Volume 1, Number 1

Winter 2010

liaison

The Canadian Food Inspection Agency Magazine

CFIA Actions Address Food Safety Priorities

see Page 4

Canadian Food Inspection Agency

Agence canadienne d'inspection des aliments

Canada

liaison

The Canadian Food Inspection Agency Magazine

liaison is the voice of the Canadian Food Inspection Agency, a federal science-based organization responsible for safeguarding the food supply, monitoring animal health and protecting plants and crops from pests and other environmental hazards.

Published by Public Affairs Branch, Canadian Food Inspection Agency
George W. Shaw, Vice-President

Managing Director
Elaine St. Amour

Managing Editor
Thomas Costea

Production Manager
Joanne McCarthy

Contributing Editors
Catherine Airth
Stan Bacler
Dr. Keith Campbell
Dr. Robert Charlebois
Dr. Brian Evans
Dr. Jiri Furych
Catherine Hanson
Rhonda Hynds
Yves Lacroix
Barbara Lee
Stephane O'Neil
J.P. St-Amand
Ruth Vanwyk

liaison welcomes letters to the editor, suggestions and contributions. Please include name, e-mail address and telephone number.

liaison
Canadian Food Inspection Agency
59 Camelot Drive
Ottawa, Ontario, K1A 0Y9
Telephone: 613-221-3931
Facsimile: 613-228-6123
E-mail: LiaisonMagazine@inspection.gc.ca

© 2010 Her Majesty the Queen in Right of Canada (Canadian Food Inspection Agency), all rights reserved. Use without permission is prohibited.

CFIA P0655-09 ISSN: 1920-034X

Inside

Food for Feedback Fodder

The CFIA welcomes the readership of **liaison** Magazine to send in comments, suggestions and contributions. Ideas or manuscripts are welcome for commentaries, essays or feature stories of common interest to our readers. All correspondence will be answered and contributions considered for publication. Please include a name, e-mail address and telephone number. Send in any feedback to **liaison** Magazine, 59 Camelot Drive, Ottawa, ON, K1A 0Y9 or e-mail LiasonMagazine@inspection.gc.ca.

www.inspection.gc.ca

Message from the President

Carole Swan

Welcome to the premier edition of liaison – *The Canadian Food Inspection Agency Magazine*. The intention of this publication is to enhance communications with our stakeholders in industry, academia, public advocacy and government.

We communicate with a wide variety of stakeholder groups through a number of venues, and now liaison is a focused voice that will bring together the dynamic aspects of the Agency on a regular basis.

We hope our community of stakeholders will find this magazine insightful and informative, complementing existing communications and addressing strategic issues in the science and regulation of food production, animal health and the protection of plant resources. The Canadian Food Inspection Agency is Canada's largest science-based regulatory organization, with a sophisticated and sometimes complex mandate to safeguard food, animals and plants.

Food safety is the Agency's highest priority and increasingly an issue of significant profile nationally and at the global level. Because of its importance and shared jurisdictional accountability, we must work collaboratively with our federal partners such as the Public Health Agency of Canada, as well as provincial, territorial and municipal public health organizations.

All those involved in the production and inspection of the food we eat need to continually assess how well the food safety regime is serving Canadians. That is just what the CFIA is doing by concentrating on enhanced surveillance of health hazards, the reduction of contaminants in the food supply and common, effective meat processing hygiene standards.

You can read about some of our actions in the following pages of feature stories, yet the ongoing collaborative efforts of our food safety partners are also noteworthy. The involvement of public health officials is important to the CFIA, in order to accurately measure the impact of our actions on the reduction of foodborne illness.

We have learned the consequences and the costs of high-risk pathogens in food products, such as listeria monocytogenes in ready-to-eat meats. Now our focus is on targeting commodities for baseline studies, designing sample plans to determine the prevalence of high-risk pathogens, and developing options for action plans complete with estimated costs and resources to ultimately reduce foodborne illness in Canada.

