Ploughing Under Clover.

The fact that clover is a cheap and profitable manure is attested by thousands of farmers in all parts of the country. In a great majority of cases the best use of the clover is to plough it under when in full bloom. There is then no labor in cutting and curing the crop, and the manure is more evenly spread over and over in the ground than it could possibly be by hand labor. The value of clover as it stands in the field is comparatively a trifle, on an average not more than $5 per ton, and perhaps not more than $2 or $3 in places distant from market. Good clover hay was sold in Rochester the past winter at $10 to $12 per ton; and at the lowest price, after paying for cutting and curing during the busiest season of the year, and then a day's work with a man and team in winter to draw to market, the clover could not net the farmer in the field more than $4 to $6 per ton of dry hay. It was probably in most cases worth more than this to plough under as a fertilizer. If this be true near Rochester, the case is still stronger at a distance from market, where clover in the field must be even lower than here. I have believed that we might profitably cut and feed at home most of our clover and then draw the manure on the land; but an excellent farmer in this country buys more or less clover every year to feed in winter, that he may have his own clover crop to plough under. The difficulty with this plan would be in getting foul seeds on the farm, quack, thistles, and the like. A second difficulty would occur if that farmer's neighbors ever got their eyes opened: none of them would sell him clover to enrich his farm at the expense of their own. He has had no such trouble, however, and it is perfectly safe to advise anyone who can buy good clover hay, free from foul weed-seeds, and at a reasonable price, to do so, especially if their soil is sandy or deficient in vegetable matter.

On a mucky soil carbonaceous matter is not needed, and here all the good effects of clover may be had by grazing or mowing the tops, and inverting the sod. The roots alone will furnish a much larger amount of plant food than is generally supposed, and if more be needed it is probably some mineral element—lime, potash, or phosphate of lime—any of which can be furnished more cheaply than in clover. Where the soil is sufficiently porous and full of vegetable matter, a light dressing of potash or phosphate of lime, drilled in with the grain, will produce a wonderful effect. The clover thus used is none the less valuable and even necessary as a fertilizer. Its roots penetrate the subsoil and bring thence mineral elements that would otherwise be out of reach of slender growing plants. These roots also decaying in the subsoil below the plough make veins through the soil to carry off water, and also to be followed by roots of corn or wheat in time of drought. It is a fact frequently noticed that crops on clover sod are less injured by dry weather than after other grasses, and this I believe to be the cause. Making the soil lighter and looser, clover makes it more open to receive air and water, by which its fertility is increased.—*Cor. New York Times.*

Absorbents for Farm Use.

To prevent the evolution of ammonia from urine, cleanliness is of great importance. Fresh urine is a comparatively stable substance, but if it be mixed with urine that has already putrefied, it quickly undergoes decomposition. Charcoal and earth are universal deodorizers; they are capable of absorbing all the gases given off by putrefying bodies. A dead body covered by a few inches of earth is, as we all know, rendered harmless; the earth-closet is another illustration of the same fact. The sprinkling of earth in poultry houses and kennels, is the best and simplest mode of keeping them sweet; a dry loam will answer well for this purpose; dry peat will also prove very useful. In the case of stables, the nature of the offensive gas is quite evident; it is clear that if a deodorizer is to be used, it must be one capable of absorbing ammonia.

Gypsum is of no practical value as an absorbent of ammonia. The most effective and cheapest absorbents are those used at gas works for removing the ammonia from coal-gas They are sulphate of iron (green vitriol), and sulphuric acid. The material principally employed in gas works is sawdust soaked with sulphuric acid; this is also the best absorbent of ammonia the farmer can employ; green vitriol would injure his manure, as it acts as a poison to plants. In cases, therefore, in which the floor of the stable is full of holes, in which urine collects and putrefies, we would recommend the farmer to sprinkle dry peat upon the floor, and failing that, to try sawdust soaked in sulphuric acid, for the same purpose. The latter deodorizer will probably prove the more powerful of the two, so that less of it will be required Brown oil of vitroil should be diluted by pouring it very slowly and carefully into three times its volume of cold water; dry sawdust is then to be stirred in till the acid is all absorbed, and the saturated sawdust preserved for use. The sawdust cannot, like the peat, be spread over the whole stable, but must be confined to those parts where the horses do not lie. As the acid may injure the men's boots, the sawdust had best be skrinkled on the floor just before leaving the stable for the night, and should be swept together on the entrance of the carter in the morning. The quantity of sawdust required will vary according to circumstances; the farmer will use the smallest quantity which experience proves to be sufficient. We need hardly add, that sulphuric acid acts powerfully on iron, and upon cotton, linen, wood, and indeed most vegetable bodies; it has less action on wool, silk, or other animal fibers.—*London Agricultural Gazette.*

Thick Seeding of Oats.

