



CANADIAN ADAPTATION AND RURAL DEVELOPMENT FUND

Manitoba Rural Adaptation Council

Performance Report 1999-2000

PROFILE

The Manitoba Rural Adaptation Council (MRAC) was established as a not for profit corporation under the Companies Act of Manitoba in November 1997. The Council membership has representation from across the Manitoba agri-food sector. MRAC's goal is to assist rural Manitobans and their communities in developing and implementing long term sustainable development strategies that will maximize social, economic and environmental benefits. MRAC applies the CARD funds to the CARD objectives: to foster increased long term growth, employment, diversification and competitiveness of Manitoba's agriculture and agri-food industry and rural areas; to promote self sufficiency and self reliance so that the sector is less dependent on government support; to foster greater cooperation, strategic alliances and partnerships among individual companies, segments of the industry and rural stakeholders.

MRAC is funded by a \$10.47 million grant from AAFC's CARD Fund. MRAC provides funding for innovative projects to develop new products, new markets, new technology and new forms of organizations. Commercial and non-profit organizations including corporations, cooperatives, marketing boards, partnerships, individuals, institutions and industry associations are eligible to apply for grants. In general, approved projects may be funded by MRAC up to 1/3 of the total cost with MRAC's share not exceeding \$100,000. MRAC was also responsible for administering \$1.9 million in funds from the Canada Agri-Infrastructure Program (CAIP) all of which was committed by June 15, 1999.

MRAC membership includes representatives from not for profit organizations and citizens at large with an interest in rural issues and sustainable development in Manitoba. The MRAC Board of Directors includes 14 elected representatives from across the industry including producers, processors, academia and the financial industry. In addition, the Board includes two appointees from rural Manitoba by the Federal Minister of Agriculture, plus two ex officio Directors from each the federal and provincial governments.

In the third fiscal year of funding (April 1, 1999 to March 31, 2000) MRAC contributed over \$1.5 million of CARDF grants towards new and continuing projects leveraging a total of over \$2.9 million of industry cash and in-kind contributions alone. During this year, the Western CARDF Council composed of western and northern CARDF Councils was created to develop a client-service oriented approach to administering projects which impact more than one western province/territory. As of March 31, 2000, two "Western CARDF Joint Council Initiatives" were approved. To further emphasize client service, MRAC has established a process to effectively fast-track proposals with sensitive time considerations. MRAC continues to administer 25 projects initiated in previous years, in addition to the 27 projects initiated in 1999-2000. Out of the 71 initiatives to be funded since the first project approval in 1997, nineteen projects are complete.

REACH

MRAC's strategic plan indicates that it will encourage individuals, groups, communities and organizations, including First Nation communities, to bring innovative proposals forward for funding consideration. All sectors of the agriculture and agri-food industry including institutions, organizations, agribusiness, commodity groups, and private individuals are eligible for assistance. MRAC is working along with the First Nations community to increase their participation.

Primary Target (Beneficiary)

Following are brief commentaries on projects MRAC has been contributing towards during the 1999 - 2000 fiscal year. These projects are in various states of progress with a number of completed initiatives as well. Not all projects funded in this fiscal year are included below. More detailed commentaries regarding some of the projects below and additional initiatives not dealt with here appear in subsequent sections of this report.

Pesticide-Free Production (PFP) is being developed as an opportunity for mainstream producers to produce commodities for emerging no-pesticide food markets thereby lowering production costs. With the University of Manitoba's Department of Plant Science at the helm, 28 producers who are members of the newly formed Pesticide-Free Production Association, have produced 10 crop varieties in the farm-research component. Due to the number of interested producers, the crop varieties and acres produced using PFP are expected to increase over the duration of this project, ultimately becoming a production method used across western Canada to fill increasingly health conscious consumer demands.

MRAC has provided assistance for the development of a course entitled *Post-Harvest Handling of Food Crops* for inclusion into Prairie Horticultural Certificate Program; the first home study horticulture certificate program which has been designed specifically for use in the Prairie Provinces. This course, developed and offered at the University of Manitoba, is available at the Assiniboine Community College in Brandon, University of Saskatchewan and Olds College in Alberta. Potential students number in the 9,000 to 12,000 range based on the individuals employed in horticulture, both full time and seasonal, in Manitoba alone. To date, nine students have been enrolled.

