

Effects of Mulching.

P. Snyder, in the *American Cultivator*, says: Mulching has long been known to be beneficial to land, but evidently it has not received the careful observation as to cost and profit which it seems to deserve. Possibly this is due to the difficulty of finding sufficient material, although it certainly is true that a great deal of very valuable mulch that might be utilized is often wasted by careless farmers.

The common idea of the use of a mulch is that it retains moisture in the soil, and in this way benefits crops in a dry season. It also, if thick, prevents the growth of weeds, and prevents the full action of the hot sun on the soil. But it does more than this. It acts in some cases like manure, adding fertility to the soil and pushing the crop forward with remarkable vigor, and if it does so uniformly it can be made a powerful aid in agriculture.

Some ten years ago I mulched a piece of land planted to strawberries with salt hay, and kept it on most of the time, winter and summer, until the piece had borne three crops, I think, and the salt hay had become very short from the weather and the manipulation to which it had been subjected. The season had been very dry, and I desired to plant the piece to late fodder corn. A light rain came late in July and then as soon as possible it was plowed, as was also a piece by the side of the mulched patch, in all nearly an acre. The latter broke up in lumps, and was very difficult to plow at all with one horse. The mulched piece was nearly as mellow as an ash heap, and it was a pleasure to turn it over. When done the unmulched piece was harrowed several times to break the lumps, and then both were planted on the same day, Aug. 1. On the mulched land the corn came up promptly in five days, had a good color and grew rapidly until caught by a rather early frost. The seed on the other part lay nearly a fortnight before any appeared, and even then much of it failed; while the growth, though treated the same as the other, was vastly inferior. Indeed, the contrast between the two pieces was extraordinary in color, vigor of growth and the proportion of seed which germinated. None of it had any manure.

This was the first and only instance in which the effect of protracted mulching came under my observation, but I am led by it to believe that when the material can be cheaply and abundantly obtained it will pay, though without manure the effect will not probably be very lasting. Salt hay is an excellent material, and that which is of the first quality will last two seasons certainly, and even a third one if taken up and piled or protected part of the time, as is necessary after a strawberry crop is gathered in order to cultivate between the rows and thoroughly subdue the weeds and runners. But on thousands of farms other material can be found, not quite so good, perhaps, but still of value.

Would it not be well if the experiment stations or experimental farms of the country undertook some careful experiments with mulching, to test the cost and permanence of systematic mulching as an aid to agriculture? We must look to them rather than to the busy farmer for such demonstrations.

An Ohio Barn Crib.

Fig. 1 is an illustration of a very convenient and substantial double corn-crib with a wagon and shed between. Such a crib can be built any size and filled with grain without the least sign of weakness. One is a brace for the

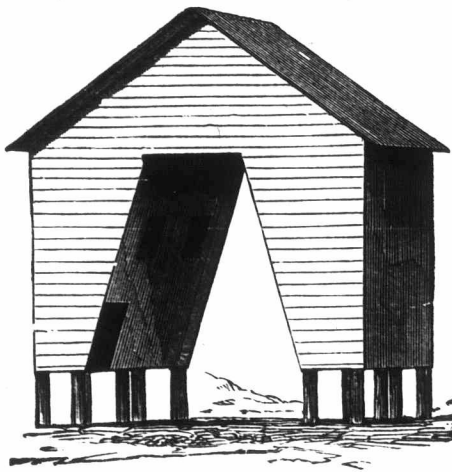


Fig. 1.

other, and the more grain there is in it the firmer it will be. It is useless to explain how the timbers should be put together, and where every door should be cut out, when one glance at the illustration will answer.

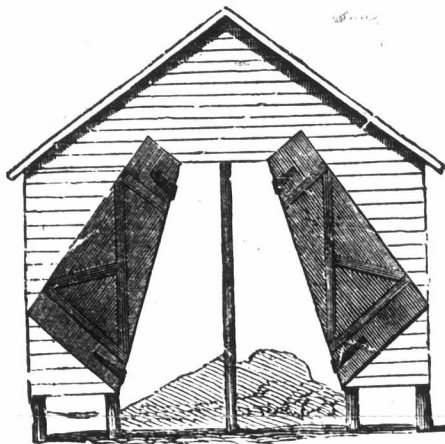


Fig. 2.

Fig. 2 represents the double doors made to correspond with the entrance of the shed. The doors when shut are fastened to a piece of scantling standing perpendicular, one entering the beam, the other entering a block put in the ground. The foundation can be of wood or stone, as suits best. This is what we call the "Ohio Dutch Yankee corn-crib."

More Grasses.

We not only need more grain in this country, but more grasses. We do not cultivate half of the number of varieties which we should. In this particular English farmers are far ahead of us. It may be said that in this country not more than six varieties of grass are extensively or generally cultivated. It is rare to find more than three different grasses sown together; but one variety should be in each meadow. The different varieties do not ripen at the same time, and one will be ready to cut for hay when the others are not. But this very fact makes a variety of grasses in a pasture a thing to be desired; it provides a succession. There is another reason why our pastures should contain a greater variety of grasses than they do, and I am sorry to say it is something which our

farmers have overlooked. A variety of food is just as essential to the well-being of an animal in summer as in winter. It is very nearly as bad to feed but one grass, as to feed but one grain. The profitable digestion and assimilation of food demands the variety of food, and it is just as necessary to provide this variety of food in the pasture as in the crib.—[New England Farmer.]

How Stumps are Blasted Out.

A correspondent of the *Ohio Farmer* gives his experience and some practical directions on this subject, as follows:—

"Last spring I sent to Indiana and hired a man to come and blast our stumps. I paid 41½ cents per pound for the powder, and 15 cents for each stump taken out—he to furnish caps and fuse. The stumps were mostly white and burr oak, from 20 to 40 inches in diameter, and had been cut from six to twelve years. Sixty-seven of the worst were taken out at an expense of 68 cents per stump. There were only three or four failures in the whole lot. As they were blown into pieces, it was much less work to pile and burn them than when taken out in the ordinary way. I bought material and took out nearly 200 smaller stumps at an expense of about 20 cents each. It took me about ten or fifteen minutes to prepare a blast. I used a two-inch auger on five foot shaft for boring under the stump. A crowbar will do in soft ground; those who follow the business use a two and a half inch auger. The charge should be put as nearly under the centre of the stump as possible.

"It is not very dangerous to use, as fire will not explode it. The cap is placed in the cartridge, and is connected by a fuse. You light the fuse, which in one or two minutes explodes the dynamite or Hercules powder. Eight or ten rods is a safe distance if you are facing the stump, for you can easily dodge chunks if any come toward you.

"It will not pay to use it very extensively on green stumps, as it will take from three to eight pounds per stump, and will not give very good satisfaction at that."

Experiments were made at the Houghton farm, New York, in order to determine the temperature of the soil at various depths. Thermometers were placed at the surface and at the depths of three inches, six inches, nine inches, one foot, three feet, five feet and eight feet. They were noticed hourly from May to September. There is a great daily range caused by absorption of heat by day and radiation at night. The maximum temperature at the surface is about midday and the minimum shortly after midnight. These extremes are later at successive depths until at one foot they are retarded eight to ten hours, presenting the curious feature of the one-foot thermometer rising while the surface one is falling, and *vice versa*. There is a constant rise in the temperature of the soil, beginning in the spring, easily observed to a depth of eight feet. During the autumn there is a zone of subsoil below one foot which is warmer than the soil above it, and this prolongs the season.

Hoe early and hoe often. [An active hoe is a good substitute for manure.]