

tion increases, as cultural methods become more intensive, and "improved" varieties of crops are employed, the "improvement" of which consists chiefly in the power of returning under favourable conditions a larger yield, without reference to their power of disease resistance, serious diseases become more frequent in their occurrence and more destructive in their effects, unless special measures are taken to safeguard crops against them. Hence there is much work for the plant pathologist who, by microscopic examination and cultural methods in the laboratory and experiments in the greenhouse or field, isolates the organisms which produce the diseases, studies their life history, determines experimentally the conditions under which they become destructive and the measures which may be successfully undertaken for their control. Fungus diseases do much harm to orchard and field crops, reducing yields and lowering the value of such produce as may be obtained. Not infrequently the loss from a single disease of one particular crop may in a season favourable to the disease amount to thousands of dollars, as, for instance, in the case of Fire Blight of apple and pear trees, or smut of wheat, or Late Blight of potatoes. These diseases cannot be ignored. It is doubtful if there is a single crop immune from their attack and, generally speaking, the more important the crop the greater the number of diseases to which it is subject. It is, therefore, the duty of the Botanist to carry on inquiries and investigations respecting the control of the diseases which appear to most seriously interfere with the work of the agriculturist and horticulturist in this country; to keep himself informed of what is being done along similar lines at other centres of investigation; and to utilise the results of his own work and those of his co-workers to furnish to the perplexed cultivator the best information available on the subject. Among the diseases more particularly under investigation at present are the Silver Leaf of fruit trees, Black Rot of cherry and plum, Scab, "Rhizoctonia" and other diseases of potatoes and Smut diseases of grain.

The difficult problem of working out methods for the control and eradication of noxious weeds and poisonous plants is another and important feature of the Botanist's work.

The Botanist also has charge of the Arboretum at the Central Farm in which there is to be found an extensive collection of hardy trees, shrubs and perennials, the result of many years' experimentation with plants from many distant parts of the world. In addition, an effort is being made to gradually bring together a collection of native plants which shall comprise all representatives of the Canadian Flora hardy enough to be grown at the Farm without special protection, to-