

CROSS-BREEDING APPLES IN CANADA.

Much work has been done by a few men in Canada in originating varieties of apples by cross-breeding and hybridization. To the late Chas. Arnold, Paris, Ont.; the late P. C. Dempsey, Trenton, Ont., and to the late Francis Peabody Sharp, Upper Woodstock, N.B., is due great credit for work done at a time when few were interested in the scientific aspects of fruit growing. The Ontario apple which was originated by Chas. Arnold by crossing the Northern Spy with the Wagener is a worthy memorial to that gentleman, it being a good, and, in some sections, a profitable, commercial variety. The Trenton and Walter apples are two of Mr. Dempsey's crosses, and are among the best apples of their season. The Crimson Beauty apple, a handsome variety now grown to a considerable extent as a very early summer apple in New Brunswick and Nova Scotia particularly, was originated by Mr. Sharp and the "New Brunswick" apple which, however, most pomologists cannot distinguish from the Duchess of Oldenburg, is said to have been originated by him and has been largely planted in New Brunswick.

At the Ontario Agricultural College, Guelph, Ont., and at the Horticultural Experimental Station, Vineland, Ont., work in cross-breeding apples has been in progress for some years and no doubt some good varieties will be produced at these institutions.

CROSS-BREEDING APPLES AT THE CENTRAL EXPERIMENTAL FARM, OTTAWA.—APPLES ORIGINATED BY THE LATE DR. WM. SAUNDERS.

The beginning of the work of the late Dr. Wm. Saunders is described as follows in his own words in Bulletin No. 68, Experimental Farm Series "Progress in the Breeding of Hardy Apples for the Canadian North-west."



Wild Siberian crab apple (*Pyrus baccata*)

"Shortly after the first Dominion Experimental Farms were established experiments were begun, both with large and small fruits, with the object of finding out what varieties, if any, could be successfully grown, especially in the colder districts in the Northwest Provinces. The apple, on account of its relative importance, naturally claimed special attention. During the first eight or ten years more than two hundred of the hardiest sorts of cultivated apple trees obtainable in northern Europe and other northern countries were thoroughly tested, especially at the experimental farms at Brandon, Man., and at Indian Head, Sask. These trees were planted in considerable numbers, often from twenty to fifty trees of a kind, some in shelter more or less dense, others without shelter, but in no case were any fruits produced. New varieties originated since then, considered to be of especial merit and hardiness, have been subjected to similar trials.

"In 1887, the year during which work on the experimental farms was begun, seed was obtained from the Imperial Botanic Gardens, St. Petersburg, Russia, of a small wild Siberian crab-apple, known as the 'Berried Crab,' *Pyrus baccata*. This crab