Black Belt region. Beef producers who have well-bred herds of good milking cows wanted to know whether it would pay to feed grain to their calves. To help answer this question, a creep-feeding experiment was started at the Black Belt Substation in 1952. This publication reports 3 years' results involving fall- and winter-dropped calves, and 2 years' results with spring calves.

Experimental Animals and Management

The dams of the calves used in this experiment were well-bred Herefords with good milking capacity. The sires of the calves were of the Hereford, Shorthorn,

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Angus, and Brahman breeds. Approximately the same number of calves from each breed of bulls was used in the creep-fed and non-creep-fed groups. All fall- and winter-calving cows received a winter ration that consisted of 2 pounds of cottonseed meal and about 15 pounds of Johnsongrass hay from December through March. The spring-calving cows were fed 15 to 20 pounds of hay and no concentrates during the winter unless they calved before spring grazing was available. Cows that calved prior to the period of ample grazing were fed 2 pounds of cottonseed meal in addition to the hay. Spring and summer grazing consisted of white clover and Dallisgrass.

Records were available on the producing ability of the cows. This permitted accurate division of the calves on the basis of producing ability of the dams. Age of dams also was a factor in the division.

Rotation between pastures at 14-day intervals was practiced with the two groups to offset any variation in productivity of the pastures. From $1\frac{1}{2}$ to 2 acres of pasture were available per cow.

The fall and winter calves were dropped from September through January. They were marketed at about 9 months of age in June, July and August. The spring calves were dropped from February through May; these were sold in October, averaging about 7 months of age. All calves were marketed at public auction with slaughter, feeder, and stocker buyers on hand for bidding. Marketing was on an age basis, with an equal number of creep-fed and non-creep-fed calves going to market on a given date.

Creep Ration

The creep ration fed the fall and winter calves consisted of 8 parts cracked yellow corn and 1 part 36 per cent cottonseed meal. This ration also was fed to the 1953 spring calves. The 1954 spring calves were fed a ration of shelled yellow corn. The creep ration was put out fresh daily and kept before the calves at all times. The feed was charged to the calves at actual market cost. Labor and creep construction costs are not included in the tables of results.

Weather Conditions

Pastures were below normal during all years of this study because of limited rainfall. Both spring clover and summer Dallisgrass were affected by the lack of moisture. The drouthy conditions also lowered the quality of the hay used for winter feeding.

Experimental Results

All creep-fed calves had more finish at market age than did non-creep-fed calves. This was reflected in the spread in price between the two groups. Market grades of the calves were not obtained.

In the case of fall and winter calves, each 100 pounds of additional gain from creep feeding required 1,408 pounds of creep ration, Table 1. With spring calves, the additional 100 pounds of grain required 1,028 pounds of feed in the long feeding period and 2,347 pounds in the short feeding period (Table 2 and Table 3). These results, however, compare favorably with findings of research from other experiment stations.

There was some difference in gain of dams of creep-fed and non-creep-fed calves, but the small variation is not considered significant. The average additional

gain of the dams of the creep-fed fall and winter calves was 9 pounds. The gain of dams of spring calves was 6 pounds in favor of the dams of non-fed calves.

Summary

An experiment on creep feeding calves was conducted with the 1952, 1953, and 1954 calf crops of the Black Belt Substation. During the 3-year period 120 calves were creep-fed and 123 calves were not creep-fed.

Creep feeding increased the weight of the calves, the market price and market value per calf. The increase, however, was not sufficient to return a profit over the cost of feed required. The non-creep-fed calves returned more net profit than the creep-fed calves.

These calves were produced by good milking cows on improved Black Belt pastures. Creep-feeding experiments are being conducted at other substations. When the results of these experiments are available, it will be possible to make an economic evaluation of creep feeding under various environmental conditions.

Table 1. Comparison of Creep-Fed and Non-Creep-Fed Fall- and Winter-Dropped Calves, Black Belt Substation, 3-year Average, 1952-54

Item	Creep-fed	Non-Creep-fed
Calves, total number, 3 years	96	96
Average initial age, days	87	87
Average initial weight, pounds*	200	200
Average days on feed	182	
Average final home weight, pounds	574	538
Gain per day, pounds	2.05	1.84
Average gain from creep-feeding, pounds	36	
Feed consumed per pound of gain, pounds	14.08	
Feed consumed per day, pounds	2.79	
Average market weight, pounds	549	511
Shrink, per cent	4.41	5.14
Market price per 100 pounds, dollars	23.32	21.59
Average market value per head, dollars	128.03	110.32
Average feed consumed per head, pounds	507	
Cost of feed per 100 pounds, dollars	4.02	
Average cost of feed consumed per head, dollars	20.38	
Average net increase per head from creep feeding, dollars	-2.67	

* Adjusted to the same initial weight.

Table 2. Comparison of Creep-Fed and Non-Creep-Fed Spring Calves, Black Belt Substation, 1952

Item	Creep-fed	Non-Creep-fed
Calves, total number	15	17
Average initial age, days	43	47
Average initial weight, pounds*	159	159
Average days on feed	172	
Average final home weight, pounds	530	487
Gain per days, pounds	2.16	1.96
Average gain from creep feeding, pounds	43	
Feed consumed per pound of gain, pounds	10.28	
Feed consumed per day, pounds	2.57	
Average market weight, pounds	509	469
Shrink, per cent	3.90	3.60
Market price per 100 pounds, dollars	23.95	23.25
Average market value per head, dollars	121.91	109.04
Average feed consumption per head, pounds	442	
Cost of feed per 100 pounds, dollars	4.30	
Average cost of feed consumed per head, dollars	19.01	
Average net increase per head from creep feeding, dollars	-6.14	

* Adjusted to the same initial weight.

Table 3. Comparison of Creep-Fed and Non-Creep-Fed Spring Calves, Black Belt Substation, 1954

Item	Creep-fed	Non-Creep-fed
Calves, total number	9	10
Average initial age, days	137	135
Average initial weight, pounds*	337	337
Average days on feed	83	
Average final home weight, pounds	506	490
Gain per day, pounds	2.04	1.84
Average gain from creep feeding, pounds	16	
Feed consumed per pound of gain, pounds	23.47	
Feed consumed per day, pounds	4.52	
Average market weight, pounds	484	465
Shrink, per cent	4.39	5.02
Market price per 100 pounds, dollars	19.46	17.15
Average market value per head, dollars	94.19	79.75
Average feed consumption per head, pounds	375.5	
Cost of feed per 100 pounds, dollars	3.75	
Average cost of feed consumed per head, dollars	14.08	
Average net increase per head from creep feeding, dollars36	

* Adjusted to same initial weight.