

3.—Our coarse fodder is principally composed of well-cured oat straw. (a) Not having cropped so heavily as we would have liked in peas this past season, our supply of peas and straw is somewhat limited; nevertheless, I am a great believer in this commodity and ready to endorse it as one of the most healthful and economical of all fodders for breeding ewes. (b) Hay crop being light, we are feeding our breeding ewes, shearlings, etc., principally on oat straw, and are agreeably surprised at results attained. Our lambs have a liberal supply of hay. (c) We feed our oat straw cut, fed in racks made for hay, underneath which is placed a trough which catches all that otherwise would drop to the ground and consequently be wasted as food.

4.—In feeding roots we do not think it advisable to feed more than from two to three pounds of turnips per head; in fact, not so large a quantity until the ewes are accustomed to them, and then as the ewes reach the more advanced stage of pregnancy we somewhat modify the quantity and add a little oil meal. Our ewes are doing remarkably well on a ration of one-third pound oats, one-half pound bran, two and a half pounds turnips, with cut oat straw to balance what they will eat up without much or any waste of straw.

5.—We believe in feeding grain to young and breeding sheep, especially in conjunction with roots, and have every reason to believe that fed in very moderate quantities conduces to make fine, sappy, and vigorous specimens.

6.—I do not believe that it is at all necessary that the pens should be kept cleaned to the floor. I have never found any detrimental results to the flock where the manure has remained all winter, provided a little gypsum or land plaster be scattered around in soft, greasy weather. The manure, however, should be removed directly the sheep are taken from the pens, or it will burn and be almost worthless.

7.—It is absolutely necessary that sheep have free admission to pure water at all times, and I would advocate easy reach of same inside of pen.

W. J. CLARK, T. D. MCCALLUM,
Shepherd. Manager.

Lessons from the Sheep Fold.

1.—Let lambs run with older sheep and the profit of sheep breeding is almost or altogether lost, for either you will feed the older sheep too high or the lambs will get stunted, not being able to get the proper food needed. Take good care of lambs and feed liberally from birth until they are one year old, then they are able to cope with older sheep. I would also recommend keeping old sheep, such as are past the vigor of life, separate.

2.—Use a large, dry, and well-ventilated pen with wide doorway to yard. Let sheep have free access always, except on stormy days and very cold nights, and if there is an old sod field convenient to pen let sheep into it when not covered with snow. Feed in yard on fine days.

3.—I prefer good pea straw, bean straw and clover hay: (a) pea straw morning and noon, bean straw at night; (b) clover hay at night after ewes have lambed; (c) uncut if I have plenty of feed; cut if scarce of feed, and in either case in trough; do not like racks for sheep with foretop, such as Oxfords or Shropshires.

4.—I have never had any experience with ensilage, but have had good results from feeding roots. I feed from two to three pounds of roots to each ewe before lambing time, according to quality of straw, and one-half to one pound of oats until lambs are one week old; then I increase gradually: oats from two to three pounds; roots to what they will eat up clean.

5.—I prefer oats and bran, equal by measure, with a good sprinkling of nutted oil cake; one to two pounds of this mixture per day to each lamb. Answer for breeding ewes given in No. 4.

6.—The pens should be cleaned out before fermentation begins or any odor arises, and kept well bedded.

7.—Sheep should have free access to clean water and salt at will. Some think if sheep get roots they do not need water; they say if you offer them water they will not drink. I admit that they will hardly ever drink when you offer it them, but they will go and lick snow if there is any; but let them have access to water all the time. They will drink quite a lot, I don't care how many turnips they get. My pen of 32 breeding ewes drink three sixteen-quart pails per day. It is very essential to feed regularly.

Brant Co., Ont.

Wintering Sheep in Manitoba.

My experience teaches me always to keep lambs separate from the older sheep. I feed my shearlings and older ones together, as lambs do not require nearly as much feed as sheep, but need it much better and more nutritious; whereas, if fed together the older ones crowd the lambs back, and therefore they cannot do as well.

I allow my sheep to have access to the pens and yards night and day, and I find they do much better than when closed up at night.

