Get to know us – FDC is:

Manitoba Agriculture & Food

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Leigh Gao, PhD, Asst. Deputy Minister

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Leslie Hudson, BSc, Product Development Consultant

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The Blue Box – Manitoba Agriculture and Food’s

The Blue Box – Manitoba Agriculture and Food’s Kitchen to Market resource pack

An entrepreneur, processor or producer wishes to develop a unique health energy bar containing wheat, oats, sunflower seeds and canola. What information must appear on the label? Which government regulations apply? Is there a market for this type of health bar? One source that will assist in answering such questions is a resource pack developed by Manitoba Agriculture and Food. The resource pack is called How to Create a New Food Product – Kitchen to Market and has been assembled to assist food producers through an often complicated maze of necessary steps for determining their business potential, developing a quality product and bringing it to market. Also known as the “Blue Box,” the pack is easy to use and contains more than 100 resources including a variety of books, pamphlets, fact sheets, videos and computer programs. The range of resources includes basic business materials as well as specific food industry information. Creating a business plan and understanding food plant sanitation are examples of the coverage contained in the Blue Box.

A notable inclusion in the Blue Box is a video produced by Manitoba Agriculture and Food, called Kitchen to Market – the 12 Steps to Food Product Development. It showcases seven Manitoba food companies and shares their business success stories. A second video has been added to the pack, Bringing Ideas to Market, produced by the Food Development Centre. It explains in detail FDC’s capabilities and operations. The Rural Product – Kitchen to Market resource pack can be borrowed from the Food Development Centre, the Market and Farm Business Management Branch of Manitoba Agriculture and Food, and 21 MAF home economists and agri-venture specialists throughout the province. Just ask for it!

The Entrepreneur’s Technical Guide to Food Product Development and Manufacture is an invaluable tool published by the Manitoba Food Processors Association. It introduces entrepreneurs to the scientific and technical aspects of developing a high quality, wholesome and shelf stable food product.

The Blue Box is financially supported through the Canada-Manitoba Farm Business Management Agreement and is a starting point for businesses exploring the development of a new food product. The pack is a reference tool that provides in one convenient source a vast amount of information that would require months of research for the novice to gather from scratch. The Kitchen to Market pack can be borrowed from the Food Development Centre, the Market and Farm Business Management Branch of Manitoba Agriculture and Food, and 21 MAF home economists and agri-venture specialists throughout the province. Just ask for it!

Manitoba’s hottest hemp processors know one thing for sure: without the technical support and expertise of the Food Development Centre in Portage la Prairie, their ideas for Fresh Hemp Foods Ltd. would never have grown beyond a dream.

“IT wouldn’t have been possible if we hadn’t run into the Food Development Centre,” says company president Mike Fata. “We wouldn’t have been able to jump over some of the hurdles they’ve helped us overcome.”

From Fresh Hemp Foods Ltd. is the brainchild of Fata and his two partners, Alex Chwaiewsky and Martin Moravcik. They started out buying hemp seed oil from another processor and bottling the finished product. But the trio wanted to have greater control over the purity of their product and also to expand their line to include hemp nut. “We wanted to get right to the source and work right from the seed,” Fata explains.

But there were a couple of problems. They didn’t know whether there was going to be a market

Innovative hemp processor launched with help from FDC

By Jodi Ferguson

continued on page 3
Foot and mouth disease – the special concern with pigs

By Terry Whiting, DVM, MSc

Very few viruses infect more than one species of animal. Notable exceptions are rabies and the influenza virus, which can affect animals and man. Foot and mouth disease (FMD) by comparison is promiscuous in its ability to infect all even-toed animals, all the common split-hoofed farm animals, wild deer and like animals, and elephants and rhinos. It is not considered infectious to man.

With the different strains of FMD there is generally a greater risk for a particular species. In 1997 the Taiwan outbreak was a swine-adapted strain that affected the current outbreak in the United Kingdom, primarily sheep and goats. In 1998 the U.S.-Canada-Mexico computer simulation of a FMD outbreak, reported in the January 2001 issue of Canadian Cattlemen, is a model example of a multiple area outbreak. Secondly, if the response does not include effective pre-emptive slaughter (the killing of animals prior to the development of clinical disease) control of the outbreak is unlikely.

Canada has had significant experience in controlling tuberculosis and brucellosis of cattle. Both of these diseases are poorly infectious compared to FMD or hog cholera. Response to foreign animal disease is important in minimizing the risk to our production systems. Prevention is by far the most economical risk management choice.

Terry Whiting is a veterinary epidemiologist for the Veterinary Services Branch of Manitoba Agriculture and Food. He regularly writes technical notes on animal disease control for colleagues and food animal producers in the province.

