

## Manufacturing

Manufacturing is a bright spot. Employment has remained constant at around 66,000 and capital investment rose 69.7 per cent last year. Manitoba's garment, furniture, food and machinery plants serve the expanding markets of western Canada and are suffering less from the recession than their eastern counterparts.

Winnipeg is a centre for the manufacture of aircraft components, buses and railway rolling stock, much of which is exported to the U.S.

## A Few Vigorous Words from the Government

Premier Howard Pawley of the New Democratic Party took office in the fall of 1981, succeeding Conservative Sterling Lyon. Mr. Lyon was a neo-conservative. Mr. Pawley is not.

In its 1982 budget address, the Pawley administration outlined its program for the immediate future:

- A \$23 million interest rate relief program to provide assistance to homeowners, farmers and small business operators.
- New job creation programs to stimulate employment in the short-run.
- A new residential rent control program.
- An increase in minimum wages.
- Major increases in assistance to municipal governments and school divisions to ease the property tax burden.
- An increase in Pensioners' School Tax Assistance.
- A continuation of the Hydro rate freeze.
- A \$17.5 million Beef Income Stabilization program.
- A freezing of University tuition fees and community college fees.

## How to Keep the Wheat from Rusting

The first prairie farmers had little going for them except hope, in some cases desperation, and a handful of seed. The weather was unlike any they had known—long winters, extreme temperatures and limited rainfall. Plants with shallow roots died in the summer. A crop planted too soon would be killed by the frosts of spring, and one that took too long to ripen would be killed by the frosts of fall.

The first Manitoba farmers (the first on the prairies) learned by trial and error and the quick learners survived. Their descendants are more fortunate. Manitoba has been the research centre for grain farmers for most of the century.

The Winnipeg Research Station of Agriculture Canada began in 1925 as the Dominion Rust

Research Laboratory. The original building, a relatively small but handsome brick structure, now contains the complicated instruments used to measure the quality—the protein content and flour yield—of grain samples sent in by breeding stations across Canada.

Across the road is the research centre's main building, modern and much bigger.

The first laboratory was concerned, as the name suggests, with rust, a plant disease that plagued the prairies in the 1920s. Although the last major epidemic was twenty-six years ago, it returns from time to time in more virulent forms, and the centre is still preoccupied with developing new rust-resistant strains.

Barrie Campbell, the ranking wheat breeder in Canada, has supervised the introduction of seven wheat varieties since he joined the Winnipeg facility in the 1940s. When he arrived the staff was developing Selkirk, the variety that would be used to beat back the rust epidemic of 1956.

Today most prairie farmers growing bread wheat use seeds developed by him and his associates. The most popular one right now is Neepawa, which was sown in 61.7 per cent of the 23.75 million prairie acres in bread wheat in 1980.

The development of new strains involves a team of experts—entomologists, chemists, geneticists and pathologists—and years of crossing, growing, testing and winnowing.

The first step is arranging an epidemic. Gordon Green, a colleague of Campbell's and an expert on cereal diseases, started one in 1980 at the centre's field operation at Glenlea outside Winnipeg.

It affected some 40,000 plants. The few that rejected the rust were selected and cross-bred. They will be cross-bred again and again.



*Dr. Barrie Campbell in the rust nursery.*