Ministry of Agriculture, Food and Rural Affairs

Food Safety

Background

Because of new food production and processing practices, emerging food-borne pathogens, and changing eating habits and demographics, there has been a greater awareness of food-borne illness in recent years. According to figures published by the World Health Organization, up to 30% of the populations of industrialized countries suffer from food-borne diseases every year. In Canada, on the basis of 10,000 to 30,000 reported cases of food-borne illness and some 30 deaths, it has been estimated that there were about 2 million cases of such illnesses each year. The symptoms can range from mild to severe flu-like symptoms to chronic illness, disability, and even death. Most people have had a food-borne illness, even though they may not have recognized it as such.

At various points in the food-supply chain, food can be contaminated by physical, chemical, or biological substances in the feed given to the animal; misuse of veterinary drugs; or poor farming practices. Food can also become contaminated at processing facilities, in stores and restaurants, or in the home through improper storage, food-handling practices, or preparation. Many cases of food poisoning can be attributed to the mishandling of food in the home. Consumer education in safe food handling is one of the most effective means of reducing food-borne illness.

In Canada, the regulatory responsibilities for food safety are shared among all levels of government. At the federal level, Health Canada establishes the policies and standards governing the safety and nutritional quality of all food sold in Canada, as well as carrying out surveillance of food-borne diseases. The Canadian Food Inspection Agency (CFIA) is responsible for regulating federally registered establishments, which are generally those that move products across national and provincial borders; when warranted, it issues food recalls.

At the provincial level in Ontario, the Ministry of Agriculture, Food and Rural Affairs (Ministry) administers a number of statutes that are intended to minimize the risks to food safety related to meat, dairy products, and foods of plant origin processed and sold in Ontario. In addition, the Ministry of Natural Resources is responsible for food safety as it pertains to fish and fish plants. The Ministry of Health and Long-Term Care sets food safety standards for food premises. It has delegated the inspection of retail stores, institutions, and restaurants to municipal public health units.

The difference between federal and provincial establishments is primarily one of scale and scope. Provincially licensed facilities may sell their products only within the boundaries of Ontario,

whereas federally registered facilities may sell to other provinces and other countries.

With respect to meat, the Ministry is responsible for the licensing and inspection of abattoirs, and since 2005 its mandate has included freestanding meat processors. The latter are primarily wholesale establishments that do not slaughter animals but which process meat (for example, by cutting and packing) and sell their products, such as roasts, steaks, and ready-to-eat meat products, to restaurants, retailers, and so on. In 2006, provincially licensed abattoirs slaughtered more than 22 million animals (75% of which were chickens), which is about 10% of all animals slaughtered in Ontario. As of March 2008, there were about 160 abattoirs and 290 freestanding meat processors licensed by the Ministry.

The Ministry has delegated responsibility for administering and enforcing various quality and safety provisions for raw cow's milk under the *Milk Act* to the Dairy Farmers of Ontario (DFO). The DFO collects milk from the farms and sells it to processing plants, which then process it into fluid milk (that is, homogenized, 2%, and so on) and industrial milk and cream (which is used to manufacture other dairy products, such as butter, cheese, yogourt, and ice cream). The DFO is responsible for dairy farm inspection, and the Ministry is responsible for the licensing and inspection of dairy processing plants and wholesale distributors of the processed milk products. Retail distributors are the responsibility of municipal public health units. In 2007/08, there were about 120 dairy processing plants and 390 wholesale distributors licensed by the Ministry.

Fresh fruits and vegetables, maple syrup, honey, apple juice, cider, and minimally processed fruits and vegetables are classified as foods of plant origin. The Ministry operates under the *Farm Products Grades and Sales Act*, which was created primarily to regulate the grading, packaging, labelling, and advertising of farm products. Although the Act prohibits the sale of produce that is unfit for human consumption, in contrast to the legislation regulating meat and dairy products, it does not contain specific requirements for the licensing and inspection of foods of plant origin. It is estimated that there are about 10,700 producers of such foods in Ontario.

The Ministry's food safety programs are administered by its Food Safety and Environment Division. In 2007/08, the Division had about 280 full-time staff, and total expenditures on food safety were approximately $48 million. The expenditures were primarily for licensing and inspection, laboratory testing, and financial assistance programs for food safety initiatives.

Audit Objective and Scope

The objective of our audit was to assess whether the Ministry has adequate systems and procedures to manage food safety risks effectively and to ensure compliance with applicable legislation and policies.

Our audit followed the professional standards of the Canadian Institute of Chartered Accountants for assessing value for money and compliance. We set an objective for what we wanted to achieve in the audit and developed audit criteria that covered the key systems, policies, and procedures that should be in place and operating effectively. We discussed these criteria with senior management at the Ministry, who agreed to them. Finally, we designed and conducted tests and procedures to address our audit objective and criteria.

Our audit included researching food safety practices followed in other jurisdictions, interviewing ministry staff, and analyzing relevant inspection files and information. We also toured various facilities, including an abattoir, meat and food-processing plants, a milk producer, and a dairy processing plant, to get first-hand knowledge of the facilities and observe the Ministry's inspection process. In addition, we met with the Ontario Independent Meat Processors, the Dairy Farmers of Ontario, the Canadian Food Inspection Agency,

Mr. Justice Roland Haines (who conducted an independent review of Ontario's meat regime in 2004), and University of Guelph professors for their input on how food safety can be improved.

We also reviewed the activities of the Ministry's Internal Audit Services Branch. Although the Branch had not conducted any recent audits in this area, it had evaluated the Ministry's progress in implementing Justice Haines's recommendations.

Summary

The Ministry has established many of the systems and procedures needed to minimize food safety risks. Nevertheless, we have identified a number of areas where improvements are required.

With respect to meat, the Ministry has established detailed food safety standards for provincially licensed abattoirs, which account for about 10% of all animals slaughtered in Ontario, and freestanding meat plants. However, in order to ensure the safety of meat and meat products sold to consumers, the Ministry needs to make sure that corrective action is taken when significant violations of its standards are found during licensing audits, so that only plants that are free of significant deficiencies are granted licenses to operate.

Specifically, a number of abattoirs and freestanding meat processors were found to have major and serious deficiencies during their licensing audits. Some plants that were deemed to have met minimum regulatory requirements had a deficiency rate for the standards examined of close to 30%, and even a number of highly rated plants had many deficiencies. Many of these deficiencies were repeat violations noted during previous audits.

In addition, microbial organisms (bacteria) and chemical substances in food are not readily detected through the Ministry's visual inspections of meat and of operators' facilities and equipment. Although the Ministry conducts laboratory tests to identify the presence of such substances, we noted overall that there had been a lack of systemic follow-up or corrective action to address adverse results from the laboratory tests. For example, a study of 48 newly licensed freestanding meat processors in the Greater Toronto Area in 2006 to determine the prevalence of pathogens and contamination on equipment and food-contact surfaces found high rates of bacteria, even for highly rated plants. Although the Ministry informed us that the adverse results did not pose an immediate public health risk, they could indicate a lapse in sanitation or a process failure that increases the risk of causing food-borne illness in consumers.

For dairy products, the Ministry has delegated the responsibility for administering and enforcing various quality and safety provisions of the legislation for cow's milk to the Dairy Farmers of Ontario (DFO). The Ministry relies on the DFO's mechanisms for inspecting all farms to ensure that the farm premises, surrounding areas, and milking equipment are sanitary. Laboratory tests are also performed routinely for bacterial content, somatic cell counts (an indicator of infection in the udder), and antibiotic residues, and there are severe financial penalties for non-compliance.

