



Agriculture and
Agri-Food Canada

Agriculture et
Agroalimentaire Canada

Portraits of success

Canadian Adaptation
and Rural Development Fund
(CARD II)

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Message from the Minister

As we look back at eight years of the Canadian Adaptation and Rural Development (CARD) program, CARD-funded regional and national initiatives have had a significant impact on the Canadian agricultural sector. Each of the more than 5,000 CARD-funded initiatives has its own story to tell and pays testament to the ingenuity of the people that have managed these projects. This is something of which I am very proud.

Many changes have occurred in the agricultural policy landscape since 1995 when CARD was created from the recognition that domestic and international structural changes would place increasing pressures on the agriculture and agri-food sector in Canada. Adaptation programming was aimed at helping to offset some of the impact of the reform of agricultural and transportation policies, changes in international trade obligations, and rising fiscal constraints. The second generation of CARD, which began in 1999, addressed the need to respond to the changing global marketplace and to encourage the sector to focus on national priorities.

Canadian agriculture is now entering a new phase. Federal, provincial and territorial governments are working together on the implementation of the Agricultural Policy Framework (APF), a comprehensive roadmap to address the key challenges currently facing the sector, with the goal of making Canadian agriculture a world champion in food safety and quality, innovation, and environmentally-responsible production. While CARD has played a key role in helping the agriculture and agri-food sector adapt to domestic and global challenges, the program has also provided Agriculture and Agri-Food Canada (AAFC) with valuable experience in dealing with the many pressures facing the sector. Indeed, CARD has played a pathfinding role which has contributed to the development of comprehensive programming under the APF and has contributed to its design. Work is currently under way to explore future

programming needs beyond CARD II. AAFC will be working closely with the sector and other stakeholders over the coming months on the development of new pathfinding programming that will advance the sector and keep Canada at the leading edge of developments in the global marketplace.

CARD II Portraits of Success highlights some of the achievements that have made a difference for our producers, processors, and agricultural communities. While the success stories featured in this report are only a small sample of the projects that CARD has made possible, they demonstrate the diversity of ideas, innovative approaches, and positive outcomes that have emerged from the people in the agriculture and agri-food industry.

Lyle Vanclief

CARD—Making a Difference in Canada's Agriculture and Agri-Food Sector

Since 1995, the Canadian Adaptation and Rural Development (CARD) fund has been providing assistance aimed at helping the sector thrive. Since its inception, CARD has been an innovative example of how federal funding can leverage industry involvement that generates real benefits for the agriculture and agri-food sector.

An Investment in the Future

Change is constant and the ability of Canada's agricultural and agri-food sector to anticipate and respond to change will determine the health and vibrancy of the sector in years to come. Investments in new technologies, education and training, and sustainable agricultural practices today will produce significant dividends tomorrow and for generations beyond. The CARD fund makes good business sense. This is because the funds invested by CARD help to leverage additional investments from industry.

CARD has invested approximately \$450 million to help Canadians meet and exceed the evolving demands of consumers, adapt to advances in technology, and compete against other nations in markets around the world. This money has helped to support more than 5,000 agriculture and agri-food projects in communities across Canada. This report contains a sampling of some of these projects.

A History of Success

Few could have predicted the level of CARD's success and the positive impact it has had on agricultural initiatives and rural communities. CARD I, which took place between 1995 and 1999 was only the beginning. CARD II (1999 to 2003) saw a renewal of the program's objectives and focussed on priorities identified by the industry. The decision to extend CARD II into its fifth year until 2004 is a reflection of the important role that the program has played in the sector, and enables AAFC to determine the program's future direction.

CARD's Innovative Funding Approach

CARD has operated under a \$60 million per year funding formula—\$35 million, or 58 percent, is earmarked to support national initiatives that benefit the entire sector from coast to coast. The remaining \$25 million, or 42 percent, is distributed at the regional level through industry-led adaptation councils in each province and territory to fund regional projects.

National programs and projects are managed by a wide spectrum of Canadian organizations, industry groups, and non-profit organizations. Program managers provide efficient administration through their own networks and are accountable for meeting CARD's goals.

The 14 regional adaptation councils follow CARD's criteria and adhere to national priorities, yet have the flexibility to determine how CARD's goals can best be met by funding projects in their regions.

CARD support is focussed on those initiatives that promote co-operation, and the formation of strategic alliances and partnerships among individual organizations, industry sectors, and rural stakeholders. Priority is given to projects where there is direct or in-kind financial support from industry.

CARD's flexible funding formula has allowed the program to support both major national programs and small community projects. For example, the Canadian Agri-Food Research Council has allocated \$4-million in CARD funds to support several research projects aimed at addressing knowledge gaps in the understanding and measurement of agricultural greenhouse gas emissions and to develop technologies to reduce these emissions. Much smaller investments, however, also have the potential for big dividends. CARD funding has, for example, helped to produce a children's storybook that is designed to encourage young readers to think about agriculture as a possible career.

The Impact of CARD

The Canadian agriculture and agri-food sector knows best where funding dollars can have the biggest impact. CARD invests in six priority areas set out as a result of nation-wide consultations with the industry: research/innovation; human resource capacity-building; capturing market opportunities; environmental sustainability; food safety and quality; and rural development. These priorities cut across all of CARD's funding decisions, whether CARD is supporting sweeping nation-wide programs or specific regional ones.

Environmental Sustainability: Preserving the Environment for All

CARD funds projects that support long-term sustainability and pioneering of safe, environmentally friendly ways to make the best use of Canada's agricultural resources. This means balancing the protection of the environment with robust production, and developing innovative new "green" products that today's savvy consumers demand.

