

linseed meal, old-process linseed meal, cottonseed meal, Chicago gluten (three grades), corn meal and coarse wheat bran. If there is something else that would help the ration, please add it as I should like to make a success of it if possible.

In past years I have fed to 50 sheep 3 or 4 bush. stone turnips as morning ration and wheat bran middlings and corn meal, equal parts, about $\frac{1}{2}$ lb. for each sheep. Perhaps I have fed too many turnips and not enough grain food. I have fed about same kind of ration to lambs all they would eat, as it was kept where they could have access to it at all times.

Thomaston, Conn.

G. B. J.

G. B. J. has probably fed too great a proportion of turnips and mangolds to his ewes, and as he had read carefully the advice given in this paper during the last three or four months he would have seen the proportions advised. He should turn to page 812, Oct. 27 last, and in the advice to "Old Subscriber" he will see the ration advised for the ewes before dropping their lambs and after dropping their lambs, also what is best to feed lambs separate from the ewes.

We think it advisable to feed the lambs separate from the ewes but very little, if any turnips, especially where, as in this case it is desirable to have the flesh of the lamb as well matured as possible and with as little sap as may be, so as to reduce shrinkage.

We should advise that he feed his ewes after lambing, 1 lb. to $1\frac{1}{2}$ turnips or beets, morning and evening, and from 1 lb. to $1\frac{1}{2}$ lb. of the grain food both morning and evening. But we should advise the grain mixture for the ewes in the proportion of 10 lb. corn meal, 10 lb. wheat bran, 3 lb. linseed oil meal; and as a mixture for the lambs separately, we should advise the proportion of 1 lb. corn meal, 2 lb. ground oats, 2 lb. wheat bran, $\frac{1}{2}$ lb. oil meal. Let this be thoroughly mixed together and placed in a trough for the lambs to get at separately. The oil meal will prevent constipation, and the flesh of these lambs will shrink very little. It would not be objectionable to give the lambs a few slices of turnips or beets.

E. W. S. (1)

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SHEEP-RAISING IN WESTERN NEW-YORK.

Mr. F. D. Ward of South Byron read a paper on the breeding and rearing of coarse wool sheep. He recommended the rearing of mutton-lambs for Western New-York, and said they should be dropped in October, so as to be ready for market Jan. 1. Such lambs are now worth 26 cents per pound in our city markets. They should make one pound of growth per day for three months. He has raised them that made a gain of one pound a day for four months. The breeding and rearing of such lambs will be found very profitable. He also urged the necessity of using only thoroughbred males, and said that the old adage, "blood will tell", is nowhere more applicable than in sheep-breeding. Gold is not found in lead mines, and profit will not come from raising \$2.50 sheep. Always breed from thoroughbred males coupled with the best ewes you can rear or purchase; thus the flock will be constantly improving. He also dwelt largely upon the necessity of proper care and food, and said that the warmest and best of winter quarters should be provided.

(1) If G. B. J. would give his lambs a few slices, daily, he would find they would shrink less.

—MR. EDWARD VAN ALSTYNE spoke on the "Value and Importance of the Sheep Industry." He urged a more scientific, systematic method in breeding, and the abandoning of the every day haphazard way of doing it, as now practised by the average farmer. Have a purpose, and be governed accordingly. Whoever contemplates going into sheep-breeding should do it intelligently, and not follow in the same lines where the masses travel.