New GM envisions positive changes for FDC

Manitoba Agriculture and Food is pleased to announce the appointment of Pat Scott as the General Manager of the Food Development Centre (FDC). Pat has served as the Controller of the Centre since its move to Special Operating Agency status in 1996. Pat, who is originally from Western Manitoba, received her Certified Management Accountants (CMA) professional designation from the Society of Management Accountants in 1985. She has acquired extensive professional experience in all facets of management accounting, including controllership of Special Operating Agencies and profit and non-profit organizations. She has also served as Controller of Leaf Rapids Town Properties, as treasurer on numerous boards of directors and has been involved with the Society of Management Accountants in their educational programs.

Pat envisions positive changes for FDC’s future, to coincide with the ever-evolving trends of the agri-food industry in Manitoba and the Centre’s move to Manitoba Agriculture and Food.

From its inception, Pat has presided over FDC’s development of a comprehensive strategic plan that positions the Centre as a leader to help industry remain competitive in this time of global markets and rapidly developing technology. She is confident that, through the introduction of new technology, the promotion of new product areas of global interest and the matching of industry potential with opportunities, FDC’s complement of research and business specialists will continue to lead growth and increased wealth generation through all sectors of Manitoba’s agri-food industry.

The results – she concludes with a smile, “new food products, new business, new jobs – a prosperous way of life for Manitobans.”

“The Food Development Centre operates within the Agricultural Development and Marketing Division of Manitoba Agriculture and Food. Pat Scott can be reached at FDC in Portage la Prairie at (204) 239-3624 or on email at pats@fdc.mb.ca.

Message from the CEO

It has now been more than a year since FDC joined Manitoba Agriculture and Food (MAF). The positive response has been overwhelming, with the general comment “well it’s about time” being heard again and again.

FDC and MAF are capitalizing on the joint capabilities to stimulate economic development within Manitoba’s agri-food Industry. With the higher costs of transportation, Manitoba, as are all of Canada’s provinces, is seeing a shift in exports from lower value primary commodities to value-added processed products. The joint industry/government target for 2005 is to have 60% of exports in the value-added category. FDC is working with industry to achieve this goal.

Together FDC and MAF have created a seamless approach to exporting Manitoba’s commodities is being realized throughout the province.

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On behalf of MAF, I am both pleased with and proud of the results of this partnership, and I am looking forward to increased future activities as FDC’s capabilities continue to be enhanced and developed in keeping with the dynamic evolution of the agri-food industry.

Dave Donaghy is Chief Executive Officer of FDC and ADM for Manitoba Agriculture and Food.
More to oats than a bowl of porridge

Grandma knew that an oatmeal bath was the most soothing treatment for measles and chicken pox but she may not have known why. Many people prefer to think that oatmeal is best used in cookies, apple crisp, granola bars and porridge. Others want to find ways to add value to a crop that has been used traditionally as livestock feed and for human consumption.

Researchers in Canada have extracted many components from the oat kernel and further tested these ingredients to determine whether they have any special properties. The 13 required core nutrients and each can be separated into other compounds. The groat contains bran, fines and the flour. In turn, each of these can be broken down into other ingredients for pharmaceuticals, functional foods and consumer health products.

For example, the bran is used as an absorbent to thin personal products such as lotions, creams and gels. It is also a functional ingredient in a diabetes test meal bar. Oat bran contains the fiber that appears to reduce the body’s level of cholesterol and helps control glyceremia when ingested. Oat flour contains starch that can be substituted for talcum powder and cornstarch in cosmetics such as powder blush and eyeshadow. It can also be used as a substitute liner in disposable gloves. Oat protein is being tested for use in shampoo, hair conditioners and other lotions. It has excellent foaming and fat-binding properties that recommend it as a suitable component for these products. An anti-irritant ingredient in oat fines is used in shampoos, skin creams, sunscreens and a wide variety of soaps and shampoos for pets.

Since the United States have been permitted for oatmeal, the first such recognition that the U.S. Food and Drug Administration has allowed for a specific food. It is acceptable to include oatmeal on oatmeal products for sale in the United States to include the claim that “eating oat bran or oatmeal daily may reduce heart disease risk.” Health claims of this nature are not permitted on labels of products for sale in Canada. As more is learned about the special properties that oats offer, there will be more opportunities for the development of new products and food items.

Linda Lowery is a Food & Nutrition Specialist in Neepawa for Manitoba Agriculture and Food, with a particular interest in nutraceuticals.

HEMP PROCESSOR continued from page 1

For their product they didn’t want to invest the capital needed to set up their own processing facility. “It would have been physically impossible to have enough capital to set up our own processing facility when we were still in the market research stage,” Fata notes. Plus, they didn’t have the scientific background to determine shelf life and ensure the finished product was of optimum quality.

