

subacid, pleasant; quality above medium to good; season medium; shipping quality moderately firm to firm; plant vigorous, productive; foliage good. An attractive looking berry, being of good size, colour and form.

ACKNOWLEDGEMENTS.

The author's grateful acknowledgment is herewith given to the co-operation of the Entomological Branch of the Department of Agriculture and the Botanical Division of the Experimental Farms' Branch in contributing the sections on insects and diseases which will make this bulletin much more valuable than it otherwise would be. Thanks are also due the strawberry growers in Canada who kindly furnished the information in regard to the cost of growing strawberries. For most of the illustrations we are indebted to Dr. Frank T. Shutt.

INSECTS AFFECTING THE STRAWBERRY.

BY THE ENTOMOLOGICAL BRANCH, DEPARTMENT OF AGRICULTURE.

There are several important insects which almost every year effect serious damage to strawberry plants and it is, therefore, important that the strawberry grower should guard against injury by insect enemies. The following information on insects affecting the strawberry has been prepared by the Entomological Branch. Enquiries regarding insect pests should be directed to the Dominion Entomologist, Department of Agriculture, Ottawa. Letters and packages containing insects or their work, weighing up to twelve ounces, may be sent through the mails free of postage.

WHITE GRUBS (*Lechnosterna Spp.*).

White Grubs, which are the larvæ of the well known May Beetle, or June Bugs, are some years very destructive, particularly in eastern Canada. The grubs feed naturally on the roots of grasses, so when sod land is ploughed up they are deprived of their usual food and readily attack strawberries and certain other crops if these are grown on the land. The injurious species require three years to complete their life-cycles; in other words, a period of three years elapses from the time the eggs are laid until the grubs, which hatch from the same, are mature, transform to the pupal state and appear as beetles. The female beetles lay their eggs in sod land and also in land bearing such crops as timothy and small grains. Suitable land nearest to groves or woods is favoured by the beetles which feed upon the foliage of the trees and then visit such nearby fields to lay their eggs. Land intended for the growing of strawberries should be previously planted to a crop which will not attract the insect, such as alfalfa, clover or buckwheat. Commercial growers of strawberries in eastern Canada are advised to correspond with the Dominion Entomologist before establishing new strawberry plantations in order to learn of the then present stage in the life of the insect.

Under garden conditions grubs are often turned up when the land is being dug or ploughed. As many of these as possible should be removed by hand and destroyed. Under acre conditions there are unfortunately no practical measures known to destroy the grubs when they are known to be present in the land and destroying the crop. Late summer ploughing which brings many grubs to the surface, crushing numbers of them and exposing others to adverse weather conditions, is useful, particularly in years when the grubs are changing to beetles. At such a time, too, if hogs are available, they will root them out and destroy large numbers. Limited areas may be practically freed of white grubs by such a method.

The practice of taking only one crop of fruit from a plantation and then ploughing it up is followed by many commercial growers.