We are eating more fresh meat than ever before, particularly mutton, and we who can should turn our attention to the breeding and rearing of mutton lambs. Make wool a secondary object, at the same time striving to put as many pounds of it on the sheep's back as can be made to grow there, remembering that the same food that makes the best mutton also makes the most and best wool and the best manure. The Michigan Merino crossed with the South Down, Hampshire or Shropshire, will bring good results. Would not cross it with the Cotswold. He favored the raising of lambs for the June or July markets, and they should then be four months old, and will sell for \$4 to \$5 each. During the time the ewe is suckling the lamb she should be given a liberal ration of nitrogenous food. (1) Oats, wheat bran, linseed and other like foods are best. Beans are also a good food, but care should be taken in feeding them, as, if too many are fed, they will produce "scours" and deranged kidneys. Mix linseed with the beans; keep the ewe improving from the time the lamb is dropped, and shear the sheep in June, as at that time the loss from shrinkage in weight of wool is less than at any other season. If the ewe is allowed to "run down" as soon as the lamb is dropped, a loss in the quality as well as in the yield of wool will surely follow. Brewers' grains, bought in the fall and carefully covered (2) in a pit, will be found an excellent food. They cost at his station, on the Hudson River Railroad, direct from the brewery, \$2.60 per ton, or kiln-dried, \$18 per ton. With him it is cheaper to buy them undried.

THE QUESTION BOX.

Is there danger of the mutton industry being overdone, and the bottom falling out?

Dr. Smead—I do not think so. Until we come nearer furnishing the supply now in demand, there will be no danger of the bottom of the mutton interest dropping out.

Is it advisable to feed as much as a pint of beans to a breeding ewe?

Mr. Van Alstyne—I stated that they should be mixed with a ration of linseed meal. If so mixed they will not be found injurious.

Dr. Smead—Beans, as well as linseed, are nitrogenous; therefore, I should say there would be too much of that element in such a mixture. I would not feed more than a third of it, as I believe it would leave a rheumatic tendency in the limbs of the animals.

Mr. Van Alstyne—I have always fed ensilage or turnips in connection with the foods I have recommended; both are laxative. Mixed or meadow hay is also fed.

Other gentlemen gave their opinions, one recommending wheat straw for ewes that are to be wintered. (3)

What is the best way to save the liquid portion of barn manure?

A Farmer—I use straw as an absorbent, and draw out the manure

(1) And so they should while pregnant. Ed.
(2) After thorough tramping. Ed.
(3) Clover-hay is better, and so is pease-straw. Ed.

every day. The gutters in the stable are not water-tight; I wish they were. Other farmers gave their methods: some of them mixed the horse manure with the cows' voidings; others used sawdust.

Mr. Eastman—It is very important to have these gutters water-tight, as six-tenths of the value of manure is found in the urine; hence the importance of saving all the liquids. He recommended the use of gypsum, or what is commonly known as land plaster, as an absorbent, as it takes up and holds all the liquids, at the same time locking up and holding the nitrogen, thus preventing a loss of it in the form of ammonia, by evaporation.

Opinions, as to the advisability of drawing manure to the field every day, differed, being nearly evenly divided pro and con., the difference, if any, being pro.

What shall we do to prevent clover from dying out?

John Gould—Cut the first crop early, to give the second one a good chance, which cut and leave off the land as a mulch. (1)

Mr. Eastman—Topdress the meadow with manure in the fall, then roll the land.

Dr. Smead—Underdrain the land.

A Farmer—Plow the land and reseed. You will find it a safer and surer remedy. (2)

Is it advisable to roll wheat land in the fall the same as for a spring crop?

A number of voices—Always follow the drill with the roller.

John Gould—Did you ever follow the roller with the drill? That is the best way. (3)

Mr. Budding—I always roll in the spring, not in the fall.

A Farmer—I follow the roller with the drill always.

Opinions on this question differed. (Cultivator.)

Who Knows What Ails the Lambs?

R. F. L., Greenville, Va.—I have a lot of ewes that are now dropping their lambs. Some are doing badly; they seem to have plenty of milk, but it does not agree with the lambs. I have lost seven out of twelve. I am feeding corn and cob crushed (fine) half a bushel, a quarter of a bushel of whole oats, and one bushel of wheat bran, hay and fodder. I am feeding $1\frac{1}{2}$ bushel of this mixture to 74 ewes which are in fine condition.