The Food Development Centre’s manager of product and process development, Alphonso Usih, had the answers to those questions in addition to a full-scale food processing plant and a staff of scientists to help analyze the product. Beginning in January 1999, FDC’s technical experts put their skills to work in determining how to optimize the shelf life of hemp oil and nut without adding any preservatives. Then the technologists in FDC’s pilot plant showed them how to extract the purest extract of hemp seed using a method.

Fata cannot say enough about the vital role the Food Development Centre has played in the success of Fresh Hemp Foods. “They’ve helped us out in every stage,” Fata says. The Centre has contributed to the success of Fresh Hemp Foods in several ways. It has been temporarily installed at FDC but will go with Manitoba Agriculture and Food, with a particular interest in nutraceuticals.

Hemp products are becoming popular because of their nutritional benefits and the profit. Hemp can be grown in cropland and hemp food stores across Canada and the United States. Hemp seed contains high concentrations of essential fatty acids and is a source of protein for vegetarian diets. The oil is an excellent choice for salad dressings and low-temperature cooking and baking. Hemp nut has a unique and wonderful nutty flavor and is versatile. It can be added to cereals, salads and baked goods. Because of its high protein content, it is an excellent meat alternative in soups, stews and gravies.

The Food Development Centre has not only contributed to the success of Fresh Hemp Foods, says Fata, but also to the growing popularity of hemp products in general. “They’ve helped us a lot but they’ve also helped the hemp industry because right now we are one of the leading companies in developing new hemp products.”

Jodi Ferguson is a freelance journalist in Portage la Prairie, Manitoba.
We’ll be there – will you?

Manitoba is hosting the Western Canadian Conference on the Food Industry – Thinking Outside the Bag, at The Fairmont Winnipeg in Winnipeg, Manitoba on 31 May – 02 June 2001. Featured will be the Genesis New Product Awards, honouring the Best New Food Product in Western Canada for 2001. For more information contact the MPFA office.

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Nutraceuticals and the farm

When tomatoes ripen on the vine, many are interested in eating them fresh and seeing the nutrients they contain. But there are also other farmers who grow tomatoes for seeds, which can be used to produce more tomatoes. This new trend in health consciousness is an opportunity for producers to penetrate the nutraceutical marketplace. In addition, specific feeding regimens for livestock can affect health changes to the nutrient composition of meats. By adding flaxseed (a source of beneficial omega-3 fatty acids) to feed rations, farmers can manipulate the level of omega-3 fatty acids in their eggs and the pork they produce.

Nutraceuticals is a natural product that is a mixture of plants that have medicinal or health benefits. Carrots contain beta-carotene, which helps reduce the risk of heart disease. Tomatoes are rich in lycopene, which has been linked to a lower risk of prostate cancer. Oats contain fibres and bran, and each has its own health-giving properties. Phytoestrogens present in soybeans help reduce the risk of some cancers. The lignans in flaxseed have been linked with prevention of some forms of cancer.

The medicinal and culinary herb and spice market is another opportunity for diversification on prairie farms. Producers need to explore whether they can grow and harvest the crop, market it and make a profit. If the answer to these questions is yes, they must decide whether they are willing to undertake the challenge, adapt or invest in specialized equipment, provide the manual labour that may be required and risk planting a crop that is tricky to grow.

For nutraceuticals to become important in healthcare for Canadians, the confidence of health professionals and the public must be won with science rather than testimonials and anecdotal evidence. This requires sorting fact from fiction when evaluating the safety and effectiveness of these natural health products.

Production of nutraceuticals is still new in Canada and therefore limited advice is available to producers with respect to growing different crops and choosing varieties that are high in desirable properties.

More information is available from:
Marketing and Farm Business Management Branch
Manitoba Agriculture and Food
(204) 945-4521
Animal Industry Branch
Manitoba Agriculture and Food
(204) 945-3341
Food Development Centre
(204) 239-3150
1-800-870-1044 in Canada

Lynda Lowry is a Food & Nutritional Specialist for Manitoba Agriculture and Food.

MFPA Christmas reception 2000 a snazzy celebration of Manitoba Made products

The turnout for the 2000 MFPA Christmas reception at Alley Catz Piano Bar in December was fabulous. More than 400 people joined us to sample this year’s featured presentation of Manitoba Made products at the Canad Inns Fort Garry. Products on the buffet table received much praise, and the chef station were lauded as a unique and creative idea. People participating in the silent auction and Santa’s Stocking Raffle helped the Manitoba Food Processors Association to raise $900 for Winnipeg Harvest. Thanks to all MFPA members who donated items for these activities and helped to make the evening a snazzy celebration. Once again, thank you for helping to make the 2000 MFPA Christmas reception a resounding success.

Joanne Dyker is the Training Coordinator of the MFPA. The Manitoba Food Processors Association promotes the Manitoba food processing industry through membership and training programs for companies involved in the province’s food industry.