Together with our stakeholders, the CFIA is facing many issues of serious importance to Canadians. It is only by working cooperatively with our regulatory partners and industry stakeholders that we can effectively protect consumers, animal health, plant health, ecosystems and our economy.

This magazine is one of the tools we are utilizing to demonstrate our efforts in managing risks, developing science and technology, informing stakeholders and advocating innovative solutions.

We welcome your comments and encourage contributions to our new magazine, as we journey along the frontiers of science and regulation in the public interest.

CFIA Actions
Address Food Safety Priorities

Not only is the world looking at food safety through a different lens of new emerging health hazards these days, but governments are also looking at new ways of communicating with industry stakeholders to present a unified front in the battle against foodborne illness.

CFIA Inspector Rosette Fayez reviews proper record keeping at a food processing establishment.

Eric Marceau, a laboratory chemist with the CFIA, is one of many specialists who help the Agency respond to emerging health hazards through sampling and testing.

The Canadian Food Inspection Agency continues to ramp up its efforts working with the food processing industry and the entire production continuum to focus on preventing, detecting and responding to future foodborne illness outbreaks.

> The CFIA is moving to hire and train an additional 70 inspectors for ready-to-eat meat processing plants to help with these new procedures, "who will be deployed to critical areas identified by the Agency," says Airth.

Food safety has certainly become a high priority for the Government of Canada in light of hazards found in imported food products and the listeria outbreak in ready-to-eat meat products in 2008. This fall the Government announced $75 million of new actions that address recommendations in the *Report of the Independent Investigator into the 2008 Listeriosis Outbreak*.

"The new actions will enable Canada's listeria management strategy, which makes environmental testing and reporting mandatory in federally-registered ready-to-eat meat plants," says Operations Branch Associate Vice-President Catherine Airth. "The CFIA has doubled its efforts with industry in the wake of the listeria outbreak to implement enhanced requirements."

The requirements, published in the Agency's Meat Hygiene Manual of Procedures, include more rigorous, mandatory listeria testing and immediate reporting of any positive findings to the CFIA, with prescribed follow-up to verify the effectiveness of actions that plant operators take to respond to positive listeria findings.

A CFIA directive to the food processing industry calls for a systematic and aggressive cleaning and sanitation procedure for slicing equipment, including all internal non-electronic parts. Plant operators are required to perform environmental sampling of contact surfaces, re-sanitize equipment prior to reuse and inform CFIA inspectors of the results.

Inspection systems are in place to monitor hygienic practices for food processing establishments in Canada, including meat processing plants.

The CFIA is moving to hire and train an additional 70 inspectors for ready-to-eat meat processing plants to help with these new procedures, "who will be deployed to critical areas identified by the Agency," says Airth. "We are also looking at what is needed to ensure our Compliance Verification System is as effective as possible in overseeing the food safety controls applied in meat processing."

The Agency is also very busy working in the laboratory to support the collaborative efforts of government and industry. The CFIA is strengthening diagnostic tools used in laboratories to improve detection methods for listeria monocytogenes and other microbial hazards in food. This will reduce testing time, enable more rapid response and improve surge capacity during outbreaks.

"We're implementing new screening methodologies to test for listeria in ready-to-eat meats and the environment in meat processing establishments," says Science Branch Associate Vice-President Catherine Hanson. "The screening methods help us to better detect pathogens and allow us to test more samples in the same period of time. CFIA laboratories have also switched to a seven-days-a-week rotation for priority testing of pathogens such as listeria."

The CFIA is currently working with other federal departments and academic research centres on different pathogen research projects, using tools such as biotechnology and nanotechnology. The development of techniques to identify and characterize listeria monocytogenes in the food manufacturing environment is an example of a collaborative project being pursued with other partners such as Health Canada and the Public Health Agency of Canada.