The Vegetable Growers Association of Manitoba established trial growing sites designed to determine agronomic, marketing and production information for the commercial production of oriental-type vegetables in Manitoba which attracted over 400 visitors. The extensive agronomic information gained will be of benefit to the 318 vegetable growers in the province as well as any other individuals looking to take advantage of the increasing market demand for these vegetable varieties. These products were showcased at the annual Taste of Manitoba Festival in Winnipeg where they were featured in a cook-off followed by media interviews for inclusion in Manitoba's television program "The Farm Report". Articles regarding these vegetables were published in the press including the Manitoba Co-operator which virtually reaches all farms in Manitoba.

MRAC is providing assistance to the Prairie Fruit Growers Association (PFGA) to help growers develop the Manitoba strawberry industry. This research project focusses on plant propagation techniques suitable to Manitoba allowing the province's strawberry/fruit producers to obtain their plants locally and open opportunities for plant sales based on "Northern Vigour", i.e. increased vigour when grown in southern regions such as the United States and Mexico.

A performance analysis of a new propagation method for roses and ornamental plants began this year in an effort to expand the Manitoba nursery industry. This biotech approach could potentially increase propagation efficiency and enhance the ability of Prairie garden centres and nurseries to respond to the growing demand for roses and bring new varieties to the market more quickly.

Information gained from projects such as demonstration of grazing cattle on alfalfa and extending the grazing season through grazing cattle on maize can reduce producer input costs thereby providing benefit to all 14,000 Manitoba cattle producers. Producers now have the opportunity to collect and preserve bull semen on farm thus protecting genetics of high quality sires at a substantially reduced cost. Promoting Manitoba beef to consumers and identifying investment and marketing opportunities will further allow this industry to expand.

Due to the expanding number of hogs, cattle and poultry, the Keystone Agricultural Producers have taken a pro-active approach to investigate the means by which to provide the Canadian livestock industry with high energy, economic sources of feed. Through the development of the fusarium resistant Ultra High Yielding (UHY) Wheat breeding program, introduction and processing new lines of wheat will impact Manitoba's 8,000 wheat and cereal grain producers, over 1,500 hog producers, and 130 poultry producers. The proposed new lines of UHY Wheat will have the potential to impact the livestock, feed and seed industries across Canada.

Cross country reach, and beyond, will be demonstrated through the establishment of the Canadian International Grains Institute pilot pasta plant and mill which will research various types of durum to meet the quality and economic needs of Canadian and off-shore pasta processors. The evaluation and use of new types of durum will increase the market share for both the Canadian processor and producer.

The Canola Council of Canada will provide over 80,000 Canadian canola producers with additional information to optimize production through the use of integrated pest management (IPM). Practice of IMP will reduce pesticide use in preparation for the US re-evaluation of tolerance set for pesticide residues in food, and improve consumer confidence in the judicious use of pesticides on Canadian farms.

Both the National Sunflower Association of Canada and the Manitoba Flax Growers Association continue with efforts to establish their respective product check-off levies to facilitate continuing research, development and extension for their producer members.

To maximize the rotation benefit of pulse crops to a subsequent wheat crop, Agriculture and Agri-food Canada's Brandon Research Centre is conducting research of a wheat-pea management study to determine the impact of tillage systems on pea and wheat diseases. Greater net returns on a crop rotation involving both cereal crops, and, in this case, peas, will be of benefit to wheat growers across Manitoba. An increase in pea production will also indirectly facilitate expansion of the livestock industry in Manitoba by providing an alternate source of protein in hog rations.

Negative perception and concerns of the public in regards to air and water quality has an impact on the expansion of the hog industry. Although Manitoba producers are compelled in various ways to establish new hog operations with a land base large enough to agronomically use the hog manure produced, residents remain concerned about the unknown impacts of new hog operations on the quality of their immediate environment. Odour associated with manure management practices tops the list of concerns. DGH Engineering, who is part of a consortium committed to the development of facts and solutions for the design and siting of future hog operations, is surveying neighbours of existing hog operations to collect data of the perceived level of odour and nuisance caused by these operations. The survey will provide data which will be used with other data collected from associated projects undertaken by the consortium to determine whether a relationship exists between the level of odour experienced by residents and the manure management practices of the operation. This data will be accessible by all concerned residents, and indeed the public at large, to demonstrate proper siting, design and operations of livestock facilities.

