

FARM.

The Construction of Cement Stable Floors.

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To lay cement floors, get a good foundation. When filling in to raise the floor up to the proper levels, throw some water on the earth as it is put down, but earth is just as good if well rammed down. The cement-mixing machine saves a lot of hard labor. It is made to be run by horse power or engine. It mixes better and quicker than by hand. The proper proportions of hydraulic cement and gravel are one of cement to five of gravel, the latter from the size of mustard seeds to goose eggs. Lay down 3½ inches of this mixture, ram well, do not make it too wet. The way to tell is to take a handful and squeeze it in the hand. If it stays in a ball in the hand it is all right, if it falls down it is too dry; if the water runs out of it, it is too wet. Take one (sack) of cement to five (sacks) of gravel and put them into the machine and start your power. After the machine turns around about six times dry, start and pour in the water. By the time the water gets in your mixture is ready to wheel away to the floors. When the bottom is well pounded down, take and sift out of the same gravel, with a three-eighth mesh sieve, enough of fine stuff to put on the top, say, one-half inch thick for cattle. For horses I would put one inch, and for passages one-quarter inch will do. Make this top like good plastering mortar, one of cement to two of sifted gravel, trowel it well to bring the cement to the top; be sure and not have the water lying on the top when you are done with the piece that you are at. Do not let the bottom get too dry before you put on the top. Do not leave any bottom over dinner hour or night without you have the top on and finished. I prefer having my cattle stand three inches higher than the passage behind them, and then your gutter will be three inches drop from the passage and fourteen inches on the bottom, and six inches raise where the cattle stand.

The advantages of having cement floors over stone or plank are: you have all the liquid manure saved, and experience tells us that one ton of liquid is worth more than a ton of solid manure. With stone or plank you cannot save liquid like you can with the cement; you would not be long in saving enough to pay for the cement, and it does not cost any more than planks at \$10 per thousand, as one barrel will lay a floor sixty square feet. I find by experience that planks will not last any more than ten years, and the rats and mice cannot work under cement like other material. We lay cement floors from two to four inches deep, according to where strength is most needed. I have had cement floors in my own stable for six years, and I would not put in any other if I were putting in floors again. Some object to them, claiming them too cold, but I have had no bad results from them in any way whatever.

Rape for Fall Pasture.

Only those who have had experience with a crop of rape for forage for sheep and lambs and for young cattle in the fall months can fully appreciate its value in the growth of flesh, and as a wholesome and invigorating food for stock. For fattening lambs it is especially valuable, as well as for feeding off old sheep or putting the ewe flock in the best condition for breeding early and strong lambs; while young cattle also improve rapidly on it and are brought into the best condition for entering upon winter fare. It is a crop that is easily grown, the seed costing, as a rule, not more than ten cents a pound, and requires no special skill in its cultivation. Any fairly fertile land will produce a good crop of rape if it is reduced to a fine tilth, the seed not covered too deeply, and the soil between the rows worked two or three times with the horse hoe. In very clean, loamy land, in a favorable season, a very good crop may be secured by sowing the seed broadcast, at the rate of about 4 lbs. to the acre, and covering with a light harrow. But, as a rule, the best results follow sowing in drills, about 24 or 26 inches apart, either on the level or on slightly-elevated ridges, when 2 lbs. per acre of seed is sufficient. The seed, being very similar to turnip seed, is generally sown with a turnip drill. Hand hoeing is seldom necessary unless thistles or other strong weeds are numerous, but the horse hoe used two or three times to keep down weeds and to keep the moisture in the land will give the crop such a start that it will require no further attention. Sowing from the 20th of June to 1st of July usually gives the most satisfactory crop, but a good deal of feed can be got by sowing any time up to the middle of August. In a moist season, wheat or barley stubble may be plowed after harvest, and a fair crop of rape grown. When the rape is about a foot high is a good time to turn in the lambs, giving them the run of a grass field as well, and putting them in the rape only when it is dry, till they get used to it. The stronger and more fully it is grown

the better feed it makes, and frost does not hurt, but rather improves, its feeding qualities, and sheep relish it and grow fat on it right up to winter, when the snow buries it out of sight.

Grass Adds No Fertility.

Many farmers misapprehend the effect of grass in its relation to fertility. They seem to think that if they can only get a stand of grass it will restore and maintain fertility, even though they cut the grass for hay and sell it in the market. This is not exactly the fact, although it is true that land in continuous cultivation declines in fertility more rapidly than when in grass. To sell hay off the farm, however, is selling the fertility of the land equally with selling grain. The only advantage the grass land has is that it does not suffer the losses from leaching, washing and oxidation that land under cultivation does. If the latter is kept covered constantly there is not much to choose between it and grass land even in this respect.

Grass makes no actual gain for the soil, although its roots do bring up from lower levels the fertility that is there—placing it near the surface where it is more accessible, and there is thus a seeming recovery from the effects of continuous cultivation. If the grass is pastured, or if it is made first into hay and then into manure that is saved and restored to the land, there is an actual increase in the surface or available supply of the elements of fertility, but there is no such addition as takes place when clover or other legumes are grown and pains are taken to restore the elements taken from the land by carefully saving and applying manure. Going to grass "rests the land" and rests the farmer, for it does not require the labor that cultivated crops demand; it prevents leaching and washing, and brings up fertility from lower strata so far as the roots are of the deeper penetrating kind; the decaying roots will add humus, a very essential element in fertile soil; if the annual product goes

Turnip Seed and Turpentine.