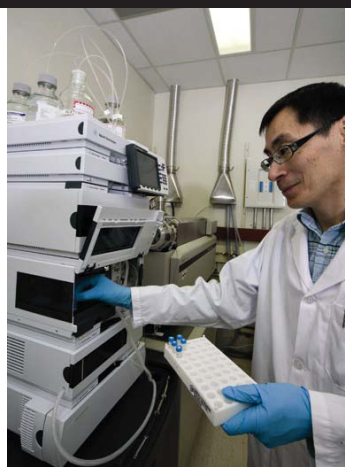
"We have put in place a rapid test kit for listeria to test meat products and environmental surfaces," says Hanson. "We also continue to develop rapid test kits both for other food commodities, and to shorten the time for final results. Some of these projects look very promising."

Operational and scientific actions at the CFIA are complemented by communications to increase awareness and knowledge among the public about the health risks associated with unsafe food handling practices and foodborne illness, including concerted efforts to target those most vulnerable to foodborne illness. A Government of Canada website portal is also being developed to give Canadians a single source of quick, easy access to food safety information.

Laboratory Team Responds to International Health Hazard

Laboratory scientists and technicians typically live in a slower paced environment than the commercial business world. However, when it comes to testing for life-threatening contaminants in the food supply, the lab coats can almost be seen flapping in the breeze like the capes of super heroes.

The Canadian Food Inspection Agency often finds itself working with industry and other partners to pinpoint potential health hazards and keep contaminants out of the food supply, with the common goal of protecting the health and safety of Canadians. And when those contaminants are suspected in imported food that is being shipped worldwide, the pressure is on not only to protect Canadians but also consumers in many countries.



Daniel Leung is one of the chemists on the team at CFIA's Calgary laboratory that developed new testing procedures for melamine.

That was the situation facing the CFIA when melamine was found in certain milk products originating from China. Melamine, a substance commonly used to harden plastics and form countertops, was added to milk products to boost protein counts. That caused the death of four babies and hospitalized about 50,000 people in China from the consumption of contaminated infant formula and milk products in September 2008.

When the world found out that some dairies in China were adding nitrogen-rich melamine and cyanuric acid to inferior milk, artificially boosting the protein content, governments around the world had to respond quickly to detect this new source of contamination in the global food supply.

"We were faced with the unique situation of not knowing how far this new contamination in milk protein products had spread into various food products, while dealing with a substance we had not historically monitored or tested extensively," says Stan Bacler, CFIA National Manager of Laboratory Operations. "We had to act fast and adapt to a new public health hazard."

The situation certainly required some innovative thinking. CFIA scientists responded quickly to the challenge of adapting an existing test into one that could detect contamination levels of concern to infants, in a growing list of more complex commodities.

Besides a rapid method development response, the CFIA labs established a very short service standard of approximately three days, so that affected product could be quickly removed from the marketplace or released for consumption. The result was increased food safety for the consumer with minimum disruption to the food supply, allowing safe products to remain available for sale.

The melamine contamination response involved almost 600 individual visits to Canadian retailers and importers, an effort involving roughly 80 CFIA inspectors. The development of test methods and the effort to limit and prevent the spread of contaminated products in the marketplace was a testament to the cooperation between the CFIA, provincial health authorities and the affected food industry.

"The CFIA responded to the needs of all its stakeholders and ensured that all of the test methods were made available to accredited Canadian labs for

Continued on page 14

New Laboratory on Cutting Edge of Food Safety

CFIA laboratory samples.

Determining the prevalence of hazards and the risk of contamination in the food supply is a major focus of ongoing actions to build a national food safety surveillance system for Canada, and now a new specialized laboratory project at the Canadian Food Inspection Agency is making a significant contribution to these efforts.