Mr J L. B. Kerr, a Michigan farmer, gives the following item of experience of his young days to the New York *Tribune*

Many years since my boss took a field to work on shares to sow oats. The ground was ploughed convement to sow broadcast by furrow Boss being a tailor, I had to sow said oats, which was new work to me. However, I went to work like a man, feeling quite large scattering oats. Boss ordered, "sow 2 bushels per acre." I tried to do so, getting only one bushel on the first acre. The next acre 1½ bushels. The next four acres, 2 bushels per acre. Seeing that I was going to have considerable seed left after sowing the field, I concluded to try an experiment. The seventh acre received 2½ bushels, and the eighth 3 bushels. In the evening I told my boss what I had done, receiving a severe scolding for experimenting at other people's cost. I was not afraid of getting a flogging for I felt just then like whipping more than nine tailors.

The first day of oat harvest (in said field) the proprietor of the farm came to me where I was cradling. "The oats are rara thin." Yes sir, quite too thin here but they are thicker in all the field except this acre. "I mow; hors that" I explained to the gentleman my mistake, and also the experiment. Mr. Trumbull sympathized with me at once, and his countenance brightened up, and he inquired, "And what is the result?" The crop is very much better where the oats were sown thickest. The gentleman examined the crop closely and returned to me. "Mr. Trumbull don't you think the oats are best where I sowed 2½ bushels on the acre?" "I dinna kin aboot thort." The field was re-examined after the oats were harvested, and our good neighbors sowed 3 bushels of oats per acre after the year 1836, and I have practised sowing 2½ bushels per acre. Mr. Trumbull not being a close observer sowed too much seed in dead furrows.

Gypsum and Ashes are valuable in the compost heap. Twenty pounds of plaster to each good load of manure is sufficient, since one hundred pounds of gypsum will fix twenty pounds of ammonia. Quicklime should not be used with fermenting manure, since it sets the ammonia free, instead of fixing it. Ashes contain largely phosphoric acid and potash. When leached, the phosphoric acid remains, and also a good deal of the potash. The phosphoric acid is in a finely divided state, and in combination with peroxide of iron, magnesia and lime; so the carbonic acid generated in the compost pile will liberate it from its bases, and render it immediately available to plants.

Curing Sowed Corn.—Let the crop grow until it begins to ripen. This is a particular point in the curing of this crop, for when the lower leaves begin to turn yellow, it is a sign that the saccharine matter is being converted into sugar, and that there is less water to dry out than at any time previous to this, consequently the crop is more valuable than when cut sooner. The ground having been rolled smooth, I can cut the crop with my reaper, close to the ground. I then let it lie in the sun two or three days, then rake with a horse-rake and cock up, and allow it to cure for four or five days, when it can be hauled to where I wish to feed it. I usually put it in small stacks, and have but little more trouble with it than I do with timothy hay.—*Ex.*

The Action of Lime.—Professor Bartlett says:—Lime answers two great purposes for nourishment: *First*—It disposes certain insoluble bodies to form by their decomposition, soluble compounds; and, *secondly*, it prolongs the action and nutritive virtue of soft and insoluble animal and vegetable substances beyond the time they would continue to act if they were not made to enter into combination with the lime. From this statement the agriculturist can draw some practical conclusions in regard to the uses of this substance, and the manner in which it should be employed in order to have the results arising from its application conform to those which have been produced by enlightening experiments Lime is acknowledged to be specially useful upon fallow lands which are broken, upon sward lands and those of a turfy nature, which are to be put in a fit state for cultivation. In all these cases there exist in the land large quantities of roots, which, by the application of lime, may be made the better to serve for manure by the solubility it will give to the new compound formed by them; but to produce this effect the lime must be thoroughly mixed with the soil.

