

# CEMENT WALLS AND FLOORS FOR SHEEP HOUSE—CHANGING MILKERS—SEEDING FOR SHEEP PASTURE.

OSWALD WALKER, Perth Co., Ont.:—"In the next issue of the ADVOCATE would you kindly answer the following questions? From the experience you have had, would you recommend putting in cement walls for a sheep house? Would it be dry enough? Would it do to floor the sheep house with it? Which would be the cheaper, brick or concrete, for the walls?"

"2. I have noticed some women milk their cows in this fashion: start one, get up and leave her, start another, and then go back to the first one. The idea was to let their milk come down. What results might one expect?"

"3. What kind of seeds, and what amount, would you advise one to sow per acre for seeding down a sheep pasture?"

[We know of no more suitable material for sheep-pen walls than cement, as it is cheap, dry, and durable. It is more substantial than a brick wall, and does not require an expert to build it. Except, perhaps, in places where brick is exceptionally cheap, cement will cost less for material and labor. For a sheep-pen floor, we have never found anything more suitable than clay, where it is well underdrained, or the ground in shed is higher than that outside. If a floor of some other material is desired, cement would be our choice, as it possesses all the requirements of a satisfactory floor.]

2. With quiet cows, well acquainted with their milkers, we believe, under ordinary circumstances, no material ill effects will follow starting to milk and then leaving the cows for a few minutes for the milk to come down. Of course, this is of advantage only in saving time while the milk flow is scant or when the cows are approaching the dry season. Prof. Carlyle, of Wisconsin, tested the Agricultural College herd last year in the matter of changing milkers, and found that no loss occurred, but rather that the cows seemed to respond favorably to the change. What have dairymen to say about this question?

3. The writer has tried various seed mixtures for hay and pasture, but no other seems to give the same satisfaction as timothy and blue grass along with a mixture of clovers. We would recommend for an acre of finely-worked soil four pounds of timothy, four of blue grass, four of red clover, four of alsike, and two of white Dutch clover. This should produce a thick stand of first-class sheep pasture, that will improve for years, if not cropped too closely.]

## CONVEYING WATER BY SIPHON.

J. L. Grey Co.:—"What size piping is required and what is the best kind to convey water about twenty rods, from well to barn, the water to be raised 11 feet up out of the well and then have a gradual fall of 12 feet 6 inches to barn? What is the best system of conveying water out of a well with that much of a raise, without pumping. I intend to have the piping run through a 3-inch tile, 3 feet underground."

[I should judge that the size and kind of pipe best suited to this purpose would be 3-inch or 1-inch galvanized iron, the size depending on the quantity of water required. The only system for conveying water, in these circumstances, without pumping, is that of the siphon. The pipe should extend as far into the water in the well as possible without danger of sucking up sediment; it must be air-tight throughout its whole length, and the end at the barn should be kept as low as possible, the difference of a foot and a half being a small motive force to run a siphon. To start the siphon, it would be necessary to fill the pipe by some means. The easiest way, perhaps, would be to attach a pump to the pipe at the barn end, and draw the water from the well through the pipe. When once filled, it will continue running, if the above conditions are observed.]

J. B. REYNOLDS.

Ontario Agricultural College.]

## GRAIN MIXTURE FOR GREEN CROP.

H. B. Leeds Co., Ont.:—"I have about four acres of thin land, beside my pasture. What can I sow on it to produce the most green feed? The pasture gets dry about July 1st. Is there such a thing as spring rye?"

[There is such a grain as spring rye, but it is not much grown. The most satisfactory crop to sow in spring for green feed in July is oats and peas, two bushels of the former to one of the latter per acre. It is well to sow at three or four intervals, ten days apart, so as to prolong the season for cutting the food green. Lucerne should do well on this soil if it has an open subsoil. It should be sown alone in spring, about eighteen pounds per acre, on clean land. The crop would not yield much the first season, though on rich land it may be cut once the first year, but the second and following years two or more cuttings should be produced, and it holds in the land for several years. We would recommend a trial on a small area.]

## CEMENT FLOORS FOR GRANARY.

THOS. STAGDILL, Lambton Co., Ont.:—"I want to ask your opinion about cement floors. Would a cement floor do for a granary floor, and would it do for drive floor in a barn?"

[If the ground beneath the granary is well drained, so that water would not stand as high as the floor, a cement floor would answer well, as it is smooth, dry, durable and rat-proof. We have seen it used with marked success in driving barns, and we have no hesitation in recommending it for the drive floor of an ordinary barn.]