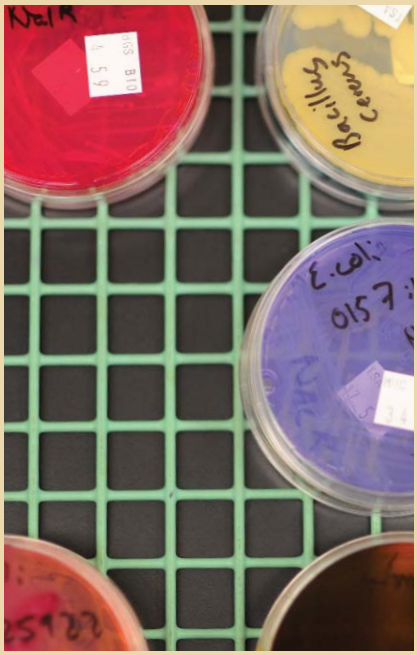
The CFIA is melding its efforts on molecular typing of isolates to reduce the time needed for characterizing bacteria, helping to make the linkages with pathogens in food and humans and providing alerts to public health jurisdictions across the country.

The Pulse Field Gel Electrophoresis laboratory housed in the Agency's Ottawa Laboratory at Fallowfield is contributing to the determination of foodborne illness patterns and the analysis of trends in food safety hazards.

"Formerly, the Public Health Agency of Canada (PHAC) used this DNA-based typing on all food isolates, but now the CFIA brings the capability and capacity to analyze higher volumes of samples for food testing in the convergence of public health and food safety," says Barbara Lee, Director of Food Laboratory Services at CFIA.

The new CFIA lab provides gold standard tests for typing bacterial pathogens such as E. coli O157:H7, listeria monocytogenes, salmonella spp. and shigella.

The CFIA sends test results for designation as a national pattern to the National Microbial Laboratory in Winnipeg, where PHAC manages the PulseNet program. These results help identify patterns and clusters, allowing epidemiologists to match clinical cases with food recalls being monitored by CFIA's Office of Food Safety and Recall and potentially trace food sources for outbreaks of illness.

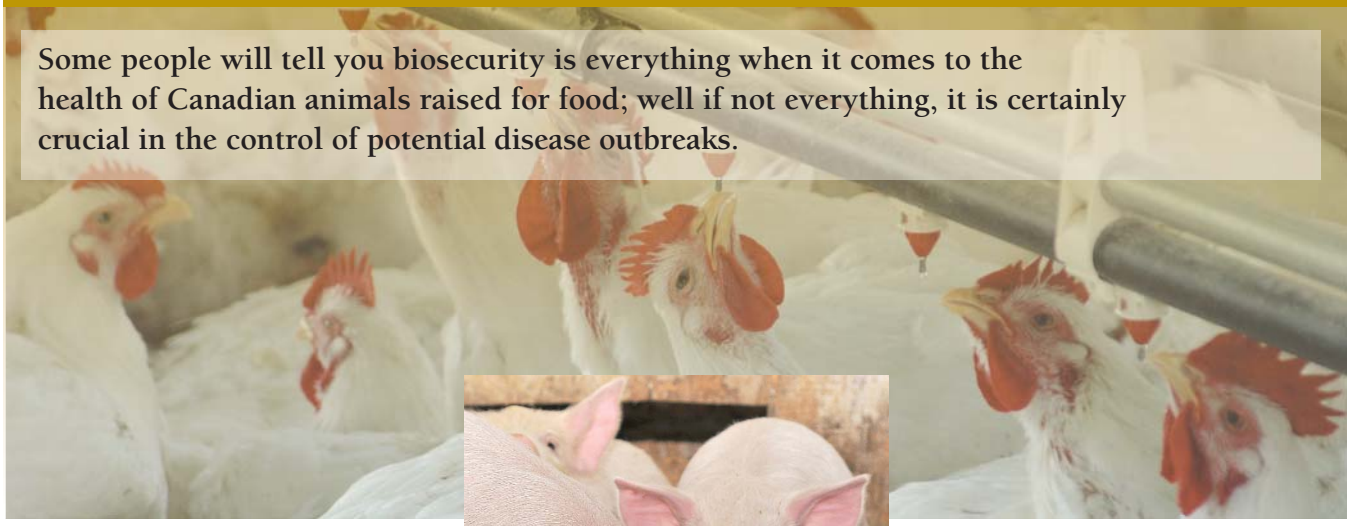


"We've taken a technology developed for use in a public health research environment and made it part of a food-testing regime," says Lee.

