

food shall be such as will relax the bowels. The teeth of the little pigs should be examined as soon as they are born, and if overgrown or sharp should be clipped or broken off with a small pair of nippers.

FARM.

Problems of the Soil—III.: Rolling.

At the present time, a good deal of discussion is going on as to the merits and demerits of rolling at the time of seeding, some claiming good results, and others stating that they have received no benefit whatever, and, in some cases, that positive evil had resulted. It may as well be admitted at the outset that a good deal may be said on both sides of the question. The effect of rolling differs so widely on different soils, and with different methods of cultivation, that the mere statements of individuals as to the results count for very little. It is necessary, in order to understand the question, to know the effect of rolling on different soils and with different methods of cultivation. In our present article we shall endeavor to examine these questions, saying nothing of the use of the roller to break lumps or to press small stones into the ground, and confining our attention to the effect on soil moisture, which is really the great question in regard to rolling at the time of seeding.

On rough and open soils, such as heavy clay soils in a poor condition of tilth, the effect of rolling will generally be good, if the land be in proper condition at the time. Such soil, being in comparatively large lumps, cannot properly cover the seed, and is in danger of losing its moisture through the free circulation of the air among its lumps. Seed planted in such soil will often lie for some time before it can get sufficient moisture for germination. Under these circumstances, rolling will be beneficial, pressing the soil more closely about the seed, and crushing the lumps more closely together, thus reducing the circulation of the air through the soil and preventing the soil from drying out. In this case, too, it is to be observed that no harm can come. The harm of rolling is when the soil particles are pressed so closely together that soil moisture may be drawn to the surface and lost by evaporation. In lumpy soils, there is no danger of the dry, lumpy surface soil being pressed together closely enough to draw water up to the surface, and so this loss does not occur.

Even in soils of fine tilth, where the land has been deeply stirred in the spring, rolling may have good results. As we saw in a previous article, the ability of a soil to draw water from below to the surface depends on the closeness of its particles. Where a soil has been deeply stirred in the spring, as with the plow, the ability to draw water to the surface has largely been lost, and seed sown will have to depend on rain for the moisture it requires. Under these circumstances, rolling may have very good results. The soil will be pressed more closely together, the ability to draw on the supply of moisture in the lower soil will be restored, and the seed, receiving its moisture from below, and no longer dependent on the caprice of the weather, will be surer of germination. Here, however, a danger occurs. The roller firms the soil to the very top, and the moisture may be drawn to the surface and lost by evaporation, and in this way the soil may be robbed of much water that should be held for the needs of the young growing crop. I have often seen rolled soils, in such cases, kept quite moist by moisture drawn to the surface, which, of course, would be dried up and lost. We should guard against this danger, and we may do so simply by harrowing after we roll. It matters little whether the rolling be done before or after seeding, but in any case a stroke of the harrow should be given to loosen up the surface soil and prevent evaporation.

Where the deeper cultivation has been done the previous fall, and the seed-bed is prepared by thorough cultivation to the depth at which we wish to sow our seed, and no deeper, we do not think rolling will give any good results, and it will likely give bad ones unless we stir the soil on top afterwards, in which case the whole effect of the rolling will be lost. Here the seed, planted by the drill on firm soil which has the ability to supply moisture, and covered by a loose, warm layer which prevents its escape, has the very best conditions of moisture, and rolling is needless and can do no good.

Summing up, we would say that on rough, lumpy soils rolling is a good thing. On firm soils, which have been stirred deeply, it will give good results, but the soil should be lightly worked on top afterwards. On soils where the seed-bed has been shallowly prepared, rolling is needless. In no case should we roll when the surface is wet, or we will press it too closely together and cause baking.

Binder Twine Outlook.

So far as we have learned, up to a recent date, the large binder twine concerns doing business in Canada had not yet fixed their prices for the coming season, but the indications are that they will be about the same, or perhaps a shade lower, than last year. Speaking generally, conditions appear to be similar in most respects to what they were last year. The work of Twine Inspector Haycock has had a good effect in relation to the standard of twine put upon the market, and in protecting farmers from twine short of the length represented upon the tag.

Success with Preston Wheat.