- In British Columbia, riparian management practices are taking hold throughout the Chilako Valley as ranchers apply techniques to reduce the impact of farming activities on the natural environment, like encouraging cattle to water at a single site and planting grasses and other plants along the banks of the Chilako River.
- Quebec producers have a new biopesticide option available to help fight pests that attack sweet corn and other crops. The new biopesticide formula has proven to be effective in the field for longer periods of time than regular products, leading to a reduced number of applications per year, and cost savings to farmers.
- Stockpiles of outdated and unuseable crop protection products that were posing a hazard to both human and environmental health in Saskatchewan and Newfoundland were collected from farms and warehouses and disposed of in an environmentally sound manner, much to the satisfaction and relief of farm residents.

Capturing Market Opportunities: Aiming for Growth and Prosperity

Successful businesses are constantly on the lookout for ways to increase their share of the market. CARD-funded programs help Canadian suppliers capture new market opportunities, both at home and abroad.

- Since the "value chain" approach to tracking, tracing, and implementing food safety and quality production and processing practices was introduced in Alberta, other provinces have adopted value-chain programs as a way to enable the agri-food industry to be more competitive globally through lower cost, higher quality, niche market food products.

- Fine food and beverage operators expanded their market for Nova Scotia specialties like lobster, chowder, and Nova Scotia wines by hosting an exhibition in London, England, aimed at food buyers and journalists.
- In New Brunswick, a new “Eco-Logic” label was launched to promote a line of products that supports the safeguarding of the environment and production of safer foods, which will translate into increased sales for producers.

Human Resource Capacity-Building: Skills that Open New Doors

Top-notch training and new skills are essential for farm leaders of tomorrow. CARD invests in skills development programs that the industry needs to improve productivity, including leadership and business management training, as well as financial and environmental planning programs.

- The Canadian Farm Business Management Council has developed various information products aimed at helping Canadian farmers to develop effective succession plans and facilitate the transfer of farm businesses to the next generation of Canadians.
- CARD is an active partner in supporting 4-H programs across Canada—a program with over 34,000 farm and rural youth members, supported by 10,000 volunteers. The 4-H programs provide youth with important life skills and increase their technical agricultural knowledge.
- Canada’s first pork industry interpretive centre opened in Saskatchewan with the aim of increasing awareness among the public about pork producers’ contribution to the economy and dispelling some of the myths about intensive livestock production.

Food Safety and Quality: Creating a Safer Food System

Consumers everywhere are calling for stronger assurances that the food they buy is wholesome and safe. At the same time, demand continues to grow for new and exotic products, such as organic foods grown without pesticides and herbicides. CARD helps develop the tools needed to mitigate food safety risks and prevent food safety problems before they occur, and invests in programs that equip Canadians to handle outbreaks of disease or pathogens.

- The Canadian Food Safety Adaptation Program has undertaken various projects that help raise awareness of Hazard Analysis Critical Control Point (HACCP) principles in food production, that provide tools for individual companies to use in the design of HACCP systems in their establishments, and that refine existing HACCP systems.
- The Canadian On-Farm Food Safety (COFFS) Working Group has launched a program to train on-farm food safety auditors. These auditors will help producers to improve their on-farm food safety practices by conducting assessments of these practices based on HACCP principles.

Research and Innovation: Pioneering a New Era

Scientific breakthroughs are ushering the agriculture industry into a new era, as innovative methods and technologies allow living things to work differently. Through collaborative research ventures, CARD supports innovative research that looks beyond traditional crops and production methods to develop new products and more efficient and safer ways of producing them.

- Agricultural waste products such as animal fats, vegetable oils, and seed oils have been successfully turned into biodiesel fuel, thereby increasing the demand for agricultural products such as soybeans and canola, and producing a more economical and environmentally safe alternative to regular diesel fuel.
- Researchers have demonstrated that DNA vaccines could become a more effective vaccine system than current conventional vaccines. The Veterinary Infectious Disease Organization has generated the interest of a commercial company to continue research to develop a commercial DNA vaccine product.

Rural Development: Transforming the Rural Economy

Rural communities are fundamental to Canada's economy, generating 40 percent of exports and more than a quarter of Canada's jobs. Yet rural Canadians face substantial challenges, as rural economies are traditionally resource-based and cyclical, and they are often remote from services and markets. CARD funds are used in projects that have the potential to transform and diversify the rural economy.

- Remote northern regions typically lack an adequate agriculture infrastructure, which must be built from the ground up. In the Yukon, bulk fertilizer storage bins were established in various locations in the territory, enabling producers to purchase and transport fertilizer in bulk and save money.
- Producers and others in the Peace River region of British Columbia and Alberta have joined forces to promote the region's food products and to develop the necessary skills among entrepreneurs to develop new commercially viable products and services for the area.
- To increase the number of tourists to the Prescott-Russell region of eastern Ontario, a promotional campaign was held that focussed on nature-oriented tourism with a mixture of francophone culture and native Canadian history. The growth in agri-tourism provides this and many other rural communities with new sources of income and helps to diversify rural economies.

Celebrating CARD Successes

This report provides a snapshot of some of the programs and projects that have been made possible by the CARD fund. The profiled programs and projects have been chosen from among the 5,000 CARD-funded initiatives because they are representative of the innovation and hard work demonstrated by Canadians and that have helped to "make a difference" for Canadian producers and processors and agricultural rural communities. Most of the profiled programs and projects have been funded under CARD II; some began prior to 1999 and are ongoing to the present.