A "win-win" situation is developing for the hog, forage, and cattle producers in the Eastern/Interlake Region of Manitoba through a project administered under the Stuartburn Piney Agricultural Development Association designed to realize opportunities of utilizing manure on forages. By using hog manure as a nutrient to increase productivity of unimproved pastures for grazing cattle, hog manure has the potential to be recognized by communities as a sustainable asset. Results gathered to date are being made available through a news release published in Manitoba and Saskatchewan rural newspapers and via radio interviews, of which, to date, there have been four. A table top display is used at farm meetings and was present at Manure Expo at Selkirk in 1998 and 1999. The report to be compiled upon project completion for distribution to farmers will also be useful for research and extension purposes. In the meantime, a second public tour is being planned.

The *Manitoba Forage Seed Industry Development Proposal* will enhance opportunities for crop diversification and value-added production. Research activities include new grass seed development, forage legume seed production systems development and forage cultivar evaluation. Information is disseminated to the forage seed industry on a constant basis to facilitate rapid adoption. This is achieved in part through the Manitoba Forage Seed Association quarterly publication Forage Seed News which has a circulation of 850, through annual summer tours with average attendance of 200, at the Canadian Forage Seed Conference with over 300 attendees, via a variety of extension meetings, and publications including a forage information section published in Seed Manitoba '99 circulated by the Manitoba Cooperator.

The Manitoba Forage Council received funding to conduct a study to assess the competitiveness of the forage industry and develop a strategic plan for future development and growth within the Manitoba industry. Part of the study involved consultation with 400 forage producers and processors to determine their plans to participate in the growth of the industry and to facilitate alliances. The final report was presented at a seminar during Ag Days 2000 in Brandon, Manitoba. To date, approximately 35 - 45 copies of the report have been distributed. The report was also summarized and included in the Council's newsletter which is distributed through other means to the industry stakeholders.

Other efforts undertaken to assist Manitoba's 400 forage producers and 5 forage product processors with growth and development of the forage industry include researching marketing and export opportunities for annual ryegrass, development of a bale system to increase producers' capacities to move higher volumes of hay, and development of new grass seed, forage legume seed production systems, and forage cultivar evaluation thereby expanding the industry.

The Manitoba Sheep Association has launched the Sheep Industry Initiative to provide Manitoba's current 555 sheep producers and interested entrants with information to upgrade production and identify diversification opportunities within the industry. This will be achieved by establishing technical libraries at ag rep offices, offering sheep production courses, and holding grazing management technique demonstrations. The Manitoba Bison Association has embarked on a management

and marketing program designed to provide the existing 160 and the prospective bison producers with improved production and management information via an assortment of video material. The Association will also be concentrating their efforts to strengthen the market by raising consumer awareness of the quality of the product. Use of a display, industry promotion video and companion brochure will enhance efforts to increase consumer demand. Operating as a New Generation Co-op (NGC), The Ostrich Products Marketing Co-operative Ltd. (OPMC) will co-ordinate delivery, slaughter and processing of prime cuts, processed meats, hides and by-products for its 30 members. These products will be marketed by the NGC for sale within Canada and into the international niche markets in Asia, Europe and North Central and South America.

The Manitoba Food Processors Association continues to provide the *Manitoba Value-Added Agropreneurship Initiative* to increase the knowledge and skill sets of the province's value-added agropreneurs and small business owners in the areas of marketing, application of technology and small business management. This initiative is available to the 250 processors members as well as small business owners and new industry entrants. 995 people were involved in the training initiatives offered by the program to date. Included and/or in addition to this number, 225 persons have taken up the pathfinding and mentoring services offered.

The University of Manitoba has developed a business plan for the Centre for Functional Foods and Nutraceuticals to be established at the University of Manitoba. The centre will assist Manitoba farmers in diversification through value-added processing and characterization of new crops. Further funding to implement the business plan is being sought.

The Tribal-Wi-Chi-Way Win Capital Corporation has developed an adaptation strategy for the First Nations of Manitoba to address the current and contemplated changes in rural Manitoba and capitalize on opportunities to maximize the social, economic and environmental benefits for this community. A strategy for capturing opportunities in mainstream agriculture would benefit the 150 respondents to the survey which formed, in part, the groundwork for the strategy development.

