

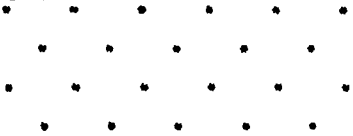
CULTURE OF FRUIT TREES.

THE APPLE.

In raising young apple trees, the stocks should be seedlings, and not suckers, as the latter furnish less perfect roots; and as those varieties which produce suckers most freely are chosen, they are apt to prove troublesome from the abundance which they yield.

Transplanting apple trees is generally performed with far too little care; though their hardiness will enable them to endure bad management, the thriftiness from good treatment far more than compensates all additional labour. The mode of proper transplanting has been described in a former number. Where the quantity of land is small, such care is especially necessary.

It is now satisfactorily determined that apples are a most profitable crop for feeding domestic animals; hence larger orchards are becoming desirable. Those on good land will occupy less if placed in the hexagonal form, or in equilateral triangles, thus:



For several years after young trees are transplanted, the ground should be constantly cultivated. This is easily performed so long as the trees remain small. When they become large, an occasional cultivation, with intervening crops of grass, may be sufficient for extensive orchards.

It is a common practice to neglect not only cultivation but pruning. Irregular and stunted trees, and small and inferior fruit, are the consequence. These may be prevented by moderate, frequent, and judicious pruning, if the trees are not already old. The object is to diminish the thick growth, to increase the vigour of the branches, and to admit light and air. The best and most thrifty branches should be left, the distance asunder being as nearly equal as possible, and forming a well shaped top. The branches should be cut closely in pruning, but not so much as to occasion too broad a wound. If the wounds are an inch or more in diameter, they should be protected by a thick coat of paint, or better by a mixture of brick-dust or whiting with warm tar. This prevents cracking, admission of moisture, and the consequent rotting of the branches. Pruning should never be done, in spring when the sap is flowing, but may be performed either in winter or in the summer. A sharp saw is the best tool for removing large limbs.

There are many orchards of ungrafted and comparatively worthless fruit, which might be greatly improved by converting the tops of good varieties. This is usually done by grafting into limbs two or three inches in diameter, but it is more difficult to perform, and the young shoots are much more liable to be broken off by wind, than when grafted into small branches. A sufficient number of young and thrifty shoots may be obtained in one season for grafting, by cutting off a few of the most central and larger limbs, when fresh ones will spring up vigorously in their place. As the grafted branches increase in size, the old ones are to be gradually removed.

It would be difficult, even for one extensively acquainted with the varieties of the apple, to give a complete selected list; the difficulty is increased by the great uncertainty of names among cultivators, and the multiplicity of synonyms for the same fruit. Lindley says, with much truth,—

"In apples, a greater profusion exists in this respect, than in any other description of fruit. This arises not so much from the great number of varieties grown, as from the number of growers, some of whom seek to profit by their crops alone, regarding but little their nomenclature. Nurserymen, who are more anxious to grow a large stock for sale, than to be careful as to its character, are led into error by taking it for granted that the name of the fruit they propagate is its correct one, and no other; hence arises the frequency of so many fruits being sold under wrong names. Gardiners, who purchase trees, become deceived by this procedure, and do not discover the error,

unless they have been imposed upon by the substitution of something worthless, and obviously at variance with the character of the fruit sold them. This is a serious evil, to say nothing of the disappointment of the purchaser; for unless the mistake be detected at first the longer the tree grows before it is discovered, the more time will have been lost by its cultivation, and be it remembered, this time is irrecoverable."

It is care alone that can correct this evil; nurserymen should propagate for sale a smaller number of varieties on the one hand, and examine thoroughly a larger number on the other, that they may prevent confusion and mistake by the former, and improve their selection by the latter. Purchasers must be careful to obtain them from those sources most to be depended on; or if they raise their own trees, they should, if possible, obtain their grafts from trees, whose genuineness has been proved by actual bearing.

In giving a short list of apples, it is to be remembered that there are many good varieties, and that some must therefore be omitted; and to some, such a list may seem badly selected, in consequence of the many inferior fruits falsely called by the name of excellent varieties. The following list may assist the cultivator in selection:—

SUMMER FRUIT.

Yellow Harvest,
Early Sweet Bough,
Early Red Juncating,
Summer Pearmain,
Sine Qua Non,
Bullington's Early.

AUTUMN FRUIT.

Belle-bonne,
Strawberry Apple,
Summer Queen,
Ramboe,
Autumnal Swaar,
Gravenstein,
Fall Pippin.

WINTER FRUIT.

Baldwin,
Swaar,
Peck's Pleasant,
Jonas Spizzenbergh,
Jonathan,
Orley,
Baldwin,
Rhoda Island Greening,
Ribston Pippin,
Newtown Pippin,
Roxbury Russet,
Tatman Sweeting,
Northern Spy.

All these are, in a greater or less degree, suitable for table fruit; and some of them are also peculiarly adapted to culinary purposes. As the day for the manufacture of cider has passed away, and a far more profitable use is made of apples in feeding domestic animals, no varieties expressly for cider are given.