- In “Portraits of National Initiatives,” a sampling of projects and initiatives that have been carried out through various national programs and projects are profiled.
- In “Portraits of Regional Adaptation Council Initiatives,” a sampling of projects administered by each of the CARD-sponsored adaptation councils are profiled.

For a more detailed overview of CARD success stories, please visit the CARD Web site at: www.agr.gc.ca/card-fcadr/.

Portraits of National Initiatives

This section provides a sampling of projects managed by national organizations or projects of a national scope.

DNA Vaccines Effective in Controlling Livestock Disease

CARD Priority: Research/innovation
CARD Funding: \$1,500,000 (out of project budget of \$3,750,000)

The Veterinary Infectious Disease Organization, through the University of Saskatchewan, has been researching the development of new DNA vaccines that could be marketed to Canadian agricultural producers in an effort to help control livestock diseases and ultimately lower production costs.

CARD funding of \$1.5 million was crucial in demonstrating that DNA vaccines could become a more effective vaccine system than current conventional vaccines, and for generating the interest of a commercial company to continue research to develop a commercial DNA vaccine product. The research is based on the use of DNA sequences to stimulate innate immunity that provides rapid protection against infectious disease outbreaks. The effectiveness of conventional vaccines is also enhanced by stimulating specific immunity when DNA vaccines are combined with conventional vaccines.

Zero-Till Cultivation Improves Yields and Is Better for the Environment

CARD Priority: Research/innovation
CARD Funding: \$180,000

Zero-till cultivation, a system that allows producers to plant seeds without breaking up the ground, has been shown to improve the long-term health of soil, reduce erosion, and requires less fuel. This is good news for environmentally conscious farmers who look for ways to minimize negative impacts on the environment from farming activities.

While zero-till cultivation requires specialized equipment to get seeds in the ground and to inject manure without breaking up the earth, more and more farmers are using the system that pays off in the long run by better maintaining nutrients in the soil and creating a gradual increase in yields. Farmers also save on fuel and labour costs.

A research study to demonstrate the benefits of zero-till cultivation and to provide advice to farmers on how to manage rotations and manure applications, should further expand the use of zero-till cultivation. It's part of a cropping systems research program, for which CARD has provided funding of \$180,000 to date. "We are looking at how farmers can maximize yields and minimize impact on the environment," says Dr. Valtcho Jeliakov of the Nova Scotia Agricultural College. "The system we are working with has been shown to help trap carbon in the soil and reduce greenhouse gases. That's an environmental plus."

Statistics on Agricultural Injuries Help in the Design and Implementation of Safety Initiatives

CARD Priority: Human resource capacity-building
CARD Funding: \$160,000 per year for 8 years (out of project budget of \$320,000 per year for 8 years)

CARD funding has enabled the Canadian Agricultural Safety Association (CASA) to collect and interpret information on fatalities and hospitalizations due to injuries resulting from agricultural activities in Canada. Under the Canadian Agricultural Injury Surveillance Program (CAISP), statistics are collected from hospitals and coroners offices in Canada, and summarized in reports that CASA and the agricultural safety community can use to design and implement safety initiatives.

The information obtained under this program is quoted widely in the media and has raised awareness of the severity of the problem of agricultural injuries and the importance of intervention strategies. The statistics are also beneficial for tracking and monitoring trends related to agricultural injuries.

In 2002 the CAISP received the Research Award of the Year from the U.S. National Institute for Farm Safety. Other industrial sectors, including those from the U.S. and Australia, have expressed interest in the CAISP model as a way to deliver injury prevention program within their industries.

Lifetime Leadership Program Nurtures Leaders for Agriculture of the Future

CARD Priority: Human resource capacity-building
CARD Funding: \$483,756

Like other sectors of Canada's economy, agriculture must have effective leaders to deal with emerging issues such as globalization, technology, and risk management. The Canadian Agriculture Leadership Program (CALL) responds to this need by providing an intensive curriculum on personal skills (such as public speaking), evaluation of strengths and weaknesses in leadership, new information technology, and an analysis of issues facing Canadian agriculture. It is expected that graduates of CALL will play leading roles in Canada's agri-business industry as well as in their rural communities.

As the only national leadership program in the agricultural sector, CALL has received international recognition for the caliber of its program. CALL 2002 was delivered jointly by the University of Saskatchewan and Université de Laval, with support from the CARD-funded Canadian Farm Business Management Council. A total of 28 participants were enrolled in the program, which was comprised of self-directed study in both English and French via the Internet, along with 6 seminars in locations across Canada and in Washington, D.C.

Destination Inspection Service to Undergo Renewal

CARD Priority: Capturing market opportunities
CARD Funding: \$392,375 (out of a project budget of \$484,375)

Destination inspection services provide a mechanism for buyers and sellers to negotiate the true value of imported products by assessing the quality of the products. These services help to ensure a fair trading system that benefits all partners.

CARD funding has enabled the Fruit & Vegetable Dispute Resolution Corporation (DRC) to undertake a project aimed at broadening the scope of the current destination inspection service in Canada and modifying the way in which the service is delivered. This initiative will maximize benefits to Canadian growers and dealers of fresh fruits and vegetables in Canada.

The DRC has completed profiling the current destination inspection service offered by the Canadian Food Inspection Agency (CFIA); has conducted industry consultations to determine the current service level needs and future inspection service requirements; has identified various inspection service agents and solicited information on alternative service delivery options; and analyzed the research conducted to date on development of alternative models. The DRC is currently finalizing the documents that will be presented to the current inspection service provider and that will be used to communicate to industry the service delivery options.

