

CREEP FEEDING FALL-BORN CALVES

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A fall-calving program was established on the Squaw Butte Experimental Station beginning in 1965. For the past three years one-half the Station herd has been on a fall-calving and one-half on a spring-calving program. The data from previous years indicated that the production of fall-born calves has some definite advantages over spring-born calves and is economically practical. Fall calves, during the years of this study, have averaged more than 175 pounds heavier at weaning time than spring-born calves.

Research is currently being conducted to determine the levels of feed required by the cow and/or the calf that will give the greatest return. The primary objective of this research is to establish nutrient levels required to maximize conception rates of the cows without regard to milk production. The calf can be creep fed more economically than feeding additional nutrients to the cow in order to increase milk production and consequent weaning weight of the calf.

All of the fall-born calves have normally been creep fed during the winter. The purpose of this study was to determine the extent to which the creep feed actually adds to the weight of the fall-born calf. Therefore, this work was initiated to compare creep feeding versus no creep feeding of the suckling fall-born calves in both winter and summer.

EXPERIMENTAL PROCEDURE

One hundred and twelve steer and heifer calves that were dropped in October and November were stratified by age and weight of the dam and birth date, sex, and weight of the calf for allotment to the experimental treatments. The cows were on a separate study with cows receiving two levels of energy and two sources of protein, however, treatments of the cows were equally stratified across creep treatments. One-half of the calves were creep fed starting on December 1 and continuing on through weaning time, while the other half received no additional feed.

The calves had access to average quality meadow hay along with their mothers at all times. In addition, those that received a creep were fed a creep-ration as shown in Table 1. This creep was offered free choice. During the winter the calf creep was located within a windbreak, and the calves which received no creep had access to a similar windbreak in their pasture. During the summer the creep was located adjacent to the single watering location within the pasture.

The calves were individually identified with weights taken at the initiation of the trial and at 28-day intervals until weaning time. Salt and a salt bonemeal mixture were available to the cows and calves at all times. Water was available in a heated, float-controlled watering tank during the winter time and adequate fresh water was hauled daily to the cows and calves while they were on range.

Table 1. Creep ration

Ingredient	Percent
Alfalfa, pelleted	80
Barley, rolled	10
Salt	5
Molasses	5
Total	100

RESULTS AND DISCUSSION

Performance data of the creep and noncreeped calves are shown in Table 2. The creep-fed calves gained 170 pounds or 1.45 pounds per day during the period from December 13 to April 9 at which time they went on the range. The calves that received no creep gained 104 pounds or 0.88 pounds per head per day during this same period. Creep consumption was 332 pounds per head or 2.84 pounds per head per day. The creep was valued at 2.1 cents per pound which gives a cost per head per day at 5.76 cents. If we use a value of 35 cents per pound the gain of the creep-fed calf was worth \$59.50 compared to \$36.40 for the noncreep-fed calf or a return of \$23.10 for the additional weight of the creep-fed calf, or a net return over feed costs of \$16.13.

Table 2. Performance, creep intake, cost, and return of calves on creep- and noncreep-fed rations during winter period 1/

Item	Creep	No creep
Calf weight, lb. (12/13/70)	119	128
Calf weight, lb. (4/9/71)	289	232
Winter gain, lb.	170	104
Average daily winter gain, lb.	1.45	0.88
Total creep intake, lb./head	332	---
Creep intake, lb./head/day	2.84	---
Total creep cost, \$	6.97	---
Creep cost/head/day, \$	0.576	---
Value of gain @ 35¢/lb., \$	59.50	36.40
Minus cost of creep feed, \$	6.97	---
Net value of gain, \$	52.53	36.40

1/ Costs and returns were considered on feed and animal values alone since labor, investment, and other factors will vary from range to ranch.