The Agri-Food Network of Manitoba, a consortium of commodity organizations, the financial community and government has formulated a communication plan and is delivering a coordinated agricultural industry communications initiative to maintain and/or enhance the current levels of consumer support for agricultural producers and the industry. A multi-media ad campaign promoting positive messages about agriculture was launched with a potential reach of 2.9 million people via television and another 3.4 million by radio.

The Western CARDF Council is an alliance between MRAC, Alberta Agriculture and Food Council (AFC), British Columbia Investment Agriculture Foundation (BCIA), Saskatchewan Council for Community Development (SCCD), Territorial Farmers Association (TFA) and Yukon Agricultural Association (YAA) joined in a co-operative effort (Western CARDF Council Joint Initiative) to establish a new agricultural and rural "Think Tank" (the Western Agri-Food Institute (WAFI)). The Institute will gather information and conduct independent research focussing on agricultural, agri-food and rural issues within a global context. The results will facilitate positive action in advancing and protecting the agri-food industry and rural communities in Canada. Attempts to attract investment into the Institute have been through the distribution of information packages, workshops, establishment of a new website, printed articles and media events.

Intermediaries/Co-deliverers

The greater part of MRAC funded initiatives have intermediaries/co-deliverers who provide the technical expertise where needed and contribute to the management, extension, technical transfer, or information dissemination of project results. The following list illustrates the project name and applicant with the co-deliverers appearing in italicized text.

- Intensive Grazing 1998 and 1999, Larry Martin - *Manitoba Agriculture and Food*
- Producer Survey, Medicinal and Aromatic Plants Association of Manitoba, - *Manitoba Agriculture and Food*
- Impact of Tillage System and Rotation on Pea and Wheat Disease, AAFC-Brandon Research Centre - *Manitoba Agriculture and Food and Saskatchewan Pulse Development Board*
- Agronomics of Oat Production in Manitoba, AAFC-Brandon Research Centre - *Indian Head Agricultural Research Foundation*
- MPP Warehouse Net, Manitoba Crop Insurance Corp. - *Manitoba Agriculture and Food, Manitoba Co-operator*
- Centre for Functional Foods and Nutraceuticals, University of Manitoba - *Manitoba Agriculture and Food*
- Manitoba Beef Advantage, Manitoba Cattle Producers Association - *Manitoba Agriculture and Food*
- Agriculture the Next Generation, Parkland Crops Diversification Foundation - *Manitoba Agriculture and Food*
- Grazing Maize, Glen Crawley - *Manitoba Agriculture and Food*

- 1999 Annual Crop Silage Variety Trial, Blanshard-Hamiota Soil Savers - *Miniota Municipal Soil Management Association*
- Hardy Roses from Somatic Embryos - Field and Pot Growth Trials, Jake Penner - *AAFC-Morden Research Centre*
- On-Farm Semen Collection and Preservation, Tag-A-Long Red Angus Farms - *Manitoba Agriculture and Food*
- Sustainable Forage/Beef System Utilizing Hog Manure, Stuartburn Piney Agricultural Development Association - *Manitoba Agriculture and Food, AAFC -Prairie Farm Rehabilitation Administration*
- Survey of the Perceived Environment Quality Around Existing Intensive Hog Operations in Manitoba, DGH Engineering - *Manitoba Livestock Manure Management Initiative, University of Manitoba*
- Bison Management and Marketing, Manitoba Bison Association - *Manitoba Agriculture and Food*
- Fruit Crop Diversification, Prairie Fruit Growers Association - *AAFC-Morden and Kentville Research Centres*
- Pilot Pasta Plant and Mill, Canadian Wheat Board - *Canadian International Grains Institute*
- Manitoba Sheep Industry Initiative, Manitoba Sheep Association - *Manitoba Agriculture and Food*
- Specialized Decision Support Tool for the Manitoba Livestock Industry, Keystone Agricultural Producers - *AAFC - Prairie Farm Rehabilitation Adaptation*
- Western Agri-Food Institute, Western CARD Council (MRAC, SCCD, AFC, BCIA, TFA, YAA), i.e. CARD Councils across the Prairie provinces and the Councils in the North West Territories and the Yukon
- New Pest Control Strategies for Enhancement of Oriental Vegetable Production, Vegetable Growers Association of Manitoba - *Manitoba Agriculture and Food, Peak of the Market*
- Manitoba Beef Advantage, Manitoba Cattle Producers Association - *Manitoba Agriculture and Food*
- Native Seeds Agronomy Research Project, Interlake Conservation Seeds - University of Manitoba, Ducks Unlimited