The patterns detected are posted for provincial and territorial public health jurisdictions to monitor, contributing to an enhanced national public health and food safety surveillance system.

Industry Collaboration Helps Develop Animal Biosecurity Standard

Some people will tell you biosecurity is everything when it comes to the health of Canadian animals raised for food; well if not everything, it is certainly crucial in the control of potential disease outbreaks.



The Canadian Food Inspection Agency has come a long way working with industry and provincial governments in improving animal biosecurity standards and guidelines for producers. In 2004, the spread of avian influenza – still to this day a concern for global public health – was confirmed in the chicken population of British Columbia's Fraser River Valley.

The 2004 influenza outbreak sparked the creation of an avian biosecurity advisory council with CFIA and industry to develop new standards and producer guidance for procedures to help prevent the spread of disease in and among poultry flocks. Those efforts have led to incorporating biosecurity standards with the on-farm safety program established for chickens, and intentions to develop similar standards for the other three major commodity groups – beef cattle, dairy cattle and swine.

The National Avian On-Farm Biosecurity Standard is complete and incorporated in the Chicken Farmers of Canada on-farm safety program, while other poultry groups have indicated they will do the same. The other three commodity groups are investigating best practices and combining them with benchmarking statistical surveys to design achievable standards.

"The on-farm programs give us a vehicle to work closely with all four major associations and acknowledge the role industry plays in developing a consistent national approach across the country and across all commodity groups," says Dr. Keith Campbell, National Manager of the CFIA's Office of Animal Biosecurity.

"We want to do this in collaboration with industry in order to make it a practical and successful program," says Dr. Campbell. "That makes communications with commodity groups very important. Producers have been practising biosecurity forever; now we're looking at systematically designing individual plans for each group."

The development of new biosecurity standards is being meshed with previous and ongoing communication campaigns, starting with a bird health basics campaign after 2004 and linking with a new animal health campaign that features articles in industry and professional newsletters, direct mailout of fact sheets to producers and veterinarians, enhanced disease reporting on the CFIA

Continued on page 14

The Road to Secured Certificates for Russia

Go figure, government officials are good at creating paperwork. But this is not the kind of paperwork that bogs down the process with copies in triplicate; it's the kind that smoothes out the road with trading partners.

The Canadian Food Inspection Agency interacts with the agriculture and agri-food sector to certify products for export and international trade. Sometimes, something as unassuming as the correct form or tag can put millions of dollars in the balance.

It's important to get it right, and the CFIA is constantly consulting with industry and international authorities to make sure all the paperwork is in order to facilitate the safe trade of commodities and food products, which is fundamental to economic viability. The road to a secured certificate for pork, fish and seafood exports to Russia in 2008-09 was a bit bumpy at times, but also an example of how the Agency can step up to smooth out the ride.

When Russian officials questioned the authenticity of imported shipments purportedly accompanied by Canadian export certificates and threatened to halt shipments from Canadian processing plants approved by Russia, at least $130 million in trade was at stake.

Government needed to come up with a more secure certificate for certifying that food products are Canadian-made and meet all health and safety standards. The CFIA initiated discussions with Russian officials to find a solution, which was eventually found in the CFIA's Web and Form Services division, not a place normally associated with trade negotiations. Nevertheless, the paperwork had to be secure and authentic to ensure the flow of Canadian food products.

"It was a collective effort by the entire Agency," says Dr. Jiri Furych, an Export Veterinary Specialist with the CFIA's International Inspection Systems. "From the design of a secured form, to senior officials visiting Russia, we negotiated back and forth until we came up with a solution and we were rewarded with the continuation of trade."

Designing a new export certificate for Russia involved reducing the number of pages, using a special thermocromic ink that can not be copied successfully, and using a unique watermarked paper from a specific pulp and paper mill.