I would say for Preston wheat that it is the best in every respect that I have ever seen, as far as I have had a chance to test it, and I have always been a farmer, and am now almost 41 years of age, and have tried different varieties of wheat. Four years ago I got eight pounds from the Experimental Farm at Ottawa, and sowed it on the 25th of April on a plot of ground 66x83 feet, that had a potato crop on it the year before. It was light sandy loam, and it was the nicest piece of grain I ever saw. The straw was stiff, long, and not the slightest appearance of smut or rust, or fault of any kind; the straw was about 3½ feet high, and as bright a golden color as I ever saw, and I threshed 5½ bushels. The next year I sowed two bushels, and had a fine yield, and the next year also. Last year I did not sow any at all, as I could not get a piece of land in proper shape for it, and have kept enough for my own seed, but have none to sell. I test various kinds of grain each season, and the Preston wheat, Banner oats, and the Oderbrucker barley are my only choice as yet; that is, on our kind of soil, and the quality of the grains all 'round. So far as to give the number of bushels per acre, I can't; I have not measured my ground after the test plot, but I can heartily recommend it to any one that has light sandy loam land, and can get on it early to sow. Of course, the land wants to be rich, or in good condition.

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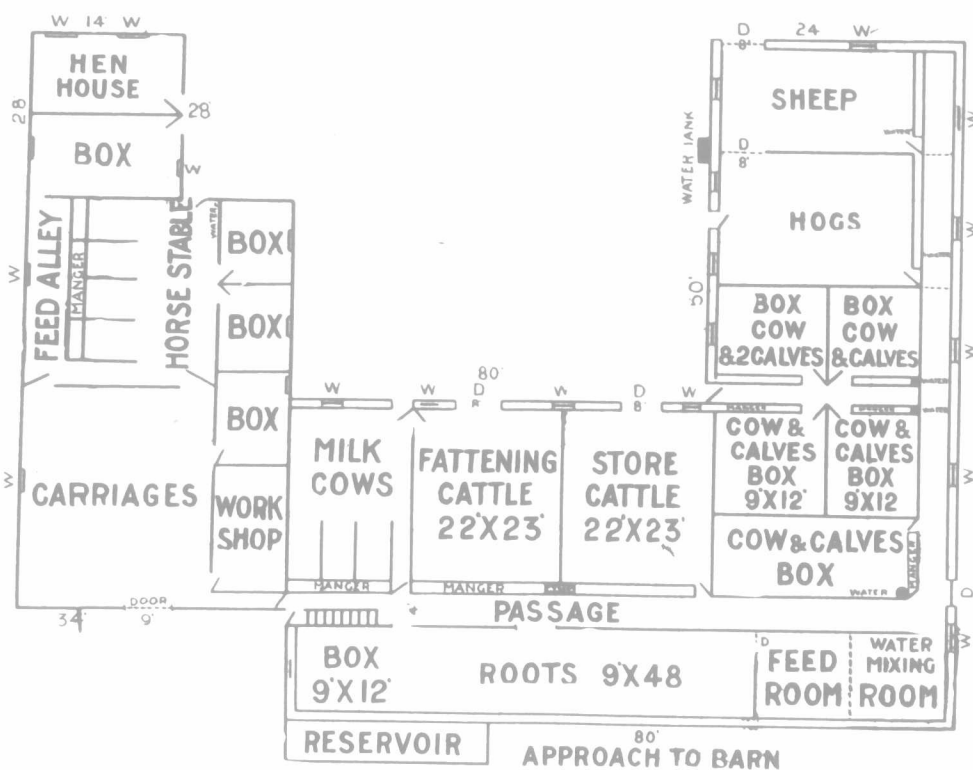
Remodelling Barns and Stables.

To the Editor "Farmer's Advocate":

I have been noting with interest the plans of modern barns in the last few numbers, and if it is not amiss would mention a few thoughts that have occurred to me in looking them over:

(1) Is there not in most of the plans too much space occupied by passages, in comparison with the utility space for stock accommodation?

(2) The plans submitted are mostly the stall or



stanchion system, with perhaps one or two small boxes for calves; in one or two plans a larger box, apparently for young cattle. The plans seem to me mostly adapted for dairying or stall feeding of fattening cattle. I prefer all cattle loose (dehorned), except milk cows, believing it a great economy of labor. Cattle thrive better getting exercise, no matter what the weather or temperature, and are less liable to sickness.