# MAINTAINING FERTILITY—ENSILAGE VS. DRY FODDER—SHEEP ON STRAW—FATTENING CATTLE.

ENQUIRER, Prince Edward:—"1. Can we retain the fertility of our soil by growing a crop of clover every second or third year? Some of our neighbors by this method raise first class crops. It is certainly cheaper and easier than to bother with cattle for manure."

"2. Occasionally we see a silo built and then abandoned, and hear of many more treated the same way. If corn is put up in the field in large shocks so that it retains its nice green color, is it as good, or better, than ensilage?"

"3. Can sheep be wintered at all successfully on wheat, barley and oat straw, with a grain ration added?"

"4. Is it possible to fatten cattle without hay or corn, just straw and grain and some roots, and what kinds of grains and how mixed would you suggest?"

[1. The system would no doubt give good results for a time, as the clover would collect nitrogen from the atmosphere, and there is usually enough phosphoric acid and potash in soils to last a considerable time. But, sooner or later, the phosphoric acid and potash will become so reduced that crops will not grow satisfactorily and the farmer will find it necessary to make large outlay in commercial fertilizers containing those substances of which he has robbed his soil.]

2. We seldom hear of abandoned silos in Ontario, and the number of silos is constantly increasing. Results of experiments, on the whole, show an advantage in favor of silage over dry corn fodder, though good corn fodder is a very satisfactory food.]

3. Would not care to winter sheep in the manner described, though no doubt they could be pulled through. A few roots or a little silage added to ration would be a wonderful help. Would not use barley straw, however. The awns, or beards, would be a bad thing in a sheepfold.]

4. Yes, quite possible. The kinds of grain available should have been stated, in order to answer this question intelligently. A few pounds of oil cake would be a great help to the meal ration. This could be mixed with any kinds of grain available, the greater the variety the better. A rather heavier meal ration will be necessary than when hay is used. If this correspondent would furnish a list of available foods, with prices, a more satisfactory answer could be given.]

G. E. DAY, Agriculturist.

O. A. C., Guelph, Ont.]

## RATION FOR CALVES.

W. J. MATHIESON, Wellington Co., Ont.:—"What sort of mixed ration would be best suited to take the place of the new cow's milk for calves after they are one month old? If flaxseed were mixed with wheat—two pounds to one of flaxseed, and ground together—what proportion would you advise to mix that with peas or oats, or any of the other grains grown on the farm, so as to give the most gain in growth and flesh; separator skim milk taken into account, of course?"

[Separator milk, fed warm from the separator, three quarts at a feed three times a day for two months after the calves are one month old, will keep them growing well. From three to six months old they may have four to five quarts twice a day. In addition to this, allow access to fresh clover hay, pulped roots—what they will eat up clean; also a mixture of bran, two parts; ground oats, four parts; ground wheat, two parts; and oil meal, one part. This mixture may be varied occasionally, substituting peas or corn chop for wheat. It is not well to feed grain to calves in porridge form or mixed with their milk, as digestion is better accomplished when the chop is eaten dry and thoroughly masticated.]

## DURHAMS AND SHORTHORNS AGAIN—MISSED HIS FARMER'S ADVOCATE.

GEO. McTAVISH, Ontario Co., Ont.:—"1. Are the Shorthorn and Durham cattle the same, and can they both be registered by Hy. Wade in the same herdbook at Toronto? 2. Having profited so much by reading the FARMER'S ADVOCATE, I wish to have the past year's copies bound, but lack one issue; can I obtain it?"

[1. Yes. See answer to similar question, page 20, Jan. 1st issue. Hy. Wade is the Registrar for Shorthorn cattle. 2. Advise us the date of the missing number. For months past, owing to the demand for extra copies by new subscribers, the supply of most issues has been completely exhausted. We would advise our readers not to delay in writing us if any issue of the paper does not reach them through the mails in good time, otherwise it may not be possible to secure same.]

## CAN THE WELL BE CEMENTED?

LESLIE G. TROUP, Welland Co., Ont.:—"Would you or some of your readers answer a question for me? I have a well dug twenty feet deep, four feet in diameter, stoned up loose, drilled ten feet in the rock. Could I cement it up, and get it tight, to keep the surface water out? The water rises one foot above the rock, and can be pumped out."

