Agricultural.

Use of Lime in Gardening.

Of all the mineral and earthly substances employed in agriculture and gardening, there is not one,probably, about which there exists,in the minds of most persons, more doubt and uncertainty as to its real value and action, than in respect to the simple article Lime.

Lime is a very important auxiliary to other manures. It is in more ways than one a real fertilizer, and it produces, sets free, and organizes fertilizing qualities in other matters ; but it is by no means a universal manure or fertilizer.

I propose to set down, in a series of paragraphs, the most evident and important uses of Lime in gardening, and to call attention especially to two actions which it possesses, which are not generally recognized or understood.

1. Lime is an alkaline earth—a sort of salt—under its first and most evident use is to sweeten our soil.

2 Lime furnishes a substance which is present in considerable quantities in the ash of nearly all cultivated plants and fruits. For this reason, partly, lime is especially useful to potatoes. The tuber of the potato shows but a trace of lime in a ton,and hence some writers have hastily concluded that lime in quantity is not essential to this crop. But look at the analysis of the straw or top ; there you will find nearly three hundred pounds in the product of an acre.

3. Freshly slacked,or caustic lime, acts as a powerful decomposing agt., when in contact with masses of earth or vegetable matter,setting free many substances which before existed in forms insoluble in water,and causing the natural decay of organic bodies to be hastened.

4. Lime causes cold, dense soils to become more open and porous,and renders light and sandy soils more close in texture or more adhesive.

5. Vegetable matter(that is,loam, sods,stable manure and straw) is the food of lime. By its decomposing power,it may almost liteially be said to eat up vegetable matter and loam. It effectually decomposes and drives vegetable matter and manure out of the soil when in the caustic state.—Hence where there is little loam there lime should be used sparingly.

6. Not only does lime decompose vegetable matter, but when used in excess it render the results of decomposition insoluble in water.

7. Lime, in close proximity with decaying nitrogenous matters in the soil, (as horse manure, hair, leather, &c.,) becomes a real ammonia, producing agent, the lime and nitrogen united to form nitre of lime, is fully equal to ammonia as a fertilizing agent,while potash and nitrogen form a nitrate of potash, (saltpetre,) the money value of which as manure needs no explanation.

8. Lime, when it has been burned and slacked, and again becomes a mild carbonate, is then a store-house of carbonic acid for the use of plants, and in a certain degree has the same action upon vegetation as carbonic acid evolved from decaying vegetable matter. You will ask,how is this carbonic acid set free ? I answer, in one instance,by the action of carbonate of lime upon silicia or sand, (which is chiefly an acid,) silice acid is liberated, which in its turn acts upon the carbonate of lime,and large quantities of carbonic acid are let loose. Other changes of a similiar character take place in the soil,caused by the actions and reactions of acids and alkalies,which result in the liberation of carbonic acid, held in combination by lime, and thus it serves, in a measure, the same purpose of vegetable carbon in its relation to plants.

The last two sections, 7 and 8, are those to which I wish to direct the attention of the reader,as they describe the least known and more important use of lime.

My rule is to use lime in the garden constantly, but moderately ; and especially to use it in combination with hair, leather, or any slowly rotting nitrogenous matter ; and thus I secure two or three important points in 'terre culture'.—Wm. Bright, in Gardner's Monthly.

Deep Ploughing.

If you are tired of working the old farm, and want a *new* one ; instead of going 2000 miles after it in the far west,we advize such to take the one offered to them, immediately *under* the one they have been cultivating, and for which no extra title-deeds or payments are necessary. It is an entirely new farm, and virgin soil, on which there has not been even a squatter since the country was first settled. To those who doubt of there being any strength in the yellow and *apparantly* sterile sub-soil, 14 *inches* under the surface, we would ask an explanation of the enriching and extraordinary effects of yellow soil from the bottom of a well 12 to 15 *feet* deep. We have known white clover to grow most luxuriantly,after this was spread over the surface, where none had grown before. Every farmer must have seen such results himself. We know of one person who had a most extraordinary growth of oats after earth from the digging of a cellar, five feet deep, had been spread *one foot thick*. There must therefore be *something* of value in it.

