

up kind. The latter sort is unfit for breeding purposes, and all such should be weeded out of the flock, and, if possible, fattened for the butcher.

The fall or early winter is an opportune time to look over the flock of ewes and cull out the inferior animals, of which there will always be a few, with the most careful management, from one cause or another. If a yearling ewe is at all undersized, and in good order, the chances are that she will turn to better account on the block than to keep her for breeding purposes.

A requisite in lambs is that they early attain good size, whether yearned in February or August. A good sized, vigorous ewe, coupled with a mature, hardy ram of the right type, should drop at least one vigorous lamb, which, given a good chance, will thrive and grow from the day he is dropped till turned to the butcher.

While Merino blood is slow in respect to maturing, it is hardy and vigorous; hence, Australian, and to some extent, American, sheepmen have found that good grade ewes, tintured with a dash of Merino blood, make good mothers and drop vigorous lambs when coupled with a ram of most long-wooled English breeds. While profits from most lines of farming are on a lower level than formerly, the change in sheep products, with the improvement in breeding for the purpose to suit the line of marketable products, places sheep growing on a full par with other lines of husbandry.

Then, the breeder must use every care in the choice of his rams. These must be purely bred, as a sure guarantee of ability to transmit their own qualities. Never bring a ram lacking in good, sound characteristics into a flock. He should possess a massive breast, excellent heart and flank girth, and, withal, a bold, bright eye and gay carriage, to indicate the possession of marked vigor and stamina. Such an animal can scarcely fail to be prepotent; but if, when proved, he is found lacking in prepotency, the eye should not pity nor the hand spare. No man can possibly make a success of breeding sheep who is not skillful in the selection of his rams. It has been frequently stated that the ram is half the flock. To speak thus is only to tell a half truth, for he is as much more than the half of the flock as his prepotency exceeds that of the average female with which he is mated.

Bradford, Eng.

As Viewed from a British Standpoint.

The *Scottish Farmer*, a strenuous opponent of the free admission into Great Britain of Canadian live stock, appears to regard with more satisfaction the proposal to establish a Canadian dressed-meat trade, judged by the following, which appears in its last issue:—

"Professor Robertson, the chief agricultural organizer of the Canadian Government, is a long-headed Scotchman; he recognizes the wants of the times, and resolutely sets himself to supply them. At the congress held during the Christmas [Ontario Fat Stock] show week he unfolded a scheme for supplying wholesome food to the British market, with which no one will be able to quarrel. The keynote of his scheme is—Britain for the British; Canada is part of the United Kingdom; better is it for the mother country to get her food supplies from her own children than from strangers. So say we all. The aim of the Professor—and the Dominion Government will back him—is to make the cattle trade between Great Britain and Canada a dead-meat trade. He recognizes that the ports of this country are irrevocably closed to live cattle and sheep. He therefore calls upon the Canadian farmer to supply the mother country with dead meat, which will be chilled, not frozen. He proposes that, in order to make a demand for this meat, the Government of the Dominion begin by slaughtering 500 cattle per week at Montreal and shipping the chilled carcasses to the chief British ports, in which shops will be opened for the sale of Canadian meat and nothing else. Believing that the quality is first-class, Professor Robertson means to sell it on its own merits, and thereby create a demand for Canadian beef such as now exists for Danish butter. As we cannot feed our population ourselves, no fairer or more worthy method of supplementing our efforts than that now outlined has ever been devised."

The English *Live Stock Journal* is non-committal, but is evidently surprised that mutton is not specially mentioned in the proposed Canadian project.

Round Silo Construction.

We have just received an interesting letter describing in detail how one of our readers last season built a successful round silo 25 feet deep, from 2x6-inch tamarac staves, filling it with *uncut* ensilage. It will appear in next issue.

The order of the British Board of Agriculture, in reference to the importation of sheep, came into force on Wednesday, January 1st, 1896. All foreign sheep must now be slaughtered at ports of landing in Britain.

FARM.

Interesting Point in Silo Wall Construction.