(3) I consider a horse stable is better separate from cattle entirely, and not in basement of cement or stone, but connected so as to be easily accessible.

(4) I notice that none published show a plan of hog or sheep pens in connection with main barn, and of which stock no good farmer, following a system of mixed husbandry, should be without.

My idea is that all stabling for horses, cattle, hogs and sheep should be so arranged that the work can be done with the least possible labor and the greatest convenience and comfort to the worker; or, in other words, they should be planned for economy of time and labor, as well as comfort of man and beast.

I have been remodelling my barns, and am sending you a plan of same, and if it is of any use to readers of the "Advocate," or contains any ideas which would be of use to those contemplating building or remodelling and rearranging old barns, shedding and other outbuildings, and putting in basements, I should consider the little trouble it costs me well repaid.

I would not say that I would recommend my plan so much to those building new entirely, as to those rearranging and remodelling a scattered lot of outbuildings, such as we see on many farms; arranging them to the best advantage considering expense, as the majority of farmers cannot afford to put the price of a farm in buildings.

My plan for the cattle compartments is more for feeding beef cattle, or if grassing off is preferred, carrying over cattle. I favor a box system almost entirely; my belief also is that each farmer should produce and grow his own feeders. I also believe this is the most profitable to the feeder himself.

I propose to raise two calves on each cow, providing small boxes for this purpose, keeping calves in during summer and feeding alfalfa and a very little meal. I then have two very large boxes, one for carrying over, the other for feeding (fattening off) a lot coming two years old. These large boxes will accommodate nicely ten or twelve head of large cattle. At one end I have three stalls for milk cows (enough if one is in the feeding line); if one desires more they could be arranged across the end, making eight or ten. I have very little waste room behind the milk cows, but it suits my purpose.

My horse barn, as you will notice, is separate, but connected so that it is convenient. It was a good building before, and I utilized it in this way with very little expense, adding ten feet to one side. It is not on walls, except foundation, and the stabling is enclosed with lumber and tar paper, which makes it perfectly free from dampness, smell or heat from cattle. The boxes are for colts and brood mares.

The large pen for hogs will accommodate twenty (more if necessary), and could be divided with temporary partitions if desired. They can be bedded from above, and in this way a lot of straw can be worked up into the best of fertilizer, allowing it to accumulate until about a foot deep, but keeping fresh littered every day so they are dry. I find them freer from dampness and more

comfortable this way than in any pens I have been into this winter, and I have been into those that are supposed to be the most approved. The partitions of hog-pen reach to ceiling, with slide doors across passage. My walls are of cement (Portland), nine feet high; windows large, and plenty of them. Other partitions in stables are five feet, being fourteen inches cement at bottom. Mangers for feed are built up of cement to height required, the sides of mangers placed, then a smooth coat of cement filled in for bottom of manger. Sheep-pen is 24 x 30 feet, being posts set in ground to

height of wall, boarded on posts and covered with straw. The wing where hogs and small boxes are I use mostly for straw above. My large boxes, hog and sheep pen are cleaned with wagon or cart, and the manure drawn direct to field and spread, selecting good days and cleaning when there is about a foot of manure. My feeding is all done inside, and my yard is protected on all sides but one. My horse barn is not completed yet, and I am using more of the one wing for sheep at present than shown in plan, but this is my plan when completed. A silo could be placed just outside of feed room if so desired.

My main barn originally was 36x60 ft.; I added 20 ft. to one end. Horse barn was 24x46 ft.; I added 10 ft. to one side, the only cost being for roofing and work, as same siding was used. The wing over hogs and two small boxes was constructed from timbers and lumber from sheds and other outbuildings. The lumber and timbers in sheds, outbuildings, etc., furnished nearly all material required. I still have a good cow barn, 24x36 ft. I intend to take down and use for whatever required in finishing horse stable and other parts. The box and henhouse at end of horse stable is a good building, 14x28 ft., previously used for hogpen. Sheep pen extends somewhat farther out than appears in plan.

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