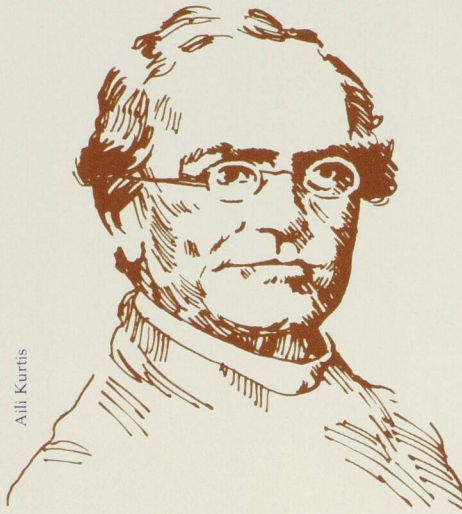


try represents a triumph of determination over bad climate and good sense. While we plant vast acreages, unseasonal frosts and protracted winters make our yield per acre in grains a dismal fourteenth in the world. The late August frost of 1982, for instance, destroyed an estimated 15 to 20 per cent of the Prairie crop.

To produce crops tailored to the rigorous climate of the Canadian Prairies, the University of Manitoba program is relying on improvements from traditional plant breeding techniques and agronomic practices. Recently, there has been a good deal of publicity about the application of the new techniques of genetic engineering to crop improvement. It has been

