South Dakota State University
Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange

South Dakota Sheep Field Day Proceedings and Research Reports, 1979

Animal Science Reports

1979

Effect of Management System on Lamb Return

A. L. Slyter
South Dakota State University

Follow this and additional works at: http://openprairie.sdstate.edu/sd_sheepday_1979

Recommended Citation
Slyter, A. L., "Effect of Management System on Lamb Return" (1979). *South Dakota Sheep Field Day Proceedings and Research Reports, 1979*. Paper 9.
http://openprairie.sdstate.edu/sd_sheepday_1979/9

This Report is brought to you for free and open access by the Animal Science Reports at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in South Dakota Sheep Field Day Proceedings and Research Reports, 1979 by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.

EFFECT OF MANAGEMENT SYSTEM ON LAMB RETURN

(Progress Report)

A. L. Slyter

Department of Animal Science
Experiment Station

South Dakota State University
A.S. Series 79-17

Summary

The effects of sex (ram vs wether) and management system on market returns were investigated utilizing 256 February-March born lambs produced at the Antelope Range Field Station, Buffalo, South Dakota. Lambs weaned in early June and finished on a high concentrate ration made superior gains to either lambs weaned a month later or lambs left on native range with their dams. Early weaned-drylot finished ram lambs were heavier when marketed and grossed more total dollars per head than any of the other management-sex combinations, although they brought less per pound than early weaned-drylot finished wethers. Market alternatives that avoid such discounts on young, adequately finished ram lambs would increase this differential in favor of the intact group. In general, short-fed lambs did not return enough additional dollars to offset feed cost. Discounts on ram lambs compared to wether tended to be higher in the short-fed and all pasture system.

Introduction

Early weaning of range lambs at 70 to 90 days of age and finishing in the drylot offers an alternative management system for the range sheep operator. Higher ewe stocking rates, less predator losses and a higher percentage of finished market lambs are some of the possible advantages of this system. In addition, intact ram lambs have been shown to gain faster and have leaner carcasses. A major consideration of such a system is the profit or loss realized compared to the conventional approach of selling grass lambs in the fall. This study was initiated to compare the effect of three management systems and sex (ram vs wether) of lamb on dollar return.

Experimental Procedure

Two hundred fifty-six February-March born male lambs were utilized in this study during the summers of 1977 and 1978. Approximately one-half of the lambs were castrated within 1 week of birth. Ewes were lambed at the Antelope Range Field Station, Buffalo, South Dakota, in a typical range shed lambing system, with the ewes and lambs going back on winter range as soon as snow cover permitted. June 1 the lambs were randomly allotted to one of three management systems. One-third of the lambs were

Prepared for Sheep Day, June 8, 1979.

sorted from their dams in early June and trucked to Brookings and placed on feed in drylot at the Sheep Research Unit. One-third of the lambs were weaned in late June (1978) or early July (1977) and moved to the drylot in Brookings for feeding. The remainder were allowed to graze with their dams on native range until sold in early to mid-August. Lambs in the drylot were brought to a full feed of a 20% chopped alfalfa hay-80% concentrate ration as rapidly as possible. Drylot lambs were shorn as soon as possible after arrival at the feedlot. Live weight of lambs finished in the drylot systems has not been corrected for fleece weight removed or market receipts adjusted for fleece value. Lambs remaining in the pasture system were not shorn prior to sale. Initial live weights were taken at the Antelope Range Station. Intermediate weights were taken at their respective locations prior to movement of the second group to Brookings. Final weights were scale weights at the time of sale at the Sioux Falls Stockyards. Lambs were sorted by sex within management system on arrival at the yards. Further sorting within this grouping was done by the sales representative if he felt it was advisable. Lambs from all three management systems were marketed by the same commission firm the same day via auction. Lambs going direct to market from Buffalo were weighed at the time of sale at Sioux Falls within 30 hours of loading. Lambs out of the drylot at Brookings were across the scale within 6 hours after leaving the lot. All lambs were transported the same total distance during the course of the experiment from the place of birth to market.

