

plant food. An application once in two or three years will usually give excellent results, especially on light soils which are most lacking in potash. Muriate of potash is another economical form in which to obtain potash. Phosphoric acid may be purchased in the form of superphosphate. Nitrogen may be procured in the form of sodium nitrate, but leguminous cover crops furnish a much cheaper source of this essential but costly element.

### PRUNING.

The object of pruning is to form a vigorous and evenly balanced tree, which will produce annually a paying crop of good sized, well-colored fruit. Unpruned trees produce many small-sized unsalable apples. Pruning lessens the number of apples per tree, but at the same time increases the size and improves the quality of those produced. A heavy crop of good-sized fruit is not so serious a drain on the vitality of the tree, nor the fertility of the soil, as the same weight of smaller apples would be, for it is the production of the seed which makes the greatest drain on the tree and soil.

Pruning should be practised every year without fail from the time the tree is planted. In this way the operation is never a severe one, and the removal of the large limbs becomes unnecessary. Limbs growing too strongly in any particular direction, which are liable to upset the balance of the tree, should be headed back. Where two limbs cross, one of them should be removed. Branches growing across, from one side to the other, should be cut out. Care should be taken to leave sufficient twigs in the centre to protect from sunscald. Much may be done in directing growth by heading back to a bud pointing in the desired direction. It is while the trees are young that the greatest care in training is required.

A properly pruned apple tree should be open enough to admit sunlight and permit of free circulation of air. Its lower branches should be trained high enough to admit of easy cultivation, yet the top should not be so high that spraying and harvesting are rendered difficult. Varieties differ more or less in their habit of growth, and, while it may be advisable to modify this to some extent, it is not well to attempt to change it unduly. Long bare branches should be avoided, and the formation of fruit spurs should be encouraged on all parts of the tree.

The best time for pruning is just before growth begins. Wounds made at that season soon heal over. It is not well to prune when there is frost in the wood. Pruning while the tree is dormant tends to increase the growth of wood. Summer pruning encourages the formation of fruit buds, but it is not advisable to do much of it, as the removal of any considerable amount of the leaf area tends to check the vigor of the tree. Pruning by the removal of buds may be practised at any season of the year.