Imperial Valley Lamb Feeding

data on rates of gain per month and per acre obtained in winter season feeding trials on alfalfa pasture

N. R. Ittner and Wm. C. Weir

Lambs grazing on alfalfa pasture in the winter season of the Imperial Valley gained 9 to 10 pounds per month during two trials. The pasturage had a carrying capacity of five to six lambs per acre, and produced 40 to 50 pounds of lamb per acre per month.

Approximately 250,000 head of lambs are fattened on Imperial Valley alfalfa pastures each winter, but—because most of the operations are on a large scale, involving many fields and bands of lambs—basic information on rates of gain, carrying capacity, and pounds of lamb produced per acre has not been available. To obtain such information, two trials—the first in 1951–52 and the second in 1952–53—were conducted at the Imperial Valley Field Station.

For the 1951–1952 winter pasture period 52 head of Rambouillet-type lambs were purchased in Texas. After six days in transit—with two stops en route—the lambs had shrunk 13% of the Texas shipping weight upon arrival at Brawley.

For the 1952–53 winter pasture period 50 black-face feeder lambs were purchased in Los Angeles. They had been trucked in from northern California but no previous history was available.

Upon arrival at the Imperial Valley Field Station, the lambs were fed hay, rested, and gradually accustomed to the pasture by allowing them to graze for longer periods each day. The 1951–52 group was held in this manner for 13 days and the 1952–53 group for 10 days. Neither group made any gain during this holding period. Because dogs were a hazard, the lambs were corralled at night in a dog-proof pen where alfalfa hay and water were available.

Each lamb in both trials was dosed with copper-nicotine sulfate drench and numbered at the beginning of the test. They were weighed individually at the beginning and at 28-day intervals during the trial. The weights were taken after the lambs had been subjected to a 10 hour stand without feed or water. The lambs in the first group were sheared on February 7, 1952, and those in the second group on February 5, 1953. At the time of sale—March 17, 1952, and April 20,

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Lambs on Alfalfa Pasture During the Winters of 1951–52 and 1952–53**
(All figures in pounds unless otherwise indicated)

	Buying wt. to selling wt.*** Oct. 24, 1951–Mar. 17, 1952 144 days	Buying wt. to selling wt.*** Dec. 8, 1952–April 20, 1953 133 days
Number in lot	52	48
Av. initial wt.	63.1	62.3
Av. final wt.	105.2	97.5
Av. daily gain*	0.339	0.302
Av. daily feed—Alfalfa hay	0.78	0.51
Av. fleece wt.	6.7	4.9
Shrink to L. A. Mkt.	8.1%	5.9%
Yield	55%	50%
Grade	All choice	19 choice 29 good
Death loss (head)	0	2

* Average daily gains include the weight of the wool.

** The lambs in 1951–1952 were Rambouillet type animals while those fed in 1952–1953 were the blackface type.

*** Selling weights were obtained at the Los Angeles Union Stock Yard after being fed, watered, and rested.

Rambouillet feeder lambs used in 1951–52 feeding trial. The lambs were corralled at night and fed hay in this dog-proof pen.

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1953—the first lot of lambs had a Number 2 pelt and the second lot a Number 1 pelt.

Several of the Rambouillet lambs in the first group showed poor gains at the beginning of the trial. A blood analysis revealed a low blood phosphorus level which was corrected in a few days by feeding a 50-50 mixture of bonemeal and salt.

The area pastured was measured and the production based on the actual area producing feed, because the fields used included some bare alkali spots.

For the first 48 days of the 1951–52 trial the lambs were rotated between two pastures of alfalfa in an 8.5 acre field. For the last 96 days of the trial they were grazed on a field of 8.46 acres which was divided into three pastures. This latter field had had barley seeded in with the alfalfa on October 1. During December, January, and part of February considerable barley pasture was available on this field. For the 1952–53 trial only this field was used but because of improvements, 9.28 acres were producing feed. Barley was again fall sown and furnished considerable feed.

Results of Tests

The recorded buying weight on the Rambouillet lambs was their actual weight after they had been unloaded, fed, watered and rested 24 hours at Brawley. The weight used for the black-face feeders was the buying weight in Los Angeles. Selling weights in both trials were obtained in Los Angeles after the lambs were fed, watered, and rested. However, the Rambouillet lambs did not have much time to take on a fill before being sold and consequently they showed more shrink than did the black-face animals.

On the basis of the recorded weights, both groups of lambs gained between 9 and 10 pounds per month per lamb. In the second group of lambs it would have been necessary to hold the smaller lambs on pasture longer to get them fat enough to grade choice. This was not practical under the conditions of the trial.

If the initial rest and adjustment period is disregarded the gains were somewhat higher. In the first trial, the first individual shrunk weight was taken on November 7 and the last individual shrunk weight on March 14. During this 128-day period the lambs gained 0.403 pound per day plus the wool weight of 6.7 pounds. In the second trial the first individual weights were taken on December 19 and the last weight on April 8. During this 110-day period, the lambs gained 0.339 pound per day plus the wool weight of 4.9 pounds.

The gains of the lambs were quite uniform within lots. The standard deviation of the average daily gain on the first lot was plus-or-minus .062 pound and for the second group the standard deviation was plus-or-minus .086 pound.

During the first trial the lambs were grazed at the rate of 6.1 lambs per acre. During the 1952–53 trial the stocking rate was 5.2 lambs per acre. More lambs could have been carried during the second trial. The pounds of lambs produced per acre were calculated by estimating the gain made by the hay and subtracting this from the total gain to obtain the gain produced by the pasture. Although the pounds of lambs produced per month during the second year—when only one area was used—were not so great as those produced in the first trial—when the two fields were used—the pounds of lamb produced per acre were considerably larger in the 1952–53 trial.

Lamb Production from Hay, Pasture, and Per Acre

	Gain produced per day from hay per lamb	Gain produced per day from pasture per lamb	Pounds lamb produced per acre	Pounds lambs produced per acre per month
1951–1952 .. Days 144 Av. wt. 84 lb.	0.066 lbs.	0.273 lbs.	79* (48 days) 162* (96 days)	49.4 50.6
1952–1953 .. Days 133 Av. wt. 80 lb.	0.040 lbs.	0.262 lbs.	180 (133 days)	40.6

* The 79 pounds were produced on the first field used while the 162 pounds were produced on the second field.

N. R. Ittner is Associate Specialist in Animal Husbandry, University of California, El Centro.

Wm. C. Weir is Assistant Professor of Animal Husbandry, University of California, Davis.

Black face lambs at the close of the 1952–1953 test.