Nutraceuticals seminar a repeat success

The Food Development Centre and its allies in the agri-food industry presented the second conference on nutraceuticals on 22 March 2001 in Winnipeg at the St. Boniface General Hospital Research Centre. The conference was called New Directions for Agri-Foods: Nutraceuticals and Functional Foods and was well-attended by industry stakeholders for the second year in a row. Speakers from Canada, the United States and Europe were present. The SNN’s Kelley Fitzpatrick acted as lieutenant and program delegates were favourably impressed with the presentations and exhibits.

Earl Taylor from the Department of Foods and Nutrition at the University of Manitoba launched the day’s presentations with a talk on research activities in nutraceuticals and functional foods. Kelley Fitzpatrick, a highly active Canadian in the industry, gave a talk on presentation on marketing nutraceuticals internationally. Ms. Fitzpatrick is the President of the successful Saskatchewan Nutraceutical Network (SNN) that unites a membership of nutraceuticals and functional foods companies, government organizations, research institutions and industry associations. Dr. Wim Jongen travelled from the AgroTech Institute in the agricultural city of Wageningen in The Netherlands to deliver a talk on the European regulatory system and industry perspective on natural health products. Europe and Asia have lead the nutraceuticals and functional foods industry worldwide and are looked to by North America for indicators of industry and legislative trends. Philip Waddington was to represent the federal Office of Natural Health Products (ONHP) but was suddenly unable to be present.

Regulatory Update

Federal minister’s mandatory nutrition labelling proposal

On 19 October 2000, federal Health Minister Allan Rock announced that a sweeping two-year review of Canada’s nutrition labelling policy and claim requirements had culminated in a number of recommendations for a new federal nutrition labelling policy. The proposal is shortly to be published in the Canada Gazette Part I. Along with improvements in nutrient content claims and health claims in food labelling, final regulations are anticipated in 2001 and following the documentation, manufacturers will be allowed a two-year grace period within which to implement the requirements in compliance with the legislation. Nutrition labelling is the standardized quantitative declaration of calories and the nutrient content of a food product. The intent of the proposal is to provide consumers with reliable information that will help them to make healthy food choices and to be more aware of the composition of their daily diet. The role of diet in some illnesses and chronic diseases has been recognized and by extension, the role of healthy eating patterns has been promoted as essential in reducing the risk of diet-related illness and disease. An aging generation of health-conscious and economically astute Canadians has recognized that diet, health and longevity are inextricably linked and that a healthy population helps relieve the strain on competing and limited resources in Canadian healthcare.

A review of the Canadian system of voluntary nutrition labelling and claim stipulations was undertaken in 1998 to address the inadequacies of the extant policy and to generate new recommendations in response to consumer, industry and legislative concerns. The collaborative and consumer-centred review process began with Health Canada’s appointment of a Nutrition Labelling Advisory Committee. The Committee has presided over the gathering and interpretation of data resulting from numerous consumer studies and consultations with stakeholders and nutrition, food, literary and design experts. In a letter to continued on page 8

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By Linda Petriuk, BSc, BA, MLIS

By Linda Lowry, PHEc/MS

By Markus Schmälgen, PAg, BComm, MSc
Nutraceuticals and the farm

When farmers give chicken soup to their sick children is it the warm liquid or the love that is added with each ingredient, or is there something else about the chicken soup that soothes sore throats and has health-giving properties?

More and more, credit is being given to foods that appear to have the ability to affect our health. These foods have been given a number of names – nutraceuticals, functional foods, novel foods, etc. In each case, these names describe everyday foods and plants that have medicinal or health benefits.

As baby boomers take personal responsibility for their health, a great deal of interest is being generated in using natural products to prevent and treat illness. Consumers who purchase nutraceuticals are educated and willing to spend an estimated $150 million annually.

This new trend in health consciousness is an opportunity for agricultural producers who wish to diversify by adding value to the foods produced on their farms. Every year Canada grows approximately 60 million tonnes of grains, oilsseeds and special crops. Fibre, essential fatty acids and other components found in these crops provide attractive opportunities for producers to penetrate the nutraceutical marketplace. In addition, special feeding regimens for livestock can effect healthful changes to the nutrient composition of meats. By adding flaxseed (a source of beneficial omega-3 fatty acids) to feed rations, farmers can manipulate the level of omega-3 fatty acids in their eggs and the pork they produce.

Hundred of beneficial phytochemicals have been found in plants. Carrots contain beta-carotene, which helps reduce the risk of heart disease. Tomatoes are rich in lycopene, which has been linked to reduced risk of prostate cancer. Olives contain fines and each has its own health-giving properties. Phytoestrogens present in soybeans help reduce the risk of some cancers. The lignans in flaxseed have been linked with prevention of some forms of cancer.