"We had an ongoing dialogue with our printer as we went back and forth with several design drafts to meet the demands of our trading partners," says Ruth Vanwyk, Head of CFIA's Forms Development and Management team.

"We had to shuttle samples from the printer in order to get everything done and meet the Russian timelines. It was a tight turnaround, what normally takes six weeks we managed to complete in less than one week."

In the end, the secured certificates were accepted by Russia and trade has since resumed. But is it not the only time the CFIA has been involved in customizing documents needed to protect the safety of food, plant and animal resources.

"We are frequently asked to change the details of forms or design new formats and mediums for special circumstances," says Vanwyk. "For example, the printing on tags for bags of seed or animal feed were not standing up to inclement weather, so we had to adapt the printing, or the material of the bags would change and we had to find a new type of glue that worked to keep the tags adhered properly."

The CFIA is often involved with trading partners at the highest levels to facilitate the flow of agricultural commodities and food products and sometimes stick handle around obstacles, including something so seemingly mundane as getting the paperwork done right.

Organic Standards Establish National

CFIA Inspector Myriam Bourdon reviews the label of an organic food product.

The popularity of organic foods has steadily increased in Canada over the last several years. However, knowing exactly what organic means has varied depending on the commodity, the number of ingredients in processed foods and even the region where products originate.

Responding to marketplace demand and consulting extensively with industry stakeholders, the Canadian Food Inspection Agency has introduced new mandatory standards for organic foods in Canada.

The new standards are accompanied by a *Canada Organic* logo that can be applied to products meeting the standards. The logo represents the entire Canada Organic Regime comprising the regulations, standards and certification.

"Not only is the Agency implementing standards for organic production, but it will also be establishing a consistent national system of certification that will enforce the mandatory regulations and allow inspectors to identify products falsely claiming to be organic," says Michel Saumur, National Manager of the Canada Organic Office.

Canada has had voluntary organic standards since 1999. Marketers of organic products have been responsible under these standards to demonstrate the veracity of organic claims; that the product was produced according to organic principles. There has been some confusion in the marketplace however, as not all organic products were certified to the same organic standard or not even to a standard at all.

Certification System

However, multi-ingredient products with less than 95 percent and at least 70 percent organic content, will be allowed to claim they contain a certain percentage of organic ingredients, but they cannot use the logo.

Effective June 30, 2009, the new Organic Products Regulations came into force under the Canada Agricultural Products Act. These federal regulations, containing the Canadian Organic Standards, are intended to protect consumers against false and misleading organic claims. The regulations and the *Canada Organic* logo also give producers and marketers the advantage of clearly identifying legitimate organic products in a manner that is meaningful to consumers.

The CFIA is also coordinating Canada's effort to negotiate import/export agreements between Canada's organic regulatory regime and the regulatory regimes of its major trading partners.

Food products with at least 95 percent organic content according to the standards will be eligible to be labelled as organic and can carry the new logo. This can include multi-ingredient products. However, multi-ingredient products with less than 95 percent and at least 70 percent organic content, will be allowed to claim they contain a certain percentage of organic ingredients, but they cannot use the logo.

Products represented as organic for interprovincial and international trade, or bearing the new *Canada Organic* logo, must be certified to the Canadian Organic Standards by a CFIA-accredited certification body. The CFIA is also coordinating Canada's effort to negotiate import/export agreements between Canada's organic regulatory regime and the regulatory regimes of its major trading partners. An agreement has already been entered into with the United States and negotiations are under way with the European Union.

The scope of the new standards include organic production methods for foods and other agricultural products that are from a farm system employing management practices seeking to nurture ecosystems in order to achieve sustainable productivity; and that provide weed, pest and disease control through enhancement of biodiversity, recycling of plant and animal residues, crop selection and rotation, water management, tillage and cultivation.

