

cate my boys. The soil is a rich vegetable mould with a clay subsoil. Of course I took an agricultural paper, I bought a subsoil plow, and of course the cold clay got mixed up with the top soil, and of course my land was very soon lumpy, and of course the lumps grew coarser until the matter became serious and I sought my neighbors' advice.

"Why, man," said they, "you work your land too wet." In vain I asserted that I did not—that I was always behind them in putting in the plow. But my reasoning was unavailing—they had worked this soil for fifty years, and all knew that I worked my land too wet. So I followed their advice and kept off my land till the land became so dry and hard that it was almost impossible to plow it, and it broke up in lumps of enormous size. Three plow-beams were broken in a field where now a single pair of mules plow ten inches deep with ease.

These lumps in many instances had to be broken up with heavy sledges into smaller lumps, and then the most severe dragging and rolling only reduced them to a spherical form. The surface was covered with a mass of baked clay-balls, ranging in size from grape shot to twenty-four pounders—both being equally favorable to the germination of seeds and the growth of plants.

There may have been other fields like mine but seldom any so bad, for very few persons would have had the like perseverance in working land so dry.

After this experience I think myself qualified to instruct others how to make land lumpy; and if the reader still has any doubt on the subject, I will state more explicitly the principal requisites for entire success, on soils of clay or loam:—

1. Haul out your manure on to your fields in spring and fall when the ground is soft.
2. Let your cattle, colts especially, roam over your fields looking for something to eat.
3. Do not begin plowing till the surface of the ground is indurated by the sun and wind several inches deep.
4. Plow with a strong team, cut wide so as to turn well and deep, and bring up the "virgin soil" (yellow clay), to fertilize the exhausted soil at the surface.
5. Plow around the field so that the team may turn on the ploughed land.
6. And most essential—do not put on the drag till the sun and wind have dried the furrow slices sufficiently hard. Many persons, who are very successful lump-makers, wait till the weeds start. One day at least is necessary, unless the winds are very strong and drying, in which case a few hours may give very good sized lumps. It takes about the same time as to dry bricks in a yard. Indeed the process and materials are quite similar, and brick should never be turned till they are hard enough to handle without breaking.
7. Drag your land thoroughly. All old farmers know how important this is. It is

a good plan to use a light drag and a young team with a boy to drive. They will go over more ground and pack it much harder. Be sure to cross-drag it, or many lumps half buried will remain beyond the action of the winds and never get properly indurated. Drag it repeatedly both ways. At every turn you will observe lumps becoming more numerous and more symmetrical in form. The more they are turned the faster they dry. The rough angles of the masses will be rubbed off as they were jostled about upon the same principles involved in pill-making. By the action of the wind and sun they soon become as hard as stones and are nearly as valuable upon the land. They are as good for a mulch or shade as sound stones, and they are equal obstacles to the growth of weeds. However, as a promoter of vegetable growth the stones are probably the most desirable. They are better conductors and reflectors of heat, and they do not like the lump, rob the soil by absorption of the dews and gentle rains which are so refreshing to plant-life. If we turn a stone we shall find the earth moist beneath it, while under a clay-ball it would be dry.

It is true that the reader now sufficiently understands the process of lump-making to appreciate a system which I have adopted for making the land mellow and friable—which I intend to describe in another article.—*Geographical Telegraph*.

Saving Corn Fodder.

So far as the writer's observation has extended, there has been very little progress in improvement in saving the blades and stalks of corn for forage purposes, in the last fifty years. Topping corn, and cutting it up near the ground to increase the fodder saved, are little practiced in the South, partly because farmers are not compelled, as at the North, to fatten cattle six months in a year; and partly because the corn plant is much larger in the South, and stock cannot eat the butts so well. Hence, it is only the leaves of large corn in the South that are pulled, and called "fodder," although where corn is small, farmers often cut the plants off near the ground, and cut the whole for forage.

When the seeds are in an immature or milky state, the leaves contain the most nutriment; but to pull them so early is to injure the yield of grain. It is not possible to have the maximum of plump seed and of nutritious blades upon one plant. As the seed becomes perfectly ripe, the leaf deteriorates rapidly in nutritive properties. Large corn growers who have no meadows, either pull off the upper leaves, or cut the stalk just above the ears, before the seed is ripe, to obtain good fodder. As one can gather corn hay much faster by topping corn than by pulling fodder, the former is the better practice. The stalk above the ear is not so large that cattle cannot eat it easily; and if cut at the right time, cured and

promptly housed, makes excellent forage. There is no other annual plant that yields so much horse and cow feed on rich land as corn. Millet, Hungarian grass, and oats come nearest to corn in the yield of hay. Corn beats them also in weight of nutritive seed. Raised for hay alone, it is not expensive, considering its value.—*Cor. of Prairie Farmer*.

FARM IMPLEMENTS—"DON'T MIND THEM."

—The *Christian Union*, tired of throwing away good, sober, serious advice, waxeth "scarcastikul," in this wise—viz:

"We have resolved, for the present at least, to change our tactics regarding the care of farm implements. Hitherto we have, in common with the agricultural papers in general, urged farmers to take great care of their tools and machines. We have even printed directions for oiling, and painting, and storing, and the like. Now, however, we have abandoned that line of policy. The dealers in and manufacturers of such implements must live, and as we have some friends and acquaintances among them, we are convinced that we have been too forgetful of their interests. An editor says that, during a ride of ninety miles which he took through an agricultural district, he counted the following household implements, namely: forty-four ploughs, twenty-three harrows, seven reapers, one reaper with beater and platform, and, in one instance, a set of harrows hanging on a fence. The ploughs were mostly standing in the furrow where they had been last used. Such a sight as that gladdens the heart of the itinerant manufacturer, and is an example which ought to be followed by every tiller of the soil who wants a new set of implements. Farmers, attention! Do not rub linseed oil on your fork and shovel and rake handles, do not paint your ploughs and mowers, do not use any rust preventive on the iron and steel parts, and, above all, leave everything out of doors. You really have no idea how quickly you will possess a new set of tools, provided you have a balance at the bank, if you abandon that most objectionable structure, the tool house. Only seven mowers and one reaper out in the air in a stretch of ninety miles! And only one set of harness! Well, we will hope for a better report from that section the next time our agricultural contemporary goes that way."

ARMY WORM.—The Yolo, California, Mail, says: "We understand that the army worms have made their appearance in full force in several of the vineyards in this vicinity, and in one instance, have destroyed six acres of bearing vines. The proprietors of the vineyards attacked have succeeded, however, in heading off these destructive creatures by the application of running water through the vineyards. These worms have also made sad havoc with some of the alfalfa lots near town."