

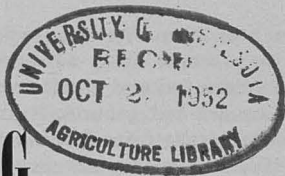
Copy 2

MN 2000 EF 37 Rev. 1952
c. 2

Extension Folder 37

3

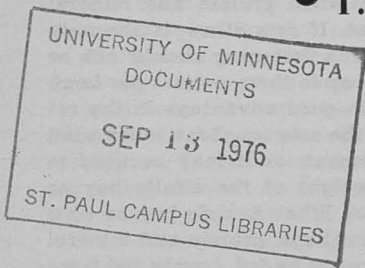
Revised June 1952



FATTENING LAMBS



- W. E. MORRIS
- P. S. JORDAN



UNIVERSITY OF MINNESOTA ¹
Agricultural Extension Service ²
U. S. DEPARTMENT OF AGRICULTURE



DURING THE last 25 years, the University of Minnesota's West Central Experiment Station at Morris has conducted 42 feeding trials in fattening lambs for market. These trials have been with many different types of lambs, many different feeds and combinations of feeds, and many different methods of feeding. From the results of these trials, we can draw several basic rules to follow for successful and profitable lamb fattening.

Purchase Thrifty Feeder Lambs

First step toward profitable fattening of lambs for market is purchasing the lambs. Most feeders don't want heavy, rangy, coarse lambs weighing 80 pounds or more. Such lambs generally continue to grow and fatten slowly when put on feed. By the time they are fat enough for the packer, they are too heavy to suit him. Seldom are they market-topping lambs. Small, unthrifty looking lambs are also bad risks because death loss is likely to be heavy.

The ideal feeder lamb is short legged, has a short neck, is smooth and compact of body, and weighs from 60 to 70 pounds. About 65 pounds is the ideal weight at the beginning of the feeding period. He can be native- or western-bred, white-faced or black-faced—it doesn't matter.

Feeders may purchase lambs directly from the range if they can handle large numbers. When only a carload or two is wanted it is best to get them through a dealer or commission firm.

Many range lambs are shipped directly to feedlots. These are usually contracted for in advance by a dealer, commission company, or feeder. As a rule, they are sold as a band to one person who sorts off the fat lambs and sells the thin ones to feeders.

The feeder who wants only a few lambs may obtain native lambs locally. Both native and western lambs may be bought on a central market.

Fill Lambs on Arrival

Lambs usually lose from 4 to 7 pounds per head between point of shipment and arrival at the feeder's. They arrive thirsty, tired, and hungry. They need first a drink of water, some rest, and a slow fill on feed such as prairie hay, clover and timothy mixed hay, or pasture that is not too green and rich. A native prairie grass pasture, bluegrass pasture, or second-growth timothy meadow are suitable pastures for filling lambs on arrival.

Lambs should not be turned directly into green alfalfa or sweet clover or into a green cornfield or a green grain stubble field. Nor should they be fed entirely on alfalfa hay during the first few days. Any of

these starting feeds may induce scouring, bloating, and some death loss.

Start Lambs on Grain

A little whole oats or oats mixed with barley or shelled corn are ideal grain rations for starting lambs on feed. They can be started on corn alone or barley alone if oats are not available. Lambs not accustomed to getting any grain should be fed not more than 1/5 to 1/4 pound of grain per head a day as their first feed. This should be increased a little each day for three or four weeks or until the lambs reach a full feed, which is the amount of grain they will clean up in about 20 minutes.

Lambs can be placed directly on a self feeder if the grain is mixed with some light feed like chopped alfalfa. A suitable mixture to start with is 30 per cent grain, 70 per cent light feed. The change from hand feeding to self feeding must be made carefully. Give the lambs their regular full feed in the morning and then open the self feeders in which grain has been diluted with a light feed. As the feeding period progresses the amount of grain may be gradually increased to about 60 per cent.

Select the Right Feeds

Grain. Shelled corn heads the list of grains for fattening lambs. However, other grains and other forms of corn may be used successfully. Shelled corn and alfalfa, with or without protein supplement, have been the most efficient and usually the cheapest of all rations fed at the Morris Experiment Station.

Whole barley is a close second—80 to 90 per cent as efficient as shelled corn. Wheat and rye are usually too high priced to feed, but both are good when the price per hundred is about equal to that of corn. Minnesota-grown oats are not as good as the heavier grains. Mixed with other grains—particularly, early in the feeding period—oats have been useful for the bulk added.

