

must be sown in January to make sufficient growth by early winter. At the time of sowing, an application of 1½cwt. of superphosphate is advised to assist the lupin crop.

Thinning the Fruit

Although the maximum benefit from fruit-thinning may be secured by doing this work earlier, any available time will be profitably employed in further thinning. By this time there should be sufficient indication as to whether the thinning has been adequate for the particular crop and the seasonal conditions. In any case, it is an advantage to go over the trees a second time to remove fruit obviously undersized, diseased, or badly russeted, which may increase the proportion of lower grades or rejects if left. It is far better to avoid handling these in the packing shed during the rush of a fruit harvesting season.

With a possibly much-reduced fruit export—and markets in the Dominion likely to be more than adequately supplied—it is desirable that small and low-grade fruit should be reduced in quantity as far as possible. Small sizes, particularly, are in little demand locally, a fact which points to the necessity for extra thinning to secure larger fruit on the average and the elimination of small sizes. Thinning carried out on a normal crop does not

reduce the bulk of fruit fit for market, but brings about more uniformity in size, with an increase in the average size of the remaining fruits.

Handling the Crop

Fruit harvested during the coming month will be mainly stone fruit, although a fair quantity of Gravensteins and other early apple and pear varieties will appear on the markets.

Very great care is required in handling stone fruit to avoid wastage. Maturity for picking should be regulated according to the distance the fruit is intended to travel. Fruit for near markets may approach a tree-ripened stage of maturity, and if special packages, either trays or crates, are used, the fruit may even travel some distance. For long distances, and unless there is rapid delivery to the markets, peaches should be picked while still firm.

Care should always be taken in avoiding any contact between sound fruit and fruit affected with brown rot. Special tins which may be sterilised should be used for picking if any rot is present, and no diseased fruit should be handled when picking sound fruit.

Particular attention should be given to maturity for picking apples. Fruit for immediate sale on the local market should be allowed to reach a

greater degree of maturity than fruit intended for cool storage or for export. Under the abnormal conditions prevailing, the bulk of the apple crop could with advantage be left to gain rather more maturity than is usual when picking largely for export consignment.

Packing Shed Hygiene

Packing shed hygiene and care in handling are important factors in minimising subsequent storage rots in fruit. Reject fruit should not be allowed to remain in or about the packing shed to rot, but should be removed and destroyed or fed to pigs. Grading machines accumulate dirt very quickly under certain conditions, and require cleaning at frequent intervals to avoid marking of fruit, which is very detrimental to appearance, keeping quality, and market value.

With the possibility of much greater quantities of fruit having to be held for later markets without extra cool storage facilities being available, growers should make some provision for orchard storage in sheltered and cool positions under shelter belts or in plantations, but avoiding positions exposed to prevailing winds, which may cause excessive wilt in fruit. Fruit will develop less wilt if storage cases are paper-lined.

—N. J. Adamson, District
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Citrus Notes

Value of Orchard Records Book

WHEN these notes appear the 1939 citrus production year will be closing, and it may be appropriate to suggest that as from January 1, 1940, citrus growers producing lemons, oranges, and New Zealand grapefruit endeavour to begin regular diaries in which is set down a daily summary of the day's activities, matters of particular interest observed in the orchard, out-of-pocket expenses connected with the orchard, and questions for the Orchard Instructor at his next visit.

Need for Records

Some growers may consider that it is neither feasible nor necessary to attempt any such summary, but recent

efforts to obtain costs of lemon production clearly demonstrate the necessity for such records to be kept. If growers with bearing groves of more than 200 citrus trees kept such records, they would be invaluable whenever any survey required is to be undertaken. Records of this kind would also tend to summarise results achieved or possible from any block of citrus trees.

Every orchard has its trees of inferior strain, some of which bear coarse or ill-shaped fruits, some which have never borne a reasonable crop per tree, and others which have succumbed to borer, bark blotch, or collar rot. These trees should be noted in an orchard records book, together with the

efforts being made towards improvement. Only by such means will the grower be in a position to decide which trees require to be eradicated, drastically pruned, treated for disease, or budded over to a better strain.

Efforts are being made to improve the existing varieties of citrus in New Zealand, and each grower can assist by marking those trees in the grove which are outstanding in both quality and quantity of the fruit borne. This is most necessary for the lemon, New Zealand grapefruit, and sweet orange.

"Off Type" Trees

Now is the time to bud over or top-work a few "off type" trees. The process of budding is better demonstrated