

pillar of *Sphida obliqua*, and the field cricket. Researches have been made also on rusts, with the object of determining the alternate hosts of certain species and the most important factors in the spread of the cereal rusts which often cause much damage to cereal crops. These investigations are still under way. Considerable attention has been devoted to the study of weeds, weed seeds and the common fungous diseases of the orchard and garden.

*Chemistry.*—The Chemistry Department has for some years been carrying on experiments in connection with the maple sugar industry. Some of the topics of investigation have been the detection of adulteration, finishing tests, changes in storage and the nature and utilization of maple sugar sand. Commercial household cleaning materials, including liquid and solid ammonia, soaps, cleaning powders and laundry blues, have been examined and their active values compared with one another and with home-made materials. Fertilizer experiments have been conducted in co-operation with the Cereal and Horticulture Departments and with students and farmers. A text book for household science students has been published.

*Horticulture.*—The area of the Horticulture Department comprises about 35 acres of orchard, 25 acres of vegetables and small fruits and 50 acres of campus. Two modern greenhouse establishments are maintained, one of which is largely devoted to vegetables. The orchard consists of apple, plum and cherry trees and some pear trees. A large number of varieties of each of these fruits are under test as to their value for Quebec conditions, and experiments in spraying, fertilizing, thinning and cultural work are being carried on in connection therewith. Among the apples, the Duchess, Wealthy, McIntosh and Fameuse are the most important commercial apples for this province, and should be more generally grown for the home and export markets. Pears, cherries and grapes can only be grown successfully in the more favoured parts of the province. The Americana plums do particularly well and, almost annually, give good crops. Much of the area in vegetables is on a commercial basis to supply the college needs; but, in addition, varieties are tested and other work is carried on. In onions and cabbages a complete test of all varieties or strains offered by the leading Canadian and some of the representative United States seed firms is being conducted. Attention is also being given to seed growing, and some selections of superior strains of vegetables have been made. On the campus have been planted practically all the native trees and shrubs and many of the hardy ornamental trees and shrubs from other countries, together with perennial borders containing the best of the hardy perennials. These have made a good growth, the collections are being continually added to and the grounds present a very fine appearance. In the greenhouses, commercial and experimental work is carried on.

*Physics.*—Research has been carried on as follows:—(1) On a simple electrical method to determine the fertilizer requirements of field soils. The time this year has been devoted to the work of determining the lime requirements of soils by this method. (2) On