SHORT-TERM RESULTS - Manitoba Rural Adaptation Council

Human Resource Capacity Building

Best Practices

Grazing tours were held as an illustration of adding value to livestock by grazing steers, bred heifers, cows and calves on alfalfa. Production information such as rate of daily gain per animal, pounds of gain per acre, methods of reducing livestock bloat, and returns per acre are documented in the final report that is available to interested producers. The practises established by this initiative have been taken up by, two producers to date; one in Swan River, the other in Dauphin. The participating farmer and Manitoba Agriculture and Food have both reported numerous inquiries and further adoption of these practises is anticipated in future grazing seasons.

Products

The *Implementing a Model for Expanded Use of Native Grass* project will expand the native grass study currently conducted by the University of Manitoba by demonstrating the implementation of a step by step model for expanded use of native grasses to seed producers. The model will be adaptable by any company that desires to enter the emerging market for native grasses and will provide information regarding the commercial potential of a native grass species.

Technology

The Manitoba Crop Insurance Corporation (MCIC) is establishing the *MPP Warehouse Net*: a data warehouse system housing all the most pertinent agronomic data available through MCIC's extensive database to be accessible via the internet. Farmers, in return for supplying the data to MCIC, will receive free access to information pertinent to their business. Differential query fees will be implemented for the more complex, custom queries from the commercial and research sectors allowing the system to become self sufficient within the first three years of operation.

Information

The *Western Agri-Food Institute*, a new agricultural and rural "Think Tank" founded by the Western CARD Councils (MRAC, Alberta Agriculture and Food Council {AFC}, British Columbia Investment Agriculture Foundation {BCIA}, Saskatchewan Council for Community Development {SCCD}, Territorial Farmers Association {TFA} and Yukon Agricultural Association {YAA}) is guided through an interim board of directors made up of Council and industry members from each founding

province and territory. By December of 2002, the Institute will be self sufficient and industry run. This will be accomplished through membership funding and fee for service from industry.

To look beyond the immediate challenges and issues of today and identify the opportunities of tomorrow, the Institute will gather information and conduct independent research of emerging economic, social and environmental issues and trends within a global context. The results disseminated will facilitate positive action in advancing and protecting the agri-food industry and rural communities in Canada.

Links with over 25 think tanks from around the world have been established and the Institute has begun scanning and monitoring issues around the globe. The first project will be a compilation of keynote papers from six partner think tanks on the impact of changing ownership structure and the way in which it has affected their rural communities. The information garnered will provide insight into how western Canada can best adapt to these changes. This information will be compiled into a document that can be read by a variety of audiences. To provide information to the people who can take positive action in advancing the agri-food industry and rural communities in western Canada, dissemination will be facilitated by a series of articles in major farm newspapers and magazines across the west.

Organizational Forms

Current research at the University of Manitoba will assess the potential for New Generation Co-operatives (NGCs) as a business organization in the economic development of rural Manitoba. This project will help identify the appropriate environment for an NGC, the most effective means to establish an NGC, and also provide case studies on specific NGCs. The information garnered from this research will be in the form of a source book for use by individuals interested in forming a New Generation Co-operative for value-added processing in Manitoba. A website will be developed for the source book and related information.

Innovation

Best Practices

Corn in itself is not innovative, however, when planted for the purposes of grazing cattle on it during the winter months, it could provide the opportunity to reduce the significant costs associated with winter management systems. The project concluded that although the feed pricing at that particular time made corn a higher cost wintering system than using purchased hay in the field, in year of feed shortages and higher priced market feed, corn grazing would provide an economic benefit over feeding stored hay. Over the time of grazing, producers attended tours and sought out the project leaders to gain information. An agronomic and cost of production report is available to interested parties. It is expected more producers will be testing this practice in the 2001 season.

Products

Due to the expanding number of hogs, cattle and poultry, Keystone Agricultural Producers have taken a pro-active approach to investigate the means by which to provide the Canadian livestock industry with high energy, economic sources of feed. The development of the fusarium resistant Ultra High Yielding (UHY) Wheat breeding program is underway at Agriculture and Agri-Food Canada's Cereal Research Centre in Winnipeg. Commercialization of these innovative products will provide alternatives to the feed and seed industries across Canada increasing the productivity and enhancing the competitiveness of the country's livestock industry.