To those who have but small gardens, the following are more particularly recommended:—

Yellow Harvest,
Bough,
Sine Qua Non,
Strawberry Apple,*
Gravenstein,

Fall Pippin,
Swaar, Baldwin,
Spizzenbergh,
Jonathan,
Northern Spy.

The uses of apples are becoming yearly better understood, and their value constantly increasing to the farmer. It is now not only satisfactorily proved that they are not only excellent for fattening hogs, but are equally so for feeding milch cows during winter. Horses may also be advantageously fed on sweet apples. For cows and hogs, the difference between sweet and sour apples is found to be far less than generally supposed. A moderate estimate of the expense of one acre of orchard, (remembering that the ground may be cultivated with crops while the orchard is young,) will show the cost at from one to three cents per bushel; their value for feeding hogs has been proved to be much greater than the same quantity of potatoes.

THE DISEASES AND ENEMIES to which the apple tree is subject, are generally not formidable. It has, however, sometimes serious ones to contend with. Among the chief are—1. The Caterpillar. 2. The Borer. 3. The Canker. 4. The American Blight. 5. The Canker Worm.

1. THE CATERPILLAR.—This was formerly the most formidable evil the apple had to contend with in Western New York, and, in fact, the only one of any importance. There are several species; but the only one which proves seriously injurious appears in the spring as soon as the leaf buds begin to open, at which time it is not the least of

* This variety appears to be known only in western New York, and appears to be greatly superior to any other variety of that name. Nearly the only nursery which has furnished it is that of Thomas & Smith, of Macedon.

an inch long, nor so large as a cambric needle; it increases constantly in size for a few weeks till it is two inches long and a quarter of an inch in diameter. It then spins a cocoon and passes to the pupa state. In the latter part of the summer it changes to a brown miller, and deposits its eggs in cylindrical rings of several hundred each round the smaller branches. Every ring of eggs destroyed in fall or winter, which may be easily done by cutting off the small shoots which hold the eggs and burning them, will prevent a nest of Caterpillars next season. If left till they hatch, they are easily killed when they first appear, by a caustic or poisonous solution, as of lime, ley, or of tobacco, applied to them with a cylindrical brush on a pole. The later the operation is deferred, the more difficult the work becomes. They have been much diminished of late years, but need watching to prevent increase.

2. THE BORER.—This is an insect which enters and perforates the wood of the tree at or a little below the surface of the earth. In Western New York they rarely prove destructive to the apple tree. They may be taken out by introducing into the hole they have made, a flexible bared wire, or punched to death in their holes by a flexible twig.

3. THE CANKER.—This is sometimes termed *bitter rot*. It is ascribed to various causes. By some it is considered as arising from neglected culture—poorness or wetness of soil, or exposed situation. But the most probable, or the immediate cause, appears to be injudicious pruning and bruises. Decay generally commences at the wounds thus caused, and extends till the tree dies. To prevent this never prune in spring while the sap is in active motion, and protect all wounds of much size from air and moisture by a coat of paint, or of tar and brick dust. The only way to cure trees already diseased, is to cut away all affected parts and apply a suitable covering to the wound. It rarely proves a serious evil in this country.

4. THE AMERICAN BLIGHT, (so called,) is caused by the *Aphis lacinta*, a small insect so thickly covered with fine white hair as to appear enveloped in fine cotton. It is furnished with a fine bristle like beak, with which it perforates the bark of the branches. Excrecences rise, the limb grows sickly, and perishes. Branch after branch is assailed in turn, and the whole tree ultimately dies. It is easily destroyed on young trees, and older ones if recently attacked, by brushing over the affected parts a mixture of equal parts of fish oil and rosin melted together and applied warm. The operation should be performed as early in the season as possible, or when the insect is first perceived. In England, many trees have been greatly injured, and some destroyed by it. Although introduced into nurseries in this country, it has hitherto proved of little injury, and, if carefully watched, probably be kept from spreading.

5. THE CANKER WORM, where it has appeared, is perhaps the most destructive to apple trees of any insect in America, but it has hitherto been confined in its ravages to certain parts of the country, particularly of New England. Its habits are thus described by Kenrick:

"The canker worm, after it has finished its work of destruction in spring, descends to the earth, which it enters to the depth of from one to five inches. After the first frosts of October, or from the 15th or 20th, those nearest the surface usually begin to rise, transformed to grubs or millers. They usually rise in the night, and invariably direct their course to the tree, which they ascend, and deposit their eggs on the branches, which are hatched in April or May. They frequently rise during moderate weather in winter, when the ground is not frozen, and in March, and till towards the end of May. When the ground in spring has been bound by a long continuance of frost, and a thaw suddenly takes place they are said sometimes to ascend in incredible numbers."

They destroy all the leaves of the tree and thus eventually cause its death. The only effectual remedy yet devised is to prevent their ascent, which is effected by means of circular led troughs filled with fish oil, encircling the tree.

J. J. T.

* If applied early, lime white-wash will do it off easily.