Results and Discussion

Results of the 1977 trial are shown in table 1 and the 1978 trial in table 2. Intermediate weights favored lambs in short-fed and all pasture systems. Final weights were heavier for early weaned-drylot finished lambs. However, part of this difference in 1977 can be accounted for in the difference in initial weight present at the start of the trial. Short-fed lambs had the lightest final weights in 1977. Apparently, the time on feed (34 days) in 1977 was not sufficient for them to regain shipping related losses, etc. In 1978, short-fed lambs were intermediate in final weight to early weaned-drylot finished and all pasture lambs. In general, ram lambs were heavier in all management systems and at all weigh periods than wether lambs. Ram lambs brought less per hundredweight than wethers with the largest dockage in short-fed and all pasture systems. Lighter, underfinished ram lambs received the heaviest dockage on the market. In spite of the discount on rams, ram lambs in the early weaned-drylot system brought the most total dollars per head. Market alternatives that avoid discounts on young, adequately finished ram lambs would increase this differential in favor of the intact group.

Return per head over control wethers (wethers in the all pasture system) varied from -$4.76 to $12.09, not considering feed or yardage charges. In general, feed costs were not recovered in short-fed lambs. A margin over feed costs was shown for the early weaned-drylot system with an advantage for ram vs wether lambs. No pasture charge has been charged against the all pasture lambs, which must also be considered in any final economic analysis.

Table 1. Effect of Management System on Lamb Return
1977 Trial

Treatment	Early weaned-drylot finished		Short-fed		All pasture	
Days on feed	70		34		0	
Sex	Ram	Wether	Ram	Wether	Ram	Wether
Initial wt., lb.	75.1 (24)[a]	67.9 (23)	65.2 (26)	64.4 (25)	63.4 (25)	64.5 (24)
Intermediate wt., lb.	75.5 (23)	71.9 (20)	84.4 (27)	83.0 (25)	82.8 (25)	81.1 (23)
Final wt., lb.[b]	106.1 (23)	98.3 (20)	85.2 (26)	81.9 (24)	89.0 (25)	84.4 (23)
Price received/cwt., $	51.12	54.77	47.70	53.28	46.86	49.96
Per head value, $	54.23	53.81	40.64	43.62	41.70	42.14
Return over control wethers/head, $	12.09	11.67	-1.50	1.48	-.44	.00
Number lost	1	3	1	1	1	1
Average daily feed, lb.	2.7	2.5	2.5	2.4	--	--
Total feed, lb.	189	175	85	82	--	--
Cost of feed, $.03/lb.	5.67	5.25	2.55	2.46	--	--

[a] Numbers in parenthesis are numbers of animals.
[b] Scale weight at Sioux Falls market. No credit given for wool shorn from early weaned-drylot finished and short-fed lambs.

Table 2. Effect of Management System on Lamb Return
1978 Trial

Treatment	Early weaned-drylot finished		Short-fed		All pasture	
Days on feed	63		40		0	
Sex	Ram	Wether	Ram	Wether	Ram	Wether
Initial wt., lb.	69.4 (20)[a]	62.7 (17)	61.1 (17)	63.0 (17)	66.8 (21)	66.4 (17)
Intermediate wt., lb.	74.6 (19)	73.1 (17)	71.6 (17)	74.6 (17)	79.8 (21)	79.2 (17)
Final wt., lb.[b]	113.7 (19)	98.8 (17)	100.6 (16)	95.6 (17)	83.3 (21)	82.4 (17)
Price received/cwt., $	55.22	58.50	55.97	58.95	60.00	66.50
Per head value, $	62.78	57.81	56.32	56.35	50.00	54.76
Return over control wethers/head, $	8.02	3.05	1.56	1.59	-4.76	.00
Number lost	1	0	1	0	0	0
Average daily feed, lb.	2.5	3.2	2.9	2.8	--	--
Total feed, lb.	157.5	201.6	116.0	112.0	--	--
Cost of feed, $.04/lb.	6.30	8.06	4.64	4.48	--	--

[a] Numbers in parenthesis are numbers of animals.
[b] Scale weight at Sioux Falls market. No credit given for wool shorn from early weaned-drylot finished and short-fed lambs.