

# Agriculture and Food

# 2

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## Main points

This chapter reports on the adequacy of the processes that the Department of Agriculture and Food (Department) uses to regulate the sale, use, storage, transportation, and disposal of pesticides.

Adequate regulatory processes for pesticides include the following:

- ◆ Licensing persons who are educated and trained to handle pesticides
- ◆ Providing information on current best practices in safe pesticide use
- ◆ Monitoring and enforcing compliance with pesticide control laws
- ◆ Reviewing and recommending updates to pesticide control laws
- ◆ Reporting on pesticide use and control in the province

The Department had adequate pesticide regulation processes except it has not done an overall risk analysis to guide its activities. As a result, its monitoring and enforcement activities may not focus on areas with higher risks.

To help focus its monitoring and enforcement activities on areas with higher risks, the Department needs to formally analyze the risks that users do not follow the pesticide control laws. It should then develop a monitoring and enforcement strategy to reduce these risks.

## Introduction

The mandate of the Department of Agriculture and Food (Department) is to foster a commercially viable, self-sufficient, and sustainable agriculture and food sector. Working with individuals, businesses, communities, and governments, the Department assists farmers and ranchers, encourages higher value production and processing, and promotes sustainable economic development in rural Saskatchewan.<sup>1</sup>

The Department is responsible for fifteen special purpose funds and Crown agencies. All, except for Milk Control Board, have a March 31 year-end. Milk Control Board has a December 31 year-end. In Chapter 11 – Agriculture and Food of our 2006 Report – Volume 3, we reported the results of the audits of the Department and fourteen of its fifteen funds and agencies with March 31, 2006 year-ends.

In this chapter, we report on the results of our audits of the Milk Control Board and the Department's regulation of pesticides.

## Our audit conclusions

**In our opinion, for the year ended December 31, 2006:**

- ◆ **Milk Control Board had adequate rules and procedures to safeguard public resources**
- ◆ **Milk Control Board complied with the authorities governing its activities relating to financial reporting, safeguarding public resources, revenue raising, spending, borrowing, and investing**
- ◆ **Milk Control Board's financial statements are reliable**

In the next section, we report on the adequacy of the Department's processes for pesticide regulation.

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<sup>1</sup> Saskatchewan Department of Agriculture and Food. (2006). *2006-07: Saskatchewan Provincial Budget Performance Plan: Saskatchewan Agriculture and Food*. Regina: Author. page 2. [www.agr.gov.sk.ca/docs/programs\\_services/agriculture0607plan.pdf](http://www.agr.gov.sk.ca/docs/programs_services/agriculture0607plan.pdf)

## Pesticide regulation

The Department is responsible for regulating the application of pesticide products in both agricultural and non-agricultural industries.<sup>2</sup> Non-agricultural industries operate in both urban and rural settings and include landscaping and greenhouses. Regulating agricultural application of pesticide products is one of the Department's key functions.

Pesticides are products, methods, or organisms that control pests. Examples include chemicals used to control weeds, insects, and other pests in both agricultural and urban settings. Pesticides include herbicides, insecticides, fungicides, and rodenticides.<sup>3</sup>

Pesticides help to maintain Canada's food supply by protecting food crops from disease and pests. Saskatchewan's farmland covers over 65 million acres—about 40% of Canada's arable land. In any given year, 35-46% of Saskatchewan's farmland will receive an application of pesticide.<sup>4</sup> Carrying out farming and processing practices in an environmentally sound manner is important to protect soil and water resources.<sup>5</sup>

Many pesticides are applied to food products to improve production or quality. In some instances, residues of these pesticides can remain in or on treated foods. Pesticides are also used for aesthetic purposes (e.g., kill dandelions in lawns). Applying pesticides in urban settings (e.g., landscaping and commercial use) increases the likelihood of human exposure to pesticides.

Regulating the sale and use of pesticides helps to protect human health and the environment. Training of those who sell and use pesticides along with effective regulation minimizes risks associated with pest control products, while giving producers and the public access to effective pest management tools and strategies. It helps agricultural production in Saskatchewan to occur under safe and environmentally sustainable

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<sup>2</sup> Saskatchewan Department of Agriculture and Food, *2006-2007 Saskatchewan Budget - Performance Plan, Saskatchewan Agriculture and Food*, Regina, Author

<sup>3</sup> Herbicides control weeds; insecticides control insects; fungicides control mould and fungi; rodenticides control rodents.

<sup>4</sup> Department of Agriculture and Food: Pesticide Practices and Trends

<sup>5</sup> Saskatchewan Department of Agriculture and Food. (2006), *Annual Report, 2005-2006 Saskatchewan Agriculture and Food*. Regina: Author

conditions. It also supports consumer confidence in food safety, health safety, and environmental protection.

