

in numbers if disturbed during their resting-period. Fungoid diseases overwintering on fallen fruit find conditions suitable to their development when provided with a covering of weeds. Under these conditions spore-discharge progresses, and with the aid of wind or any movement in the orchard the spores are carried to places suitable for their development, and fresh infection occurs. The cultivation programme should be so arranged that operations can be suspended from shortly before and through the blossoming-period. In the normal life-cycle of some of the worst diseases the spores are being discharged at that time, and any fruiting bodies which have been partly buried may be brought to the surface and the liberation facilitated.

Manuring.

The application of fertilizers will require early consideration. Orchards in districts which are subject to dry springs or where the rainfall is light should have their applications this month. Quantities will vary according to the nature of the soil and the condition of the trees, but for good average soils with bearing trees in fair condition up to about 6 cwt. per acre would be a good dressing. Poor and light soils may require heavier annual dressings until satisfactory growth is stimulated. Manuring alone cannot be expected to promote activity in badly stunted and stagnant trees. Generally this type is liberally covered with fruit-spurs, which during the winter season should be considerably reduced, and possibly a thinning of the fruit in following seasons will be beneficial.

Nitrogen in the form of nitrate of soda, sulphate of ammonia, dried blood, &c., acts as a stimulant to vegetation activity, and the quickly soluble forms should be applied just as growth is commencing. Excessive quantities may stimulate growth at the expense of fruit-production, and while the effects are being felt predispose the crop to bitter-pit. Phosphates promote fruitfulness, and annual applications are advisable for bearing-trees. Potash provides the colour and finish to fruit, and is especially needed for starch and sugar production. A generally satisfactory mixture comprises four parts of high-grade superphosphate, one and a half parts of sulphate of ammonia, and one part of sulphate of potash, mixed and applied evenly over the orchard during the late autumn or winter. Home-mixing of manures permits of slight variations being made in the proportions to suit individual requirements of varieties or locations, and a certain amount of experimental work is necessary to ascertain the soil-requirements. The lime content of the soil must be maintained to facilitate the action of manures.

Spraying.

Preparations for the spraying-season should be kept in view. An early overhaul of the spraying-plant and the completion of any repairs or renewals of doubtful parts may save costly delays when the season starts. The material required for the first sprays will be oil, and lime-sulphur or bordeaux, and stocks should be on hand. Oil is used as an insecticide, and has a beneficial effect on bark which has been hardened by the continued use of lime-sulphur or bordeaux. Lime-sulphur acts as a dual control of insects such as the various scales, red mite, &c., and as a fungicide; bordeaux is a straight-out fungicide and is in general use for the first foundation spray.

Planting.

Planting should be completed as early as possible, but only if the land is sufficiently dry to permit free working without producing a soggy mass under the necessary treading to compact the soil round the roots. Deep planting to withstand the wind in exposed situations is to be avoided, and, if necessary, stakes should be provided to keep the trees stationary. Shelter planting should be completed and any gaps in existing shelters made up.