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Dr. Carla Taylor from the Department of Foods and Nutrition at the University of Manitoba launched the day’s presentations with a talk on research activities in nutraceuticals and functional foods. Kelvin Fitzpatrick, a highly active Canadian in the industry, gave a presentation on marketing nutraceuticals internationally. Ms. Fitzpatrick is the President of the successful Saskatchewan Nutraceutical Network (SNN) that unites a membership of nutraceuticals and functional foods companies, government organizations, research institutions and industry associations. Dr. Wim Jongen travelled from the AgroTech Institute in the agricultural city of Wageningen in The Netherlands to deliver a talk on the European regulatory system and industry perspective on natural health products. Europe and Asia have lead the nutraceuticals and functional foods industry worldwide and are looked to by North America for indicators of industry and legislative trends. Philip Waddington was to represent the federal Office of Natural Health Products (ONHP) but was suddenly unable to be present.

The SNN’s Kelley Fitzpatrick acted as lieutenant and took the podium once again to deliver his presentation, providing an update on the regulatory framework for nutraceuticals and functional foods industry in Canada. The ONHP was launched in March 1999 to create a separate regulatory branch for health products not recognized as drugs but regarded as requiring further regulation than currently provided in the Food and Drugs Act. Aaron Stephens of Nature’s Path Foods Inc. in Delta, BC delivered a speech on the state of the industry in nutraceuticals and functional foods. Anne Kennedy of the National Institute of Nutrition (NIN) drew attention to consumer concerns and trends in Canada. Tim Blakey of Frontier Herbs in Ohio gave a highly informative presentation about small business opportunities and the herb industry climate. He and fellow presenter, Richard Allan Miller of Oregon’s Northwest Botanicals Inc. concluded the day’s program with separate talks condensed with information for herb producers and processors. The two speakers were the sole presenters at another FDC presentation the following day at St. Norbert Community Centre at the southern reach of Winnipeg. The workshop, Herbs and Medicinal Plants: Getting Started, was held on 23 March 2001. The workshop provided a rare inside view of success stories from two industry leaders who enthusiastically shared their experiences and knowledge with delegates interested in penetrating the herb and medicinal plant industry.

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**FDC Library catalogue now online**

By Linda Petruk

The FDC Food Development Centre Library is pleased to announce that its electronic catalogue of the Library’s holdings is now on the world wide web. Remote location Library patrons are now able to search for particular books, reports and serials in the FDC Library from their own computers. If the FDC Library has an item the patron wishes to borrow, an icon on the screen can be clicked on to send an email to the Library to request the item for loan. Patrons who are not Manitoba residents can place interlibrary loan requests for items through their local libraries. The Library catalogue is at http://www.fdc.mb.ca/Library.htm

The FDC Library loan policy is as follows:

- **Books and videos:**
  - three-week loan (no charge)
  - two-week loan (no charge)

- **Serials:**
  - additional weeks, subject to recall

- **Reference volumes and periodicals:**
  - not for loan

- **Copies of articles:**
  - no charge

**New materials in the FDC Library**

Books and videos


**Serials subscriptions**

Journal of Natural Products (ISSN 0163-3864)

Journal of Food Composition and Analysis (ISSN 0998-1575)

Perfumer and Flavorist (ISSN 0272-2666)

Plant Foods for Human Nutrition (ISSN 0921-9688)

Potato Research (ISSN 0014-3065)

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**The evil that FAD does**

By Terry Whiting, DVM, MSc

The two major foreign animal diseases of pigs are foot and mouth disease currently sweeping Britain, and hog cholera (classical swine fever). The year of 1997 saw a major upswing of serious disease in swine production areas of the globe. In March 1997 FMD swept through Taiwan (Taipei, China), with immediate ramifications of classical swine fever (CSF) on Pacific Rim countries. The estimated impact of the outbreak was an immediate expense of 1.6 billion US dollars and the area has not yet recovered disease-free status. Taiwan previously had held a major share of the Japanese fresh pork market. In February 1997 hog cholera was identified in The Netherlands, with rapid spread throughout the country’s core swine producing area. The outbreak was difficult to contain and spread to Spain and Italy. The cost to contain the outbreak was nearly 2.4 billion US dollars, however, Holland has since regained its disease-free status. These events have served to remind pork producers everywhere of the importance of foreign animal disease (FAD) control in the assurance of access to foreign markets. On 04 August 2000, hog cholera was identified in Britain. All controls relating to the 16 outbreaks of classical swine fever that occurred in Great Britain between 04 August and 03 November 2000 were lifted on 30 December 2000. Although the hog cholera outbreak was limited to 16 confirmed cases, the necessary and widespread measures taken by the UK government to prevent the spread of the disease are expected to have far-reaching consequences. Not only did the various restrictions placed on the hog sector detrimentally affect output for the five months it took to eradicate the disease, but the disruption to the UK breeding program is expected to affect national production for as long as two years. Because of the lengthy period of swine fever controls in East Anglia as a direct consequence of the disease, approximately 50,000 pigs that normally would have been marketed were slaughtered on farms where swine fever was found. In addition, 25,000 pigs were slaughtered on farms considered dangerous contacts and an additional 190,000 pigs were removed from entry into the food chain. This outbreak was very small compared to the current FMD outbreak in Britain.