Technology

Plant Pathways, a Manitoba plant propagation company and the AAFC-Morden Research Centre are performing a performance analysis of new propagation technology for roses and ornamental plants in an effort to expand the Manitoba nursery industry. This bio-technological approach could potentially increase propagation efficiency and enhance the ability of Prairie garden centres and nurseries to respond to the growing demand for roses and bring new varieties to the market more quickly. The market for hardy roses in the US is large and Canadian varieties are sought after. If the performance trials indicate there is a market advantage to using this technology, plants derived from this method could be marketed over a very broad area and readied for shipment at any time of the year. In the longer term, this project could lead to increased

production of roses for an international market. Studies of this technique on roses could also provide useful information for adapting this method to other crops.

Organizational Forms

Initiated by the Manitoba Ostrich Association, a New Generation Co-operative was established to market and sell ostrich products within Canada and into the international niche markets in Asia, Europe and North, Central and South America. Known as the Ostrich Products and Marketing Co-op Ltd.(OPMC), this NGC conducts market research and product development and coordinates efforts to move fresh and processed meats, hides, fat, bones and offal for its thirty members. OPMC will be used as a case study in the assessment of the potential for NGCs as business organizations in the economic development of rural Manitoba conducted at the University of Manitoba.

Environmental Sustainability

Best Practices

In preparation for the re-evaluation of tolerances set for pesticide residues in food by the US, the Canadian Canola Council, in cooperation with provincial grower groups, has initiated an *Integrated Pest Management (IPM) Strategy*. Supported by the Western CARDF Council, this project will provide producers with information on current and new technology for pest management, including biological and chemical options which can be used to optimize production, lower cost of production and possibly realize environmental benefits. Furthermore, because a major concern of consumers regarding food safety is pesticide residues, initiating an IPM program can improve consumer confidence in the judicious use of pesticides on farms in western Canada. There is also potential for the development of commercial products realized through the identification of pest management tools that are needed. The project information will be disseminated through the provincial producer groups and the ten existing Canola Production Centres across Canada.

Products

In response to a rise in environmental awareness and an interest in reclamation (re-planting) of native habitats to bring back lost bio-diversity, Interlake Conservation Seeds launched a *Native Seeds Agronomy Research Project*. Through this research growers will be provided with the seeding methodology, weed control regime, pollination management, integrated pest management, and harvest technology to grow consistent commercial volumes of seed thereby diversifying away from traditional crops and generating a higher farm income. Interlake Conservation Seeds will continue with research and development, marketing, and follow-up support activities in partnership with the grower cooperative.

Technology

It is the mission of the Manitoba Livestock Manure Management Initiative (MLMMI) to encourage sustainable growth in the livestock industry in a manner acceptable to the public. MRAC has assisted MLMMI in addressing its mandate through supporting four of its initiatives; acquisition and calibration of equipment for livestock odour measurement which is being used to enhance six manure management research initiatives, and a performance demonstration of a three-stage waste treatment technology proposed for hog operations. Information on the new manure management technology and practical solutions resulting from these initiatives will be available to the agricultural community and general public through the media, advertising, a newsletter and the World Wide Web.

Market Opportunities

Best Practices, Products

The increasing demands by the growing ethnic population for a variety of fresh produce exported from the southern US was the driving force to investigate the *Feasibility Study for the Production and Marketing of Manitoba "Oriental Type" Vegetables* and *New Pest Control Strategies for Enhancement of Oriental Vegetable Production* initiatives. As a result, varieties of fresh produce previously not available from a local source were grown and marketed to retailers in Winnipeg. The agronomic information gathered from the growth trials has provided producers with the methods to grow these crops resulting in 50 acres of Manitoba-grown oriental vegetables in the 1999 - 2000 growing season.

Pesticide-Free Production (PFP) is being developed as an opportunity for mainstream producers to produce commodities for emerging no-pesticide food markets thereby lowering production costs. With the University of Manitoba's Department of Plant Science at the helm, 28 producers who are members of the newly formed Pesticide-Free Production Association, have produced 10 crop varieties on 3,500 acres in the farm-research component. Due to the number of interested producers, the crop varieties and acres produced using PFP is expected to increase over the duration of this project. Driven by increasingly health conscious consumer demands and environmental concerns, PFP has the potential to evolve into a production alternative across western Canada.