Auditors Get Trained in Food Safety

CARD Priority: Food safety and quality
CARD Funding: \$141,900

In February 2003, the Canadian On-Farm Food Safety (COFFS) Working Group represented by primary production agriculture industry groups—launched a program to train on-farm food safety auditors.

The Canadian On-Farm Food Safety Program is a voluntary initiative undertaken by producers in the major commodity sectors spanning every region in Canada. Under this industry led initiative, producers are encouraged to implement specific measures on their farms and ranches to ensure the safety of their products, right from the beginning of the food chain. Once implemented, Trained auditors will help participating producers by conducting standards-based assessments of their on-farm food safety practices. The auditor training program, developed by the Institut de technologie agroalimentaire de Saint-Hyacinthe, with financial assistance from the CARD program, focusses on food safety issues and auditing practices. It is based on the curriculum guidelines for Hazard Analysis Critical Control Point (HACCP) training material developed by the Canadian Food Inspection Agency and on the ISO audit training requirements equivalent to ISO 10011. The course involves 35 hours of in-class time and an additional 15 hours of assignments prior to the examination. Most on-farm industry associations recommend that individuals who audit on-farm food safety programs complete this introductory course and then eventually qualify under a commodity specific course as required.

Program Recognizes Exceptional Environmental Stewards

CARD Priority: Environmental sustainability
CARD Funding: \$600,000 (out of project budget of \$953,000)

CARD funding helps to support a national stewardship recognition program, Countryside Canada. This program recognizes that farmers and ranchers care about their land, and that given the choice, they will do what is right for wildlife and wildlife habitat.

Often the difference between good stewardship and poor land use is knowledge—an awareness of the best practices for managing the land in harmony with nature. Countryside Canada is working to increase that awareness through activities that include: conducting a survey to establish a benchmark of the current level of knowledge and the conservation practices performed by agricultural landowners; developing recognition awards of exemplary private land stewardship practices; and communication and promotion of best practices.

Future initiatives may include investigating the establishment of a Governor General’s Annual Stewardship Awards program and a “Stewardship Week” to recognize and profile stewardship successes. It is hoped that these and other initiatives will increase the profile and understanding of the contribution that farmers and ranchers make to conservation, the environment, and quality of life.

Research Will Help Reduce Agricultural Greenhouse Gas Emissions

CARD Priority: Environmental sustainability
CARD Funding: \$4,000,000 (out of project budget of \$7,395,058)

The Canadian Agri-Food Research Council (CARC) has successfully used \$4 million in CARD funding to help support research projects aimed at addressing knowledge gaps in the understanding and measurement of agricultural greenhouse gas (GHG) emissions, and to develop technologies to reduce GHG emissions. CARD has helped in 15 climate change research projects, supporting the work of 15 students and 2 research chairs, and has led to improved collaboration and networking among climate change researchers. These efforts are expected to lead to better crop and livestock nutrient management, manure management, carbon sequestration, and use of biofuels.

Future activities are expected to build on the efforts of recent years, specifically in the areas of developing new expertise, developing science network and industry matching for climate change in agriculture, and developing workshops and communications on climate change.

Canadian Food Safety Adaptation Program

CARD Priority: Food safety and quality

CARD Funding: \$11.4 million

The Canadian Food Safety Adaptation Program brings together different sectors of food production to develop and refine food safety programs and systems. With the help of CARD funding, two projects—the Supply Chain Food Product Recall workshops of the Food and Consumer Products Manufacturers of Canada (FCPMC), and the National Red Meat Microbiological Baseline Study of the Canadian Meat Council (CMC)—raise awareness of Hazard Analysis Critical Control Point (HACCP) principles to improve food safety in food production, provide tools for individual companies to use in the design of a HACCP system in their own establishments, and provide information to refine existing HACCP systems.

The FCPMC, in partnership with other organizations, developed training materials and coordinated a series of 10 food product recall workshops in 10 cities across Canada, reaching nearly 1,300 industry participants. The workshops were intended to not only raise awareness, but also provide participants with tools and information to enhance their product recall plans and reduce the necessity for food recalls. Based on the demand and outstanding success of these workshops, further funding for an additional 11 workshops has been approved.

The CMC, in partnership with other organizations, is conducting a National Red Meat Microbiological Baseline Study that will give the industry information against which they can measure the effectiveness of their food safety program and new food safety initiatives. One of the study's many objectives is to establish performance criteria and food safety objectives required by mandatory HACCP-based food safety programs. The Red Meat Microbiological Baseline Study is the first of its kind ever conducted in Canada.

The Technical Director of the CMC says, “We are appreciative of the funding from the [CARD supported] Canadian Food Safety Adaptation Program which enable the launch of this comprehensive project in more than 100 red meat establishments across Canada. The government funds, in addition to significant in-kind contributions from both government and industry, proved to be a powerful, successful combination for a project of this magnitude.”

Apple Growers Develop National Standards to Produce Safer, Better Apples

CARD Priority: Food safety and quality

CARD Funding: \$151,500 (out of a project budget of \$301,500)

The Canadian apple industry faces a number of challenges related to regaining and holding its share of the domestic market for apples. These challenges are due to oversupply of apples on the world market, combined with increasing global competition, and customer demand for assurances that good agricultural practices are used.

To address these pressures and increase the consumption of Canadian-grown apples, the Canadian Horticultural Council, with the help of the CARD program, developed national Integrated Fruit Production (IFP) principles, guidelines, and standards for the Canadian apple industry. These guidelines and standards address various aspects of ecologically-sound fruit production and environment-friendly farm practices.