Lambs will handle ear corn well. For bunk feeding, however, the cobs are a nuisance. A good way to feed ear corn is to scatter it on clean ground. Ground

ear corn has given about the same results as barley. It must be ground frequently to keep the pile from heating. Neither ear corn nor ground ear corn is quite as good as shelled corn, but both cut preparation cost.

Grain for lambs should not be ground unless it is small seeded like proso millet and screenings. Screenings are often successfully used. Their value depends on quality, which is shown by weight. At a weight corresponding to some grain, the feeding value would be about equal to that grain. To fatten lambs for a 90- to 100-day feeding period, it will take roughly 2 to 2½ bushels of corn and about 140 pounds of legume hay per head.

Beet by-products. For gain, thrift, and finish, beet molasses, dry beet pulp, or a combination of the two may replace one-half of the grain in the usual ration. On these feeds, the lambs will gain about as well as on an all-grain ration.

Beet tops in any form—green, field-cured, or as silage—are palatable to lambs and are a safe feed. When the tops contain 30 to 50 per cent moisture, they have about the same feed value, ton for ton, as good-quality heavy corn silage.

After beet harvest, lambs being started on feed may be allowed to graze the field on which tops are left. The tops also may be piled in small piles in the field and hauled to the feedlot and fed as needed. Some feeders wilt beet tops, store them in stack or trench silos near the feedlots, and feed them as silage.

Fattening lambs will do well on beet tops as the only feed for from four to six weeks at the beginning of the fattening period. A grain ration and a little hay should be supplied from then on, but until the end of the fattening period, lambs can be fed as many beet tops as they will eat. A lamb will eat from 400 to 500 pounds of beet tops during a normal fattening period of around 100 days.

Roughages. A legume hay is the best but is not absolutely necessary for fattening lambs. Alfalfa hay, preferably of the second or third cutting, can't be beat as a roughage. High-quality sweet clover is equally good. Red clover and soybean hay are both excellent roughages but unless they are ground or chopped, are wasteful because of the large amount of stems.

Where legume hay isn't available, nonlegume roughages such as prairie hay, brome grass, sudan grass, or silage may be used if properly supplemented with both a protein supplement and lime. If not properly supplemented, gains will be slow and the costs high. From .3 to .5 pounds oil meal (soybean, linseed, or cottonseed) per head should be fed daily. Nonlegume roughages are all low in calcium (see page 8).

Silage, either corn or grass, makes an excellent roughage for fattening lambs. It can be used as the

THE FULL FEED PERIOD

Once lambs are well started on a full feed of grain, fattening and finishing them for market is simple. In hand feeding a good method is to feed lambs twice a day all the grain they will clean up. If hay is also fed twice a day, avoid waste by putting out only the amount that the lambs will clean up. In large-scale operations, self feeding is popular.

The Morris trials show that one of the most profitable rations is shelled corn and alfalfa hay. If the alfalfa hay is of high quality, it is often necessary on reaching full feed to limit the amount of hay fed to about one pound per lamb per day to make the lambs eat enough corn to fatten rapidly. When on a full feed, lambs weighing from 60 to 85 pounds should eat from 1½ to 2 pounds of grain and from 1 to 1¼ pounds of hay per head daily. They should gain at least ⅓ pound per head per day or 25 to 30 pounds in 75 to 100 days. Even though thin at the start, they should be fat enough to suit the packer after such a feeding period. A 90- to 100-pound home weight is ideal for a fattened lamb.

The trials showed repeatedly that gains can be increased by adding 1/5 pound per lamb per day of high-protein supplements. The advantages of feeding a high-protein supplement are that lambs (1) gain faster, (2) require less grain for 100 pounds gain, (3) attain a higher finish, and (4) generally sell higher. The addition of a protein supplement is not recommended where alfalfa of high quality is the roughage fed. Slightly higher gains and finish will be obtained but at a higher cost.

Shelled corn, whole ear corn, ground ear corn (corn-and-cob meal), and ground shelled corn have been fed to fattening lambs. In this order these are

the best forms for feeding corn. Likewise, whole barley, whole oats, whole wheat, and whole rye have been fed and results compared when the same grains are fed ground. Results invariably showed greater profit from feeding the small grains whole.

Feeders having no corn but a supply of barley, oats, wheat, or rye and enough roughage need not hesitate to undertake the fattening of lambs. Results almost equal to those from corn have been obtained repeatedly from barley or mixtures of barley and oats and from wheat and rye when the oats did not constitute more than half of the grain ration. Lambs fed oats alone grow but fatten slowly. They are too big and too thin to suit the packers.

When alfalfa hay is not available, sweet clover, red clover, alsike clover, or soybean hay can be used with about equal results. Lambs can be profitably fattened with prairie hay as the only roughage, though when any nonleguminous roughage is used, some protein supplement and lime should be fed. (See page 8.)