In addition, the Ministry has made significant progress in the inspection and testing of goat's milk, an area where we made a number of recommendations in our last audit in 2001.

However, we noted weaknesses in the Ministry's inspection of dairy processing plants and distributors. These included instances of licences being renewed before an inspection had been completed; only minimal inspections of dairy distributors; inconsistencies in the depth of inspections conducted; and inadequate documentation of the inspection results. Thus it was difficult to assess the overall compliance levels. In addition, results from the testing of fluid milk and cheese showed cases of bacteria counts that suggested that a number of processing plants might have sanitation problems.

For foods of plant origin, there are limited enforceable provincial food safety standards, because the legislation was created primarily

to regulate grading, packaging, labelling, and advertising. Nevertheless, the Ministry, on its own initiative, has been collecting samples of fruits, vegetables, honey, and maple syrup and having them tested, primarily during the summer. In 2007/08, the Ministry conducted over 2,400 tests and found adverse results for 2% of the samples. The contaminants included lead in processed honey and maple syrup, chemical residues in fruits and vegetables exceeding Health Canada's maximum allowable limit, and microbial contaminants (listeria and salmonella) in minimally processed vegetables. When non-compliance was detected, the Ministry collected additional samples from the same producers for further testing; the non-compliance rate on those second samples has been about 20%. Since the Ministry has limited enforcement authority, it could not stop producers from continuing to sell their products to the public. It could only make educational visits to notify the producers and send the results to the CFIA for possible food recalls and hazard alerts. Our review of a sample of non-compliance results found 10 producers with repeated violations in the last five years; this suggests that the Ministry's educational efforts with those producers have not been successful.

Finally, we noted that to manage food safety risks better, the Ministry needs to develop a more comprehensive risk-based strategy to guide its priorities and activities.

A number of our observations had been noted in our previous audit of food safety in 2001. Although our follow-up in 2003 found that action had been taken, the Ministry has not been able to sustain a number of the improvements noted at that time.

OVERALL MINISTRY RESPONSE

The Ministry of Agriculture, Food and Rural Affairs welcomes the Auditor General's report on the Ministry's food safety programs.

Ontario has a strong food safety system and a recognized reputation for safe food. Everyone—from consumers to producers and food processors to all levels of government—has a part in this system.

The Ministry takes food safety seriously. That is why the Ministry continually reviews and enhances its food safety programs, using new scientific knowledge and technological advancements. Our system is strong. We can always make it stronger, and we thank the Auditor General for identifying specific areas for further improvement.

The Ministry has recently taken several steps to strengthen the food safety system, such as by:

- passing the *Food Safety and Quality Act, 2001*;
- expanding provincial meat inspection to include non-slaughter plants;
- hiring more full-time meat inspectors; and
- continuing to support the Canadian Partnership for Consumer Food Safety Education in order to promote food safety practices to consumers.

We accept the Auditor General's recommendations and will carefully review the report in order to guide the further evolution of Ontario's food safety strategy.

Detailed Audit Observations

The Ministry administers and enforces a number of statutes in order to minimize risks to food safety in various commodities that are produced, manufactured, or sold in Ontario. They include the following:

- *Food Safety and Quality Act, 2001*—Proclaimed in 2005 with the objective of modernizing the regulatory framework for meat inspection, this Act provides for the control and regulation of the quality and safety of food, agricultural or aquatic commodities, and agricultural inputs; and for the management of risks to food safety, such as food contamination; chemical, biological, and physical hazards in food; and food-borne illnesses.

The Act also specifies through regulation the licensing requirements and standards for production, premises, and operations; labelling and packaging; and the proper disposal of inedible material.

- *Dead Animal Disposal Act*—This Act regulates the disposal of certain animals that died from causes other than slaughter and sets out licensing requirements for persons engaged in the carcass disposal business.
- *Milk Act*—This Act provides for the control and regulation of the producing and marketing in Ontario of cow's and goat's milk, cream, and cheese; and of the quality of cow's and goat's milk, milk products, and fluid milk products in Ontario.
- *Farm Products Grades and Sales Act*—This Act regulates the inspecting, grading, packing, and marking of farm products, which include meat and meat products, fruits, vegetables, and honey.

To help achieve compliance with the applicable legislation and manage food safety risks, the Ministry has systems and procedures for the licensing, inspecting, and ongoing laboratory testing of the various food groups. Licensing is intended to ensure that facility operators are in compliance with legislative standards in the production of food products. Inspection is intended to ensure continuous compliance and that the food products produced meet food safety standards. Laboratory testing is aimed at detecting contaminants that may be in food products but that are not readily apparent through visual inspection. In addition to the licensing, inspection, and laboratory testing of food products, the Ministry also undertakes special projects to estimate the prevalence of specific hazards in designated commodities. The findings from special projects could in turn be used to target inspection, intervention, and further research efforts.

MEAT

The Ministry is responsible for the licensing of abattoirs in Ontario. In addition, the *Food Safety and Quality Act, 2001,* proclaimed in 2005, expanded the Ministry's mandate to include freestanding meat processors, which were previously under the jurisdiction of municipal health units. The Ministry's plan was to phase in the licensing of the freestanding meat processors, on the basis of their production volume, over three years beginning in 2005.

Abattoirs and freestanding meat processors must be licensed annually. The licence is to be issued after an audit has determined that the legislative requirements and ministry safety standards have been met, although freestanding meat processors were initially given a transition period of about six months from the issuing of a licence until the audit.

As of March 2008, there were about 160 abattoirs and 290 freestanding meat processors licensed by the Ministry, and by October 2008 the Ministry expected to have approximately 500 freestanding meat processors licensed.

In addition to undergoing a licensing audit, abattoirs must present all animals for an ante- and post-mortem inspection. An inspector, with the assistance of a veterinary inspector, has the authority to stop a slaughter, detain products, and issue compliance orders. The Ministry also conducts laboratory testing of healthy animals for drug residues, growth hormones, parasites, and so on; it also tests the safety of water and ice used in the slaughter process.

Freestanding meat processors are inspected periodically by the Ministry to help ensure that the plants continue to meet food safety requirements. As well, the Ministry tests the safety of water and ice used in food preparation.

The Ministry does not conduct regular microbial testing (testing for bacteria) on meat and meat products.

In early 2004, the government of Ontario asked Mr. Justice Roland J. Haines of the Superior Court of Justice to review the meat regulatory

and inspection regimes in Ontario. The safety of meat in Ontario became a matter of public concern about such issues as bovine spongiform encephalopathy (BSE or mad cow disease) and allegations of illegal activities at certain provincial abattoirs. Consequently, Justice Haines's report, which was issued in July 2004, made 113 recommendations, of which the majority pertained to the Ministry, for improving meat safety in Ontario. According to the Ministry, it has implemented, or is in the process of implementing, many of the recommendations, including ones that pertain to stronger meat legislation, changes to the organizational structure of the Ministry, and the establishment of a number of food safety initiatives. However, our current audit found that in the licensing, inspection, and laboratory testing of abattoirs and freestanding meat processors, further improvements are needed. Our observations are described in the sections that follow.

Licensing of Abattoirs and Freestanding Meat Processors

For use in the licensing-audit process, the Ministry has established detailed compliance standards to assess whether abattoirs and freestanding meat processors are complying with the requirements of the legislation and to derive a plant rating. The Ministry rates each compliance standard as major, serious, or moderate. There are over 500 compliance standards, covering various aspects of the licencees' operations, such as the overall cleanliness of facilities and equipment, and training of personnel. The plant rating is based on a letter grade system, as shown in Figure 1.