**Risk and time periods**

There are four time periods that contribute to the overall cost of a FAD outbreak. Prevention Period (Po) is the time during normal industry operations when other countries have highly contagious diseases and a particular country is still disease-free. While reaping the benefits of increased market access during this period, the disease-free country is also incurring some expense. Preventing the entry of the disease and containing it is the least glamorous to talk about, however, it is the most significant. Taiwan has been unable to recover from the 1997 outbreak and we will learn valuable lessons from the next couple of years in Britain.

Producers are indispensable to early warning and first detection of foreign animal disease. By practicing good biosecurity on your farm in times of peace you will be prepared for the evil one. Terry Whiting is a specialist in veterinary disease control and epidemiology in Winnipeg for the Veterinary Services Branch of Manitoba Agriculture and Food.

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**NUTRACEUTICALS SEMINAR**

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Both events were well-received, leaving the planning committee free to organize future events on the same theme. The sponsors of the events were the Food Development Centre, Manitoba Agriculture and Food, Manitoba Processors Association, the National Research Council, Manitoba Industry, Trade and Mines, St. Boniface General Hospital Research Centre, the Herb Society of Manitoba, and Agriculture and Agri-Food Canada.

Markus Schumlen is the Business Development Co-ordinator at FDC and regularly organizes workshops presented by FDC.
More to oats than a bowl of porridge

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Researchers in the United States have extracted many components from the oat kernel and further tested these ingredients to determine whether they have any special properties. The test results indicate that hemp seed oil and oat flour can be separated into other compounds. The great contain bran, fibres and the flour. In turn, each of these can be broken down into other ingredients for pharmaceuticals, functional foods and consumer health products.

For example, the bran is used as an absorbent to thicken some personal products such as lotions, creams and gels. It is also a functional food ingredient in diabetes test meal bar. Oat bran contains beta-glucan and other phenolic acids that reduce cholesterol and helps control glycemisation when ingested. Oat flour contains starch can be substituted for talcum powder and cornstarch in cosmetics such as powder blush and eyeshadow. It can also be used as a substitute liner in disposable gloves. Oat protein is being tested for use in shampoo, hair conditioners and other lotions. It has excellent foaming and fat-binding properties that recommend it as a suitable component for these products. An anti-irritant ingredient in oat fibres is used in shampoos, skin creams, sunscreens and a wide variety of soaps and shampoos for pets.

Since most of the equipment was available in FDC’s plant. The hemp nut is packaged in small, resealable pouches starting at 56 grams for home use but it is also available in 200-pound drums for restaurant use. Hemp products are becoming popular because of their nutritional benefits and the profit can be found in grocery and health food stores across Canada and the United States. Hemp seed contains high concentrations of essential fatty acids and is a source of protein for vegetarian diets. The oil is an excellent choice for salad dressings and low-temperature cooking and baking. Hemp nut has a unique and wonderful nutty flavour and is versatile. It can be added to cereals, salads and baked goods. Because of its high protein content, it is an excellent meal alternative in soups, stews and gravies.

The Food Development Centre has not only contributed to the success of Fresh Hemp Foods, says Fata, but also to the growing popularity of hemp products in general. ‘They’ve helped us out, but they’ve also helped the hemp industry because right now we are one of the leading companies in developing new hemp products.

Lynda Lowry is a Food & Nutrition Specialist in Neepawa for Manitoba Agriculture and Food, with a particular interest in nutraceuticals.

HEMP PROCESSOR continued from page 1

For their product they didn’t want to invest the capital needed to set up their own processing facility. ‘It would have been physically impossible to have enough capital to set up our own processing facility when we were still in the market research stage,’ Fata notes. Plus, they didn’t have the scientific background to determine shelf life and ensure the finished product was of optimum quality.

The Food Development Centre’s manager of product and process development, Alphonus Utioh, had the answers to those questions in addition to a full-scale food processing plant and a staff of scientists to help analyze the product. Beginning in January 1999, FDC’s technical experts put their skills to work in determining how to optimize the shelf life of hemp oil and nut without adding any preservatives. Then the technologists in FDC’s pilot plant showed them how to extract the purest extract of hemp seed using a method.