In Austria they have a way of preserving fodder for winter which will be new to our farmers. The product is called "sour hay," and is made thus:—The green grass, green Indian corn, or other fodder is simply crammed down into graves or trenches four feet wide and six to eight feet deep, until it forms a compact mass up to the surface, and the whole is then covered with one foot or rather more of earth rounded over, so as to form a long mound. No salt is used, and the wetter the fodder goes the better. The preservation is complete, and when cut out with a hay spade in winter the fodder is of a rich brown color, and exhales a slightly sour, but, on the whole, agreeable flavor. As this method is stated on the high authority of Prof. Wrightson, of the Cirencester Agricultural College, to be quite successful, it may be worthy of a trial here.

Ploughing in of Green Crops.—In ploughing in green crops it will be readily seen that all that is drawn from the air is clear gain to the soil, by supplying a portion of that in which the land is deficient. Now, take a piece of soil, such as referred to, and plough it; sow it with buckwheat, and then, just before it begins to head out, plough it under. In this case, all of this green crop which comes from the air is clear gain to the soil, while that which comes from the earth to help in the growth is returned right back to it again. It is quite evident, then, that this will repair land. On some soil a crop can be had on the following year after one green one has been turned under. On other soil it may take two or three. The last crop to be ploughed under should be quite a thrifty one before taking any off. When the soil has been brought up, it should be kept so, either in this way or by other means.—*Cor. New York Times.*

Poisoned with Charlock.—An English paper tells us of the poisoning at Market Deeping of thirty-seven cattle, by rape-cake containing an admixture of wild mustard or charlock seed. The cake was fresh from the mills the evening before, but they had previously consumed a ton of a similar kind, and partook of it readily. About ten o'clock the three cows which had the largest share and were first served began to show symptoms of uneasiness, lying down and suddenly getting up again, stretching out their heads, and putting their bodies into all kinds of contortions, kicking and moaning occasionally. By twelve o'clock all the herd, without exception, showed symptoms of colic, and the cows were now almost frantic, rushing unrestramedly through the yard; indeed, so insensible were they to external impressions that one of the cows, one of those that survived, threw herself down in a paroxysm against the wall with such force as to fracture the spines of the sacrum. Eight head died, and the rest did not recover for several days.

About Killing Willows.—It is a well-known fact that willows are a difficult thing to get rid of, and having accomplished this successfully, I propose to give my experience for the benefit of others. When I came on this farm, five years ago, there was a piece of about two acres of rather wet land, from which the timber had been cut some years previous. Upon this piece had grown up a thick undergrowth of willow, ranging from two to ten feet in height. The following winter, having occasion to build a fence on one side of this piece, the willows were cut and made up into a brush fence. In the spring the stumps sprouted, and where there was one before there were a dozen now. It beat all how those willows did sprout and grow. The following two years nothing was done with them. Last summer we resolved to get rid of them if possible. There they were, one dense mass, many of them twenty feet in height, and four inches through. So at it we went in August, and cut them all down and piled them. Late in the fall we set fire and burned them up. This season not a sprout is to be seen in the whole piece; nothing but the stubs, which were cut close to the ground, left "to tell the story." We were cutting them, off and on, as we had time, for over a month, so the *moon* had nothing to do with it.—*Country Gentleman.*

Removing Boulders.—I have had some experience with boulders, and have resorted to various means to get them off from my fields. I have broken them with fire; I have dug them out and drawn them off with three teams; I have buried a great many, and on one occasion came near being buried myself. But latterly I have employed men to break them with powder, which I think the cheapest and best way to get rid of stones too large to be drawn with one team. I took over one hundred of these troublesome pests from my corn-field last spring, one of which cost $6 25 to get broken into pieces of suitable size to be drawn with one team. This monster made thirty-five large boat loads of fragments, many of which were very fine face stones for wall. The expense for breaking stones which will make three or four boat loads, with me, has been 37½ cents. Where land is worth clearing of boulders, the stones are valuable for fencing and should not be buried. If land is so occupied with stones that it will more than fence the land, it will not pay to remove them. —*Cor. Country Gentleman* Dynamite is immensely superior to gunpowder for smashing boulders, and is safer and easier to handle A few days ago we saw on the farm of Mr. Hill, east of Toronto, the remains of a boulder which, when entire, must have weighed some eight or ten tons. A dynamite cartridge completely broke it up, and most of it so small as to want no further breaking for road purposes.