

involving food industry representatives, the Ontario government, labour unions and the University of Guelph.

The efficiency of R&D spending in agricultural and food research is further enhanced through the Canadian Agricultural Research Council (CARC), a national body of research and development professionals organized into expert committees that advise public and private sector R&D organizations and investors. CARC also maintains an inventory of Canadian agricultural and food research projects to assist researchers in partnering and obtaining maximum value from complementary research activities.

FERMENTATION

These R&D linkages and alliances among the major nodes of scientific expertise and technology have been a strong contributing factor in the development of leading food products and technologies in Canada. For example, Canada enjoys a strong position of leadership in fermentation technologies and products used in the manufacture of brewery products, wines and spirits, bakery products, dairy products and a range of other fermented food products. Much of the research and development in this field is centred in and around Agriculture and Agri-Food Canada's St. Hyacinthe Food Research and Development Centre in Quebec.

Canadian-based food and beverage manufacturers are taking advantage of this expertise to compete against international producers. Canada's leadership in dairy food science and fermentation technologies is allowing Canadian dairy processors to develop made-in-Canada products that compete successfully against an ever-growing array of imported cheeses and other dairy products. A Canadian firm is the leading

global supplier of yeasts and related products. Canada's malting industry also leads the world as a preferred supplier of the highest quality barley malt for brewers and distillers.

FOOD IRRADIATION

Canada offers unique capabilities in food irradiation technologies. Nordion International Inc., a Canadian company, is the primary supplier of food irradiation equipment and has installed more than 170 industrial irradiators in more than 40 countries. Through its Whiteshell Research Facility in Manitoba, Atomic Energy of Canada Limited offers a unique expertise in radiation processing of foods and other agriculture products. The facility is equipped with an accelerated-electron beam irradiator to meet either research or pilot scale needs.

The Food Research and Development Centre in St. Hyacinthe, Quebec has a pilot scale cobalt-60 irradiation for research and development purposes.

Commercially, food irradiation is still used in a limited number of food and agriculture products in Canada and around the world. But with the continued technological advancements, food irradiation will play a more important role in the industry. For example, in 1991, the United States approved the irradiation of chicken meat to eliminate salmonella.

BIOTECHNOLOGY

This collaborative approach is highly in evidence in the case of biotechnological research and development related to agriculture and food. This activity is being conducted at three major clusters located in Saskatchewan, Ontario and Quebec. For example, Canadian research scientists are

“The future for the Canadian food industry lies in value-added products, and the challenge in developing value-added is to look for both food and non-food applications of our products and technologies.”

Don Murray
President and CEO
Guelph Food and Technology Centre