

house has been thrown over the yard in order to level the ground. This is sometimes of great depth. This subsoil is usually either a stiff clay or sand. Clay, while it will give more hard work, is usually a much better material to start with than sand. If there are many coal ashes in the yard most of them should be removed altogether or buried in one corner of the yard. A little ashes mixed with the clay will help to make it more friable or more open, but there is little plant food in coal ashes and there should be a minimum of them in good garden soil. A mixture of sand and clay will help to make the soil of a better consistency than is either one of these alone. An application of lime to clay at the rate of about two tons per acre or about 100 pounds to a garden 25 x 40 feet in size, or even half that quantity and thoroughly mixed with the clay, will help in breaking it up, but the most important thing of all is the manure, preferably rotted manure if it can be obtained. Fifty tons per acre is none too heavy a dressing. When spread on the ground before digging in it can be from three to four inches thick without there being too much. This should be well worked through the upper foot of ground whether it be good soil, clay, or sand. If the manure is strawy it should be well dug in so that the straw will not be pulled out when the soil is raked. With a heavy annual application of manure even the poorest soils can be made to give good returns providing there is sufficient moisture in the soil which in the city can be applied artificially. Where no water is available very strawy manure applied to light soils is apt to make them loose and they dry out easily and seed does not germinate well, hence well rotted manure is much better for such soils if it is available. The rolling of light soils where strawy manure has been used will be found useful in bringing the moisture to the surface and hastening the rotting of the straw. The great aim should be to eventually get the soil into such a condition that it will neither bake nor become hard in a dry time nor dry out readily and both of these conditions will be brought about by the liberal use of manure which adds plant food in an easily available form and helps to form humus which is so essential to a good physical condition of the soil. Clay soils should not be dug when they are very wet as they will bake badly, but by waiting until they are fairly dry they can be worked much better.

A spade, a hoe, a garden rake and a digging fork are the four chief tools needed in gardening. Narrow hoes and rakes are best for small gardens, or well made children's tools but with long handles. In stiff clays it may be found necessary to use the hoe after the soil has been dug in order to break it down, so that the rake may be used advantageously. The rake is now used to level the soil and to pulverise it still more. The surface soil should be made as level, smooth, and as fine as possible.