At the completion of a licensing audit, a Corrective Action Plan meeting is to be held between the Ministry and the operator of the plant to discuss any deficiencies noted and the actions that need to be taken for the plant to be in compliance with the legislation. Meat inspectors and area managers are to verify that the corrective actions have been taken according to deadlines established by the Ministry. All ratings, deadlines, and follow-up actions are to be recorded in the Ministry's information system.

The Ministry engages seven auditors on a contract basis to conduct licensing audits. For the purpose of assigning a plant rating, the Ministry relies on the knowledge and judgment of the auditors, although there were a number of absolute requirements that have to be met.

We noted that many major and serious deficiencies were found during the licensing audit at a number of abattoirs and freestanding meat processors. About half of all abattoirs (162) and freestanding meat processors (80) were deficient in at least 10% of the compliance standards audited. As the examples in Figures 2 and 3 illustrate, some plants have been deficient in more than 30% of the compliance standards audited, and there were significant inconsistencies in deficiency rates for plants with the same rating.

Figure 1: Plant Ratings for Abattoirs and Freestanding Meat Processors, 2007/08

Source of data: Ministry of Agriculture, Food and Rural Affairs

	# of Abbatoirs	# of Freestanding Meat Processors
AAA—plant exceeds regulatory requirements	3	5
AA—plant generally exceeds regulatory requirements	40	17
A—plant meets regulatory requirements	94	44
B—plant meets minimum regulatory requirements	24	13
C—plant is not operating in accordance with legislative requirements and must make immediate improvements	1	1
Total	**162**	**80***

* As at March 31, 2008, 80 of the 290 licensed freestanding meat processors had been audited and designated a plant rating.

In addition, the Ministry's information system showed that a large number of abattoirs and freestanding meat processors had been found repeatedly to have the same major or serious deficiencies. For example, a 2007 audit of an A-rated freestanding meat processor noted 45 deficiencies, 21 of which had been reported in each of the last three audits.

The Ministry informed us that a number of deficiencies could have been corrected but not updated in the information system. It also acknowledged that insufficient details are kept in the current information system and that this makes it difficult to determine precisely which deficiencies are repeat violations and which have been corrected. On the

Figure 2: Range in Deficiency Rates at Abattoirs

Source of data: Ministry of Agriculture, Food and Rural Affairs

	# and Type of Deficiencies Found				# of Applicable Standards	Deficiency Rate[1] (%)
	Major	Serious	Moderate	Total		
Three Selected A-rated Abattoirs						
Plant 1 – highest[2]	36	25	2	**63**	252	25
Plant 2 – median[3]	16	9	0	**25**	261	10
Plant 3 – lowest[4]	3	2	0	**5**	384	1
Three Selected B-rated Abattoirs						
Plant 1 – highest [2]	74	45	1	**120**	335	36
Plant 2 – median [3]	27	19	1	**47**	330	14
Plant 3 – lowest [4]	7	6	0	**13**	316	4

1. The deficiency rate is calculated by dividing the total # of deficiencies by the # of applicable standards and multiplying by 100. The results have been rounded.
2. Among all the plants with this rating, this is the plant with the highest deficiency rate.
3. Among all the plants with this rating, this is the plant with the median deficiency rate.
4. Among all the plants with this rating, this is the plant with the lowest deficiency rate.

Figure 3: Range in Deficiency Rates at Freestanding Meat Processors

Source of data: Ministry of Agriculture, Food and Rural Affairs

	# and Type of Deficiencies Found				# of Applicable Standards	Deficiency Rate[1] (%)
	Major	Serious	Moderate	Total		
Three Selected A-rated Freestanding Meat Processors						
Plant 1 – highest[2]	35	21	2	**58**	179	32
Plant 2 – median[3]	8	7	3	**18**	181	10
Plant 3 – lowest[4]	5	1	0	**6**	189	3
Three Selected B-rated Freestanding Meat Processors						
Plant 1 – highest[2]	66	39	2	**107**	252	42
Plant 2 – median[3]	42	19	1	**62**	241	26
Plant 3 – lowest[4]	2	9	0	**11**	150	7

1. The deficiency rate is calculated by dividing the total # of deficiencies by the # of applicable standards and multiplying by 100. The results have been rounded.
2. Among all the plants with this rating, this is the plant with the highest deficiency rate.
3. Among all the plants with this rating, this is the plant with the median deficiency rate.
4. Among all the plants with this rating, this is the plant with the lowest deficiency rate.

basis of our review of the underlying documentation, we were not convinced that all plants had corrected their deficiencies, because the same plants continued to have a large number of deficiencies each year.

We also noted the following weaknesses that were specific to the licensing audit of freestanding meat processors:

- To identify the freestanding meat processors operating in Ontario, the Ministry in 2002 developed a preliminary database using information obtained from the various public health units, Canadian Food Inspection Agency, Ontario Independent Meat Processors, and commercial directories. Since then, however, the Ministry had not updated its database.
- As of March 2008, out of the 290 licensed freestanding meat processors, only 80 had been audited and rated. While resources were committed to do routine inspections on many of the remaining 210 unaudited meat processors on numerous occasions—with about half having been inspected more than 10 times—no resources have been committed to doing a full compliance audit to determine if these processors should be licensed and to derive a plant rating. The Ministry informed us that freestanding meat processors are now required to comply with more stringent standards than previously and that much of its inspectors' time had been devoted to helping meat processors to be in compliance with the food safety standards: hence the large number of inspections. We were concerned, however, that such a large number of inspections could also mean that many processors were still not in compliance.
- A number of staff we interviewed expressed concern about the new freestanding meat processors, including issues related to poor sanitation, improper construction materials (such as wood rather than stainless steel), the use of basements, lack of labelling, and the risk of ready-to-eat meat products.
- In the licensing audits of freestanding meat processors, the Ministry was using the compliance standards for abattoirs that also conduct further processing of meat. An internal review conducted by the Ministry pointed out that all standards pertaining only to slaughter plants should be removed and that additional compliance standards specific to freestanding meat processors and for processing ready-to-eat meat products should be adopted. The lack of a specific set of compliance standards for freestanding meat processors may result in inconsistencies in licensing and a less effective audit framework.

The above observations led us to question whether more stringent compliance with the Ministry's food safety compliance standards should be required before licences are granted.

RECOMMENDATION 1

To help ensure that licences are issued only to abattoirs and freestanding meat processors that have met its food safety standards, the Ministry of Agriculture, Food and Rural Affairs should:

- ensure that prompt corrective action is taken by the plant operators when significant deficiencies are found during a licensing audit, and if corrective action is not taken, to consider denying a licence;
- review its system of rating abattoirs and freestanding meat processors and provide clear criteria and guidelines so that they reflect more accurately and consistently the facilities' level of compliance; and
- update its information system promptly to facilitate auditing and licensing decisions.

In addition, the Ministry should:

- periodically update its database of freestanding meat processors so that all are subject to the required compliance audit;

- expedite the outstanding licensing audits for the large number of newly licensed freestanding meat processors;
- follow up on and address concerns raised by its staff with regard to any potential systemic problems; and
- develop compliance standards that are more specific to freestanding meat processors.

MINISTRY RESPONSE

The Ministry agrees with the recommendation.

We recognize that an ongoing review of the inspection, audit, and licensing systems is necessary to ensure that they are effective.