The standards apply to unprocessed plants and plant products, livestock and livestock products that follow the principles of production and specific verification rules described in the standards, and processed agricultural crop and livestock products intended for human use that are derived from the aforementioned principles of production, as well as livestock feed and processed agricultural crop and livestock products intended for animal consumption also derived from the same principles of production.

The regulations also prohibit the use of certain substances, methods or ingredients when producing or handling organic products, including all materials and products produced from genetic engineering, synthetic pesticides, wood preservatives, fertilizer or composted plant and animal material that contains a prohibited substance, sewage sludge as a soil amendment, synthetic growth regulators and synthetic allopathic veterinary drugs, including antibiotics and parasiticides.

A New Imperative for Food Safety

by Dr. Brian Evans, Executive Vice-President of the Canadian Food Inspection Agency and Chief Veterinary Officer of Canada

Dr. Brian Evans

Responsibility for food safety is shared among many groups in Canada, from producers, processors, distributors and retailers, to multiple government departments and agencies, and consumers themselves. And while industry is ultimately responsible for the safety of the products it sells, the Government of Canada, along with provincial and territorial authorities, have specific and important roles to play.

In general, the Government of Canada oversees legislation related to food, as well as international and interprovincial trade. The federal government also sets, verifies and enforces food safety standards, publishes information on food safety and public health, and conducts relevant research. The provinces and territories oversee laws in their own jurisdictions and help investigate foodborne illness.

The Canadian Food Inspection Agency, as its name suggests, is primarily responsible for inspection in the management of food safety at the federal level. This includes enforcing appropriate laws and regulations, confirming compliance and leading investigations and recalls related to food. The Agency also has responsibility for certain areas of animal health and plant protection upon which the production of safe food depends.

It's important to recognize, however, that despite the name of our organization, we're only one of many players involved in food safety. Protecting the safety of food is a collective effort. Food safety is also a relatively complex undertaking in this country, in part because of provincial and federal jurisdictions, but also because of emerging trends and expectations, all of which underscore the need for a new concept of food safety. We need a transparent and proactive investment in continuing education to inform the public of the investments being made, and the inherent limits of protection achievable across the complex and dynamic food production system that makes zero risk, no matter how desirable, an unattainable outcome.

Risks to food safety persist, emerge and re-emerge continually, which potentially pose a serious challenge for our food safety efforts. This is not unique to Canada. There are also many misconceptions and myths about food safety, and about production and inspection practices. Government and industry can and must do a better job of transparently reporting on their performance, educating consumers about food safety risks and providing them the information that will assist their decision making and influence their food handling and preparation. And we need to start considering new ways to get this information out to people, such as using social media.

Unfortunately, Canadians' understanding of the food production system is limited and some of the fault lies with us as regulators and industry. To protect the safety of food in the modern era requires greater familiarity with the current food production and distribution system. Today, most consumers simply do not have knowledge of where their food comes from and how it's made. One or two generations ago, most Canadians had a

direct connection with food production; they had direct experience or relatives or friends who worked on farms. For most Canadians, that connection no longer exists.

Within developed countries food is derived from intensive production systems. Environmental degradation, climate change, microbial adaptation, increasing food allergies and an aging and increasingly immuno-compromised population, all contribute to a convergence model that poses challenges for defining and achieving food safety standards.

The system has changed, in large part, responding to consumer demand and modern technologies. For example, Canadians want fresh fruit and vegetables year round. They want to choose from an ever-greater variety of foods. The demand for extended-life foods – products that remain safe to eat for months – continues to increase. In addition, modern lifestyles also favour convenience foods that do not require significant preparation or cooking, which historically provided a significant step in risk reduction. Canadians also expect to spend less on foods consumed at home; the percentage of household income devoted to food has declined considerably in recent decades. During the same period, the percentage of household income spent on restaurant meals has risen significantly.

Against these expectations, food has gone global with sourcing of many foods and ingredients from countries with diverse and disparate food safety controls. Within developed countries food is derived from intensive production systems. Environmental degradation, climate change, microbial adaptation, increasing food allergies and an aging and increasingly immuno-compromised population, all contribute to a convergence model that poses challenges for defining and achieving food safety standards.

