

## The Settlers



Three generations of Croatian settlers in Kenaston, Saskatchewan, c. 1910.

The first Indians came to Saskatchewan about 8,000 years ago. Another wave from the eastern forests arrived about 5,000 years later. The first white man, Henry Kelsey, a surveyor for the fur companies, came in 1690, and the French Canadian explorers, La Vérendrye and his sons, arrived by way of the Great Lakes in 1733. The Chevalier de la Corne built Fort St. Louis twenty years later and planted the first prairie corn.

Occasional Englishmen wandered in during the last half of the eighteenth century, and in 1876 and 1877 the Sioux, fleeing from the Dakotas after destroying Custer and his men at the Little Big Horn, moved in and were pacified by a handful of RCMP. The Canadian Pacific brought settlers in increasing number, and the first elected Legislative Assembly of the Northwest Territories met in Regina in 1888. For the next two decades the immigrants from Europe poured in, and Saskatchewan became a Canadian province in 1905.

## Research and Development

The Saskatchewan Research Council turns milkweed into fuel and chaff into cattle feed. It uses snow to save energy and the province's natural refrigeration to get the salt out of water.

The Council was established by act of the

Legislative Assembly in 1954. It has eighteen members and a summer staff of around 250. It has five divisions—Chemistry and Biology, Engineering, Geology, Industrial Services and Physics—two pilot plants, a remarkable chemical analytical laboratory and a nuclear reactor, called Slowpoke, also used for analysis.

It received \$2,728,000 from the provincial government last year and over \$4 million in fees from more than 250 private and public clients.

Its scientists have:

- Conducted a five-year study on the use of straw and chaff as fodder. It was found that ammoniating them made them useful for animal feed and that the chaff was particularly nutritious for sheep. They also found that when a nitrogen fertilizer was applied to the straw early in the season its protein content increased significantly and it was more digestible. Sunflower residues showed high feed values, but unfortunately Saskatchewan does not grow great crops of sunflowers.
- Found that tall patches of standing stubble accumulate snow, retaining moisture for winter fields. The higher crop yields provide a thirty-four to forty-four per cent better return on the fuel used for farm machinery. Legumes grown in rotation with normal crops save fuel by reducing the need for nitrogen fertilizer. It is believed that when the techniques are used together the moisture from the snow could compensate for the moisture depleted by the growing of legumes. The reduction or elimination of conventional tillage and the use of herbicides to control weeds also greatly reduce the fuel required. The cost of the herbicides is considerably less than the cost of fuel.
- Discovered that winter dust in barns carries bacteria which causes diseases among farm animals. A computer model of an air-exchange system for a turkey barn is being developed to provide an optimum balance between air quality and energy saving.
- Created a simple, inexpensive, small-scale way to desalinate brackish ground water (of which the province has great quantities). It involves spray freezing, using the low winter temperatures.

In conjunction with the University of Saskatchewan, the Council is now studying the use of rapeseed oil in diesel engines. It also has a leading



The Chemistry and Biology and Physics Divisions of the Saskatchewan Research Council are located in Innovation Place, in the Saskatoon Research Park on the campus of the University of Saskatchewan.