I feed hay and oat sheaves; hay night and morning in racks in the pens; at noon, oat sheaves scattered around through the yards. I fed pea straw one winter. I believe sheep will do well on it, but one has to give them a large quantity, as I found they would only eat the leaves and finest of the vines. I have not as yet fed cut straw or hay. I believe it would be a saving in fodder, but where

a person has to hire his help the expense in cutting would be more than the saving in fodder where hay is as cheap as it is in Manitoba. A few roots are good for any kind of sheep—lambs, breeding ewes, or fattening sheep.

I feed from a quarter to a half pound of grain each per day to lambs and breeding ewes. It is not necessary to clean out their pens until it begins to thaw in the spring. I believe where sheep have access to abundance of clean snow they do as well on it as water. I have answered your questions, but a great deal of the success of winter feeding depends not only on the amount of feed and the quality, but also on the condition the sheep are in in the fall and the way they are attended to. I see by Mr. Bowman's letter that he recommends a run on rape for getting sheep into good condition for going into winter quarters. I have grown a small field of rape every year and find it an excellent thing, but where farmers have some summer-fallow the sheep do equally as well on the fresh weeds as on rape, thereby saving the expense of sowing rape, and the sheep also enrich the land and tramp it firm. When sheep are in good condition to go into winter quarters they can be wintered well with at least one-third less expense. I find sheep will do as well on upland weedy hay, well cured, as they will on red top or other coarse hay and one half pound of grain per day. They should be penned off with about fifty in each pen and a good yard to each pen, although I have one hundred in each pen. I have sufficient racks and troughs combined and still they waste a little hay, but I find they eat more and waste less by feeding carefully and giving them just sufficient to keep them picking until the next feed. Another important thing is to clean out their racks of old feed before every meal. In order to keep the wool clean (while feeding hay and grain) I shut them out in the yard, then the large doors are thrown open, giving them all an equal chance at the grain. If any of the sheep are not doing well I cull them out and put them with the lambs, where they will have a better show.

They should have salt once a week or rock salt where they could have access to it at times. If sheep have access to water one should be sure it is not stagnant water, as it is more injurious to sheep than any other stock.

Emerson, Man.

A Successful Manitoba Sheep Raiser's Experience.

1.—We do not find it necessary to keep the stock ewe lambs separate from the ewes, the wedder lambs having been sold to the butcher partly during summer and the balance at the beginning of winter.

2.—We allow the sheep to go out and in to their sheds at all times, and it is only during very cold or stormy weather that they stay inside.

3.—Straw of all kinds—wheat, barley, oats, and peas. The greener the grain when cut, the better is the fodder. In fine weather the chaffiest of the straw is spread upon the snow, and they eat it up readily. This is supplemented by what hay they can eat fed to them in the sheds. The fodder is all uncut.

4.—Turnips are an excellent feed for sheep, but we have not had so much experience with them in this country as we could wish. We sow from ten to twenty acres each year with rape upon the summer-fallow, and in the fall when the prairie grasses are getting hard and dry, give the flock a daily turn on it, with an outrun on the stubbles, which soon puts them in prime condition. We have had no trouble or loss with them on the rape.

5.—We give the ewes a little oats and bran a week or two before and after lambing, which is discontinued as soon as there is a full bite of grass.

6.—We only put as much bedding in the sheds as keeps them dry and comfortable. It is tramped so firmly that there is no heating or bad smell, and it is only necessary to clean out the sheds once a year, during summer, when it is hauled to the fallow break. It is the best manure that can be made on a farm.

7.—Let them have free access to water at all times.

Niverville, Man.

WM. & J. WALLACE.

Valuable Suggestions on Feeding Lambs and Breeding Ewes.

1.—I should most certainly keep lambs and older sheep apart while in their winter pens, especially in the case of rams, as the older ones knock the smaller ones about, and lambs need a better class of food to keep them growing.

2.—I do not consider it wise to confine any sheep to close pens at any time. Let them have a dry, roomy yard to run, with a comfortable shed to go into when they so desire. They know best when to do that. When the weather is fit at all they are better fed outside.

3.—Clover hay, pea straw, and corn fodder; fed in racks uncut. To breeding ewes hay once a day, pea straw twice; lambs, hay twice, pea straw once; clearing out the racks clean each time before again feeding.

4.—Sliced roots (swede turnips preferred) to breeding ewes, six pounds once per day until after lambing; then after that all they can eat of good clean, wholesome sliced swedes. Lambs from three to four pounds twice each day, with good success after thirty years' experience among sheep every day.