Technology

The Canadian International Grains Institute (CIGI) pilot pasta plant and mill will research various types of durum to meet the quality and economic needs of Canadian and off-shore pasta processors. The evaluation and use of new types of durum and pasta recipes will increase the market share for both the Canadian processor and producer. CIGI has provided the technology and technical expertise to a Montreal processor and will design programs geared towards the operational and economic scenarios of specific processing operations.

Information

The Manitoba Chicken Producers conducted a survey of consumer attitude toward chicken as part of a strategy to retain and increase consumer demand for local Manitoba chicken. The results were incorporated into the market plans launched by two local processors. The Manitoba Chicken Board reports 14 new producers, 900,000 square feet of new production facilities, an increase in production of 3.5 million kgs. in 1999, and an increase in average farm size.

The *Manitoba Forage Seed Industry Development Proposal* will enhance opportunities for crop diversification and value-added production. Research activities include new grass seed development, forage legume seed production systems development and forage cultivar evaluation. Communication of information and technology development will be through quarterly newsletters, tours and field days, meetings, publications and reports. The information will be disseminated to the forage seed industry on a constant basis to facilitate rapid adoption.

Investment

Borderland Ventures Ltd., out of Russell Manitoba, is developing an integrated gluten, ethanol, flour and beef cattle feedlot facility to diversify the area's economy. This undertaking is being approached in three phases, with Phase I, the feedlot and mill, currently underway. A prospectus is being developed through MRAC funding and a public offering is planned.

Food Safety and Quality

Information

Health Canada regulations for permissible tetrahydrocannabinol (THC) levels in industrial hemp products pose a challenge to the processor. Hemp Oil Canada initiated the scientific analysis of the origin of THC in the hemp seed. Results will impact existing or new processing techniques as processors strive to develop products with less and less THC content.

Rural Development

Information

The Agri-Food Network of Manitoba, a consortium of commodity organizations, the financial community, and government, has formulated a communication plan and delivered a coordinated agricultural industry communications initiative to maintain and/or enhance the current levels of consumer support for agricultural producers and the industry. Preliminary activities included identifying the group of most influential consumers and their greatest concerns. The information resulting from this research was used to develop a multi-media ad campaign. Follow-up activities, conducted to gauge the impact of the television and radio ads, indicated that one in three Winnipeg residents were able to recall a positive message consistent with the intended purpose of the ad.

The Tribal-Wi-Chi-Way Win Capital Corporation has developed an adaptation strategy for the First Nations of Manitoba to address the current and contemplated changes in rural Manitoba and capitalize on opportunities to maximize the social, economic and environmental benefits for this community. The publication resulting from the project entitled Manitoba First Nations Agriculture Analysis and Strategy Report consists of 11 policy recommendations and five key components with a strategy implementation plan for each. Implementation of all plans would result in a Loan Guarantee Fund, Youth Loan Fund, a Strategic Development Fund and establishment of a First Nations Farm Association is also included. Full implementation of the entire plan is expected by 10 years time with efforts of the Association to move towards self-sufficiency in the third year. The group is seeking funds from provincial and federal government to begin implementation activities.

Investment

Manitoba Pork Marketing Co-op Inc. and N.M Paterson & Sons Limited formed the Dynamic Pork Corporation to develop, promote, and manage investment in the hog production sector. Through the creation of alliances between hog producers and grain processors "Production Networks" were formed. These networks will consist of the investors who own the breeding stock and progeny through to market, and the barn owners who will be contracted to produce and feed the hogs on behalf of the investors. N.M. Paterson & Sons Limited will supply the barns with feed at cost utilizing production from over 15,000 acres in the surrounding area annually. The hogs will be marketed through the Manitoba Pork Marketing Co-op Inc. The first network, Turtle Mountain Pork, will consist of a 3,400-head sow barn which, together with 18, 1,300-head feeder barns will be capable of producing 74,000 finished hogs per year. Annual sales minus cost of production are expected to reach \$1.5 million and create approximately 20 jobs with another 10 being created in the feed mill. The second network would duplicate all but the feed mill component.

