

EARLY WEANED FALL-BORN CALVES ON IRRIGATED PASTURE

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Several water reclamation projects in Oregon have made water available for land previously considered marginal for irrigation purposes. Much of these lands are going into irrigated pasture which offers new management opportunities for livestock producers. The producer can increase production through intensive management without acquiring additional land. Also, with the need to produce red meat with less dependence on grain and more fully utilizing forages, improved pastures enhance these opportunities. The purpose of the pasture work at the Union Station is to investigate the use of irrigated pastures in beef cattle management systems for increased red meat production.

EXPERIMENTAL PROCEDURE

Pastures were seeded in 1973 to fawn fescue and Ladino clover. Seeding rates were 10 pounds of grass per acre and 6 pounds of clover seed per acre. The soil is well-drained and interspersed with shallow-soiled gravel bars. The grazing season started May 20 and continued until September 19. Pastures were sprinkler irrigated every two weeks from mid-June until the first of September. The grazing system consisted of two 2-acre pastures being grazed 21 days, followed by 21 days of rest. Animals were weighed on and off the pastures. Pasture forage quality and animal consumption were measured during the first and third weeks of grazing on each pasture during the entire summer.

Sixteen fall-born Hereford x Simmental and Hereford x Angus cross calves with an average weight of 380 pounds were divided into groups with respect to sex and breed. Eight of the calves were weaned on May 8 and grazed on irrigated pasture for the duration of the trials. Eight calves remained with their dams and grazed native forested range at the Hall Ranch from May 20 to June 28. The calves were then weaned on June 28 and moved to the station headquarters for a post weaning adjustment period. These late weaned calves were moved back to the range and grazed on a seeded forest clear-cut from July 8 to August 12.

RESULTS AND DISCUSSION

There was some seasonal variation in pasture quality which was probably influenced by irrigation and grazing practices as well as plant response to seasonal temperature change. Crude protein values of the pasture forage ranged from a high of 24.60% in early June to a low of 19.40% in mid-July (Table 1). Clear-cut forage crude protein values averaged 9.13% from July 8 to August 12.

Table 1. Crude protein content, on a dry basis, of the forage consumed by the calves during each grazing period

Period of grazing	Crude Protein
5/8 - 6/10	21.21
6/11 - 6/28	24.23
6/29 - 7/19	19.40
7/20 - 8/12	21.67

The gain data for the calves under the two management systems are shown in Table 2. Little difference in gain was evident between early-weaned calves on irrigated pasture and calves left on their dams, with weaned calves gaining 0.14 pound per day less for the period of May 8 to June 28. During the period June 28 to July 8, which was a post weaning adjustment period for the late weaned group, the early weaning calves gained 1.43 pounds per head per day as compared to 1.40 pounds for the late weaned group. The drop in the late weaned group would be expected due to weaning stress but the drop in the early weaned group was not expected. There was a drop in forage nutrient quality as measured by crude protein changes (Table 1) that may partially explain it. However, the forage should have been high enough in quality to sustain a better gain. However, it does represent the latter half of the 21 day grazing period.

Table 2. Weight gains for early-weaned and late-weaned fall-born calves

	Average daily gain			
	May 8 to June 28	June 28 to July 8	July 8 to August 12	May 8 to August 12
	lb	lb	lb	lb
Early-weaned	2.57	1.43	1.83	2.20
Late-weaned	2.71	1.40	1.17	2.01

High quality pasture forage presents an opportunity to increase calf gains through intensive management. Early-weaned fall-born calves continued to gain well throughout the season while calf gains on range fell below 1 pound per day during July and early August. Irrigated pastures may also offer other management opportunities including finishing yearlings on pasture, possibly using low levels of energy supplementation, thereby reducing costly grain feeding.

of these lands are being used for irrigated pasture which has some general opportunities for livestock producers. The purpose of this study was to determine if intensive management would increase calf gains on irrigated pasture. Also, with the need to produce beef with less grain and more fully utilized forages, irrigated pastures should be an opportunity. The purpose of the pasture work at the Utah Station is to investigate the use of irrigated pastures in beef cattle management systems.

The gain data for the calves under the two management systems are shown in Table 1. Little difference in gain was evident between early weaned calves on irrigated pasture and calves left on range until May 15 when the irrigated calves gained 0.14 pounds per day less than the range calves.

During the period of May 15 to July 12, the irrigated calves gained 1.14 pounds per day more than the range calves. This gain was due to the fact that the irrigated calves were fed a supplement of 1.14 pounds of grain per day. The gain of the irrigated calves was not significantly different from the range calves until July 12 when the irrigated calves gained 0.14 pounds per day more than the range calves. This gain was due to the fact that the irrigated calves were fed a supplement of 1.14 pounds of grain per day. The gain of the irrigated calves was not significantly different from the range calves until July 12 when the irrigated calves gained 0.14 pounds per day more than the range calves. This gain was due to the fact that the irrigated calves were fed a supplement of 1.14 pounds of grain per day.

Table 1. Gain of early weaned fall-born calves on irrigated pasture and on range. The irrigated calves were fed a supplement of 1.14 pounds of grain per day. The range calves were not supplemented.

Period	Irrigated (lb/day)	Range (lb/day)
May 15 to July 12	1.14	0.00
July 12 to August 17	0.14	0.00
Total	1.28	0.00

Yielded and their relative status in pasture in various years. The gain of the irrigated calves was not significantly different from the range calves until July 12 when the irrigated calves gained 0.14 pounds per day more than the range calves. This gain was due to the fact that the irrigated calves were fed a supplement of 1.14 pounds of grain per day. The gain of the irrigated calves was not significantly different from the range calves until July 12 when the irrigated calves gained 0.14 pounds per day more than the range calves. This gain was due to the fact that the irrigated calves were fed a supplement of 1.14 pounds of grain per day.