We are warm friends, both from theory and practice, of the Double Michigan or Sod and Subsoil Plough. Most of our readers know this to consist of two ploughs on a single beam, the small one in front of the other, in operating, taking off about five inches of the surface soil, letting the hinder plough lift and put immediately on top of this, seven to nine inches deeper. "But" say some, "would it not be better merely to *stir and loosen* this, without bringing so much yellow stuff to the top ?" Our answer is, no ; if it was rich soil, we might let it lay there, and the roots would find it ; but being *comparatively* poor, we cannot *afford* this, but must have it on the surface, where we can control it, pulverize and aerate it, and avail ourselves of its absorbent power—the power of *drawing* on the fertilizing gases of the atmosphere. *We want* inversion, and not merely stirring ; our object and intention being to get a depth of what is popularly called soil, fourteen inches, at least, as black and *as good*, in every particular, as the present four or five inches, and to obtain this in the shortest possible time. We want a large reservoir of plant food. Our practice therefore is to plough with the Double Michigan, for corn, 14 inches deep. We stimulate in the hill the early growth of the corn in its rather cold seed-bed,but the roots soon find their way down to the surface soil which had been inverted, and before the growing season is over the crop has taken root downward and sprang upward, untouched and unaffected by drought, and yielding heavy returns of bright glazed, heavy, well-ripened ears, as if the roots had been fairly revelling in the profusion of their appropriate food. There are two other great advantages of ploughing 14 inches deep, in guarding against the effects of excessive drought or too much rain, either of which is injurious to the growth of plants. In a very wet season the super-abundant moisture passes down instead of settling at the roots, to their great injury,and the ground, even after heavy rains, can soon be worked. In the event of a severe drought, the roots penetrate the sub-soil for moisture, which is drawn up by capillary attraction,and their growth is not interrupted. In the county where we reside, a friend once complained to us of the trouble he had got himself into by visitors stopping to inquire what was the matter with a certain portion of his corn field. As an experiment, in a corn-field along the roadside he had caused his men to *dig* a few feet square to the depth of three feet. A drought ensued that summer, of great severity, so that the corn-fields in midsummer looked as brown as in winter. The stalks were killed but on the dug portion of the same soil, and in other respects under the same treatment, the corn continued growing through the season without interruption, and the green spot in a desert of dry corn-stalks attracted the attention of passers-by to know the reason. In the fall of the year he carefully traced corn roots to the depth of three feet. We have therefore to say that ploughing seven inches deep is good, ploughing and subsoiling is better, and ploughing 14 inches with the Double Michigan and inverting the subsoil is best of all, connecting this, however, the first season with the proper use of fertilizers.—*Practical Farmer*.

Few Varieties in Planting an Orchard.

In setting out an orchard it is a common error which fruit-growers fall into of planting too many varieties.—It is better, in our opinion, to cultivate a few choice varieties that have been well tested, and are known to be valuable and to do well in the planter's locality, than to venture upon a great number of sorts, some of which at least are of doubtful merit, or are not well adapted to the soil or climate where it is designed to plant. Where the object mainly is to furnish a supply for home consumption, it is desirable to select a sufficient number of reliable sorts to furnish a continuous supply. But, were we to set out a large orchard, with a view to raising fruit for market only, we should confine the selection to a few kinds, and such as were known to do well every way, and that were *saleable* in market ; as this plan would be least likely to result in disappointment, either in the quality or yield of the fruit, or in the profits to be derived from their sale. Besides, it is always troublesome where apples or other fruit are *barreled* for market, to have a large number of kinds to keep separate, and provide barrels for.—Then, when they are brought into market, it is such a mixed lot to get rid of. Here is a sort that the would-be purchaser is not acquainted with the merits of,and therefore sets down as undesirable ; while there is a sort that is every where spoken against, and are not wanted at all. Some of the varieties are either comparative strangers in the market, or are bad keepers, or indifferent in quality, any of which will stand in the way of a ready or satisfactory sale. While a lot of three or four well and favorably known kinds will generally find plenty of purchasers at remunerative figures. It may do for amateur fruit growers or wealthy farmers to experiment with the new varieties, who generally find a pleasure in doing it, while at the same time they may benefit others by their labors and experience. But it requires time, after the reputation of a new fruit comes to be favorably established among *growers*, to gain for it the same favorable reputation in the market ; so that it is better we think for those, whose object is certain and speedy profit, to plant rather sparingly even of these.

Prepare for a Crop of Roots.

The value and importance of a liberal supply of roots, especially dairymen and those who have live stock to winter, should not be overlooked in maturing plans for the coming season. More food can be produced from an acre of roots of the right sort, when properly cultivated, than from any other crop ; besides there is an advantage to be derived from a mixed diet,for though cattle may thrive and do well on hay and grain,they have a natural fondness for food of a succulent nature, and will turn greedily from dry hay of first quality, or even from grain to an occasional feed of of roots of some kind. When we consider that twenty or more bushels of Mangel Wurzels can be produced where but one of corn would grow, there is a decided profit in a crop of roots for wintering stock,even though it should require 4 or 5 bushels to give an animal as much flesh as a bushel of corn.

The ground which has produced a crop of roots,is left clean and mellow, and in good condition for any crop which may follow ; neither is it left in an exhausted condition, as most root crops are considered to draw but lightly upon the soil.

The soil for roots should be made deep, rich, and mellow to produce a large crop. The seed should be sowed in drills, and for Mangels, Sugar Beets,and Ruta Bagas should be thirty inches apart. A good implement wlll greatly facilitate planting. They should be carefully hoed as early as the young plants can be plainly seen, and thined out to a proper distance between, say about six inches. If the ground is not uncommonly foul, most of the work can usually be performed after this by suitable horse-power implements.

Merchandize.

Drugs and Medicines.

Clothing.

Drugs and Medicines.

Hardware.

Furniture.

Miscellaneous.

Wagons, Carriages, &c.

Insurance.

Potographhs.