Currently, the Ministry asserts its authority to stop processing if the inspector believes that plant operating conditions have an immediate impact on food safety. The Ministry is committed to ensuring that operators take timely action when any deficiencies are identified.

The Ministry is currently reviewing the rating system for abattoirs and freestanding meat processors. The objective of the review is to achieve a consistent and transparent audit process for auditors and plant operators. Changes to the audit process are being implemented for the next audit cycle. We are strongly committed to regularly reviewing and updating all training materials; the updating of the Meat Inspection Policies and Procedures Manual is expected to be completed in fall 2008.

The Ministry acknowledges that its current information-management system does not adequately reflect deficiencies that have been identified in plants and have been corrected. Work has already begun to replace the current information management and information technology system with a new system, which is scheduled to be launched in 2009. In the meantime, improvements are being made to the current system to provide better information and a more efficient process for licence renewals.

The Ministry has recently updated the inventory of freestanding meat processors, and we will update this inventory on a continuing basis. We are committed to reviewing our approach to initial audits of newly licensed freestanding meat processors.

We have made important changes to the Meat Inspection Program, including improvements to the management structure and an increase in the number of staff meetings. With these changes, opportunities to identify and address staff concerns have already been enhanced.

The Ministry is developing compliance standards that are more specific to freestanding meat processors and that will be implemented beginning in 2009.

Abattoirs: Inspection and Laboratory Testing

Inspections

At any point in the inspection process, an inspector, with the assistance of a veterinary inspector, can condemn portions of a carcass or a whole carcass for observable diseases and conditions that have implications for food safety and consumer protection. If the inspector has reason to believe that the carcass is contaminated or otherwise unsafe for human consumption, he or she may send tissues from the suspect animal for laboratory testing.

During our audit, we found that there were large differences in the condemn rates for certain animal classes amongst abattoirs. For example, in 2007/08 for abattoirs with a slaughter volume greater than 10,000 animals, the condemn rate for barbeque hogs ranged from 142 to 778 per 10,000 slaughtered and the condemn rate for chickens ranged from 62 to 397 per 10,000 slaughtered. There could be a number of reasons for the differences in condemnation rates. For example, a consistently high rate could be due to some abattoirs or buyers

purchasing cheaper and therefore more high-risk animals from auction barns. It could also indicate problems with the animals at the farm or during transport. Conversely, a consistently low rate could suggest weaknesses in the inspection process. The Ministry did not have a formal process for analyzing these variations to determine whether the large differences were justified.

Laboratory Testing

The Ministry conducts ongoing monitoring of meat through random laboratory testing of healthy animals for residues of veterinary drugs (including antibiotics), growth hormones, parasites, and parasiticides, and so on. The majority of laboratory tests are for residues of veterinary drugs because these chemicals have been associated with adverse health effects in humans, including allergic reactions or toxic effects.

In addition, the meat regulation contains specifications for the use of potable water and water disinfectants by both abattoirs and freestanding meat processors. Potable water must, at a minimum, meet the drinking water quality standards prescribed under "Ontario Drinking Water Standards" in the *Safe Drinking Water Act, 2002*. It is ministry policy to verify through sampling and an examination of records that only potable water and ice are used in meat preparation.

In 2007/08, the Ministry had nine monitoring projects and tested approximately 5,200 animals (80% of them for drug residues) and 7,000 water and ice samples; adverse results were found in 620 and 90 cases respectively. We had the following observations:

- The Ministry's methodology suggests that 300 samples per year for three consecutive years are needed to provide a statistically valid representation of the animals presented for slaughter. However, a number of the tests conducted as part of the various projects did not meet the sampling standard. For instance, in the last three years none of the animal classes tested for abnormal muscle growth (which results from the use of certain chemical compounds in veterinary medicine) had the suggested sample size of 300. Therefore, the Ministry could not accurately determine whether residues in certain animal classes posed a serious enough problem to warrant additional action by the Ministry.
- In cases where enough data are available, the Ministry had not taken further action to address the problems identified. For instance, since 2005/06, a high number of adverse results were shown for a number of animal classes from the Ministry's antibiotic residue-testing project, but no corrective action has yet been taken.
- Although the Ministry has the authority to condemn carcasses with adverse results in individual cases, it does not have the legislative authority to deal effectively with repeat violations. For example, laboratory testing in 2007 found 51 instances of drug residues exceeding the maximum allowable limit set by Health Canada. Of these results, 19 were for calves slaughtered at the same abattoir, and of those 19, 10 were from the same livestock dealer. The same dealer has had non-compliance results for the past three years. The Ministry had been submitting the results to the CFIA but had not done any systematic follow-up on its own.
- With regard to the water and ice testing, for both abattoirs and freestanding meat processors, the adverse results for ice testing are significantly higher (5%) than for water (1%). For water testing, most of the adverse results (more than 90%) were from about 30% of the abattoirs, which were using non-municipal water sources.

In addition to the continual laboratory testing at abattoirs, over the years the Ministry had conducted various special projects on microbial and chemical contaminants in meat. While the studies were a good initiative, we noted cases of

inadequate follow-up on findings from the studies. For example, various microbial studies of raw beef, pork, and chicken from 1999 to 2002 had found a high prevalence of bacteria on the carcasses. However, the Ministry had not followed up on those studies or made changes to its inspection and testing process to address the concerns and reduce the potential risks to food safety.

RECOMMENDATION 2

To help ensure the safety of food produced at abattoirs, the Ministry of Agriculture, Food and Rural Affairs should:

- analyze why some plants were showing an abnormally high or low incidence of carcass condemnation rates and follow up to ensure that inspectors are following the inspection criteria consistently; and
- ensure that laboratory tests performed are in accordance with the sampling methodology, and when the laboratory tests indicate a potential widespread or systemic problem, make suitable changes to its inspection and testing programs.

MINISTRY RESPONSE

The Ministry agrees with the recommendation.

The Ministry will analyze condemnation rate data on a quarterly basis to identify trends. If the analysis shows that adjustments to inspection practices are needed, we will take appropriate action.

The Ministry continually reviews its policies and programs to incorporate new scientific knowledge and new technologies so as to better direct laboratory testing. In 2008, we began developing a formal, co-ordinated approach to prioritizing laboratory testing. This approach will be implemented in 2009 and will allow the highest food safety risks, including systemic issues, to be addressed first.

A meat plant operator must take immediate action on any adverse results from water or ice tests. The Ministry is analyzing the data from several years of this testing. If the data trends indicate that changes to the water and ice testing program are necessary, we are committed to making them.

Freestanding Meat Processors: Inspection and Laboratory Testing

Inspections

The Ministry conducts periodic inspections of freestanding meat processors to help ensure that the plants and the processing of meat products are in continuous compliance with food safety standards. Once the plant is licensed, inspections are to be conducted weekly at first; thereafter, the frequency of future inspections depends upon the audit rating and the deficiencies noted.

With respect to the inspections conducted on the 80 meat processors that have been audited to date, there was little correlation between a processor's rating and the frequency of inspections. For example, in 2007/08, several A- to AAA-rated meat processors with fewer than 10 deficiencies noted during the licensing audit were inspected almost 40 times, whereas three B-rated processors with more than 70 deficiencies each were inspected only 20 times.

