

## 5.6 NEW ZEALAND

**N**ew Zealand has a total population of 3.4 million located on three islands that contain 267,000 square kilometres. New Zealand invests approximately 1.4 percent (1987) of its GDP in R&D. Its GDP in 1988 was NZ\$59.2 billion (C\$40 billion). ● ●

### TECHNOLOGY TRENDS

The bulk of R&D is conducted in government supported laboratories and research institutions. Therefore, the research objectives of the Department of Scientific and Industrial Research (DSIR) can be considered to reflect the objectives of government R&D policy.

### KEY TECHNOLOGICAL STRENGTHS

These include:

- agricultural biotechnology
- compressed natural gas technology

### KEY R&D SUPPORT PROGRAMS

A main program is:

*The Development Finance Corporation  
Applied Technology Program*

This program spent approximately NZ\$3.9 million in 1985/86 to assist New Zealand industry undertake R&D.

### KEY ORGANIZATIONS

The principal technology development organizations are: Department of Scientific and Industrial Research (DSIR). DSIR is New Zealand's main government research organization and also New Zealand's major plant breeding organization conducting studies in molecular genetics, biochemistry and plant process engineering. DSIR also conducts research into:

- industrial chemistry and biotechnology (eg. bioprocessing, microbial cultures, insect bioassays, and fermentation)
- physics and mathematics (eg. metals corrosion, new ceramics, radioactive tracers, and materials characterization)

- mechanical engineering (eg. alternative fuels technology (methanol), biomechanics, advanced production technologies)
- electronics and information technology (eg. machine vision, digital communications, satellite image processing, expert systems, chip development)
- ecological science (eg. animal and plant identification, pest management, plant diseases)
- land and such resources (eg. soil and rock mechanics, waste and efficient disposal and geotechnical investigations)
- water science and resources (eg. groundwater studies, river hychology and fish habitat assessment)
- earth sciences (eg. ultra-trace metal analysis, geological well logging, seismic monitoring)
- atmospheric studies (eg. greenhouse effect and ozone levels)

### TECHNOLOGICAL OPPORTUNITIES FOR CANADIANS

The main opportunity areas are in agriculture and animal products.

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