5.—I feed breeding ewes grain once a day during the winter before lambing, one pint each day of a mixture of $\frac{1}{2}$ oats and $\frac{1}{2}$ corn or peas; after lambing I double it, one pint twice a day for lambs. I feed from $\frac{1}{2}$ pint to 1 pint oats twice each day, and to fatten lambs add a little corn or peas, oil cake and bran. I recommend but very little strong grain, such as peas or corn, for lambs.

6.—Keep pens clean and dry, with plenty of bedding. When sheep run out and in at will, "as they ought to," three times will be quite sufficient during the winter to clean out pens. If sheep are confined inside they sweat and do not do well in any way.

7.—Sheep should have plenty of fresh water to get at will, but if they get a fair quantity of roots they will not drink in very cold weather. I am pleased to see you take up this department, for we sheep-men must all benefit by hearing each one's experience in feeding and tending the flock.

HENRY ARKELL,

Wellington Co., Ont. "Farnham Farm."

Trouble with Rape and Early Frost.

I saw in your issue of January 1st where Mr. Jas. Bowman replied to your questions on wintering sheep. He covers my mode of management, except that I do not put my ewes on rape, as I have lost a number by early frosts while on rape. You will please find enclosed one dollar for my subscription for the ADVOCATE for 1897.

Oxford Co., Ont.

WM. DONALDSON.

FARM.

Handling and Applying Farm Manure.

(Continued from page 34.)

QUESTIONS.

1.—Do you use cut or uncut straw or some other material for bedding? Which do you prefer, and why?

2.—Do you consider there is any or much advantage in having manure made in box stalls, or sheds, over ordinary stalls where stock is tied?

3.—Do you consider it important to mix the manure from the different kinds of stock? If so, why?

4.—How do you manage to save the liquid and solid manure without loss?

5.—Do you consider it important that manure should ferment before being applied to the land? If so, do you haul it into large piles in the fields or give the pile in the yard any special attention during the winter?

6.—Have you tried spreading the fresh manure on the frozen fields as it is made throughout the winter, and what is your opinion of the practice from a labor-saving and manure-economizing standpoint?

7.—Assuming that you follow out in a general way a certain rotation of cropping, to which crop or crops do you consider farmyard manure most profitably applied?

Sawdust for Bedding.

1.—Keeping a very large herd of stock on a limited number of acres, I am very economical with bedding and absorbents. I never use any straw for bedding, except what is passed through the manger and the best picked out by the cattle; the balance (very little) is used for bedding. As a substitute, I freely use hardwood sawdust, which not only keeps the cattle cleaner than anything else I can use, but makes an excellent absorbent. It absorbs all the liquid, which is slowly liberated when it comes in contact with the soil and moisture. Have also used forest leaves with grand results as an absorbent and very direct response when applied to crops. When straw is used for bedding, believe it would pay to cut it all.

2.—Never practiced running stock loose in box stalls or sheds, but consider it would make excellent manure.

3.—It is very important to mix the different kinds of manure as much as possible. Horse manure, being very heating, often "fire-fangs" if put in one pile, but when mixed with cattle manure that danger is avoided (when roots or corn ensilage are liberally fed the manure is generally moist), besides it makes a better mixture for all crops. Where possible, there is no better place for hog manure than mixed with the other manures, which warm it up.

4.—The sawdust is all the absorbent I require. Have paid no special attention to manure in winter besides keeping in a nice even pile and all kinds well mixed.

6.—Never applied fresh manure on frozen fields. Have watched results with others; believe it is good on level land. My farm being somewhat undulating, the danger would be of washing the manure from the higher points to the valleys where it is least needed. Believe it would be great economy in labor.

7.—Always apply manure to root crops, such as turnips, mangels, corn, potatoes, etc.; balance on fall wheat ground. Prefer, when possible, for corn, wheat, or any other grain crop, to apply manure on top and work it in with a disk or spading harrow. I am positive on my soil (sandy loam with some clay loam) the nearer I can keep the manure on top, as long as it is covered, the better and more direct results will be obtained. As described, my manure is always short. I have no trouble in doing this. I believe long manure applied in spring and plowed under, for mellow land like mine, for oats, barley or peas (only in exceptional cases), is worse than useless for the ensuing crop. It may do in a damp season, but in a dry season my experience has been very discouraging.

Waterloo Co., Ont.

A. C. HALLMAN.