

possibly it is the most practicable of all. It is at least giving first-class returns with our calves. Anyone can build the little stalls out of old boards and scantlings.

Green Crops for Sheep and Lambs.

Editor "The Farmer's Advocate":

Mid-summer is here. The spring pastures which sprang forth so luxuriantly are now beginning to show signs of the continued grazing of stock. The hilly and more barren parts are already closely cropped, and in some places browned with the sun. In a month or six weeks, if the usual hot, dry summer weather prevails, a shortage of pasture will be general, especially on those farms that are stocked up to their full capacity.

It is at this time of the year that we hear so many complaints about the evils of sheep pasturing with other stock. It is not uncommon to hear a group of farmers say that "you can chase a louse over a sheep pasture in August," and in driving through the country one has to admit that pastures are often very scanty where sheep are grazing with a herd of dairy cows or other stock, yet when you come to analyze the situation, in all probability the farmer who pastures twelve ewes and so many lambs with his other stock, has not allowed an acre more than his neighbor who does not keep sheep. There can only be one result where such is the case. Go out into such a pasture early in the morning and the sheep and lambs are busy at work. They will bite twice or three times while the other stock are getting one mouthful. They are to be found feeding on the shorter herbage, and if you take the trouble to examine the part of the pasture that they have grazed over it will be cropped very short. Go again to where the cow or horse have been feeding and they will have taken only the stronger part of the plants, leaving that part which the sheep relish most. This would indicate that the most economical returns are got from a pasture where sheep are kept with other stock, especially where sufficient area is allowed for both, but in the summer season when the pastures make slow growth there is no doubt that sheep have every advantage over other classes of stock, both on account of their activity and close grazing habits.

This being the case some provision should be made whereby sheep and lambs can be removed, part of the time at least, from pastures where other stock are grazing. As already indicated sheep show a decided preference for fresh, green herbage, and this has led to the practice of sowing green crops for use during the late summer and fall months, when other pastures are short. These crops must be rapid growers, and furnish a crop of green foliage of a highly nutritive nature. A number of such crops are recommended, including rape, vetch, peas, oats, rye, fall turnips, cabbage, clover and alfalfa.

Rape is perhaps the most widely used, being a rapid grower and much relished. It may be seeded with the spring crops, between the rows of corn, or separately. When sown with barley or oats it is sometimes troublesome at harvest time, as in a favorable season the leaves are cut and bound with the other grain, thus delaying harvesting. Perhaps the better way, especially with barley, is to disc immediately after harvesting and reseed to rape. Oats are usually harvested too late for this practice. When seeded between the rows of corn the seed may be sown just previous to the last cultivation. As soon as the corn is harvested the rape will make rapid growth, and has a tendency to keep down weeds.

Aside from these crops rape may be seeded alone either in drills or broadcast, the usual time of seeding being from April until the middle of July. By seeding on different dates a succession of crops may be secured for use over a long period. Rape is usually ready for pasture in eight to ten weeks after seeding. When sown broadcast from 5 to 8 lbs. of seed per acre is required. When sown in drills twenty-eight to thirty inches apart 1½ to 2 lbs. is sufficient. Seeding in drills gives an opportunity for cultivation, which is often valuable in cleaning up a dirty piece of ground. Rape grown in drills is much stronger in growth and the rows provide a path for grazing, thus eliminating to a certain extent loss from tramping. On the other hand, rape grown broadcast is perhaps more tender, especially for lambs, and less labor is required.

Care must be taken in getting sheep accustomed to rape. The afternoon is the best time to drive sheep or lambs into a rape field, as then they are not so hungry as early in the morning. Sheep and lambs are subject to bloat if turned into a rape field after a rain or early in the morning. Severe frosts are also likely to set up acute indigestion. The best results are obtained from feeding rape in conjunction with a good pasture field.

Vetches are good for sheep and provide a variety. Oats and peas are especially valuable

for sheep, either as a pasture or for green feed. Rye may be used for early spring or late fall pasture. Fall turnips have much the same value as rape, and may be sown either in drills or broadcast.