The results of inspections are to be recorded on a manual checklist and then entered in the Ministry's information system. We noted that the checklist consists of only a single page of about 40 inspection tasks (which are only a small portion of all applicable standards) and a Yes and No answer for each task. As a result, the inspectors provided few details. Given the imprecise description of the tasks and the lack of details provided by the inspectors regarding any deficiencies noted, it would be difficult to understand fully the nature and significance of

those deficiencies. There were also few details available about the results of prior inspections and how long the deficiencies had been outstanding.

Laboratory Testing

Other than testing water and ice used in food preparation, as mentioned previously, the Ministry does not normally conduct regular laboratory tests at freestanding meat processors or on their products. However, it did conduct a special project in early 2006 at 48 newly licensed freestanding meat processors in the Greater Toronto Area. Microbial testing was done to determine the presence of pathogens as well as potential contamination on food-contact surfaces, including the inside of mixers, meat grinders, knives, saw blades, cutting tables, and packaging equipment. The study found:

- a high prevalence rate for E. coli (56%) and coliforms (84%) on equipment and food-contact surfaces even at A-rated plants and a significant correlation between the rates and the number of employees at the meat processors tested; and
- prevalence rates of enterobacteriaceae (a large family of bacteria) of 72% at A-rated plants and 68% at AA-rated plants, respectively; this suggests that even these highly rated plants might need to improve their cleaning and sanitation procedures.

A high count of microbial indicators does not in itself constitute an immediate public health risk. Nevertheless, the presence in significant numbers could indicate a lapse in sanitation or a process failure that increases the risk of causing food-borne illness to individual consumers. The data on the prevalence of indicator organisms from the study were intended to provide an objective point of reference that would help freestanding meat processors to review their sanitation procedures and ensure that they were meeting their obligation to prevent and reduce contamination. However, the Ministry's own inspection programs had not been adjusted in light of the results of this study, although it had been more than two years since the significant test results were found.

RECOMMENDATION 3

To help ensure the safety of food products produced by freestanding meat processors, the Ministry of Agriculture, Food and Rural Affairs should:

- ensure that ongoing inspections focus on plants that represent the highest risk;
- improve its reporting of inspection results so that better information is available when conducting future inspections of plants with significant deficiencies; and
- in light of the findings from its 2006 microbial laboratory testing, take more timely and effective action to correct both systemic issues and food safety concerns about individual processors.

MINISTRY RESPONSE

The Ministry agrees with the recommendation.

To further enhance its inspection programs, a food safety risk framework is in development. The framework, expected to be completed in 2009, will allow regular and consistent identification of specific risks and evaluation of the likelihood and impact of these risks on food safety. The framework will allow the Ministry to direct its inspection resources to plants that present a higher risk. The reporting of plant inspections will also be improved with the launching of the new information management system.

Regular microbial testing of higher-risk processed meats from provincially licensed plants is currently being implemented. Information from a scientific study was used to design the program. In the future, the results from the microbial testing program will be considered when we are making improvements to the inspection process.

Any testing programs conducted by the Ministry must include a formal protocol to address any adverse findings that may have an impact on food safety. Adverse findings result in action by the Ministry, which may include immediate reporting to the agency with the legislative authority to take further action, including the Canadian Food Inspection Agency or the Ontario Ministry of Health and Long-Term Care.

Disposal of Dead Animals

The *Dead Animal Disposal Act* (Act) and regulations prohibit the use of deadstock (animals that have died from a cause other than slaughter) for human consumption and govern the storage and disposal of deadstock on farms, as well as the collection, transportation, processing, and disposal of deadstock once it is removed from the owner's property. The Act applies to cattle, horses, goats, sheep and swine.

The current legislation was enacted in 1968, and the Ministry acknowledged that, although there have been revisions since then, the legislation is out of date in several respects:

- The legislation does not cover poultry, which has increasingly become a major meat product, nor a number of species, such as deer and elk, that are now being farmed.
- Since the emergence of BSE (mad cow disease), the market for rendered products has diminished and the industry has been looking for new methods of processing, use, and final disposal of deadstock. The legislation must be broad enough to allow new recycling methods while ensuring environmentally safe disposal.
- The Act does not give many enforcement tools to inspectors. As a result, it is usually enforced only as a result of complaints.

The Ministry informed us that it is drafting proposed regulations that would add more animals to the list of regulated species, provide for additional disposal options on farms, and incorporate environmental standards designed to protect human and animal health and minimize damage to the environment. We will assess the progress of that updating in our follow-up audit in two years' time.

There are four types of licences that can be issued under the Act: broker, collector, receiving plant, and rendering plant. We reviewed the licensing process and made the following observations:

- Collectors that transport deadstock in Ontario are required to obtain a valid marker for transporting deadstock. A new federal feed ban regulation, which came into effect in July 2007, prohibits the use of certain cattle tissues and organs to prevent the transmission of BSE through animal feeds. In regard to this new regulation, livestock producers that normally used the service of a deadstock collector now have the option of transporting their own deadstock to a receiver. As a result, there has been a significant increase in the number of applications for ministry markers. In 2007, over 250 transport markers were issued to livestock producers, in addition to the 132 collector markers issued to deadstock collectors.
- The Ministry carries out inspections to ensure that vehicles are properly constructed to prevent spillage of liquids and are thoroughly cleaned and disinfected before leaving the plant premises and that dead animals are covered during transport and not transported with live animals. We found that, although about half the deadstock collector vehicles were inspected in 2007, none of the vehicles for which transport markers had been issued to livestock producers were inspected.
- Before issuing licences for rendering plants, the Ministry relies on the CFIA to inspect the plants. To ensure compliance with legislation, the Ministry is to review the CFIA's inspection reports and follow up on any areas not covered by federal inspectors. We noted, however, that in 2007, the Ministry did not request

inspection results from the CFIA before issuing licences.

The above observations regarding the need for vehicles transporting deadstock to be inspected, and the review of and follow-up on CFIA inspection were made in our last audit of food safety in 2001. Although our follow-up in 2003 found that some progress had been made, the Ministry has not been able to sustain its earlier improvements.

RECOMMENDATION 4

To ensure that deadstock operators store, collect, process, and dispose of deadstock in accordance with the legislation, the Ministry of Agriculture, Food and Rural Affairs should:

- expand its inspection of vehicles licensed to carry deadstock to include those of livestock producers; and
- obtain and review inspection reports from the Canadian Food Inspection Agency (CFIA) and follow up on areas not covered by federal inspectors.

MINISTRY RESPONSE

The Ministry acknowledges the recommendation.

Since 2007, farmers have required a federal permit in order to move cattle carcasses off farms. To avoid duplication of licensing and inspection, the Ministry is proposing to eliminate the need for provincial licences or markers for farmers.

If this proposal is accepted, it would allow the Ministry to focus its efforts on higher-risk carcass transportation. Commercial deadstock collectors that pick up carcasses from farms would continue to be licensed by the Ministry. Regulatory requirements for all vehicles transporting deadstock would still exist, and we would continue to respond to any complaints concerning improperly transported deadstock.

To improve provincial oversight of rendering plants, the Ministry now conducts its own inspections of all provincially licensed rendering plants regardless of the CFIA inspection status.

DAIRY

The *Milk Act* and regulations deal with the quality and safety of Ontario milk (both cow's and goat's milk) and milk products. Since 1998, the Ministry has delegated the responsibility for administering and enforcing various quality and safety provisions of the legislation for cow's milk to the Dairy Farmers of Ontario (DFO).

The DFO is responsible for inspecting cow farm premises, overseeing the grading of the milk, collecting milk samples for laboratory testing, and overseeing the transporting of the milk to dairy processing plants. The Ministry is responsible for the inspection of dairy-goat farms and for the licensing and inspection of dairy processing plants and distributors (wholesalers) of processed fluid milk products. Retail distributors are the responsibility of municipal public health units.

