

**Prof. Wm. Saunders.**

Prof. Wm. Saunders, the Director of the Experimental Farms of the Dominion of Canada, was born in Crediton, Devonshire, England, in 1836, and came to Canada with his family in 1848, when they settled in London, Ontario. Subsequently he became a chemist, and conducted a successful business from 1855 to 1886, chiefly in the manufacturing line, paying special attention to the more scientific aspects of his calling. He assisted in the organization of the Ontario College of Pharmacy in 1871; was for many years a member of the council of that college; was made one of the examiners, and served two years as president. He joined the American Pharmaceutical Association in 1860, and was subsequently honored with many offices in that important body, and served as president in 1873. Several of his papers written for this association were republished in English journals, and translated and published in Germany. In 1882 he was appointed by the Government of Canada, public analyst for the western division of the Province of Ontario, in which capacity he rendered satisfactory service for four years. On the organization of the Medical Faculty of the Western University of London, Ont., in 1882, Mr. Saunders was appointed to the chair of Materia Medica, and on his retirement in 1886 to accept his present position, he was made an Emeritus Professor by the Faculty.

To gain the open-air exercise made necessary by close application to professional work, he became one of the early students of Canadian Botany and Entomology. In 1863 he published, in the Canadian Journal of Toronto, a list of the plants found growing in that part of Western Ontario in which he resided—the first catalogue published of the flora of that district. In 1863 he aided in the formation of the Entomological Society of Ontario, and afterwards was editor of the Canadian Entomologist for thirteen years, during which time he contributed many useful articles to its pages. In the early reports of the society there are many practical papers from his pen; he was elected president in 1883, and re-elected from year to year until 1886.

In 1869 he was appointed a director of the Fruit Growers' Association of Ontario, and in 1882 was made president of that body—an office held until 1886. For ten or eleven years, beginning with 1868, he carried on farming near London; and, in addition to ordinary agricultural work, planted a large collection of fruit trees and vines, covering sixty acres, which afforded the opportunity of ascertaining which varieties were most suitable to the climate of this part of Ontario, and also gave facilities for the observation of those insect pests which affect the different sorts of fruit. In 1873 he published a volume on "Insects Injurious to Fruits", profusely illustrated, printed by Lippincott & Co., Philadelphia, a work which is now in its second edition, and is a useful guide to the fruit growers of America. He has also a successful hybridizer, and has originated many interesting varieties of fruits and cereals.

When the Royal Society of Canada was organized in 1881 by the Government of

Saunders was selected as one of the original twenty Fellows which formed the Biological Section of that national scientific body, and in the volumes of its transactions several contributions of his will be found. At the last meeting he was elected president of this section. He has also long been a Fellow of the American Association for the Advancement of Science, in which he has held important offices. He has also been an active member of the American Forestry Association ever since its organization.

When the government of Ontario, in 1880, appointed a special commission to enquire into the condition of agriculture in that province, Mr. Saunders was appointed one of the thirteen selected for this work, and under his direction the information on fruit growing, forestry, insectivorous birds, insects, and bee keeping was collected and published. In 1885 he was requested to undertake the preparation and arrangement of the fruit display of Canada at the Indian and Colonial Exhibition, when the problem was

establishment of five Experimental Farms for the Dominion of Canada—a central farm to serve the purposes of Ontario and Quebec, and four branch farms, one in the Maritime Provinces, one in the Province of Manitoba, a third in the Northwest Territories, and a fourth in British Columbia. In October, 1886, Prof. Saunders was appointed as director of this important work. A site was chosen for the Central Experimental Farm adjacent to the capital, and after a careful survey of the country, during which the area from Halifax, N. S., to Victoria, B. C., was twice traversed, every promising locality inspected, and the climatic conditions and agricultural needs of the several provinces studied, sites were recommended and subsequently chosen by the government. A suitable farm for experimental work in the Maritime Provinces was found at Nappan, Nova Scotia, near the boundary of New Brunswick; one for Manitoba at Brandon; a farm for the Northwest Territories at Indian Head, and one for British Columbia at Agassiz. The work has since made rapid progress, and all the farms are now in active operation under efficient superintendents.

Mr. Saunders has also been honored in Great Britain. He has been elected a Fellow of the Linnean Society, of the Chemical Society, of the Royal Microscopical Society, and of the Entomological Society of London. The training he has had has given him a practical knowledge of many subjects, covering a wide field bearing on agriculture and horticulture in Canada, while his knowledge of chemistry, botany, forestry and entomology has further qualified him for the work he has in hand. The results already achieved in introducing new and promising varieties of seed grain into all parts of the Dominion, the experiments with cattle, and the manufacture of dairy products, also with pigs and poultry, the testing of fruits of all sorts, especially those adapted to the colder parts of the country, the originating of new kinds of cereals and fruits, and the distribution of young forest trees and forest tree seeds to the settlers on the western plains are producing a most favorable impression on the farmers of the Dominion.

The mass of valuable information being given to the farming community by Prof. Saunders and his able staff of associates in the annual reports and bulletins which have been issued under authority of the Minister of Agriculture since the work began, has furnished further evidence of the wisdom shown in originating these institutions for the benefit of agriculture in this country, and in the choice of the officers intrusted with their management.

Make up hills of fresh soil for the early tomato plants, and take the plant out of the bed with a block of earth adhering 5x5 inches square and 2½ inches deep.

More fact than poetry is contained in the following extract from a letter of Mr. R. W. Phipps, of Toronto: "Let me here state as an axiom what long actual observation has taught me: Countries are settled by the letters written by settlers. All assisted passages, all emigration agencies, lectures, and pamphlets only ultimately empty your own pocket and fill your rival's territory, if it be the best for settlers." Look, for instance, at the hundreds of settlers who are flocking into Canadian territory from Dakota.



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presented of so preserving the leading fruits of the country of the growth of 1885 that they could be presentable for exhibition purposes during the following summer. A satisfactory display was prepared, and as soon as the collection was arranged he returned to Canada, and, with the help of the leading fruit growers of the Dominion, got together and forwarded an exhibit of several thousand plates of fine fresh fruit, which was quite a revelation to the visiting public as to the resources and climate of Canada.

In 1885 he was requested by the Hon. John Carling, Minister of Agriculture for the Dominion, to visit the Experimental Stations of the United States and to make enquiries regarding experimental work in agriculture in Europe and America. The information gained was embodied in a report presented early in the following year, which also contained an outline of proposed experimental work in Canada. Following this, an Act was introduced by the Minister of Agriculture, and concurred in by both sides of the House of Commons, which provided for the