Fata cannot say enough about the vital role the Food Development Centre has played in the success of Fresh Hemp Foods Ltd. There was virtually no capital outlay for machinery since most of the equipment was available in FDC’s plant. The company did invest in state-of-the-art Swedish cold press equipment. It has been temporarily installed at FDC but will go with the company when they set up an independent processing plant near Portage la Prairie. After the seed is sorted, it is pressed in the cold press and the resultant oil is filtered to remove sediment before being bottled. The bottles range from the 355 ml size perfect for home use to 20 litre drums for sale to health food stores and cosmetic manufacturers.

To make hemp seed, the nut passes through a dehulling machine which removes the shell and seed coat from the nut. The hemp nut is packaged in small, resealable pouches starting at 56 grams for home use but it is also available in 200-pound drums for restaurant use. The Food Development Centre helps the company develop its product, it has also lent a helping hand at marketing. Fresh Hemp Foods was invited to display its oil and seed as part of FDC’s exhibition booth at the Health and Wellness Expo in April. This was a result of efforts to connect with the Vita Health chain as a distributor for its products.

Hemp products are becoming popular because of their nutritional benefits and the profit can be found in grocery and health food stores across Canada and the United States. Hemp seed contains high concentrations of essential fatty acids and is a source of protein for vegetarian diets. The oil is an excellent choice for salad dressings and low-temperature cooking and baking. Hemp nut has a unique and wonderful nutty flavour and is versatile. It can be added to cereals, salads and baked goods. Because of its high protein content, it is an excellent meal alternative in soups, stews and gravies.

The Food Development Centre has not only contributed to the success of Fresh Hemp Foods, says Fata, but also to the growing popularity of hemp products in general. ‘They’ve helped us out, but they’ve also helped the hemp industry because right now we are one of the leading companies in developing new hemp products.

Jodi Ferguson is a freelance journalist in Portage la Prairie, Manitoba.
Foot and mouth disease – the special concern with pigs

By Terry Whiting, DVM, MSc

Very few viruses infect more than one species of animal. Notable exceptions are rabies and the influenza virus, which can affect animals and man. Foot and mouth disease (FMD) by comparison is promiscuous in its ability to infect all even-toed animals, all the common split-hoofed farm animals, wild deer and like animals, and elephants and rhinos. It is not considered infectious to man.

With the different strains of FMD there is generally a greater risk for a particular species. In 1997 the Taiwan outbreak was a swine-adapted strain that affected only pigs. All areas in the current outbreak in the United Kingdom, primarily sheep and cattle are affected. In general when FMD appears in pigs the disease is most difficult to control.

Pigs infected with FMD are tremendous sources of virus production. Pigs are able to generate infective aerosols up to 3000 times greater in virus concentration than cattle. Pig farms where FMD is present can generate an infective cloud that can be blown as far as 60 km to infect other farms. Animals become ill between two and 14 days after infection. The disease in affected animals is contagious to other animals for several days prior to the onset of clinical signs. On average, cattle excrete the virus from the pharynx for 2.5 days prior to the development of blistering lesions and crusting of cattle. Both of these diseases are poorly infectious compared to FMD or hog cholera. Response to foreign animal disease is important in minimizing the risk to our production systems. Prevention is by far the most economical risk management choice.

Terry Whiting is a veterinary epidemiologist for the Veterinary Services Branch of Manitoba Agriculture and Food. He regularly writes technical notes on animal disease control for colleagues and food animal producers in the province.

New GM envisions positive changes for FDC

By MAF and FDC Staff

Manitoba Agriculture and Food is pleased to announce the appointment of Pat Scott as the General Manager of the Food Development Centre (FDC). Pat has served as the Controller of the Centre since its move to Special Operating Agency status in 1996.

Pat, who is originally from Western Manitoba, received her Certified Food Accountants (CMA) professional designation from the Society of Management Accountants in 1985. She has acquired extensive professional experience in all facets of management accounting, including controllership of Special Operating Agencies and profit and non-profit organizations. She has also served as Controller of Leaf Rapids Town Properties, as treasurer on numerous boards of directors and has been involved with the Society of Management Accountants in their educational programs.

Pat envisions positive changes for FDC’s future, to coincide with the ever-evolving trends of the agri-food industry in Manitoba and the Centre’s move to Manitoba Agriculture and Food. Asked if FDC makes a difference to Manitobans, she answers, “You bet it does. With Manitoba’s industry reporting increased sales and new employment opportunities as a result of FDC’s support and assistance, the economic benefit of the value-added approach to exporting Manitoba’s commodities is being realized throughout the province.”

