

then plowed down, and their place is taken by other beds previously set out the same spring. If it is desired to propagate some special variety largely, the beds may be left for another year, but all beds should be plowed down after two crops of fruit. The White Grub passes two years as a grub, during the first of which it does far less harm than when it is bigger. The Black Vine Weevil, although not so long-lived, does comparatively little harm in new beds.

LEAF ROLLERS.—There are several species of caterpillars of small moths which are known by the name of Leaf Rollers, and which attack the foliage of apple trees during the month of June. The Eye-spotted Bud-moth has been extremely abundant and is the one most complained of in Eastern Canada during the last spring, and both it and two other common kinds of leaf rollers can be controlled by spraying orchards regularly with poisoned Bordeaux mixture—a regular practice with most progressive fruit-growers. The dark-brown caterpillar of the Eye-spotted Bud-moth passes the winter in small silken shelters on the twigs, and emerges from these about the time the leaf buds burst, and does a great deal of harm by boring into the young growth, frequently destroying whole clusters of blossoms. The true leaf rollers—small green caterpillars—come later, and are destroyed by the first spraying for the Codling Moth. In the case of the Bud-moth, however, when it is found to be abundant, the trees should be sprayed, either with supplementary spraying of poisoned Bordeaux before the blossoms open, or where the useful practice is adopted of spraying trees with the simple sulphate of copper solution, one pound in 25 gallons water; four ounces of Paris green may be put into every barrel (40 gallons) of the solution.

BORERS.—For the prevention of the two common borers of the apple, which sometimes do a great deal of harm in apple orchards, I know of nothing better than washing the trees at the beginning and again at the end of June with an alkaline wash. One which has given good results here is to reduce soft soap to the consistency of thick paint, by adding a saturated solution of washing soda in water, and into this put one pint of crude carbolic acid to the gallon of wash. If too thin for putting on conveniently with a white-wash brush, slaked lime may be added, till the wash works conveniently. If this is painted on to the trees on the morning of a warm day, it will dry in a few hours and form a tenacious coating which is not easily washed off by rain. The application of this wash to trees in June prevents the female beetles from laying their eggs on the bark. It should be used every year as a regular practice.

If correspondents are at any time troubled with insects in their orchards, I shall at all times be glad to receive specimens, and do my best to answer enquiries about them. Such enquiries and parcels of specimens may be sent FREE by mail.

A Bonanza Story of Nova Scotia Orchards.

The only community we have ever visited where the farmers never seem to tire of telling how much money there is in their business, is the Annapolis Valley, Nova Scotia. Apples are the staple crop, and the orchards are cultivated, pruned, sprayed and cared for generally in a way that puts the average Ontario orchardist to shame. Soil and climate favor this region, and these factors, combined with up-to-date orchard management, result in splendid yields of high-class fruit, a considerable proportion of which is marketed by the individual orchardists, who ship on their own account to commission firms in the Old Country. The net prices realized by growers are away in excess of those received by Western growers, except where the latter have formed co-operative shipping associations, in which cases the returns compare more favorably with those obtained by the Nova Scotians. Some of the Annapolis Valley orchards are quite extensive. The accompanying half-tones show views in the famous Hillcrest orchards, at Kentville, owned by the Hillcrest Orchards, Limited, President and Managing-Director, Ralph S. Eaton.

One illustration shows a specimen tree in a ten-acre block of Gravensteins, the variety which, perhaps more than any other, has made Nova Scotia orchards famous. The other cut shows a view of a quarter-mile row of Gravensteins and Kings, showing trees thirteen years of age in the foreground. An 8-foot, reversible extension disk harrow, changed over from an ordinary 6-foot Massey-Harris, and used extensively in the orchard, to suit the low-branching "fillers," is seen in the foreground; also two spraying outfits, kept constantly at work during May and June (not used, generally, on trees in bloom), and a sulky gang-plow. The spraying outfits consist of one-hundred-gallon hogsheds, on low-crank axle wagons, two lines of 25-foot hose, and two sets of tripple nozzles on the end of quarter-inch iron pipe. It can be seen how great is the advantage of the low wagon for stepping on and off, and placing the cask on or off, and clearing the branches of the trees. The height of spray is either arranged by the length of rods or the man spraying standing on a platform in front of the cask. Spraying from the ground is preferred always, when possible.

Bearing orchard in this district is commonly valued



A Hillcrest Orchard Gravenstein.

Specimen tree in a ten-acre block, grown by Ralph S. Eaton, Kentville, N. S.

at \$1,000 an acre, and the following figures, giving the returns of nine orchardists in the district, show that, after deducting expenses of 50c. per barrel for picking, packing, barrels, and cartage, and \$20 per acre for the cost of plowing, harrowing, spraying, fertilizing, and seeding to clover, which is commonly sown in July as a cover crop, to be plowed down the following spring, the average net returns for a period of five years equal an interest ranging from 12 per cent. up to 25 per cent. per annum, on a valuation of \$1,000 per acre. Following are the tabulated figures:

ESTIMATES OF YIELD AND RETURN FROM SOME NOVA SCOTIA ORCHARDS THE LAST FIVE YEARS.

Owner of Orchard.	Average No. bbls. shipping apples acre bearing orchard has produced.	No. acres orchard considered in the estimate.	Average price per barrel these apples returned.	Average return per acre orchard has given.	Interest on \$1,000 per acre.
J. E. Smith, Wolfville	165	4½	\$2.12	\$349.80	25 %
Arthur C. Starr, Starr's Point	100	14	2.13	213.00	15½ "
G. C. Miller, Middleton	111	2	1.98	219.78	18½ "
Geo. H. Starr, Port Williams	117	9	2.25	263.25	15½ "
Chas. E. Sheffield, Upper Canard	100	4	2.25	225.00	15½ "
F. H. Johnson, Bridgetown	100	6	2.25	225.00	15 "
E. J. Elliott, Clarence	128	2½	2.38	304.64	23 "
Ralph J. Messenger, Bridgetown	100	3½	1.90	190.00	12 "
F. C. Johnson, Port Williams	121	9	\$2.50	\$302.00	22 %



A Hillcrest Orchard Outfit.

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