NOTEWORTHY ACCOMPLISHMENTS

Noteworthy accomplishments this fiscal year are in the area of realized institutional infrastructure. Specifically, the Pesticide-Free Production Association was formed and to date is comprised of 28 producers. The Western Agri-Food Institute was conceived and is evolving. The MPP Warehouse Net has been established to allow producer access to regional production data from crop insurance. The Ostrich Products Marketing Co-operative Ltd. NGC has been established and currently has 30 members. The first production network for hogs was formed with plans for more networks underway.

RESOURCES - Manitoba Rural Adaptation Council

CARD Priorities

CARD Priorities	CARD \$	Industry \$	Provincial \$	Industry In-Kind	Provincial In-Kind	Total	% of Contrib.
Human Resource Capacity Building	235,981	166,679	75,723	80,147	86,769	645,299	13.7
Innovation	156,682	487,487	10,432	12,748	556	667,905	14.1
Environmental Sustainability	143,495	66,324	24,771	66,384	115,958	416,932	8.8
Market Opportunities	326,396	1,611,703	19,383	137,933	33,653	2,129,068	45.1
Food Safety and Quality	10,000	5,000	0	15,000	0	30,000	0.6
Rural Development	625,530	175,401	0	31,377	3,857	836,165	17.7
TOTAL	1,498,084	2,512,594	130,309	343,589	240,793	4,725,369	100.0

CARD Priorities and Short-term Outcomes

CARD Priorities and Short-term Outcomes	CARD \$	Industry \$	Provincial \$	Industry In-Kind	Provincial In-Kind	Total	% of Contrib.
Human Resource Capacity Building							
Best Practices	28,772	68,736	68,995	13,974	850	181,327	28.1
Products	5,450	2,575		700		8,725	1.4
Technology	27,800	1,559	4,157	16,368	23,839	73,723	11.4
Information	128,959	89,836		49,105	40,480	308,380	47.8
Investment						0	0.0
Organizational Forms	45,000	3,973	2,571		21,600	73,144	11.3
Sub-total	235,981	166,679	75,723	80,147	86,769	645,299	13.7
Innovation							
Best Practices	2,199		294	4,409		6,902	1.0
Products	48,010	161,169	2,793		556	212,528	31.8
Technology	76,196	271,269	7,345	8,339		363,149	54.4
Information						0	0.0
Investment						0	0.0
Organizational Forms	30,277	55,049				85,326	12.8
Sub-total	156,682	487,487	10,432	12,748	556	667,905	14.1
Environmental Sustainability							
Best Practices	112,205	4,165	24,771	63,205	115,958	320,304	76.8
Products	24,290	48,579		3,179		76,048	18.2
Technology	7,000	13,580				20,580	4.9
Information						0	0.0
Investment						0	0.0
Organizational Forms						0	0.0
Sub-total	143,495	66,324	24,771	66,384	115,958	416,932	8.8
Market Opportunities							
Best Practices	55,869	78,724	12,100	27,038	14,191	187,922	8.8
Products	159,096	193,279	7,283	75,667	88	435,413	20.5
Technology	74,000	1,307,906				1,381,906	64.9
Information	26,440	2,469		35,228	19,374	83,511	3.9
Investment	10,991	29,325				40,316	1.9
Organizational Forms						0	0.0
Sub-Total	326,396	1,611,703	19,383	137,933	33,653	2,129,068	45.1

CARD Priorities and Short-term Outcomes	CARD \$	Industry \$	Provincial \$	Industry In-Kind	Provincial In-Kind	Total	% of Contrib.
Food Safety and Quality							
Best Practices						0	0.0
Products						0	0.0
Technology						0	0.0
Information	10,000	5,000		15,000		30,000	100.0
Investment						0	0.0
Organizations Forms						0	0.0
Sub-total	10,000	5,000	0	15,000	0	30,000	0.6
Rural Development							
Best Practices						0	0.0
Products						0	0.0
Technology						0	0.0
Information	93,019	72,318		27,923	3,857	197,117	23.6
Investment	532,511	103,083		3,454		639,048	76.4
Organizational Forms						0	0.0
Sub-total	625,530	175,401	0	31,377	3,857	836,165	17.7
TOTAL	1,498,084	2,512,594	130,309	343,589	240,793	4,725,369	