With the adoption of the broad national standards to reflect the climates and pest pressure of each of Canada's four major apple growing regions, apple growers now have a comprehensive checklist against which progress can be checked and improvements measured.

Widespread adoption of IFP protocols is expected to enhance the quality of Canadian-grown apples and provide assurance that production methods are environmentally sound. The record-keeping aspects of the IFP protocols will contribute to effective traceability across the supply chain and assure consumers that Canada's food supply is among the safest in the world.

Rural Tourism Conferences Aimed at Improving Skills of Agri-Tourism Operators

CARD Priority: Rural development
CARD Funding: \$80,465

Agri-tourism provides a means of adding value to farm businesses, supplementing income, and strengthening the rural economy. CARD funding helped sponsor more than 340 people who attended two "Beyond City Lights: Rural Tourism" conferences in Ontario. The conferences provided the opportunity for participants to network with other agri-tourism operators, generate new ideas, and share experiences. Presentations and workshops explored the current status and future trends in agri-tourism, and provided insights of other entrepreneurs involved in the industry. Participants gained new skills and insights into the possibilities offered by agri-tourism, learned about the people that can help individual businesses, and acquired knowledge about partnering opportunities.

Forums Capture Voice of Rural Youth

CARD Priority: Rural development
CARD Funding: \$44,775

The Canadian 4-H program reaches out to both farm and non-farm rural Canadian youth, concentrating on technical skill development related to agriculture as well as personal development of life skills. Members of 4-H participate in a wide variety of projects relevant to young people, including projects that develop entrepreneurial and leadership skills related to the rural and agri-food sector; that contribute to the development and training of 4-H leaders; and that raise awareness regarding rural and agriculture and food related issues such as farm safety, food quality and nutrition, sustainability of natural resources, and the relationship between the agri-food sector and the environment.

The Alberta 4-H Branch participated in the “Your Choice/Your Voice Youth Forums,” an initiative spearheaded by the Alberta government during the millennium year to solicit input from Alberta youth on a broad range of issues. CARD funding enabled the Alberta 4-H Branch to assist rural youth to attend each of the five forums held throughout Alberta, thereby helping to ensure that the concerns of rural youth were heard at these forums, and that their voices continue to be heard on various national and other initiatives.

Based on the forum discussions, a report was prepared that helped shape future 4-H programming and initiatives, including a renewed focus on using Internet technology as a way of reaching rural youth, as well as education and substance abuse issues.

Portraits of Regional Adaptation Council Initiatives

This section provides a sampling of projects administered by each of the regional adaptation councils.

Bulk Fertilizer Storage Improves Efficiency

CARD Priority: Rural development **Region:** Yukon
CARD Funding: \$105,000 (out of a project budget of \$219,905)

In response to a long recognized need to establish an agriculture infrastructure in the Yukon, CARD funding of \$105,000.00 has helped the Yukon Agricultural Association to lead a co-operative effort of Yukon producers to purchase six bulk fertilizer storage bins and set up suitable sites for these bins. The bins will enable producers to purchase and transport fertilizer in bulk, resulting in combined cost savings of about \$35,000.00 annually. Establishment of the fertilizer storage sites has had the added benefit of increasing membership to the Yukon Agricultural Association and increasing awareness of Yukon agriculture.

Strategy Aimed at Diversifying Peace Region Economy

CARD Priority: Rural development **Region:** British Columbia
CARD Funding: \$77,000

The Peace River region of British Columbia and Alberta is a prairie agricultural region that depends heavily on world commodity markets. In an effort by local producers and entrepreneurs to diversify into agri-food opportunities to generate additional income and jobs, a strategy for agri-food processing in the Peace region was developed and implemented. CARD funding helped to develop a Web site; education and training sessions; a regional trade show and a culinary challenge to promote and profile Peace region food products; implement a mentorship program for sharing ideas and successful approaches among entrepreneurs; and develop an awareness campaign that included a Peace-region logo, brochure, retail displays, and participation in retail and restaurant trade shows and promotions.

Continued diversification of the Peace region's agriculture industry is anticipated, as producers and entrepreneurs continue to work together to tap both local and e-commerce market opportunities, and develop the needed skills, products and services to be commercially successful.

Cooperative Spirit Benefits the Agricultural Sector and Environment in Chilako Watershed

CARD Priority: Environmental sustainability **Region:** British Columbia
CARD Funding: \$31,400 (out of a project budget of \$214,500)

The Chilako River is an important salmon-bearing river that is suffering from natural and man-made destruction, including erosion and flooding. Local ranchers and farmers are concerned about river flooding their land, while conservationists worry about destruction of the river's critical salmon spawning beds.

CARD has helped to fund a riparian restoration and management project that demonstrates solutions benefitting cattle, fish, ranchers, the environment, and the public. Among other things, the project has demonstrated the use of various techniques to encourage cattle to water at a single site with low impact on the riparian zone; to allow farm equipment to cross streams for the timely harvest of crops while avoiding damage to fish spawning sites; to provide off-site watering techniques to lessen stream bank trampling; to develop pasture management systems that allow sustainable use of the riparian zone by cattle; and riparian planting for erosion control. The Chilako Watershed Council, comprised of ranchers, conservationists, and enforcement officials, was formed so that additional collaborative projects could be initiated.

The project has received the Countryside Canada Environmental Stewardship Award, presented at the 2002 Canadian Federation of Agriculture annual meeting.