Cabbage is especially relished by sheep and affords a large amount of the best feed. Owing to scarcity of labor this crop is not likely to be cultivated only in a small way.

Clover and alfalfa make excellent supplements to other pastures, and are highly nutritious.

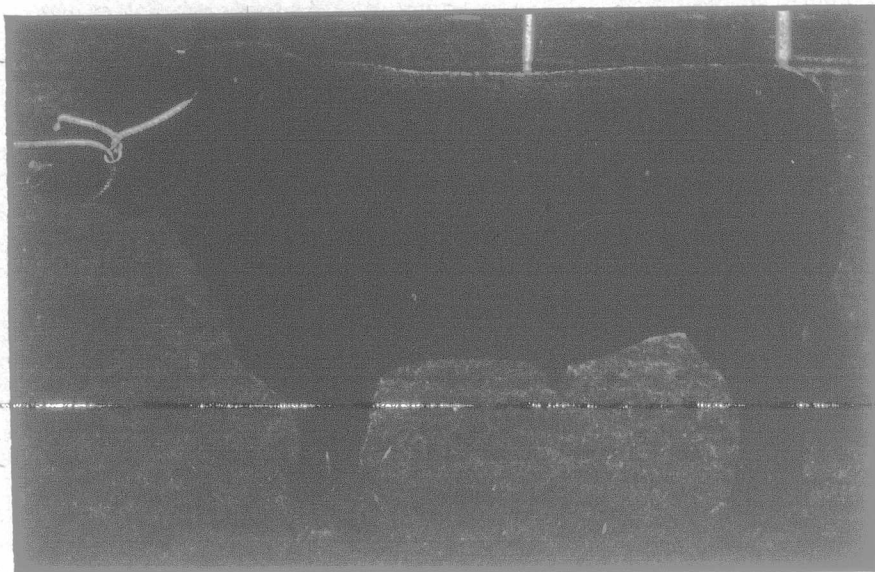
There are always a few acres around every farm that can be easily utilized for the growing of green crops. Many of our fields are overgrown with weeds in the fall which could be profitably producing a green crop for sheep,

water, but the soil in most parts of the older settled districts of the Province has become so contaminated with decaying vegetable and animal refuse that surface or seepage water can no longer be considered a safe water for domestic purposes. Consequently, every effort ought to be made to exclude this kind of water. If the well is dug in a clayey soil this may be secured by puddling the clay back of the brick, stone or concrete wall. In this case puddled clay is used to exclude the water. If, however, the well penetrates a sandy or gravelly soil it may be more convenient to put in a good cement wall and thoroughly cover the surface with a thin mixture of water and cement. This can be put on with a whitewash brush.

The tight wall should extend down several feet or to the level of the ground water. The object is to force the water to filter through the soil and come up under the wall. The filtering process purifies the water, and the deeper it has to settle through the soil before it gets into the well the better. It is impossible to say just how many feet of soil the water should pass through, but we should insist on at least 8 or 10 feet.

The idea is to construct a well that no water may find entrance to it without filtration through a depth of soil at least equal to the vertical distance between the ground level and the lowest level of ground water. To insure this it is important that the wall of the well extend above the ground so as to prevent any possibility of water getting in directly from the surface of the soil. Furthermore, the top of the well should be practically air-tight. This may be either cemented over or double boarded. It is too true that a great deal of contamination gets into wells from the top, either through the surface water making its way into the well or from drippings from the pump, carrying the dirt into the well through loose boards which cover the well.

PROF. R. HARCOURT.



Princes of Bleaton.

Champion male Aberdeen-Angus at Glasgow, 1914.

thereby increasing the earning power of the farm and at the same time maintaining the fertility of the soil. Many farmers under present conditions are forced to sell their lambs early in September owing to shortage of pasture, whereas a little foresight and outlay would enable them to carry their lambs over for the top price. Now is the time to take steps to avert this difficulty.

Macdonald College - A. A. MacMILLAN.

THE FARM.

Cribbing a Well.