Ans.—Not knowing the circumstance in this case and how these lambs were affected, it is impossible to give any opinion that would be helpful. But it may suggest a reason for the trouble, to say that corn cobs are not proper food for sheep on account of the sharp flakes of the cobs producing inflammation of the stomach (4). Sheep should have the grain food only coarsely crushed, and it should be fed in shallow feed troughs so that the greedy animals will not swallow it too fast. This of course leads to indigestion. The allowance of grain food is not too large. It is not desirable to have a breeding flock of ewes in too good condition as fat ewes generally have weak lambs. A fairly good condition (5) is all that is required. Sheep's milk is naturally

(1) Oh! we afford to lose our best winter sheep food? Ed.

(2) Sow it less frequently. Ed.

(3) Mr. Gould is quite right. All fall wheat should left with a rough surface. Think how pasty a rolled surface would be in a spring, and how heavy land would bake afterward. Ed.

(4) Just as ground, unsifted oats serve calves. Ed.

(5) With plenty of nitrogen in the food. Ed.

much richer than cow's milk, without increasing this richness by too good feeding. It is very difficult to rear lambs as well as they should be, without some laxative food, as roots of some kind, for the ewes. (1) If a few cut potatoes, half a pint per ewe, could be given it might be found useful. A few sliced turnips or mangolds or cabbages would be better still.

R. N. YORKER.

SHEEP RACKS

The combined hay- and grain-rack for sheep shown in fig. 1 is recommended in the Farm Journal by Mr. HENRY WILLARD of Ripon, Wis. The grain-rack in front is pivoted by bolts passing through the extended end of the rack into the two upright scantlings. When the grain-rack is eaten, the rack can be raised and fastened up out of the way, as shown by the dotted lines. This being done, the sheep have free access to the hay-rack. The front edge of the hay-rack floor is 2 feet from the ground, and the front pickets 2 feet long, 2 inches wide and 3 inches apart. At the top of these front pickets is a shelf or screen, shown in cut, fastened to the scantling, and to which

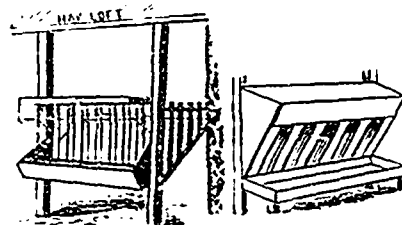


Fig. 1.

Fig. 2.

the pickets are secured. The front edges of the pickets are rounded off smooth. The advantages claimed for this rack are: 1. Economy of floor-space; 2. Economy of food—no waste; 3. Protects wool from dust; 4. Does not wear off wool; 5. Safe for the animals; 6. Cleanliness of grain trough.

The rack illustrated by fig. 2 is a simpler affair, to be constructed against the side of the sheep shed. The feed trough is 9 inches from the floor, 15 inches wide and 6 inches deep. The pickets of the rack are 2 feet 9 inches long and $3\frac{1}{2}$ inches apart. A foot-wide board is nailed along the top of rack. Cultivator.

ADVICE.

It is by no means easy to give practicable advice. What, indeed, can be done with a lot of hungry lambs in a season when we have little hay and only rotten turnips? The turnip, it is true, is a watery esculent at best. Twelve tons of these roots contain 10.8 tons of pure water, and only 1.2 tons of dry matter. We thoroughly appreciate the value of sound turnips. They are a natural, succulent food, which not only are nourishing, but wholesome for sheep. We have, however, to face a practical difficulty, and it is well to remember that only one-tenth part of turnips and swedes is of absolute feeding value. If we can supply this one-tenth part by corn and cake, we must rely on water to do the rest. We are not prepared to say how much cake will be required to supply the same amount of nourishment as an acre of average turnips or swedes. The question cannot be solved by analysis. Mr. Warrington very properly observes that "the same weight of dry matter in crude foods of this class (roots) has a decidedly less nourishing value than in foods consisting entirely of matured roots." (1) Too many roots are likely to cause ewes to produce dead lambs. Ed.