Community Program Improves Management of Riparian Areas

CARD Priority: Environmental sustainability **Region:** Alberta
CARD Funding: \$870,000 (out of a project budget of \$3,244,036)

Maintaining good water quality and healthy watersheds is an ongoing challenge for the agriculture industry. The Community Riparian Program is an umbrella program that funds individual community riparian-based projects in Alberta, and is coordinated jointly by the Alberta Management Habitat Program, Alberta Beef Producers, Alberta Environmentally Sustainable Agriculture, and Prairie Farm Rehabilitation Administration.

Assisted by the CARD program, the Community Riparian Program (CRP) is aimed at improving awareness and management of riparian areas by encouraging community-based resource management initiatives. The main types of activities supported by the program include assisting agricultural producers and community residents to develop local working groups within a watershed; developing information products to educate producers and others on ways to improve or protect riparian health; developing tools such as water systems, fencing and planting of vegetation; assisting communities to evaluate their progress; and retaining and applying best practices to ensure the continued improvement of projects. To date, over 27 projects have been funded through the CRP.

Value Chains Help Secure New Niche Markets for Agricultural Products

CARD Priority: Capturing market opportunities **Region:** Alberta
CARD Funding: \$340,000 (current phase)
(out of project budget for current phase of \$840,000)

Creating “value chains”—tracking, tracing, and implementing food safety and quality production and processing practices—is regarded as an effective way of assisting Canada’s agri-food industry in its international branding pursuits. Several CARD-sponsored value chain pilots have successfully secured new niche markets. Since the value-chain approach was introduced in Alberta in 1998, adaptation councils in Saskatchewan, Manitoba, and Ontario have also adopted value-chain programs.

The Alberta Value Chain Strategic Initiative is aimed at accelerating the formation of value chains in Alberta’s agri-food industry in order to be more competitive globally through the formation of lower cost, higher quality, niche market food products. Phase III of the program, now underway, includes education and awareness activities aimed at the industry, and promoting the merits and methodology of forming value chains. This includes participation at workshops and conferences, and development of “how to” handbooks and fact sheets, and a Web site.

Pork Industry Interpretive Centre and Viewing Gallery Opens

CARD Priority: Human resource capacity-building **Region:** Saskatchewan
CARD Funding: \$75,730 (out of project budget of \$1,061,000)

Thanks in part to funding provided by CARD, Canada’s first pork industry interpretive centre and viewing gallery opened to the public in 2003. The Prairie Swine Centre, a non-profit research corporation, built the Pork Industry Interpretive Centre and SaskPork Viewing Gallery in Elstow, near Saskatoon. The Centre is aimed at increasing awareness of pork producers’ contribution to the local, regional, and national economies, and dispel some of the myths about intensive livestock production.

The Centre will offer guided tours with interactive displays and viewing windows to describe the science, business, and human side of pork production. Among the Centre’s features is a “Pig Hall of Fame” display, which contains images of pigs from storybooks and cartoons, easily recognized by the Centre’s primary audience of 11-15 year olds. Visitors will also learn about pig anatomy and physiology at the “All About Pigs” and “See, Touch, Hear, and Smell” interactive displays, find out how pig manure is not waste through the “Pig Poop Cycle,” as well as learn about careers available in the pork industry.

Collection and Disposal of Unwanted Pesticides Reduces Environmental and Health Risk

CARD Priority: Environmental sustainability **Region:** Saskatchewan
CARD Funding: \$221,204 (out of project budget of \$460,363)

The disposal of toxic wastes is a challenge for all industries, including the agricultural sector. Obsolete, unwanted pesticides pose a variety of environmental and health hazards, especially to farm families.

With the help of CARD funding, the Crop Protection Institute implemented a pesticide cleanup program over a three-year period spanning 1999 to 2001. The program, which was managed by a multi-stakeholder group consisting of government, industry, and producers advertised collection dates to the farm trade via the media, retailers, and grower groups. Old pesticides were returned to retail outlets during specified periods, and a contractor picked up the waste product and disposed of the material in an environmentally acceptable manner.

The program successfully collected and disposed of 111,950 litres and 48,460 kilograms of unwanted pesticides that had been stored on Saskatchewan farms.

A similar project was also successfully completed in Newfoundland with the assistance of CARD funding.

Mechanical Berry Harvester Means Growth for Specialty Markets

CARD Priority: Research/innovation **Region:** Manitoba
CARD Funding: \$120,400 (out of a project budget of \$443,610)

Manually harvesting Saskatoon berries, cherries, and sea buckthorn berries and leaves is a slow and painstaking process. In response, the Prairie Agricultural Machinery Institute (PAMI) began looking for a safe and cost-effective way to harvest the berries.

CARD funding helped to develop and test a successful prototype for a mechanical berry and leaf harvester, showing promise that a commercial harvester can be developed and sold to producers to assist them in the harvesting process.

PAMI continues to modify and test its berry harvester, which currently demonstrates an improved productivity level of 20 to 30 percent. Before selling it to a manufacturer, PAMI is working toward a 40 to 60 percent productivity level.

New Technical Centre Promotes Canadian Malting Barley

CARD Priority: Capturing market opportunities **Region:** Manitoba
CARD Funding: \$200,000 (out of a project budget of \$2,286,916)

An increased demand for malting barley and malt created a need for improved marketing support and research on new varieties of barley with disease-resistant and good agronomic qualities. With the support of CARD funding, the Canadian Malting Barley Technical Centre (CMBTC) was established. This is a facility designed to foster research, and support the development, commercialization and marketing of Canada's malting barley, and malt and brewing industries.

The CMBTC, which officially opened its doors in Winnipeg in October 2001, is a non-profit, state-of-the-art pilot-scale malting and brewing facility. The facility enables customers to see what Canadian malting barley can do on a simulated plant-scale basis.

