

SUMMARY - LAMB FEEDING EXPERIMENTS

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A number of years of lamb feeding experimental work involving, grain comparisons, roughage comparisons and proportions of concentrates to roughage, conducted at the Kansas Agricultural Experiment Station are reported in detail in Tables I, II and III. Some other phases of experimental work conducted at the Kansas station in recent years are summarized in the following statements:

Acre Value of Different Crops:

1. Results expressed in terms of "pounds of finished lamb" per acre of feed grown in different cropping systems, based on four years average crop yields and on the gains made by 4 lots of lambs in 2 experiments, show the following averages:

Pounds Fat Lamb Produced Per Acre of:

Irrigated Finney Milo	925.8
Irrigated (Westland Milo 2/3 acre) (Sumac 1/3 acre)	596.4
Fallow - Finney Milo	506.7
Fallow - (Westland Milo 2/3 acre) (Sumac 1/3 acre)	290.9

In arriving at these figures, adjustment was made for protein and calcium supplements used in the ration.

Methods of Harvesting, Preparing and Feeding:

1. Self-fed lambs have made consistently larger but more expensive gains than hand-fed lambs.
2. Lambing down irrigated and dry land sorghum crops has given satisfactory gains and finish on lambs in all tests, but the gains have been more expensive than those of lot-fed lambs.
3. Lambing down sorghums has proved to be a wasteful and expensive method of feeding in Kansas. Such a practice would be justified in case of very low grain yields or extremely low grain prices.
4. Deferring grain feeding for 30 days at the beginning of the feeding period has resulted in little or no decrease in total gain or finish but has saved grain and thereby lowered the cost of feeding.
5. Relatively more roughage and less grain are utilized in fattening lambs by the deferred grain feeding system, than by full feeding.
6. Comparative tests with heavy medium and light weight lambs reveal no significant differences in the response of the different weight

grades to deferred and full grain feeding.

7. Deferred grain feeding has proved to be a safer method of getting lambs on feed and lower death losses have resulted than with lambs receiving a full grain feed from the start.
8. Heavy lambs have gained faster, but light lambs made cheaper gains consistently in several experiments.
9. Light lambs fed for longer periods profitably utilize relatively more roughage and less grain than heavy lambs fed for short periods.
10. Ground sorghum roughage is more palatable and produced larger gains than the same kind of roughage chopped.
11. Grinding sorghum grain for fattening lambs does not pay. Whole grain is chewed thoroughly and apparently utilized more efficiently.
12. Thrashing sorghum grain for lambs is unnecessary provided the heads are ground, chopped or otherwise reduced to prevent excessive waste.
13. Grinding sorghum roughage does not improve its nutritional value but greatly increases the efficiency of its utilization through increasing the percentage of the plant consumed, thereby reducing waste.
14. There was no advantage in increasing the concentration of lamb fattening rations periodically as the feeding period progressed, over feeding a ration constant in concentration and bulkiness throughout.
15. Lambs running in a combined Milo stalk field either with or without a grain feed, for 30 days, before going into the feedlot, made approximately the same gains at a decidedly lower rate than those fed the same ration in the feedlot.

Sugar Beet By-Products:

1. Replacing 1/4 the Milo grain in the ration with beet molasses resulted in a slight increase in gain, but when 1/2 the grain was so replaced the gain was somewhat reduced.
2. Dried beet pulp and Milo grain equal parts produced larger gains than Milo grain alone or Milo grain and molasses.

3. When dried beet pulp and molasses are approximately the same price per pound as grain, either can be used as a part of the concentrate ration for lambs with a resulting saving in feed costs.
4. Beet tops fed as a part of the roughage increased the gains and reduced the cost of gains on lambs providing dry roughage was also fed.

Wheat Pasture Tests:

1. Repeated tests show little advantage for feeding grain, roughage, protein supplement or ground limestone to lambs on wheat pasture, unless digestive trouble is being experienced.
2. Dry roughage helps to prevent digestive disorders among lambs on wheat pasture.
3. Lambs given access to a Milo stalk field (combined) while on wheat pasture gained more than those receiving wheat pasture alone.
4. Lambs were grazed on wheat which had 125 lbs. per acre of treble superphosphate per acre applied at the time of sowing. A very slight increase in gain accompanied the grazing of the fertilized wheat. In this case, however, the soil was not deficient in phosphorus in the first place.
5. The blood of the lambs grazed on phosphated wheat pasture was nearly 20% higher in phosphorus but virtually no different in calcium and potassium content from the blood of lambs grazing unfertilized wheat.