[We leave this question for our readers to answer. It is important from a sanitary standpoint, and we hope to receive clear descriptions of how to line a well so as to exclude surface water.]

## GROWING CLOVER SEED.

F. C. Bruce Co., Ont.:—"Would you please give to your readers a full treatise on clover-seed growing: How to prepare the ground, how to sow, how much seed per acre, the best time to cut, and way to harvest? How to thresh and market? The most profitable kind to sow—whether alsike, common red or Mammoth?"

[In some districts and on some classes of land the growing of clover seed is a profitable line of agriculture. Usually where common red does well alsike does well also. Mammoth clover seed is not much grown in Canada, so that we can say very little regarding it as a profitable crop. The growing of red clover seed differs materially from alsike seed culture, as the latter is produced from the first crop in the season, while the former plant does not produce seed from the first crop of blossoms. The reason for this is that it requires the bumble bees to fertilize the blossoms of the seed-bearing plants. This they do by going from plant to plant in their search for nectar to carry to their nests. The act of fertilization consists in depositing pollen from one head into the blossom of another head. Without this pollen no seed can be produced. Honeybees and other insects cannot reach the nectar of red clover blossoms, because their tongues are too short. When the first crop of blossoms are out, the bumblebees are not sufficiently numerous to fertilize the crop. By the middle of July, however, they are sufficiently numerous to visit most of the heads of a clover field.]

Both red and alsike clover seed are sown alike in spring on well-prepared, clean, fertile soil, usually along with a thinly sown grain crop. About twelve pounds of red or six pounds of alsike is a fairly good seeding. It is well to sow it after the drill, and harrow it in with a light harrow. If the land to be sown with clover now bears fall wheat, the clover seed can best be sown late in March or early in April, preferably on a light snowfall, during the time of freezing nights and thawing days. This is usually the surest way of getting a good catch of seeds. After the grain crop is harvested in the summer.]

The best crops of red clover seed are generally obtained from a field which has been pastured in the spring up to about the 20th of June. Then if there are many heads of the first crop coming into bloom, it is well to run the mower over the field to destroy these, as the midge will breed and work in them. If it is desired to take off a crop of hay first, it should be cut early—not later than July 1st if possible, so as to give the second crop time to ripen before frost comes.]

## ANALYSIS OF SOILS.

F. R., Brant Co., Ont.:—"I have often thought, in looking over experiments and their results in using various fertilizers, that they can not be of very much guide unless an analysis of the soil be made first, for perhaps on a different soil, differing in composition from that upon which the experiments were carried out, entirely different results might be produced. Perhaps you might be able to give a little light on the subject. Is there any inexpensive way by which an intelligent farmer could get a rough idea of the amount of the three chief plant foods in his soil, so that he might add that which was lacking, and not throw away hard-earned money by applying what was then already in sufficient quantity. The price of fertilizers is so great that for ordinary farmers it is hardly possible to make any profit by their use, unless they be applied with the greatest care."

[About the only practical method of arriving at a knowledge of the requirements of soil is to make a test by applying to plots upon which similar crops are growing, nitrate of soda, superphosphate, muriate of potash, and a mixture of the three. In this way a fairly accurate judgment can be arrived at as to the needs of the soil in question. Even a chemical analysis of soil is an unsatisfactory guide as to what manures are most needed, because much of the elements shown to exist by the analysis is in a condition that plants cannot feed upon it.]

## STUMPING WITH SALTPETRE.

D. F. KIDD, Simcoe Co., Ont.:—"I read with interest a late article in your paper with regard to the removal of stumps by means of explosives, and would like to hear of your experience, or that of any of your readers, as to their removal by treating with saltpetre and burning. Can pine stumps be removed in this way? If so, would you give details of procedure?"

[In our April 16th, 1900, issue, page 235, we published references to an experiment with saltpetre in burning out stumps, which shows the plan to have no virtue. Massachusetts Experiment Station treated fifty stumps by burning them, and inserting saltpetre in the holes, in December. The following July the holes were filled with coal oil, but even then the stumps could not be made to burn.]

## SPIDERS ON SPRUCE TREES.

JOS. CARLAW:—"You will find enclosed two small bags, I suppose you would call them, containing an immense number of insects, which I discovered on a spruce tree. Is this what is injuring our spruce trees?"

[The little brown, tough bag, resembling a dried puffball, is simply a spider's nest, and the insects within it are young spiders. They are quite harmless to the spruce tree on which they happened to be found.]