The establishment of the facility reflects a serious effort to assist Canadian farmers, breeders, and marketers in expanding the market for Canadian malting barley, and to develop new varieties of barley to meet the needs of international markets, including Asia, Latin America, and South Africa.

Canadian Technology Turns Agricultural "Waste" Into Fuel

CARD Priority: Research/innovation **Region:** Ontario
CARD Funding: Pilot phase received \$150,000 out of total project cost of \$929,000.
Second phase received \$1,000,000 out of total project cost of \$3,000,000.

The production and commercialization of biodiesel as an alternative fuel to petroleum diesel has traditionally been problematic due to the cost associated with its production, which is three times greater than production of petroleum diesel. The patented, Canadian-owned BIOX process turns waste products such as animal fats, vegetable oils, and agricultural seed oils into biodiesel, in the process producing a more economical and environmentally safe alternative to regular diesel fuel. Biodiesel can be produced from domestically grown oilseed plants such as soybean and canola as well as animal fats. The combined benefits of biodiesel are hard to beat: reduced dependence on foreign petroleum, increased domestic agricultural revenues, creation of jobs, and reduced environmental pollution.

With the help of CARD funding, the BIOX Corporation developed a pilot production plant with a 1 million- litre capacity, which demonstrated the production of biodiesel using the BIOX process on a commercial scale. Designs have also been developed for construction of 60 million- and 30 million- litre biodiesel production plants, which would mark the beginning of large-scale biodiesel production.

In 2002, the BIOX Corporation received the Canadian Agri-Food Award of Excellence for Innovation.

Setting the Standard for Environmental Farm Plans

CARD Priority: Environmental sustainability **Region:** Ontario
CARD Funding: \$16,542,880 (out of \$49,906,062 for four projects)

Since 1993, the Ontario Farm Environmental Coalition has been coordinating various activities designed to increase farmer awareness of on-farm environmental issues and develop farmer skills to meet the technical requirements of economical environmental management and protection of Ontario's agricultural resources. These efforts will ensure the viability of Ontario's natural resources and agricultural and agri-food sectors.

CARD has helped to build and strengthen the Environmental Farm Plan (EFP) program, which encompasses various activities aimed at assisting farmers to prepare Environmental Farm Plans. EFPs are documents voluntarily prepared by farmers to highlight environmental strengths on their farms, identify areas of environmental concern, and set goals and timetables to improve environmental conditions. With over 25,000 participants since the program's inception, the EFP program has been successful in helping Ontario farmers to adopt more environmentally-sustainable practices, has won international recognition for its success, and serves as the template for similar programs in other provinces/territories.

Approximately 1,700 workshops have been held to date across Ontario to raise awareness of EFPs and to provide training on how to prepare them.

Human Resources Management Training for Agricultural Employers and Employees

CARD Priority: Human resource capacity-building **Region:** Quebec
CARD Funding: \$13,662 (out of project budget of \$44,847)

The shortage of qualified workers and an excessively high employee turnover rate are impeding the expansion of agricultural businesses in the Beauce region in Quebec. To promote awareness among its members to current employment conditions and issues, the *Fédération régionale de l'Union des producteurs agricoles (UPA) de la Beauce* launched a pilot project, supported by the *Conseil pour le développement de l'agriculture du Québec (CDAQ)*, to offer services such as group consultations in human resources management, technical support and professional supervision.

A technical support club for human resources management, composed of approximately fifteen producers, was formed. The Club members participated in four conferences dealing with human resources management and eight co-development meetings, and were provided with fifteen days of individual coaching. "I realized that my leadership style was too overbearing for mature employees who have the skills needed to accomplish their duties," reported one participant.

Agricultural employers have applied the techniques they learned through the pilot project in the context of their own businesses, by developing wage policies and updating position descriptions. As a result of this initiative, it is anticipated that employers will be motivated to offer more competitive wages and working conditions in order to retain their qualified workers.

Traceability Assessment of the Bovine System, from the Stable to the Table

CARD Priority: Food safety and quality **Region:** Quebec
CARD Funding: \$300,000 over three years (amount represents total project budget)

In 2001, the province of Quebec decided to implement and regulate a system to trace cattle, “from the stable to the table,” by 2005. In support of this initiative, the *Fonds québécois d’adaptation des entreprises agroalimentaires (FQAEA)* embarked on a CARD-funded project to determine the current state of knowledge on traceability and the application rate of the related measures. The project also aimed to develop tools to disseminate information on this subject and to put in place simple, easily applied systems that are tailored to the Quebec context and that encourage competitiveness.

The FQAEA established a technical committee on traceability. This committee supervised the conduct of a study on the traceability in the agri-food processing industry and also published and distributed *Traçabulletin*, a new quarterly bulletin on traceability. The FQAEA intends to develop and distribute a traceability guide and generic models throughout the food processing sector, which it anticipates will increase awareness in the industry to the concept of traceability and will facilitate the implementation of traceability procedures that are harmonized with other safety and quality programs, such as the Hazard Analysis and Critical Control Point (HACCP) and International Organization for Standardization (ISO) programs.

Cooperative Launches Environmentally-Friendly “Eco-Logik” Label

CARD Priority: Capturing market opportunities **Region:** New Brunswick
CARD Funding: Up to \$121,273 (out of estimated project cost of \$291,946; project is not yet complete)

The Really Local Horticultural Cooperative launched a pilot project to increase the market share of horticultural products by establishing and promoting a new “Eco-Logik” label—a line of products that supports the safeguarding of the environment, better management practices, and the production of safer foods. With the help of CARD funding, the project trains growers about the new “Eco-Logik” guidelines; sensitizes the general public to the advantages of buying “Eco-Logik”-labeled foods; and identifies and implements methods to ensure the cooperative becomes self-sufficient.

