

being overripe and overcured. The ration, therefore, was nitrogenous rather than carbonaceous. The lambs were given what they would eat clean of grain and hay and what was considered a fairly liberal supply of roots. The food was charged at average market prices within the state. These were as follows. Bran, \$6.50 per ton; oil cake, \$14.00 per ton; corn, 18c. per bu.; barley, 16c.; and oats, 14c. The native hay per ton was \$3 and the roots 4½c. per bu. of 50 lbs. These are low prices, but in some instances they are more than was actually paid. Bran was bought at \$4.50 per ton and oil cake at \$13 per ton. These figures will be a surprise to feeders who live in the East.

The average food consumed per day was as follows. Grain, 2.28 lbs.; hay, .93 lbs.; and roots, 1.88 lbs., or a total of 5.09 lbs. The proportion of hay to the grain consumed was 40 per cent. With range lambs fed somewhat similarly, but without roots, it was only 23 per cent. The greater consumption of the former may possibly have arisen from feeding a diet of roots. The cost of feeding one animal for 126 days was \$1.51.

The average weight of one lamb when put into the experiment was 90 lbs. When sold 126 days later it was 134.2 lbs. without shrink. The average increase per animal per month was 10.5 lbs., during the experiment proper it was 11 lbs. These were excellent gains for so long a period. With the lambs of the previous winter the average gain per month was 12 lbs., but they were fed for but 84 days. Another feature of the gains was their continuity. Notwithstanding the length of their feeding period, the gains were quite as good during the closing portion as during any previous part of the feeding period. The cost of making 100 lbs. of increase in weight during the feeding period was \$3.41.

At the commencement of the feeding the lambs were valued at \$3.50 per 100 lbs. This was the highest price paid for such lambs at the time for feeding uses. They were sold by Col. W. M. Liggett, the Director, to E. M. Prouty & Co., St. Paul. They ultimately reached the retail markets of the Twin Cities through the trade of W. E. McCormick. The price paid was \$5.50 per 100 lbs., shrunk weight. Range lambs sold at the same time brought \$4.87½. Only 7 of the 10 lambs were thus sold, but in the financial statement they are all valued at 5½c. per pound, the price for which the 7 lambs sold. One of the lambs was presented to the Commercial Club of St. Paul and served by the Club at luncheon. At the luncheon were several of the most distinguished men of the state. The unanimous verdict of the guests placed the character of the meat in the highest scale. The proportion of the lean to the fat was unusually large. The blending of the fat and lean was simply perfect, and the meat was tender and juicy as that of a spring lamb. The other two animals of the lot were served on tables of some of the best judges of meat in the state, and the testimony was unanimous as to the excellent character of the meat.

The financial statement is as follows.

Value of the 10 lambs, shrunk weight (1288 lbs.), when sold	
March 16th, '97, at \$5.50 per 100 lbs.	\$ 70.84
Value of the 10 lambs on Nov. 9th, '96, when the experiment began, at \$3.50 per 100 lbs.	31.50
Total cost of the food	15.08
Total net profit	24.26
Total net profit per lamb	2.43

The value of each average lamb when the experiment began was \$3.15 and when it closed \$7.08. The average increase in value, therefore, from the 126 days of feeding was \$3.93. In other words the value of the lambs was more than doubled during the said period of feeding. The total net profit of \$2.43 per lamb is probably unequalled in the annals of experimental feeding in this country, at least for a period not extending beyond 126 days. And it may be that it will not be equalled again. The price of food is not likely to be so low again for many years, if, indeed, ever, hence the making of increase in weight will be more costly.

The ration was doubtless a very suitable one to secure the end sought.

The lambs were in uniformly good health during the entire experiment. They were always ready for their food, and at all times during the experiment they made good gains. The feeder, Mr. Craig, has expressed the opinion that he never fed a lot of animals which gave a more satisfactory account of themselves at every stage of the feeding. The result should tend to encourage farmers to grow lambs of a good quality and to finish them at home.

## Raising the Colt

By Alex. Galbraith, Secretary American Clydesdale Association.

The old adage that an article properly bought is as good as half sold may by a slight alteration or paraphrase be made to read that a colt properly bred is half raised or at any rate more easily raised on that account. That "blood will tell" has been so conclusively proved to every man of experience or observation as to leave no room for dispute at this time of day. Farmers should see, therefore, that their colts are bred only from worthy ancestors and that they do not inherit any serious blemishes, weaknesses or malformations which will naturally mar the colt's usefulness nor lessen or destroy its value.

Before speaking of the colt, however, I would say a few words regarding the treatment of the mare during pregnancy. Experience proves that the more natural and less artificial the conditions the better. Fat and idleness are to be deprecated especially. There is no breeder of any extent but who will confirm the statement that better results will almost invariably be obtained by keeping the mares in medium flesh and working constantly, but not of course excessively, up till time of foaling. If work cannot be provided for all the brood mares they should at any rate have abundant exercise daily and on no account be confined to the barn closely. Corn should not be fed at that time. It is too fattening in its tendency and does not contain sufficient nitrogen and ash to build up the frame of the unborn foal. Let oats and bran be the staple ration with a few roots daily—carrots preferably. As the time for foaling approaches see that the mare's bowels and digestive organs are in good, healthy condition, and if necessary increase the proportion of bran, giving it in the form of a mash every evening. Clean out carefully a good roomy box stall, have it thoroughly bedded with clean straw and turn the mare into the stall every evening. See that it is scrupulously clean, however, as the chief danger to colts comes from septicæmia or blood poisoning, by the absorption of filth or disease germs through the navel cord at time of birth.

There has frequently been a great mortality among foals throughout the country from that cause. The symptoms are a swelling of the young colt's joints, first one, then another, a loss of appetite and vitality, resulting usually in death from one to two weeks from time of birth. In addition to absolute cleanliness in the stall and on the part of the attendant, an excellent preventive is an application of carbolic acid—say ten per cent. strength—to the navel cord at time of birth and twice daily thereafter for about four days. Some other preparations are excellent, notably one called Umbilicure, which can be had from Prof. A. S. Alexander, Evanston, Illinois, by the use of which all danger from blood poisoning can easily be obviated.

Now, assuming that the foal is safely born and learned to suck—which is the first operation—it is well to see that the youngster is neither suffering from constipation nor diarrhœa, either of which, if allowed to continue many days, will prove fatal. A tablespoonful of castor oil and an injection of soap and tepid water may be administered with good results during the first few days of the colt's life in case the bowels are in any way unnatural; indeed, many successful breeders make an invariable practice of giving a small dose of castor oil as a lubricant to every young foal. The practice is a safe one, and frequently very efficacious. Weather permitting, the mare