

BRUSSELS SPROUTS CROP IN OTAGO . . .

in excellent condition for longer periods than in the Oamaru district, where the climate is usually warmer. As the harvesting of the crop proceeds additional bottom leaves are removed, but those forming on top of the plant are retained, because they are necessary for the well-being of the plant and they also provide protection from frost for young sprouts.

The earliest-harvested crops generally command high prices on the local market and are seldom sent out of the Otago Province in any quantity during the months of May and June, when it is the practice to harvest sprouts and pack them in 25lb. cases for sale. Cases reduce to a minimum the risk of bruising and at the same time allow for good ventilation between the time of harvesting and retail distribution. Crops harvested later are packed in both cental bags and cases. Packing in bags is done mostly for the sake of convenience when produce is to be railed to markets outside the Otago district. Sprouts packed in cases keep better for a longer period than those packed in bags, which sweat badly if held for any length of time.

Pests and Diseases

Information on insect pests and diseases attacking market garden crops is available from all branches of the Horticulture Division, Department of Agriculture, and consequently only those experienced each year in Otago are mentioned here. Generally brussels sprouts in Otago are affected by few diseases and insect pests other than club root, cabbage aphid, and white butterfly, which seriously affect crop yields.

There is not very much spraying of brussels sprouts done in Otago, but the

information given below on the principal diseases should be of assistance to those desirous of carrying out a spraying programme. For successful cropping in Otago there are several important points which must be kept in mind when dealing with all pests and diseases: Spraying must be done at the correct time; it must be thorough; and good judgment must be used.

Disease Control

Club root (*Plasmodiophora brassicae*): This fungus disease attacks all cultivated plants of the cabbage family, causing swellings and knots of varying sizes and shapes to develop on the roots. The plants become yellowish, stunted, and make very little growth. Spores of this fungus enter the plant through the root cells and feed on the contents. When the root dies spores are set free in the soil to attack plants of the same family when conditions are favourable. The spores are small, move easily in the soil water, and may cause serious losses if certain preventive measures are not adopted, and the following are recommended:—

1. As the disease flourishes in acid conditions, sweeten the soil for brussels sprouts growing by applying lime at 2- to 3-year intervals at the rate of 1 to 3 tons per acre; improve drainage where this is not satisfactory.

2. Practise crop rotation as far as possible by allowing as long an interval as practicable between the growing of host plants. Exclude cruciferous crops from affected land for a period of at least 3 years.

3. Examine all plants carefully when lifting them from the seed-bed and destroy any showing club root infection. Treat infected seed-bed soil with mercuric chloride.

4. Destroy all infected plants by burning.

White butterfly (*Pieris rapae*): The caterpillar of this butterfly feeds on the leaves of brussels sprouts and related plants. The caterpillar, which may be up to 1½ in. long, is dull velvety-green with an orange stripe down the middle of the back. The pest is worse in hot, dry seasons and over the past few years has been troublesome to growers, resulting in heavy losses of produce.

To control the pest plants should be sprayed with arsenate of lead (1½ lb. to 100 gallons of water). Spray the under-sides of the leaves thoroughly.

Cabbage aphid (*Brevicoryne brassicae*): The cabbage aphid or the green fly, as it is generally called, does considerable damage to all cruciferous crops in Otago if unchecked. The pest is particularly troublesome in periods of dry weather, when colonies of the small, greyish-green insect cause leaves of the plants to curl, giving a greyish appearance to infected plants.

To control the aphid plants should be sprayed with nicotine sulphate (1 part to 800 parts of water, plus 3 to 4 lb. of soft soap to every 100 gallons of solution).

CASEOUS LYMPHADENITIS ERADICATED

By Aseptic Conditions in a High-country Shed

THE eradication of caseous lymphadenitis by the adoption of strictly aseptic conditions in the shearing shed has been achieved on the Godley Peaks Station in the Mackenzie Country. Several years ago the station was putting between 1000 and 1200 Merino sheep through the works annually and an average of between 25 and 33 per cent. was being rejected because of lymphadenitis. In the past 2 years, with about the same number of sheep being sent to the works, there have been no rejections because of lymphadenitis.

THIS outstanding success is attributed by Mr. John Scott, owner of the station, to the following:—

1. Olive oil with a 5 per cent. carbolic added for use on the sharpening stones is supplied to shearers.

2. Oil rags consisting of scoured sheepskins, which are changed twice weekly, are supplied to the shearers.

3. Water tins contain a strong solution of carbolic soap.

4. The shearing board is scrubbed down with an antiseptic solution after each day's operations, even if only a few sheep have been handled in that day.

5. The concrete floors of the counting-out pens are sprayed at regular intervals to keep down dust, and after each day's shearing the pens are thoroughly hosed down.

—K. G. GRAY, Inspector of Stock, Department of Agriculture, Fairlie.

Illegal Wool-branding Materials Still Being Used

MOST farmers are aware that wool-branding materials must be tested and approved by the Department of Agriculture before they can be marketed. It is now a punishable offence to use anything other than approved wool-marking preparations, or to add anything to an approved preparation which will make it harmful to the wool.

This legislation is in the wool growers' own interests, because brands which will not scour out cause enormous damage and loss in the woollen mills—and in the final analysis this loss has to be borne by the grower of the wool. From complaints still being received from buyers and mills, some farmers apparently are still using harmful materials, so buyers continue to view all brands with suspicion. Thus the majority of wool growers are suffering from the actions of the few.

The remedy lies in the producers' own hands—the use of only approved branding materials.



Starting at the base—the correct method of harvesting.