Editor "The Farmer's Advocate":

Can you give me any information as to the suitability of concrete for cribbing a drinking well for house use? Which would be the better, brick or concrete? Would either of them make any difference in the taste of the water? Any suggestions in regard to digging and cribbing a house-well would be very acceptable, as I shall have to dig one this summer.

A. J.

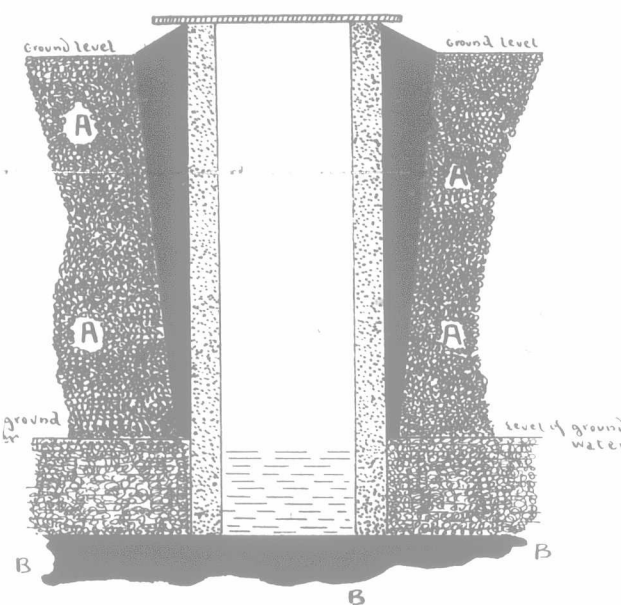


Diagram of well, showing a backing of puddled clay or other impermeable materials between the cement-work and the porous strata through which the well is dug.

I think that either concrete or brick will harden the water somewhat at first, but I do not think that either of these facing materials will give any decided flavor to the water. It is, however, important that the wall and top of the well be water-tight, and as long as this is secured without affecting the water it does not matter what the material is.

In the past seepage water was probably a safe

lowest level of ground water. To insure this it is important that the wall of the well extend above the ground so as to prevent any possibility of water getting in directly from the surface of the soil. Furthermore, the top of the well should be practically air-tight. This may be either cemented over or double boarded. It is too true that a great deal of contamination gets into wells from the top, either through the surface water making its way into the well or from drippings from the pump, carrying the dirt into the well through loose boards which cover the well.

PROF. R. HARCOURT.

Shallow Cultivation for Wheat.

In the course of a trip not long ago we were shown a large field of fall wheat which was a very heavy crop, the heaviest for a field of the size that has come under our observation this year. According to the old-established custom in the neighborhood it was deemed necessary in preparing for wheat to "ridge up," as it is called, just before sowing. This ridging up is simply a deep cross-plowing. The working of the land for the particular crop in question entirely exploded older theories. It was a summer-fallow, and the only plowing it got was with a gang-plow about four inches deep when the manure was turned under. The top was worked with a broad-shared cultivator, and all weeds kept down, cultivations being frequent. The wheat was sown fairly early on this shallow seed-bed and a bumper crop resulted. The method looks good.

This Mixture Exterminates Grasshoppers.

In our issue of June 18th Prof. Caesar, of the Ontario Agricultural college, outlined a new remedy for grasshoppers, which in some localities in a dry season become a pest. For the benefit of our readers who are experiencing trouble with these insects we repeat the formula:

Bran	20 lbs.
Paris green	1 lb.
Syrup or molasses	2 quarts.
Lemons	3 fruits.
Water, about	2½ gallons.

The bran and Paris green are mixed thoroughly in a washtub while dry. The juice of the lemons is squeezed into the water, and the peel and pulp are added after being very finely cut or ground up. The syrup is poured into the water and stirred until thoroughly dissolved. Just before using the bran and Paris green is thoroughly moistened with the water containing the lemons and syrup. Do not make sloppy.

Prof. Caesar informs us that he has just completed a trial of this preparation on an eight-acre field, and that the results were so satisfactory that he wishes "The Farmer's Advocate" to