SIR,—I read in your last issue a description of the cement concrete walls, floors and silos built by Mr. Daniel McIntyre, of Ayon, Ont. I know that you are anxious to give the farmers of this country the best possible information through your columns. The article states that the walls are plumb inside. I was present when Mr. McIntyre's walls were laid out, and I know that I gave instructions that the walls of the silos should overhang to the inside just a little, say about one inch in twenty-five feet, as a slight relief to the lateral pressure to which silo walls are subjected as the contents heat and settle. Then when the inside of silo is finished with a fine putty coat of cement, and troweled perfectly hard and smooth, there is no chance for the ensilage to bind to the walls, and it must settle solid. During the past two years we have built a large number of silos in different parts of Ontario. We have heard from nearly all of them, and they keep ensilage perfectly, and we think better not to change the plans we have adopted so long as they are satisfactory. Now that the value of corn for feeding stock is becoming understood, it is important that the best means of taking care of this valuable feed should be understood and adopted. Very often the ensilage is too dry when put in the silo; water should then be used. It causes the ensilage to settle firmer, and, no doubt, the harder the ensilage is packed the better it will keep. It would be very beneficial to all if farmers who have silos would give their experience through the *ADVOCATE* on all such matters, so that the very best results may be obtained. During the past three years I have spent all my time amongst farmers, and purpose so doing for some time yet. I am anxious to get the very best data I can, and will be glad at any time to give to or receive from readers of the *ADVOCATE* any useful information.

Thorold, Ont., Jan. 9th.

ISAAC USHER.

Hydraulic Rams.

SIR,—In the *ADVOCATE* of January 1st, Mr. R. C. Allen gives some information with regard to the working of hydraulic rams. Some of his points are good as far as they go, but I fear they might have a tendency to mislead persons who do not know anything practically about the working of hydraulic pumping machines. We have a hydraulic ram working on our farm at the present time, and truly where they can be operated they are a great boon; and there are many such places. How many farms there are with a running stream or spring within, say, one mile of the farm buildings. Many people have the idea that they are suitable for pumping water only a very short distance. That is a mistake. You can force water practically any distance, say a mile or so, if you have the head of water. We have both a windmill and ram; and if we could work a ram where we have the windmill, the windmill would soon have to go. The cost of a ram is comparatively small. The main expense is the piping, and that depends on the distance you wish to pump. Many persons have springs of running water that would probably not be strong enough to drive a ram, but would furnish plenty of water for use. If such is the case, and there is a river, creek, or any other stream, the water of which may be impure, it can be utilized to drive the ram to pump up the pure water. However, a stream or spring yielding from 6,000 to 12,000 gallons per 24 hours is sufficient to work one of the smallest sizes. This is a very small stream of water. Of course the larger the stream the larger size of ram, consequently a larger stream of water delivered. Ordinary rams are supposed to elevate about one-seventh of the water that runs through them ten feet high for every foot of a fall there is from the top end of the feed-pipe in the spring to the ram. They will elevate a smaller quantity higher than that, however. Our ram is pumping 500 gallons per day thirteen feet high for every foot of a fall in drive-pipe. There is an American ram made that will elevate 25 feet high for every foot of fall in drive-pipe. You will see the importance of making good use of what fall there is, and not wasting any of the power. Mr. Allen advises in his illustration the use of a tile drain to convey the water from the dam or head to a supply barrel which is to feed the ram. Now, where the fall is none too great this is most decidedly a mistake; and if you have plenty of fall, it is altogether unnecessary. Those tiles must have a certain amount of fall, which will make the supply barrel that much lower than the dam.



The accompanying diagram illustrates how ours is set, which I feel sure is a much better way. "A" represents the old bottom of the stream. To get the fall for the ram we started down the stream at "F" and dug the bottom of the creek out, on a water level nearly. "B" represents the present bottom of stream. "D" is a dam built to get head or depth of water to put end of feed pipe into. "H," discharge running to tank. "E," feed pipe. "C," ram. The dam ("D") may be built as high as possible to increase the head. The ram ("C") may be set down at least six inches into the water. If you