Cow's Milk

The DFO has mechanisms for inspecting all farm premises to ensure that the farm premises, milking equipment, and surrounding areas are sanitary. In addition, laboratory tests for bacterial content, somatic cell counts (an indicator of infection in the udder), and antibiotic residues are performed routinely, and there are severe financial penalties for non-compliance.

The DFO submits to the Ministry a monthly summarized report of its activities, such as quantity of milk produced, number of farm inspections, results of laboratory tests, number of rejected trucks, penalties assigned, and so on. However, the Ministry had not analyzed or assessed the adequacy or reliability of the information. For example, the

report does not contain information on the types of non-compliance issues encountered during the inspections of farms, milk trucks, or graders.

Although the Ministry is given an oversight role by its agreement with the DFO, it has not established a monitoring regime to assess the DFO's performance. In addition, the agreement also allows the Ministry to conduct an independent review of the DFO. The last such review, conducted in October 2002, was to evaluate the overall effectiveness of the Raw Milk Quality Program. Although the 2002 results were generally positive, it has been six years since that review and the Ministry has not conducted a follow-up or subsequent review since that time.

RECOMMENDATION 5

To ensure that the transfer of responsibility for the safety of cow's milk to the Dairy Farmers of Ontario (DFO) continues to operate effectively, the Ministry of Agriculture, Food and Rural Affairs should establish an oversight process and periodically review the activities of the DFO.

MINISTRY RESPONSE

The Ministry agrees with the recommendation.

The Ministry has already taken action on this recommendation by creating a new position in the Dairy Food Safety Program. This Raw Milk Quality Program Coordinator is currently developing written guidelines to oversee the responsibilities delegated to the DFO.

Over the next year, the Ministry will develop performance measures and a schedule to review regularly the activities of the DFO.

Goat's Milk

Under the *Milk Act,* the Ministry is responsible for the inspection and testing of raw goat's milk. Routine on-farm inspections are conducted annually at approximately 220 dairy goat farms in the province. Farms are then classified as Grade A, Conditional Grade A, or Non-Grade A depending on the extent to which food safety standards are met.

In our 2001 audit of food safety, we made recommendations for improvements to the inspection regime for goat's milk. Since our audit, we have noted that the Ministry has made significant progress:

- A more complete and up-to-date list of goat milk producers is now being maintained.
- The Ministry has hired full-time inspectors to enhance the inspection process, and deficiencies found during the inspections were followed up on promptly.
- A considerably larger number of milk samples were tested monthly than at the time of the 2001 audit, and overall the test results were satisfactory.

Dairy Processing Plants and Distributors

All dairy processing plants and fluid milk distributors must be licensed annually. In 2007/08, there were about 120 dairy processing plants and 390 distributors operating in Ontario.

As part of the licensing process, the Ministry conducts inspections of these establishments. In the case of dairy processing plants that are also involved in the export market, the Ministry relies on the CFIA for the inspection although it retains the overall responsibility for licensing. Of the approximately 120 dairy processing plants, about 30 are inspected by the Ministry and the rest by the CFIA.

For distributors, new applicants must be inspected before a licence is issued; in the case of renewals, inspections are to be based on risk and the history of the licence holder.

Inspection of Dairy Processing Plants

For the majority of dairy processing plants, the emphasis of the inspection is on equipment, operations, and processing. Some federally licensed plants have instituted a CFIA-approved production

and process control system. CFIA inspection of those plants would then focus on the control measures used by the operators to reduce or eliminate food safety hazards.

Deficiencies detected during ministry inspections are classified into one of four categories according to their seriousness and the time allowed for corrective action to be taken—from immediately to up to one year. The operator is required to send a Corrective Action Plan to the Ministry, describing how the operator intends to correct the deficiencies. A follow-up inspection is to be conducted to assess the corrective action taken by the operator.

We noted the following:

- In a number of cases, the Ministry renewed licenses before an inspection had been completed or before receiving an inspection report from the CFIA.
- Since the results of inspections have not been compiled and are available only individually, it is difficult to assess overall compliance levels and compare inspection results.
- The extent of inspections was at the discretion of individual inspectors. We noted that some plants were inspected more thoroughly than others.
- Of the inspections that required a follow-up, we found a number of cases where there was no evidence that a follow-up was conducted or the follow-ups were not done promptly.
- For audits by the CFIA that focused on a plant's production and process controls, the Ministry did not have a copy of the plant's control measures program; without this information it would be difficult for the Ministry to determine the seriousness of any deficiencies noted.

Inspection of Dairy Distributors

As with dairy processing plants, we found areas where improvements were needed in the licensing inspection of fluid milk distributors:

- According to the Ministry's information system, there were 387 active licenses, yet only 21 establishments had been inspected in 2007/08. No documented risk assessment or justification was available for the small number of inspections.
- Our examination of the actual inspection forms completed by the inspectors showed various instances where the data, including basic data, such as the number of depots and product types, were incomplete.
- There were also cases where a follow-up inspection—to ensure that deficiencies noted had been corrected—was not conducted.

Some of those issues were noted during our 2001 audit of the Ministry. At the time, the Ministry informed us that a regulatory review of the fluid milk distribution program would be carried out with improvements to follow, but the review was not conducted.

Laboratory Testing

Dairy processing plants produce a variety of products, such as fluid milk (1%, 2%, skim, and so on), cheese, ice cream, butter, and other cultured products. Under the *Milk Act* and regulations, there are no food safety standards for finished dairy products and no requirement to test those products. Much of the laboratory testing conducted was related to the quality of the product rather than food safety.

Although there is no requirement to test finished products, in 2005/06, the Ministry introduced annual microbial testing on some finished products, using the standards established from a study conducted in 2004. The tests counted three microbial indicators: aerobic (which indicate the sanitary quality of the product), coliform (which indicate a failure in overall sanitation of a plant), and psychrotrophs (which indicate the number of bacteria able to grow at refrigeration temperatures) counts.

The testing of fluid milk showed that bacteria counts significantly exceeded the standard estimated from the study and that a significant number

of plants had potential sanitation issues. For example, in 2007/08, when the Ministry conducted over 450 aerobic tests on products from 19 plants, it found that more than half of the plants exceeded the limits. The Ministry then conducted additional tests and concluded, on the basis of the samples tested, that there was no immediate health threat.

Similarly, the Ministry in 2007/08 tested cheese and cheese products from 13 out of 56 cheese plants. Four plants were found to have bacteria counts that exceeded test limits, but no high-risk strains of bacteria were detected upon further testing.

Although the results may not necessarily indicate an immediate health risk, they show that some operators were having difficulty in maintaining adequate sanitation standards in their plants.

RECOMMENDATION 6

To help ensure that licences are issued only to dairy processing plants and distributors that have met the food safety standards established by legislation, the Ministry of Agriculture, Food and Rural Affairs should:

- before issuing a licence, ensure that the establishment is inspected and that any significant deficiencies, including those found by the Canadian Food Inspection Agency (CFIA), are corrected;
- ensure that results of inspections are properly documented; and
- follow up on laboratory tests that show unsatisfactory results.

In addition, the Ministry should ensure that its information system provides adequate information for effective monitoring of dairy processing plants and distributors.

MINISTRY RESPONSE

The Ministry agrees with the recommendation.