All of these factors call for a modernized concept of food safety – one that doesn't apply to everyone in a uniform manner. This new concept must engage producers and consumers in the management of risk, and it must link food safety with the health of plants, animals and ecosystems. We must look at everything we do through a food safety lens.

This requires a collective approach. It will require a collaborative, complementary effort among all groups in society to promote and improve food safety. Consumers need accurate, credible information to assist in making informed decisions. Publicly accessible, relevant and authoritative data is key to strengthening our food safety system.

The government shares this responsibility and does consider food safety a top priority.

The food industry should be more open about what it does to promote and protect food safety, however it needs to do this while striking a balance; companies should publicize their food safety practices and performance without compromising competitiveness or exposing themselves to liability issues. The public's response to Michael McCain during the 2008 recall of Maple Leaf food products demonstrates a desire for accountability and clear information. Public trust is something that a company must earn with each and every product, on each and every shift.

The government shares this responsibility and does consider food safety a top priority. We must constantly strive to improve our ability to manage risks at all stages of food production and distribution, prevent problems before they arise, and respond quickly when problems occur. These are the expectations that society has of us and they are the expectations that we must have of ourselves.

Industry Collaboration

Continued from page 8

website and brochures for producers outlining responses for diseases such as anthrax, bovine spongiform encephalopathy, scrapie, chronic wasting disease, foot-and-mouth disease and avian influenza.

"We are linking the new standards and producer guidance with our website material and the new animal health campaign," says Dr. Campbell. "By having the new campaign visible and communicating face-to-face we hope it will stimulate producers to incorporate biosecurity measures into their day-to-day activities and help us all do a better job of minimizing the potential for the spread of animal diseases."

The human pandemic H1N1 2009 virus, which has been erroneously called the swine flu, has authorities worldwide formulating detailed public health action plans. There is no evidence at this time, however, that animals play a significant role in spreading the virus to humans, and the virus does not behave any differently in pigs than other influenza viruses commonly detected in swine herds. There is no food safety risk associated with the virus as well, due to Canada's slaughter inspection system which prevents sick animals from entering the food supply.

Any herds or flocks affected by the virus will be managed using the same veterinary management and biosecurity practices employed for other influenza viruses. All herds and flocks will be monitored to verify that infected animals recover and to detect any changes in how the virus affects animals or in the structure of the virus.

The very presence of diseases caused by the pandemic H1N1 2009 virus only reinforces the need for constant review and improvement of biosecurity standards across all animal commodity groups. And that is exactly what the CFIA is working towards in cooperation with industry groups, provincial and territorial governments.

Laboratory Team

Continued from page 6

industry to employ," says Bacler. "The test methods are now being put to use by labs in other countries and the CFIA has been approached for the methods by other public and private labs in Canada, as well as the United States Food and Drug Administration, the Pan American Health Organization and the World Health Organization."

Three laboratory tests were validated by the CFIA and incorporated into the Agency's response for melamine contamination in milk protein products. The first challenge was to rapidly screen a product for melamine and cyanuric acid. The rapid screening test was complemented with a second test to confirm and quantify melamine. And finally a third test was validated to confirm and quantify cyanuric acid.

Sensitivities changed with the melamine contamination in infant formula. Tests with a sensitivity of less than 0.5 ppm for infant formula, 20 times lower than before, were necessary. As sensitivities increased, so did the difficulty of isolating the melamine from all the unwanted interfering food components.

Using variations on the three new test methods developed in the CFIA's Calgary lab, a team led by Dr. Jian Wang was able to analyze upwards of 500 samples while developing and validating the test methods.

The investigation into melamine contamination has since been expanded to include other potentially affected products in addition to infant formula. Specifically, products made from milk or milk-derived ingredients that could contain contaminated product are being examined. Milk-derived ingredients include whole milk powder, non-fat milk powder, whey powder, lactose powder, and casein.