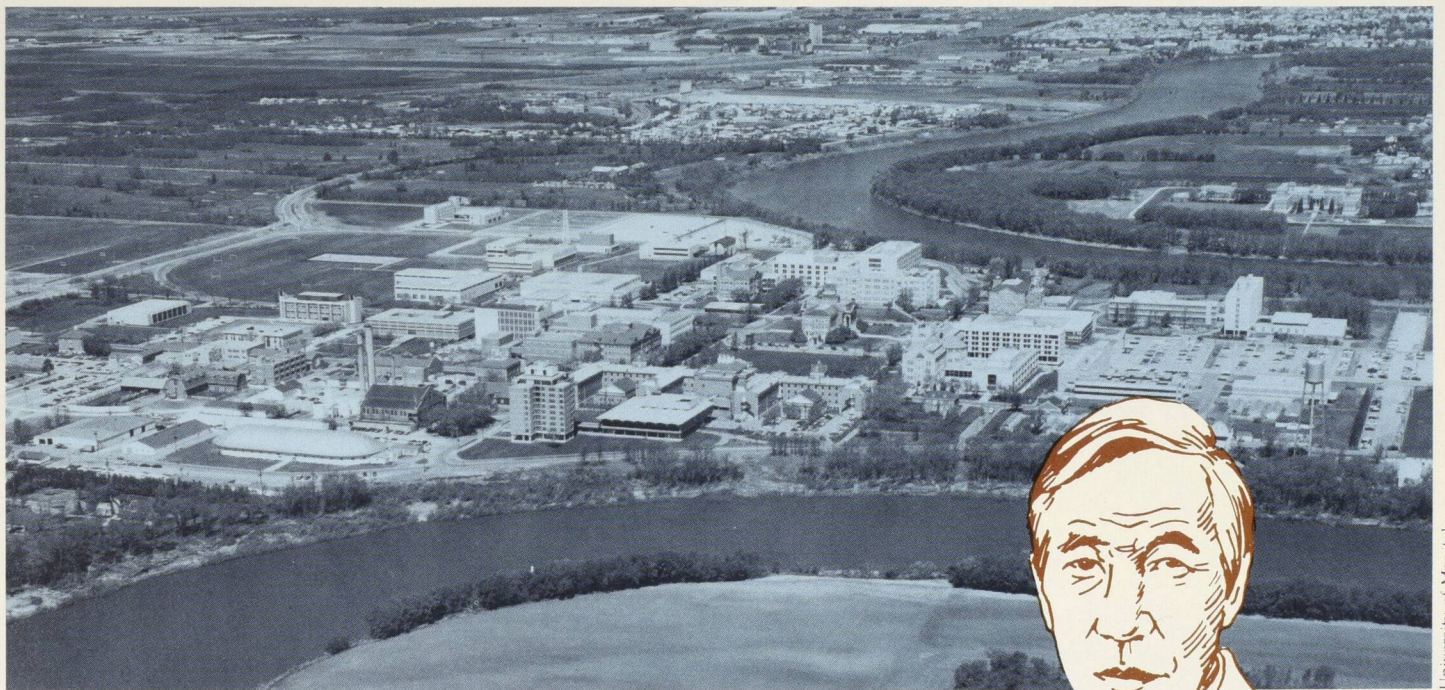


Alii Kurtis

*Gregor Mendel (1822-1884) was an Austrian monk who experimented with peas to produce new plant varieties. By carefully observing single characteristics through several generations, he established the science of genetics — the study of how particular characteristics are passed from generation to generation.*

cultural research such as that underway at the University of Manitoba holds the best promise of achieving practical results within the foreseeable future.

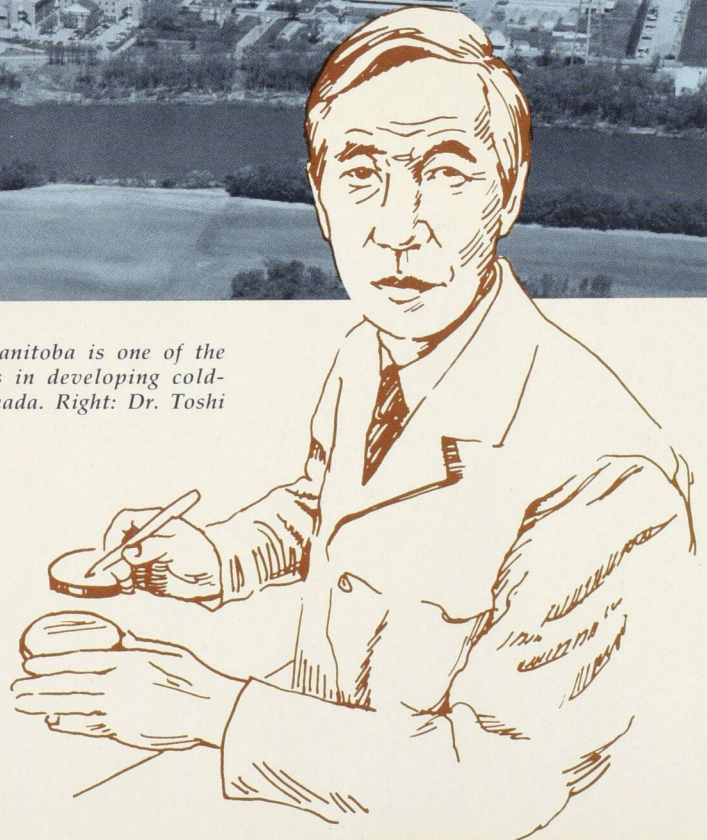
Selective plant breeding is certainly not new. By about 5000 years ago, our ancestors had domesticated all the major cereals, grain legumes, and root crops that remain our principal sources of food to this day. The foundations of modern scientific plant breeding, however, were laid in the 19th century. The major contributor was Gregor Mendel, the Austrian monk who died almost 100 years ago on January 6, 1884. Mendel's interest in plant breeding was aroused by experiences on his



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reported that scientists will soon be able to combine genes from unrelated species to produce self-fertilizing and disease-, insect-, and cold-resistant 'superplants.' However, scientists actually involved in this research are far less sanguine. For instance, Dr. Toshi Kaneda, head of a million-dollar-a-year project exploring the application of genetic engineering to crop improvement at the Alberta Research Council, describes the work as "long-term and high risk," and predicts that practical applications are unlikely within the next 20 years. Most experts agree that conventional agri-

*The University of Manitoba is one of the active research sites in developing cold-weather crops in Canada. Right: Dr. Toshi Kaneda.*



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