All dairy plants in Ontario must be provincially licensed. Plants that sell and distribute products outside of Ontario must also be federally registered. Some dairy plants hold both a provincial licence and federal registration.

The Ministry will work more effectively with the CFIA to ensure that all dairy plants are inspected, that deficiencies are corrected in a timely manner, and that we receive reports before licences are issued.

The Ministry uses its information management system to make certain that inspection results are properly documented. As previously noted, we will begin implementing a new information management system in 2009. All ministry and CFIA inspection reports will be entered into this new system to ensure that the information is correctly and promptly tracked. In the meantime, improvements are being made to the current system to provide better information and a more efficient process for tracking.

Appropriate risk-based procedures for achieving proper follow-up on adverse laboratory test results will be developed.

FOODS OF PLANT ORIGIN

Many fruits and vegetables are eaten raw where no "kill step" has been applied to reduce the likelihood of illness due to microbial contaminants. Microbial contamination could occur during harvesting, packing, or transportation. The possible avenues of contamination include untreated manure used as a fertilizer, contaminated water, animals, and unclean containers, tools, and vehicles. In addition to microbial contaminants, there are other chemical contaminants that could be hazardous and have negative long-term health implications.

The Ministry's Foods of Plant Origin program operates under the *Farm Products Grades and Sales Act*, which was created primarily to regulate grading, packaging, labelling, and advertising. Although the Act prohibits the sale of produce that is unfit for human consumption, unlike for meat and dairy, it

does not require that fruit and vegetable producers be licensed or inspected. Thus, the Ministry's efforts over the past few years have been on conducting special studies on selected commodities.

In addition, although it is not required to do so under the legislation, the Ministry has taken the initiative to collect samples, primarily during the summer, of fruits and vegetables from retailers, farmers' markets, and roadside stands and have them analyzed for chemical residues, microbial contaminants, heavy metals, and so on. Since there are no licensing requirements, the Ministry does not have an up-to-date list of all Ontario producers. The Ministry also informed us that because Ontario's produce industry is so large, it would be costly to sample at the level necessary to characterize accurately the state of the industry. Therefore, no assumptions about the prevalence of contaminants in these foods can be made on the basis of the data collected.

The samples for the Ministry's laboratory testing project comprised approximately 1,200 producers out of an estimate of about 10,700 in Ontario. According to the Ministry, the objective of the program was not to inspect or determine the prevalence of contaminants but rather to monitor and educate producers. Our review of the test results noted the following:

- In 2007/08, the Ministry conducted over 2,400 tests and found 2% of the samples to be in non-compliance. Examples of non-compliance include lead in processed honey and maple syrup, chemicals exceeding Health Canada's food safety standards in fresh fruits and vegetables, and microbial contaminants (listeria and salmonella) in minimally processed vegetables.
- Where non-compliance was detected, the Ministry collected additional samples for testing. The additional tests conducted over the last five years found an average non-compliance rate of over 20%.

When the test results show non-compliance, the Ministry notifies the producer or grower of the results of the tests and arranges to visit the farm or operation again. Spray records are examined, for example, to try to determine the cause of the non-compliance; the Ministry also advises the grower or producer on how to prevent recurrences.

Although the Ministry has informed producers when tests revealed non-compliance, our review of a sample of non-compliance results found 10 producers with repeated violations in the last five years. Since the Ministry has limited authority to take stronger action against the producers, it could not stop those producers from continuing to sell their products to the public.

Rather, the Ministry's practice is to submit to the CFIA non-compliant results involving microbial contamination, lead in honey and maple syrup, and chemical violations exceeding Health Canada maximum allowable levels by 100-fold. The CFIA has the authority to issue food recalls and notify local health units, which may in turn issue health hazard alerts. Chemical violations below 100–fold were not submitted to CFIA because the Ministry deemed them not to pose immediate health risks, even though they might have cumulative effects over time.

RECOMMENDATION 7

In order to ensure that foods of plant origin sold to the public are safe from contamination, the Ministry of Agriculture, Food and Rural Affairs should:

- work with the province and stakeholders to determine ways to strengthen the legislation to give the Ministry the authority to protect consumers better; and
- work with stakeholder groups to develop a more comprehensive inventory of producers, consider options for cost-effective monitoring of food safety in this area, and promote good agricultural practices.

MINISTRY RESPONSE

The Ministry agrees with the recommendation.

The Ministry will continue to provide leadership and support to the concept of developing and strengthening a national approach to food safety for these products by working with federal and other provincial food safety agencies.

The Ministry will continue to work closely with industry partners to develop and deliver information and tools such as Good Agricultural Practices (GAPs) to address on-farm food safety issues.

CO-ORDINATION WITH CANADIAN FOOD INSPECTION AGENCY

The success of the food safety system depends on close partnerships and clear lines of authority and accountability between federal, provincial, and municipal health authorities, the industry, and consumers. In the course of our audit, as is evident throughout this report, we noted numerous situations where a close partnership and good co-ordination are crucial to the safety of food delivered to consumers.

The arrangement between the Ministry and the CFIA is governed by a memorandum of understanding between the various federal and provincial ministries and agencies that have responsibilities for food safety, and by an agreement on the inspection of dairy processing plants. The purpose of the latter agreement, which was reached in 1992, was to streamline the inspection process and minimize duplication of inspection work.

On the basis of our discussions with the Ministry and the CFIA and our observations described throughout this report, we believe that the opportunity exists to review and make improvements to the current arrangements. Possible improvements could include defining more clearly each party's expectations with respect to all food commodities and activities such as inspections, information sharing, and food recalls.

RECOMMENDATION 8

To be more effective and efficient in ensuring that our food is safe, the Ministry of Agriculture, Food and Rural Affairs should work with the Canadian Food Inspection Agency (CFIA) to clarify responsibilities and to co-ordinate better the monitoring and enforcement of food safety.

MINISTRY RESPONSE

The Ministry agrees with the recommendation.

It is critical for all levels of government to work together to strengthen and enhance the food safety system. Each level of government has a distinct role to play in the food safety system, as dictated by various legislative responsibilities.

The Ministry will work with the CFIA on the issues raised by the Auditor General concerning inspections, information sharing, and food recalls.

We continue to refine and enhance our working relationship with the CFIA. Examples of recent collaboration include:

- a memorandum of understanding to clarify the processes related to compliance and enforcement in food safety, describing organizational responsibilities as well as an agreed-upon process for sharing information in situations where the authority to do so exists; and
- a signed and implemented food-borne-illness response protocol between our Ministry, the CFIA, and the ministries of Health and Long-Term Care and Natural Resources.

FOOD SAFETY STRATEGY

An effective food safety system uses the best combination of prevention, detection, and mitigation

to minimize food-borne hazards. In this regard, it is important that the Ministry have a strategic plan that clearly sets out its priorities and how it intends to achieve its goals. A comprehensive strategic plan should include several key components: strategic directions and priorities, an assessment of risks and issues facing the Ministry, current programs and activities, strategies and options to manage the risks and issues identified, resources and funding required, and the relevant performance measures.

According to the Ministry's 2007/08 Results-Based Plan, its food safety strategy includes research, an examination and updating of standards and regulations, inspection, and educational programs. The Ministry has also produced a separate strategic plan for food safety that includes information about and discussions of its goals and objectives, program statistics, performance measures, and work plans for its various branches. However, neither the Results-based Plan nor the strategic plan in its current form included all the essential components of a strategic plan, particularly a formal assessment of risks and the appropriate measures and options for controlling food safety risks. As well, the performance measures reported were primarily for workloads, rather than the Ministry's effectiveness in reducing food-borne illness.