Encouraged by positive feedback received from producers and consumers, the Cooperative intends to increase visibility of the products through a promotional campaign that will translate into increased sales for producers, and the eventual expansion of the label to other groups and areas in New Brunswick.

Toolkit Promotes On-Farm Safety

CARD Priority: Human resource capacity-building **Region:** Nova Scotia
CARD Funding: \$11,450 (out of project budget of \$27,000)

In an effort to reduce or prevent physical injury and financial losses that result from farm accidents and to ensure that farm operations meet the minimum standards set by Nova Scotia's 1996 *Occupational Health and Safety Act* and its regulations, the Nova Scotia Federation of Agriculture has developed and implemented a risk management and accident prevention program.

CARD funding has enabled the Federation to develop a comprehensive toolkit that includes a complete, step-by-step work site Inspection Guide for farm managers. Based on a disciplined approach to on-farm safety, the Inspection Guide describes the safe handling and operation of farm equipment, as well as the installation of proper barriers for animal holding and handling areas and other potentially dangerous areas, such as manure pits. Approximately 2,000 kits were printed and distributed to producers. The toolkit has been adopted by the Nova Scotia Department of Labour and is now used as the main resource in its training workshops for farm workers.

Quality Matters to Nova Scotia Pork Producers

CARD Priority: Food safety and quality **Region:** Nova Scotia
CARD Funding: \$5,500 (out of project budget of \$9,000)

Although on-farm quality assurance programs have been developed for many commodities, they are not always adopted at the farm level. Nova Scotia pork producers, however, are a shining exception. With assistance from CARD, Pork Nova Scotia has helped producers to successfully integrate the On-Farm Quality Assurance Program developed by the Canadian Pork Council into their farm management practices. The program aims to eliminate the risk of drug residue and bacterial contamination in pork products.

Over 90 percent of Nova Scotia's hogs come from farms that are enrolled in the program and are following the strict protocol. To encourage compliance with the program's requirements, Pork Nova Scotia has trained validators and auditors and has held workshops to educate producers on the program. "The quality assurance program is an industry commitment to help producers meet the challenge of providing the best and safest product possible to our consumers," notes Henry Vissers, Executive Manager of the Pork Marketing Board, through which virtually all production in the province is marketed.

Revolutionary Technology Helps Prevent Cracked Eggs

CARD Priority: Research/innovation **Region:** Prince Edward Island
CARD Funding: \$3,375 (out of project budget of \$10,500)

While all agricultural commodities run the risk of damage during the production process, eggs are particularly vulnerable to being cracked or broken. In an effort to save a greater number of eggs and substantially increase the profitability of egg operations, PEI's Egg Commodity Marketing Board teamed with Sensor Wireless Inc. to test the new "Crackless Egg," the latest in revolutionary agricultural technology, at eight PEI egg operations.

The Crackless Egg is built to the exact weight and size specifications of a Grade A egg and is designed to be placed anywhere in the egg gathering, conveying, or packaging systems so that it travels among the real eggs through the production process. If the Crackless Egg drops, rolls, or comes into contact with a solid object, it sends a reading to a hand-held computer; the egg also transmits a temperature reading and flags high-pressure areas. "[The Crackless Egg] allows the producer or the grader to identify pressure points in their operation where eggs might be cracked or broken," explains Murray Myles, General Manager of the Egg Commodity Marketing Board. "Those can then be corrected."

Encouraged by the egg's flawless performance during the project, the team is currently exploring how it can be extended to the greatest number of operators.

Islanders Participate in Agricultural Leadership Program

CARD Priority: Human resource capacity-building **Region:** Prince Edward Island
CARD Funding: \$51,000 (out of project budget of \$79,000)

The Advanced Agricultural Leadership program is designed to provide training for existing and future leaders in the agricultural sector. With assistance from the CARD fund, the Agricultural Human Resources Development Council purchased a block of five seats for PEI residents, allowing Islanders to participate in the program, which is held in New Brunswick. Participants learn about leadership styles, team building, conflict management, effective communication, as well as issues facing the agricultural community. A study tour provides participants with the opportunity to travel to other parts of the world and bring back ideas and practices that will benefit Canada's agricultural community.

"It has been quite a learning experience for me," said Jeff DeHaan, a volunteer with the Canadian Food Grains Bank and one of the first Islanders to take the class. "The workshops and the speakers have been just excellent." In addition to the workshop sessions, DeHaan said the opportunity to network with other students was a major drawing card. If Islanders continue to participate, future sessions could be held within PEI.

Corn Proven a Viable Crop Alternative for Newfoundland and Labrador Producers

CARD Priority: Research/innovation

Region: Newfoundland

CARD Funding: \$19,500

Managing soil and producing feed pose significant challenges for forage producers in Newfoundland and Labrador. Supported by the CARD program, Agri-Adapt Council Inc. (AACI) initiated a project to develop silage corn as an alternative crop for forage producers and sweet corn as a viable fresh market product by vegetable crop producers. The Council evaluated the efficiency of rotating corn and alfalfa crops, as well as the economic viability of producing corn in cool climates. The Council anticipates that forage producers will benefit from cycling corn crops with alfalfa every three years and predicts that corn will be successfully grown in cooler climates like that found in Newfoundland and Labrador in the future.