

quantity of manure necessary for the trees. In older orchards where there is no cropping, the annual growth of the new wood is the best guide in applying manure.

As a general fertilizer, nothing is better than barnyard manure, but it should be withheld where the new growth is excessive, or where the wood growth is at the expense of fruit.

Unleached wood ashes are a specific fertilizer for fruit trees, as they contain all the inorganic elements necessary in producing both tree and fruit. Unlike barnyard manure, they tend to promote fruitfulness rather than excessive wood growth, and may safely be applied at any time.

In applying fertilizers of any kind, never bank them about the trunk of a tree, but spread them evenly all over the ground as far as the roots extend.

*Pruning.*—One of the first things to be considered in pruning a young orchard is the height at which the heads should be started. Some prefer low heads and others high heads. Either extreme should be avoided. From four to four and a-half feet is a convenient height for apple trees. To have them all alike, cut them back when young to the desired height. Three branches are enough to leave to start the head. Space these evenly, and direct new growth whenever necessary by cutting back to a bud pointing in the direction you wish the new branch to take. The ideal pruning consists rather in directing growth than in cutting out what is grown. Thin out the new shoots as may be required to keep the head from becoming too crowded. Cut out any branches that cross or rub each other, and keep the top symmetrical by cutting back branches growing too fast in any particular direction, as they are often inclined to do on the leeward side.

If an orchard is pruned regularly every year, as it should be, there need be no necessity for cutting out large limbs, and the pruning at any time will be very light. Light pruning may be done at any time during the summer, but for the general, annual pruning, this had better be done early in spring before the growth starts.

*Protecting the Trunks from Borers.*—One of the most destructive insects to newly transplanted trees is the flat-headed apple tree borer. The mature insect is an active little beetle, nearly half an inch long, which lays its eggs on the bark of the trees, generally on the south-west side. When the egg hatches, the larva eats its way through the bark where it feeds upon the sapwood, sometimes entirely girdling the tree. When full grown it is a pale, yellow, footless grub, over half an inch long, with a large flattened head. The presence of these pests in infested trees may readily be detected by the blackened and deadened appearance of the bark over the parts where the borers are at work.

When borers get into a tree there is no other remedy than cutting them out with a sharp knife, or killing them in their burrows with a stout wire. But prevention is better than remedy, and the injury from borers can easily be prevented. To do so, wash the trunks and larger branches with a mixture of soft