have a stream of spring water, as ours is, there will be no danger of frost; the constant running of the water through the pipes will prevent freezing. We just turn an empty salt-barrel upside down on the top of our ram to prevent anything falling in on it; the pipes are not over a foot and a-half in the ground in some places. The ground becomes frozen solid all around the pipe, but it never freezes, on account of the steady running stream of pumped water. However, I would not advise everybody to put in their pipes that near the surface, as there is liable to be an accident—something might go wrong with the ram in cold weather and the pipes become frozen before being started again. The size of the feed ("E") depends on the size of the ram; we have a two-inch pipe. Some would want larger, some smaller. The length of feed-pipe has considerable to do with the power of the ram. After you get your feed-pipe over a certain length you lose power on account of the extra friction of the water running down the pipe. Of course no set rule can be laid down as to the length of the feed-pipe; circumstances alters cases, but in most cases 50 feet is too long. We have a drive-pipe 35 feet long, and the longer we make the feed-pipe over that the less water we have delivered at the barn.

Any person who can operate a hydraulic ram should have model waterworks, namely, running water at his buildings. It would be folly to be bothered with wells and cisterns, pumps, etc., which require constant attention. The ram is master of the situation. It is so simple and durable, nothing scarcely to go wrong; no oiling required. It works away day and night, week in and week out, from the beginning of the year to the end of it; through rain or shine, through calm and storm it keeps working away, supplying a constant stream of fresh water.

JOHN TAYLOR, JR.

Waterloo Co., Ont.

Winter Manuring.

I shall, as briefly as possible, give your readers my experience in winter manuring and some of the advantages to be derived from it. If it is profitable for one man to do it, it must be profitable for every farmer under the same conditions. We hear so much of the hard times among the farmers, and no wonder, when much that could be turned into a profit is allowed to go to loss, and then so much work is done to a disadvantage.

We draw out our manure every few days or once a week, and in the beginning of winter, when the snow is shallow and the roads are good, draw to the farthest fields, and then in deep and drifting snow to the nearest. We use a wooden sled, or jumper, made purposely, having its runners one or two feet farther apart than usual, and low, as a great deal of energy is saved by putting it on a low sleigh compared with a high wagon-box. We have never found any difficulty with the heaps freezing in the yard in the few days it was allowed to stand, as we have used considerable straw for bedding when straw was cheap, but when it is scarce, as it has been this fall and winter, we have used wood-dust and dry muck, which we had stored away in summer. If the manure freezes we take a common railroad pick and loosen it up, and it will handle as rapidly as in any other way. There may be lumps among it, but we go over the ground again in the spring with forks to scatter out any hard lumps.

We find no objections to putting strawy manure on the meadow, as hard, worn-out clay requires a complete covering, and with a little care in raking the hay can be gathered and the straw left as a covering. We manured a meadow field last winter with very strawy manure, raked it with a horse-rake by being careful, and had twice as much hay as the former year, although it was no better year for meadows, and so we have really gained one crop of hay, for we wouldn't have had that extra crop till the following year had we put it on in the summer. We prefer putting the manure on hay or pasture rather than plowing under, as the worn-out land needs something to keep it covered from the action of the sun and to keep it moist in time of drought. We are this winter manuring a plowed field which we intend seeding in the spring. This will ensure a good catch of grass, we think. The manure that we think is not too strawy to bother a cultivator goes on the plowing and the rest on the meadow or pasture. Where snow is deep we have learned that it is best to put in small heaps rather than to spread. This saves leakage when the snow is melting from under it in spring. We tried large heaps of several loads one year, but found that it had to be scattered with horses, but we could not get them on the field till the grass had started, and it was damaged thereby. The scattering of horse manure as it is made does away with the heating, which, if permitted, will lessen its value very materially.

As one's time in winter is not nearly so valuable as in summer, he can do much of the summer's work in this way when he has very little else to do but choring; and the horses are saved this extra hard work in summer by doing it when they need something for exercise, thus putting their exercise to practical use. Then there is a great deal of labor saved by not having to pitch from the stables over large heaps all winter or wheeling away in a barrow, and you have the comfort of a clean yard with the extra room it gives, which is considerable. This does away with the necessity of building manure sheds. The wear and tear on a sleigh is nothing to be compared to that of a wagon, and then you are in no danger of cutting up the fields, as is often the case with the wheels.

Douglas, Ont.