An example will serve to illustrate the need for more comprehensive risk assessment in allocating ministry resources. Currently, the key to the Ministry's food safety approach is inspection, which is required by legislation in many cases. In addition, the Ministry carries out regular laboratory testing and special studies on contamination of food. However, it conducts limited microbial testing on a number of food groups. The World Health Organization and other organizations have reported that diseases caused by bacteria, which are not readily detectable by visual inspection, are among the greatest threats to food safety. In addition, although the Ministry does do other testing (for example, for drug residues) and special projects, the nature and extent of such programs were largely driven by fixed funding.

Another important food safety strategy is consumer awareness and education because many cases of food-borne diseases have been attributed to the mishandling of food in the home. In the United Kingdom, for example, a 2003 report by the National Audit Office on improving service delivery by the Food Standards Agency stressed the need to provide clear information and advice to consumer groups, and to tailor its advice to those for whom it is most relevant. In Ontario, the task of educating consumers is primarily that of the Ministry of Health and Long-Term Care and municipal public health units. Nevertheless, the Ministry of Agriculture, Food and Rural Affairs has valuable expertise within its areas of responsibilities. We noted, however, that the Ministry did not have a formal strategy for working proactively with its partners on educating consumers.

RECOMMENDATION 9

To ensure that its food safety programs are more effective and efficient, the Ministry of Agriculture, Food and Rural Affairs should develop a more comprehensive strategic plan that encompasses assessment of risks to food safety, appropriate measures for controlling the risks, and relevant indicators of its effectiveness in ensuring food safety. Given that other jurisdictions are increasingly focusing on the importance of educating the public on how to enhance food safety in the home, the Ministry should work more proactively with its partners on this aspect of food safety in its strategic plan.

MINISTRY RESPONSE

The Ministry accepts the recommendation.

In keeping with a strengthened ministry-level focus on strategic planning, project management, and performance-measurement systems and processes, the Food Safety and Environment Division will complete a review of its Strategic Plan in fall 2008. Divisions and

branches will be updating plans annually. We will work to achieve an integrated ministry plan to focus future efforts in the food safety area. We have identified two key elements that will be developed first, namely:

- strengthening our risk-based approach in areas such as laboratory testing; and
- improving performance measures.

Under the authority of the Ministry of Health and Long-Term Care, the local boards of health are responsible for the public's awareness of food-borne illnesses and safe food-handling practices. Our ministry continues to be committed to working closely with government partners on initiatives to enhance the public's understanding of food safety in the home through initiatives such as our membership in the Canadian Partnership for Consumer Food Safety Education. In addition, we continue to provide ongoing educational support to food industry stakeholders.

FOOD SAFETY SURVEILLANCE

The Ministry's surveillance of food safety comprises laboratory testing programs in which commodities, product classes, and hazards (that is, chemical residues and microbial pathogens) are assessed; and special projects or baseline studies aimed at estimating the prevalence of specific hazards in designated commodities.

In addition to our observations earlier in this report regarding laboratory testing of specified food products, we reviewed the Ministry's overall planning and delivery programs and noted the following areas for improvement. Similar findings were also identified by an internal ministry review conducted in 2006:

- No formal criteria were used to identify potential contaminants for either the ongoing or special projects, nor was there a process for prioritizing projects.
- There was little formal co-ordination among ministry branches for compiling, sharing, or analyzing food surveillance data. Better co-ordination could help ensure that ministry resources are allocated in the best way to manage food safety risks and could result in more effective surveillance efforts.

In addition to the data received through its food safety surveillance, the Ministry also has access to results of tests on food-producing animals conducted by the Animal Health Laboratory at the University of Guelph, where samples are submitted primarily by private veterinarians. The Ministry told us that the data from these tests are used mainly for animal health surveillance. We note, however, that these test results—because they are from food-producing animals—could reveal threats to food safety, and yet the Ministry has not analyzed these test results for systemic concerns that would warrant changes to its food safety surveillance testing and inspections.

RECOMMENDATION 10

To help ensure that its food surveillance is more effective and to link scientific research more closely to its regulatory programs, the Ministry of Agriculture, Food and Rural Affairs should:

- develop a more formal process for deciding on and prioritizing its surveillance projects;
- improve the sharing of surveillance information and co-ordination among ministry branches; and
- analyze the test results from samples submitted by private veterinarians for potential systemic food hazards.

MINISTRY RESPONSE

The Ministry agrees with the recommendation.

The Ministry is currently reviewing surveillance activities. The report is scheduled for completion in late 2008 with the objectives of:

- reviewing the Ministry's current food safety surveillance system and activities, and determining their strengths, weaknesses, and effectiveness;
- recommending an optimal surveillance system that provides appropriate information for decision-makers to use as a foundation; and
- recommending short-, medium-, and long-term plans to implement improvements to the system.

The Animal Health and Welfare Branch is now an integral part of the Food Safety and Environment Division. We will seek opportunities to use animal health surveillance data from samples submitted by private veterinarians to the Animal Health Laboratory to improve food safety programs.

FOOD MANAGEMENT PRACTICES

Traditionally, food safety hazards have been managed through inspections and the testing of end products. This approach alone has not been adequate because of the large number of people involved between farm and table and because there are many causes of food-borne illness. More emphasis is now being placed on prevention, a science-based approach, and good management practices.

One approach to good management is what is known as Hazard Analysis Critical Control Points (HACCP), which is an internationally recognized, science-based, preventative approach. HACCP systems require individual operators to assess possible food safety hazards in their operation, and then to use control measures to reduce or eliminate their occurrence. The CFIA and many countries, including Australia, the European Union, New Zealand, and the U.S., have adopted HACCP in the food-processing sector or have begun to do so.

The Ministry has developed a voluntary approach to HACCP that it considered feasible and practical for Ontario's small and medium-sized facilities to implement, but the benefits of its implementation are still to be evaluated. As of July 2008, the Ministry's approach has been implemented by 33 facilities, which include provincially licensed abattoirs and freestanding meat processors, fruit and vegetable producers, and producers of various other food commodities.

In addition, in 2006 various federally funded financial assistance programs were offered to operators in order to increase their awareness and knowledge of the risks to food safety associated with food processing and to promote good manufacturing practices. Since the programs were established in 2006, approximately $20 million of federal funding has been allocated to provincial financial assistance programs. As of March 31, 2008, expenditures on financial assistance totalled $12 million. However, the Ministry has not yet developed criteria and measures to evaluate the success of these programs.

RECOMMENDATION 11

To complement inspection programs and prevent or reduce hazards throughout the entire food-supply chain, the Ministry of Agriculture, Food and Rural Affairs should:

- work more actively with producers and processors to facilitate industry adoption of good management practices such as the Hazard Analysis Critical Control Points system; and
- measure the effectiveness of its programs for financially assisting operators.

MINISTRY RESPONSE

The Ministry agrees with the recommendation.

We are committed to enhancing our relationships with industry partners to increase the adoption of best management practices

throughout the value chain (farmers to food processing), including Good Manufacturing Practices, Hazard Analysis Critical Control Points (HACCP), and Good Agricultural Practices (GAPs). We place specific emphasis on delivering GAPs to primary producers.

We are developing a program evaluation process that will be completed in late 2008 for the grant programs. An external consultant will evaluate the meat industry funding programs. New food safety and traceability program guidelines are being developed to include performance measures, service guidelines, application processes, and improved client communications, and are to be in place in spring 2009.