

## Agriculture.

## PLANTING.

(From the *Agriculturist*.)

Planting is the operation of inserting plants in the soil, either in the free ground or in pots. The simplest kind of planting is that which consists in removing small seedling plants, or such as have been struck from cuttings or layers; and this is commonly performed by making a round hole with a dibber, and putting in the root of the plant to the same depth as it had been covered with earth before, and making it fast by thrusting the dibber into the firm earth beside the hole, and pressing it to the root. In this operation, the great art is to make the root fast at the lower extremity. Thus, in planting common seedlings of annuals, or even cabbage plants, if the earth be pressed close to the root at the upper part, and not at the extreme points, the success will hardly be complete; and in tender plants, or in a dry season a failure will be the result. In planting plants of a larger size, a small pit should be opened by the spade or trowel; the bottom of the pit having been formed into a cone or small hill, the plant should be placed in the centre, and the roots spread out equally over it on every side. The roots are then to be covered with soil gently pressed over them; and the operation must be finished by watering, so as to consolidate the soil equally, without making it firmer on one part of the roots than another. If the soil should have been previously dug, trenched, or loosened to the depth of a foot, or probably two or three feet, the pit should not be made so deep as to throw the neck or collar of the plant below, or even on a level with the surface, when the soil is consolidated by watering. On the contrary, it must be left of such a height above it, as that when the soil is finally consolidated by its own gravity, influenced by the weather, the neck shall still be above the general surface of the ground, and the plant stand on a small hillock. This condition of planting cannot be too carefully attended to; for nothing can be more injurious to transplanted plants than having the neck buried more than it was in a natural state. Nothing is more common than too deep planting; and the temptation to it is the greater, because deep planted plants, from having the roots more accessible to moisture, are more certain of growing the first year, and are less in want of mulching to exclude the heat and drought, and of staking to prevent them from being moved by the wind. Hence, in planting trees or shrubs, it is of the greatest importance, not only with a view to their future growth, but also to their natural appearance above the surface, to have them planted on little hillocks, greater or less in height, according as the soil may have been moved to a greater or less depth, either in the operation of digging the pit in firm soil, or in planting in soil which has been moved by digging, or trenching, or otherwise. In small gardens it is generally desirable, for the sake of producing immediate effect, to plant plants of considerable size; and in this case, in addition to the precautions which have been already mentioned, it is desirable to plant by what is called fixing with water. This operation is performed in the fol-

lowing manner: the hole being properly prepared, the plant placed in it, and the roots spread out on every side, and extended as far as they will go, one person holds the plant upright, a second sprinkles earth over the roots, and a third supplies water from a watering-pot, with a rose on, if the plant be small, and without a rose, if it be a tree of six feet or eight feet in height, holding the pot as high above his head as his arms will reach. The weight of the water coming down from such a height, consolidates the soil about the roots, and fixes them in such a manner, as to render the plant, if it has been carefully taken up, almost in the same state as it was in before removing. Large trees or shrubs, if planted in this manner in the autumn, and staked, where there is danger from high winds, will grow, and even flower and fruit, the following year, as well as if they had not been removed. In this kind of planting, with large plants, the hillock, left after the operation is finished, should not be less than a foot or eighteen inches above the surrounding surface: and to lessen evaporation during the ensuing summer, the hillock should, if possible, be covered with short litter, moss, turf turned upside down, or even small stones, for the first year. In staking large plants of this kind, the stakes should be placed close to the stem of the plant, in which position they are much less likely to injure the fibrous roots, than when placed at a distance from the tree; and the stakes should be made fast to the stem of the plant, by a piece of straw or hay rope, or by a piece of twisted matting, or any kind of cord; the part of the stem to which the stake is tied, having previously had a small handful of straw, or moss, or mat, bound round it, to prevent the tie from galling the bark of the stem, and preventing its increase during the summer. These stakes should remain for a year, or sometimes two years, according to the size of the plant and its facility of making roots. In general, the sooner the stakes are taken away the better; because the motion of the stem by the wind, is essential to its increasing in thickness. In this matter much must be left to the discretion of the planter, who must always bear in mind that a staked plant is in a most unnatural position; and, also, that if the tree should lean somewhat to one side for some years after planting, it will ultimately become more or less erect; and that a strong, vigorous-looking plant leaning a little to one side, affords a greater evidence of its being secure and in sound health, than a straight, erect plant, kept in that position by a stake. In the case of planting trees with stems three or four inches in diameter, in exposed situations, two or three stakes may be used, placed at a short distance from the base of the stem and leaning towards it; and where they are made fast, they should be joined by matting, hay-ropes, or some other soft material, so as not to injure or confine the bark. Before transplanting trees of a timber size, the main roots are frequently cut at the distance of five feet or six feet from the stem, a year previously to transplanting; in consequence of which, they send out fibres which in the course of the summer become small roots, so that when transplanted, the tree, instead of drawing its principal nourishment from spongioles at the distance of twenty feet, or perhaps thirty feet from the stem, is enabled to draw it from the distance of six or eight feet,