

mummified fruits, which are a source of infection from brown-rot. These fruits should be destroyed either by burning or burying.

Citrus trees attacked by thrip or by scale insects, if not already sprayed, should be now attended to, applying red-oil emulsion, 1 to 40, provided young autumn growth has hardened. This should follow the bordeaux spray, 4-4-40.

—*J. W. Collard, Orchard Instructor, Auckland.*

#### HAWKE'S BAY.

Codlin-moth is likely to be troublesome right through March, and even in the early part of April. Not only is spraying for codlin-moth advisable, but arsenate of lead should not be omitted on the later varieties of fruits for leaf-roller caterpillar. A final spray in the early part of the month for leaf-roller is usually sufficient. A late infection of black-spot on Dougherty, Rome Beauty, and Stone Pippin can be anticipated. These varieties should be sprayed with bordeaux, 3-4-50, on the first appearance of live fungus. A final spraying for woolly aphis is advisable. Use Blackleaf 40, 1 part to 800 parts of water, and combine it with lime-sulphur, 1-100 to 1-120. The combined spray is more effective against woolly aphis than when Blackleaf is used alone.

—*T. Pitt, Acting Orchard Instructor, Hastings.*

#### NELSON.

Spraying: In localities where leaf-roller is troublesome a further application of arsenate of lead may still be applied to pip-fruits with advantage. Stone-fruit trees that have been troublesome during summer with fungus parasites should receive attention. Carefully gather and destroy all infected fruit, and apply a bordeaux, 3-4-40, spray. Raspberry, black-currant, and gooseberry plants should receive the same attention unless it has already been given recently.

Gathering the crop: This will be the chief work for the month in most orchards. In this connection the picking of the fruit may well receive more attention. Assistants engaged to pick the crop should be carefully instructed and supervised until they have shown themselves capable. Remind them that most varieties should be gathered without severing the stem from the fruit, and immature fruits should be allowed to remain on the tree to finish their growth.

Grading: Much of the cull grading may be done by the pickers but apples and pears should be graded for size before they are packed. One way of doing this in a small shed where a machine is not available is to grade off the "out" sizes—the very small and very large—when a capable packer will often pack the remainder, sizing them by sight.

Packing: Size-grading is the basis of a good pack. When the grading is properly done there is no trouble about getting a firm even pack of the right height. Such a pack travels well, keeps well, and as a result sells well. For cool storage pack only moderate-sized fruit that is clean, sound, and mature; other sorts are not worth the extra expense.

Weeds: Orchard operations at this season are often made difficult by a strong growth of tall weeds, which are sometimes wet. Should there be any extent of such growths it will pay to run a mower through, and then leave the plants where they lie. If this is done early, before they seed, many troublesome weeds will be checked.

—*William C. Hyde, Orchard Instructor, Nelson.*

#### OTAGO.

Powdery mildew has spread very rapidly in consequence of the very wet weather during January, followed by a dry spell; but during a trip through Central Otago I have failed to find any evidence of black-spot on fruit or foliage. A final application of lime-sulphur, 1-120, or atomic sulphur, 1-10, in bad cases of powdery mildew is still advisable. The former is safe in cool weather, but if hot, dry weather continues take no risks with a good crop of fruit and use the atomic sulphur. I found one instance of lime-sulphur injury caused through combination with arsenate of lead.

Keep an eye open for red spider, especially on Delicious, Sturmer, and London Pippin. If allowed to persist, depreciation of the crop can be expected. The previous directions regarding mildew will control this pest. Woolly aphis is reported by growers to be worse than usual. This trouble certainly is fairly prevalent in some orchards, and it will pay to spray with Blackleaf 40 at a