From its inception, Pat has presided over FDC’s development of a comprehensive strategic plan that positions the Centre as a leader to help industry remain competitive in this time of global markets and rapidly developing technology. She is confident that, through the introduction of new technology, the promotion of new product areas of global interest and the matching of industry potential with opportunities, FDC’s complement of research and business specialists will continue to lead growth and increased wealth generation through all sectors of Manitoba’s agri-food industry. “The results –” she concludes with a smile, “new food products, new business, new jobs – a prosperous way of life for Manitobans.”

The Food Development Centre operates within the Agricultural Development and Marketing Division of Manitoba Agriculture and Food.

Pat Scott can be reached at FDC in Portage la Prairie at (204) 239-3624 or on email at pat@fdc.mb.ca.

Clearly Manitoba Made

By Linda Petriuk

Next time you’re doing your grocery shopping, look for the amended Manitoba Food Processors Association logo and take pride in Manitoba’s burgeoning food processing industry. The new “Manitoba Made” logo was launched in spring 2000 and includes the MFP’s name on it. MFP members voluntarily include the logo on the labels of their foods to indicate that the products hail from our fair prairie province. The Manitoba Made logo has been a familiar icon in the local food industry, however, there was some concern that the public did not always realize that the logo belonged to the MFP. Rather than change the logo entirely in implementing the Association’s name, the MFP retained the familiar and catchy graphic and simply added their name below it. Henceforth both the province and the provenance of the logo will be clearly discernible at a glance.

Contacting agora

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Terry Whiting is a veterinary epidemiologist for the Veterinary Services Branch of Manitoba Agriculture and Food. He regularly writes technical notes on animal disease control for colleagues and food animal producers in the province.

Message from the CEO

It has now been more than a year since FDC joined Manitoba Agriculture and Food (MAF). The positive response has been over- whelming, with the general comment “well it’s about time” being heard again and again.

FDC and MAF are capitalizing on their joint capabilities to stimulate economic development within Manitoba’s agri-food industry. With the higher costs of transportation, processing and marketing, there is a smaller profit margin left to capitalize on new products.

Manitoba, as are all of Canada’s provinces, is seeing a shift in the food market. A younger generation is looking for new, different and healthy food products. Their lifestyle and income are driving the market.

Many companies have started to focus on new markets and new products. This is a viable opportunity especially with the market for seafood. This type of product is a new export market for Manitoba. Many of our companies are interested in this. It is a matter of finding the right product, the right processor and the right market. This will require continued research and development to support this market.

Linda Petriuk is Executive Director of the Food Development Centre.
Get to know us – FDC is:

Dave Donaghy, PhD
Asst. Deputy Minister
Manitoba Agriculture & Food
Chief Executive Officer

Linda Petriuk, BSc, BA, MLS
Librarian

Leigh Gao, PhD - Group Leader,
Product Development

Pat Scott, CMA
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The Blue Box – Manitoba Agriculture and Food’s

Kitchen to Market resource pack

An entrepreneur, processor or producer wishes to develop a unique health energy bar containing wheat, oats, sunflower seeds and canola. What information must appear on the label? Which government regulations apply? Is there a market for this type of health bar? One source that will assist in answering such questions is a resource pack developed by Manitoba Agriculture and Food. The resource pack is called How to Create a New Food Product – Kitchen to Market and has been assembled to assist food producers through an often complicated maze of necessary steps for determining their business potential, developing a quality product and bringing it to market. Also known as the “Blue Box,” the pack is easy to use and contains more than 100 resources including a variety of books, pamphlets, fact sheets, videos and computer programs. The range of resources includes basic business materials as well as specific food industry information. Creating a business plan and understanding food plant sanitation are examples of the coverage contained in the Blue Box.

A notable inclusion in the Blue Box is a video produced by Manitoba Agriculture and Food, called Kitchen to Market – the 12 Steps to Food Product Development. It showcases seven Manitoba food companies and shares their business success stories. A second video has been added to the pack, Bringing Ideas to Market, produced by the Food Development Centre. It explains in detail FDC’s capabilities and operations.

Innovative hemp processor launched with help from FDC

Manitoba’s hottest hemp processors know one thing for sure: without the technical support and expertise of the Food Development Centre in Portage la Prairie, their ideas for Fresh Hemp Foods Ltd. would never have grown beyond a dream.

“It wouldn’t have been possible if we hadn’t run into the Food Development Centre,” says company president Mike Fata. “We wouldn’t have been able to jump over some of the hurdles they’ve helped us overcome.”

Fresh Hemp Foods Ltd. is the brainchild of Fata and his two partners, Alex Chwaiewsky and Martin Moravcik. They started out buying hemp seed oil from another processor and bottling the finished product. But the trio wanted to have greater control over the purity of their product and also to expand their line to include hemp nut. “We wanted to get right to the source and work right from the seed,” Fata explains.

But there were a couple of problems. They didn’t know whether there was going to be a market