

Citrus-culture.

After such a prolonged dry spell, followed by late summer rains, the trees will rapidly put forth new growth. This growth will be softer than in normal seasons, and more disposed to suffer from even light frosts in winter. For this reason nitrogenous fertilizers are better withheld, as they will tend to make the growth even more succulent. Potassic or phosphatic fertilizers will be required, and if any nitrogen is used it should be slow-acting. Superphosphate, 8 cwt., plus sulphate of potash, 2 cwt., per acre, is a good dressing to meet most cases.

There are many citrus-groves which will naturally benefit by an application of lime. Where no lime has been applied for many years, 1 ton per acre, to be followed by $\frac{1}{2}$ ton every third year, is correct. Where such a dressing of lime is made, applications of artificial manures should be deferred until later.

Autumn working of the land should aim at keeping the soil from consolidating on the surface, and so arranging the contour as to provide an easy get-away for the heavy rains expected later. Unless this is done prior to sowing a green crop it is rarely possible to do it later, and water stagnates in odd places, to the detriment of the trees.

After thus preparing the land it is seasonable to sow a green cover-crop. Blue lupins are ideal for the purpose, and provide the largest quantity of green material to turn under later. Oats and tares or *Lotus angustissimus* are also quite good. Super or lime, whichever is being used, should be used at sowing-time; but where lime is used the super should be applied later, when the crop is turned under.

There will now be a certain amount of pruning required. First, the worn-out parts of fruiting-wood should be removed, as also all dead wood. When dealt with at this season these are more readily discernible than will be the case later, when the trees are in full vegetation. All branches which sweep the ground or hang within 1 ft. of the soil should be cut away, as it is on these that spores of citrus brown-rot first find lodgment.

The loss from this brown-rot is great every year, varying in severity according to the continuity of rainfall, but even under the best conditions it causes quite sufficient loss to justify preventive measures. These are really of a threefold character: Firstly, sterilization of the soil, where the spores reside. This is usually done with sulphate of iron, 2 lb. per tree, worked into the surface soil; but White Island No. 1 Product, 3 cwt. per acre, is in many cases giving even better results, as it not only contains various forms of iron, but sulphur and other elements which correct chlorosis and give general tone to the trees. Secondly, pruning away lower branches, so that spores missed by the sterilization will not be so readily lodged on the trees by rain-splashes from the soil. A cover-crop of green growth under the trees is also beneficial, as it acts as a carpet against splash. Thirdly, an application of bordeaux, 4-4-40, to the trees in late autumn, which acts as a preventive to the establishment of such spores as may chance to alight on the covered parts. In certain localities where the disease is not troublesome, or in seasons of lesser severity, part of this threefold treatment may suffice, but it is well to be prepared in its entirety.

—W. H. Rice, Orchard Instructor, Auckland.