In our issue of May 15th we quoted from the *Irish Farmer's Gazette* a treatment for turnip seed, which was to soak the seed in spirits of turpentine for five hours. Lest some should fear that such a treatment would interfere with germination, we made a test with turnip—also rape—seed soaked for varying intervals. One lot of turnip seed was soaked for two hours, another lot for eight hours, and a lot of rape seed for five hours, in pure spirits of turpentine. Each of these lots, as well as untreated lots of turnip and rape seed, were sown on May 14th. On the 17th inst. each lot of rape seed was well up above ground, and on the 18th all the turnip seeds had made uniform and vigorous growth, there being no perceptible difference between the seeds which were soaked in turpentine for 2, 5 and 8 hours, and those which were not treated at all. So that no one need fear trying a few rows at least of turpentine-treated seed in order to test its efficiency in preventing the turnip fly from eating the young plants. After removing the seed from the turpentine it quickly dries when spread out thinly and occasionally stirred. A little dry ashes or land plaster rubbed amongst the seed after it becomes dry will counteract a slight stickiness that is liable to remain on the seed.

Cultivating Hoed Crops.

It is the invariable practice of this locality, and has always been our own, to use the scuffler very frequently on all hoed crops from the time the plant has made its first appearance, more especially if the season be dry. A large quantity of the soil being clay loam, somewhat heavy, it requires surface tillage to keep it open and free. Mangolds, carrots and turnips are usually sown in drills, which insure a large body of loose soil to begin with, and by repeated working, if the ground is sufficiently dry, will keep it open and moist. For potatoes, we drill also and scuffle until the vines are fully developed, then mould up the loose soil to the vines, which increases the amount of soil available in which the tubers grow. If a reasonable amount of judgment is used, there is no crop which better repays cultivation than the corn crop. From the time it is a few inches above the ground until it is too large for a horse to work in, it should be worked, with possible exceptions, such as a protracted wet spell. We cultivate to a considerable depth at first after the use of the weeder has ceased, then, as the corn roots extend, make it shallow. Have tried both flat cultivation and hilling, and did not observe any difference, except that perhaps hilled corn would stand up better in case of a storm. JOSEPH MOUNTAIN, Perth Co., Ont.

Stable Cleaning Time.

This is the season of the year when every stable should be carefully cleaned out, whitewashed and disinfected. No matter how healthy one's live stock may be, there is always a possibility of some hidden disease "bug" finding lodgment in some damp, dark corner, which may find, later on, favorable soil upon which to develop in an animal whose system, from some causes, has become susceptible. Sunlight is the great germ-destroyer; therefore, let it in. Open doors and windows, thoroughly clean out gutters, stalls and passages. Use lime freely, sprinkling it into all corners, whitewash walls and ceiling, adding, if possible, a little crude carbolic acid. A whitewashed stable is lighter, looks cleaner, more comfortable and larger, and smells sweeter. This kind of work can be done at odd times without detracting from the regular farm work, and will be appreciated by man and beast when stabling time comes next fall.

Clover Silage.

Mr. D. D. Andrews, who owns a farm in the Leland valley in Jefferson county, Western Washington, built a silo in 1890, and, with the exception of a single season when his second crop of clover was lighter than usual, has filled it with second-growth clover every year. The silo is built outside, and when it has been filled, a covering of plank is laid over the top. There are three doors, one above the other. Mr. Andrews, on being interviewed, said as follows: "The first few years I put a board cover on the silage and weighted it down carefully, but in recent years this is left off entirely, simply tramping down the spread while filling in. The clover is not run through a cutter, but is pitched directly into the silo through the doors until it is full above the doors. It is then pitched up on a platform, where another man throws it over the top into the silo. If the clover is cut and put in while nice and green, no extra moisture is added, but if it is rather ripe and dry, one man sprays water over it with an ordinary spray pump as it is put down in the silo. We fill the silo as rapidly as possible with one wagon and a crew of four men. If the clover is very green and has dew on it, we want it to dry off, because we think it would sour



ROADSTER PAIR, VICAR AND VICTOR, 15.1-2 AND 15.2 HANDS HIGH. Sired by Dashwood 12486, and 2nd prize, Canadian Horse Show, 1900. OWNED BY MISS E. WILKES, BLAIR, ONT.

back to the land in the manure, it will make the available supply of fertilizing elements greater at the surface, but there is no true grass that will do for land what clover and other legumes in a good rotation will do for it.

Mustard Spraying is Worthy of a Trial.

Both at the Guelph and Ottawa Experimental Stations, trials were given last year to the spraying of mustard-infested grain fields with various solutions, in order to determine their actions upon the mustard plants. At Guelph, three different strengths of iron sulphate and three of copper sulphate were used. Iron sulphate did no injury to the crop, nor did it entirely destroy the mustard. Copper sulphate, on the other hand, completely killed the mustard and did a very slight damage to the grain. The 2 per cent. solution of copper sulphate (2 pounds in 10 gallons of water), sprayed on the crop just as the mustard was commencing to blossom, gave entirely satisfactory results.

At Ottawa, the same conclusions were arrived at with regard to the material used and the strength to use it. Prof. Shutt, who conducted the tests, concludes that about 50 gallons are necessary for an acre of crop, and that if heavy rain comes within 24 hours after the spraying, the operation should be repeated. He also concludes that the spraying should not be delayed after the mustard plants have reached a height of 6 to 9 inches.

Just why a chemical like copper sulphate should destroy the mustard plant without injuring the grain crop is not yet thoroughly understood, nor need we worry over the reason nor disbelieve the evidence we have of its effects. So to those who have farms infested with mustard, we would say by all means give the treatment a trial on at least a few lands, in order to learn the real effects of the treatment.