Pelleting and Heat Treatment of Fattening Lamb Rations (Project 236).

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This is a follow-up of the study reported on page 5 concerning the effects of form and heat treatment of rations on lamb feedlot performance.

Experimental Procedure

The 132 mixed sex and winter fine wool feeder lambs used were divided, drenched with phenolamine-lactose mustic and vaccinated with 5 cc. distemper vaccine at four weeks of age. On November 10, 1963, they were implanted with 3 mg. of oestrodiol, weighed, and then divided into a number of lots based on sex and weight. A basic ration of 30 percent dehydrated alfalfa (16 percent dry matter), 40 percent sorghum grain, and 10 percent molasses was fed to all lots. Rations treatments were:

Lot 1—Alfalfa meal expanded, reground, mixed with other ration ingredients and fed in a nonpelleted form.
Lot 2—Basic ration pelleted with conventional pelleting machine.
Lot 3—Basic ration expanded.
Lot 4—Alfalfa meal expanded, reground, mixed in basic ration and pelleted with conventional machine.
Lot 5—Sorghum grain expanded, reground, mixed in basic ration and pelleted with conventional machine.
Lot 6—Basic ration ground, mixed, and fed in a nonpelleted form.

The expanded feed ingredients used in rations for Lots 1, 2, 3, and 4 were processed by putting them through an expansion pelleting machine. In the process the ingredients were steam heated to 180°F by the Wenger Mixer Manufacturing Company.

Several lambs in each lot vanished and became severely thin after one week after starting on test. For two weeks thereafter lambs were supplied free access to wheat straw. They consumed approximately 75 pounds per lamb per day.

Lot 1 on test, all lambs recovered over an extended period and were not identifiable by the end of the study. Lambs weighing over 85 pounds were marked February 11 after 87 days on test. Remaining lambs were marketed after 115 days on test, March 10.

Results and Discussion

Feedlot performance is reported in Table 5.

There was little difference in lamb gains and carcass grades among treatments. Lambs fed hay that had been expanded in Lots 1 and 4 required slightly more feed per unit gain than those fed other rations.