Oats straw is not a satisfactory roughage for fattening lambs, even when protein and mineral supplements are added. If oats straw is the only roughage available, lamb fattening should not be attempted. Corn silage up to three pounds per lamb per day can be used to good advantage in the ration. It may be fed as the sole roughage when used with a protein supplement, or it may be used to replace one-half by weight of the alfalfa hay or other hay in the ration. When prairie hay or corn silage is used as the roughage, protein and mineral supplements should always be fed. Lambs fed large amounts of silage are likely to eat so little corn that gains will be slow and expensive.

only roughage but is better when it makes up only a half to two-thirds of the roughage fed.

Cornfield or stubble. No work has been done at Morris in fattening lambs by pasturing cornfields or stubble fields, but farmers in many localities have successfully pastured lambs in such fields for 20 to 60 days. It is not wise, however, to depend entirely on pasturing. Following the grazing, a period of dry-lot feeding is usually essential to insure profit. There is a greater death risk in cornfield and stubble grazing than in dry-lot feeding. In cornfield feeding, the lambs should be yarded at night and supplied with dry roughage and some grain such as oats. Thus, they will be filled when returned to the cornfield in the

morning. This lessens the chance of overeating in the field.



Self Feed to Cut Labor Costs

In feeding a large number of lambs, self feeding cuts labor costs. Certain precautions, however, must be taken. When a heavy, high-concentrate grain ration is self fed, the death loss is often high because of digestive disturbances. A light bulky ration is required for self feeding so that the lambs will not eat too much grain. Corn can be fed when it is coarsely ground and mixed with about 20 per cent



Lambs feeding at a self feeder.

of a light bulky feed such as bran, ground oats, or ground alfalfa hay. Some feeders add about two pounds of sulfur to each 100 pounds of the grain ration to keep lambs from overeating. Sulfur feeding may reduce rate of gain and boost feed costs.

Sixty per cent ground corn and 40 per cent cut alfalfa by weight is excellent for self feeding. These figures can be shifted 10 per cent either way depending on the relative price of corn and hay. When chopped alfalfa ($\frac{3}{4}$ -inch screen) is used at the rate of 40 per cent, no additional alfalfa need be fed.

Vaccinate for Overeating

For lambs that are being full fed on corn in dry lot or in cornfield feeding, many feeders vaccinate for overeating (enterotoxemia). Where the disease appears and feeders want immunity for the feeding period, they give the vaccination with a bacterin. For short immunity, they use an antitoxin. Vaccination with a bacterin is desirable where the lambs are to be crowded with heavy grain feeding. In any feedlot, some death loss, normally less than 3 per cent, is expected from various causes.

Provide Water, Shelter, Minerals

Lambs must have water in clean troughs or in automatic galvanized tanks. Electric heaters may be used to keep the water from freezing.

Separate bunks for feeding hay and grain should be provided. About one foot per lamb of grain bunk is needed for hand feeding and about one-third foot for self feeding.

Cheap shelter that will keep lambs dry and protect them from wind storms is essential through late

fall and winter. Losses can result from inadequate shelter.

Salt should be available to fattening lambs at all times. Block salt may be used but flake salt is better.

Mineral mixtures are of value largely for the calcium they contain. Lambs do so well on rations of homegrown feeds properly supplemented with protein that the lamb feeder usually need not spend money for mineral mixtures or other feed preparations claimed to increase gains or decrease feed requirements. However, if nonleguminous roughage is fed, some additional calcium is needed. It may be fed as ground limestone or bonemeal mixed at the rate of one pound to each 100 pounds of the grain or by self feeding salt with limestone or bonemeal, half and half.

Shear if Necessary

Shearing feedlot lambs is generally not advisable except for lambs that will be carried into the spring. Then shearing in late winter is necessary since lambs in fleece will not do well as the temperatures rise.

What About Stilbestrol?

In two years' trials, 15 mg. pellets of the hormone stilbestrol implanted under the skin increased the rate of gain by 50 per cent and reduced feed cost by 30 per cent. The hormone stimulated growth rather than fat. The carcasses were somewhat coarser and graded lower. With large numbers being marketed, price discriminations could result.

UNIVERSITY FARM, ST. PAUL 1, MINNESOTA

Cooperative Extension Work in Agriculture and Home Economics, University of Minnesota, Agricultural Extension Service and United States Department of Agriculture Cooperating, Paul E. Miller, Director. Published in furtherance of Agricultural Extension Acts of May 8 and June 30, 1914.

10M-6-52