The study on range commenced on April 15, 1971 and ended when the calves were weaned on July 28. The same calves that received creep during the winter received creep while on range and the noncreep-fed calves in the winter received no creep while on range during the summer (Table 3). The creep-fed calves gained 210 pounds over the 104 day period on range for a gain of 2.02 pounds per head per day while those receiving no creep gained 195 pounds during this period for a gain of 1.88 pounds per head per day. The creep-feed consumed was 156 pounds per head or 1.5 pounds per head per day. The cost of creep of 156 pounds at 2.1 cents per pound was \$3.28, the gain of the creep-fed calves at 35 cents was worth \$73.50 compared to \$68.25 for the noncreep-fed calves for a net return of \$1.97 over feed cost for the summer range period.

Table 3. Performance, creep ration intake, and cost and return from creep- and noncreep-fed fall calves on summer range 1/

Item	Creep	No creep
Weight, lb. (4/15/71)	300	250
Weight, lb. (7/28/71)	510	445
Total gain, lb./head	210	195
Average daily gain, lb./head	2.02	1.88
Creep ration intake, lb./head	156	---
Creep ration intake, lb./head/day	1.5	---
Total creep cost, \$	3.28	---
Creep cost, \$/head/day	0.031	---
Value of gain @ 35¢/lb., \$/head	73.50	68.25
Minus cost of creep feed, \$/head	3.28	---
Net value of gain, \$/head	70.22	68.25

1/ Cost and returns were considered on feed and animal values alone since labor, investment, and other factors will vary from ranch to ranch.

The overall effect of creep feeding winter and summer shows a gain of 1.75 pounds per head per day for the creep-fed calves compared to 1.38 pounds per head per day for those not receiving creep or 81 additional pounds gain from the creep feeding. This 81 additional pounds gain cost \$10.25 in feed costs. Putting a value of 35 cents per pound for the gain this gives \$28.35 gross or a net of \$18.10 for the creep-fed over those calves receiving no creep.

CONCLUSIONS

These data show that creep feeding in the winter time for suckling fall calves will give an excellent return with creep-fed calves gaining 1.45 pounds per day as compared to 0.88 pounds per day for the noncreep-fed calves. Creep feeding during this time, from a practical point of view, can be readily accomplished.

One of the strongest advantages, as well as requirements for a successful fall-calving program, is to intensify on the various management practices that will give an increased performance.

There are many questions yet to be answered with regard to creep feeding on range. This study compared creep feeding with no creep feeding over both the winter and summer period. No comparison was made of the influence of winter creep feeding and no summer creep feeding or vice versa. The same is true of the animals that were not fed during the winter and the effect of feeding or not feeding while they were on range. The data do show that it is beneficial to creep-feed suckling calves during either period.

In further research animals will be divided in such a way that we can compare creep-feed versus no creep-feed in the winter with creep-feeding or no creep-feeding on range in the summer.

Creep-feeding with self-feeders in the winter time for this class of animal requires little additional labor and materials output. Since the cattle are in or near the headquarters area where they must be fed their daily hay rations, as well as any additional supplements, the creep can be serviced with little additional effort.

The construction of the creep and self-feeder can range from a relatively low to a rather extensive cost depending on the wishes of the operator. Patented, prefabricated creep panels and feeders are available on the market. The feeders used on the Station were constructed from plywood and dimension lumber. The total cost for the materials for a trough and feeder is approximately \$50.00 and construction took about three hours of general farm labor. These feeders have been used for six years with only minor repairs.

The creep, itself, can be established by replacing a gate with a creep panel in an already established pen or windbreak area, or it can be set-up by using a couple of solid panels with a creep panel for each side of the feeder. If a one-sided feeder is used one creep panel is sufficient. Creep panels can be constructed either with poles fastened at appropriate heights or by using posts or bars set vertically with proper spacing to permit the calf to enter and exclude the cow. Here again, depending on the resources available and the capabilities of the rancher, we can get by on a relatively primitive structure if desired.

These same self-feeders were used in the creeps with the calves on range and can be set-up with solid panels using one or more of the creep panels. This entire set-up can be taken down, loaded onto a pickup, moved to a new location, and set-up with relative ease.