the day it is made. It is best to pour it into the sprayer through a fine gauze strainer or muslin to prevent any grit or other impurities from clogging the nozzle.

Though none of the dry Bordeaux powders is as effective as home-made Bordeaux, they are simple to prepare and if used in sufficient quantity give quite good results. The best are certified by the Plant Diseases Division of the Department of Scientific and Industrial Research and on the label carry a warrant of certification showing the correct dilution to use, usually about 3oz. to 4 gallons of water.

Combination sprays: At times it is advisable to combine certain sprays to obtain control of both insects and a fungous disease with the one application. Bordeaux mixture and copper oxychloride can be combined with lead arsenate and D.D.T. wettable powder. Lime sulphur and lead arsenate and D.D.T. wettable powder can be combined, but when combining lead arsenate with lime sulphur, hydrated lime (twice the weight of the lead arsenate) should be added to reduce risk of burning the plant foliage.

Wetting agents: With plants such as cabbage, peas, and onions it is very difficult to get the spray application to adhere to the foliage and it is advisable to use a wetting agent. There are several good proprietary preparations, which should be used according to the manufacturer's recommendation.

Dusts: Sulphur in a finely ground form is used for the control of powdery mildew and should be applied with a dust gun to give a fine coverage just visible to the eye.

D.D.T. dusting powder is sold in several strengths and may be dusted on the foliage of the plants as directed for the control of insect pests such as tomato and sweet corn worm and white butterfly and will control the tuber moth of potatoes, slaters, wireworms, earwigs, cutworms, and many other insects.

Derris dust is blown from a dust gun or sprinkled from a container covered at the mouth with a piece of muslin on to cabbage, cauliflower, etc., for the control of white butterfly and diamond-backed moth. It kills the insects by contact and also acts as a stomach poison. It has the great advantage that in the quantities used to control insects it is harmless to humans.

Baits are used for the control of slugs and snails. There are proprietary preparations containing metaldehyde which are usually satisfactory, but if desired, baits can be made from tablets containing metaldehyde and bran, one tablet being powdered up fine and mixed with a large cup of bran. Baits are scattered over the soil or placed in small heaps. They lose their effectiveness after they have been exposed to rain.

Soil fumigants are used mainly for sterilising boxing soils for the growing of seedlings. They include formalin, which is a 40 per cent. solution of formaldehyde. For the purpose of sterilisation 1 part of formalin is added to 49 parts of water (1 pint to 6 gallons of water). The soil to be treated is spread out in an open shed and the formalin solution is watered on at the rate of 1 gallon per bushel of soil. The heap is then covered over with sacks for 48 hours to retain the volatile gas, after which the soil is turned to dry. It should not be used until all smell of formaldehyde has disappeared.

Garden sanitation: It is important that no diseased refuse or crop residues should be allowed to lie about the garden. All healthy foliage including lawn and tender hedge clippings should be composted, but remains of diseased crops should be destroyed by burning, especially diseased tomato vines, potato haulms, and pea and bean foliage which may be affected with virus and other diseases.

Seed treatments: One of the objects of seed treatment is to protect seeds from fungi and other organisms commonly present on soil which cause the seeds or young seedlings to rot before they emerge above ground and to eliminate the possibility of seed-carried diseases. Dry seed dusts may be purchased and these are simply shaken up with the seed. Most seeds purchased from seed merchants have been treated.

Satisfactory pest and disease control can be secured only by regular applications of a recommended control spray and by 100 per cent. coverage, which can be maintained only by the use of good spraying equipment.

DAIRY PRODUCE GRADED FOR EXPORT

THE following figures showing quantities of dairy produce graded for export during October and for the 3 months ended October 31, 1949, with comparative figures for the same month and 3-monthly period of last year, have been compiled by the Dairy Division of the Department of Agriculture from figures supplied by divisional officers at the various grading ports:—

BUTTER—

Period	Creamery	Whey (Tons)	Total (Tons)	Percentage inc. or dec.	Total in store at end of mth. (Tons)
October, 1949	20,141	353	20,494	+9.488	23,656
October, 1948	18,391	327	18,718	—	18,291
Increase or decrease	+1,750	+26	+1,776	—	+5,365
For 3 months ended 31/10/49	45,283	732	46,015	+18.345	—
For 3 months ended 31/10/48	38,246	636	38,882	—	—
Increase or decrease	+7,037	+96	+7,133	—	—

CHEESE—

Period	White	Coloured (Tons)	Total (Tons)	Percentage inc. or dec.	Total in store at end of mth. (Tons)
October, 1949	8,820	2,516	11,336	+4.662	14,357
October, 1948	10,659	172	10,831	—	14,878
Increase or decrease	—1,839	+2,344	+505	—	—521
For 3 months ended 31/10/49	15,747	4,498	20,245	+9.592	—
For 3 months ended 31/10/48	18,301	172	18,473	—	—
Increase or decrease	—2,554	+4,326	+1,772	—	—

If these figures are converted into butterfat equivalent, there is an increase of 16.768 per cent. in butterfat graded for the 3 months as compared with the corresponding period of the preceding season. It should be noted that the above figures refer only to butter and cheese graded for export, and that owing to diversions which may take place from time to time, they are not necessarily a true indication of production trends.

BOOK REVIEW

"Tomato Diseases and Pests"

"TOMATO Diseases and Pests," a booklet by officers of the Plant Diseases Division and published by the Department of Scientific and Industrial Research, will claim the interest not only of commercial tomato growers but also of every grower of tomato plants, whether indoor or outdoor, and assist them in the incessant struggle against the numerous diseases and pests to which tomatoes are susceptible.

As many of the pests described attack other vegetables and plants besides tomatoes, most gardeners will find the manual invaluable.

In this comprehensive 112-page publication the writers have dealt briefly but thoroughly with all the principal fungous diseases, including moulds and wilts, and the most common insect pests such as caterpillars, aphides, eelworms, and slugs which affect tomatoes and other plants of this kind. General descriptions and life history are given, the text being amply and well illustrated; also, for practical use, the most effective methods of control and prevention are set out, derived from the results of much research and experimental work and trials under field and laboratory conditions exhaustively carried out by skilled and experienced officers.

The latest and full information on hygienic cultural practices is given, including extraction of tomato seeds, handling of plants, spraying implements required, and fungicides and insecticides, their component parts, and how to mix and apply them.

Soil disinfection by the most modern methods is described and useful tables of diseases and their control for glasshouse and outdoor crops are given in this informative booklet, which contains much of practical value and can be recommended to all gardeners and horticultural workers.

It is available from offices of the Department of Scientific and Industrial Research at Auckland, Christchurch, and Dunedin, and the Head Office, Wellington.

—*W.T.G.*

"Tomato Diseases and Pests," Department of Scientific and Industrial Research, Wellington. 2s. 6d.