*The Pest Control Products (Saskatchewan) Act* makes the Department responsible for pesticide management and regulation. The Department must regulate the sale, use, storage, transportation, and disposal of registered pesticides. The measures it adopts must be consistent with conditions, directions, and limitations imposed by the federal *Pest Control Products Act* and other federal legislation. The Federal Government determines which pesticides can be used for what, registers them accordingly, sets requirements for labels on pesticide products that guide their use, and dictates how these products are to be used.

The law does not require individuals who apply pesticides on land that they own or rent to obtain pesticide licences. If these individuals hire another person to apply pesticides to their land, then the law requires the applicator to be licensed.

Laws related to pesticides group pesticide products into three categories:

- ◆ Restricted products—are the most concentrated and most toxic; a licence is required to purchase and apply them (e.g., fumigants).
- ◆ Commercial products—may also be very toxic; only licensed vendors may sell them. They are not for home (domestic) use.
- ◆ Domestic products—are the least toxic; retail stores may sell them for use in homes and gardens.

## **Our audit objective and conclusion**

The objective of this audit was to assess the adequacy of the Department's processes for pesticide regulation for the 12-month period ending January 31, 2007.

To do this work, we followed *Standards for Assurance Engagements* established by The Canadian Institute of Chartered Accountants. We assessed the Department's processes against the criteria summarized in Exhibit 1.

Criteria outline our expectations. We developed the criteria based on our review of relevant literature and criteria used by other legislative audit offices. The Department agreed with the criteria.

**Exhibit 1—Pesticide regulation audit criteria**

To have adequate processes for pesticide regulation, the Department should:

1. License persons who are educated and trained to handle pesticides
2. Provide information on current best practices in safe pesticide use
3. Monitor and enforce compliance with pesticide control laws
4. Review and recommend updates to pesticide control laws
5. Report on pesticide use and control in the province

**For the 12-month period ending January 31, 2007, the Department had adequate pesticide regulation processes except it has not done an overall risk analysis to guide its activities. As a result, its monitoring and enforcement activities may not focus on areas with higher risks.**

**Findings by criterion**

The following describes our expectations in italics under each criterion noted above and sets out our main findings for each.

***License persons who are educated and trained to handle pesticides***

*To license persons who are educated and trained to handle pesticides, we expected the Department to:*

- ◆ *require pesticide vendors and applicators to obtain approved training before licensing them*
- ◆ *require licences and training programs to be updated frequently*
- ◆ *encourage those exempt from licensing to receive education and training*

The Department has a well-designed licensing process for pesticide applicators, businesses employing applicators (services), and vendors. It

has set 14 classes of licences that reflect types of pesticide application. It issues about 3,200 licences each year (1,900 – pesticide applicators, 800 services, 500 – vendors).

The Department requires all persons applying for an annual vendor or applicator licence to provide evidence that they have passed an approved training course within the past five years. It uses a computerized database to track key information about all approved licences and to monitor their status.

Training is recognized internationally as a way to reduce risk surrounding pesticide use. The Department's training framework sets minimum knowledge requirements for those who sell and use pesticides, common terminology, and certification criteria.

The Department participates in the Federal, Provincial, Territorial Committee on Pest Management and Pesticides (committee). This committee provides coordination, advice, and direction on programs, policies, and issues concerning pest management and pesticides. Through its various working groups, the committee studies related issues.

For example, its Pesticide Education, Training and Certification Working Group (working group) develops and promotes effective, high quality pesticide education, training, and certification standards. The Department, along with Saskatchewan Institute of Applied Science and Technology (SIAST), are members of this working group. This working group develops and regularly updates the training programs for the different pesticide categories and licences. The committee has developed a National Standard for Pesticide Education, Training and Certification.<sup>6</sup>

The Department has adopted this National Standard in selecting and developing training necessary for pesticide licensing in Saskatchewan (approved training courses). It works with SIAST to develop provincial specific information for the various courses. SIAST provides the approved pesticide training courses for the province. In addition, the Department has reciprocal agreements with other provinces to recognize some of their training courses. The working group approach facilitates this

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<sup>6</sup> The Standard for Pesticide Education, Training and Certification in Canada (referred to as the National Standard) is a series of documents which outline the structure and criteria for provincial/territorial certification programs.

reciprocity of training between provinces. In common with other provinces, approved training expires after five years.

As pesticide licences expire yearly, the Department requires licensees to renew their licences each year. This annual renewal process helps the Department to keep current information about each licensee (e.g., type of pesticide use and the date of training).

The Department sends renewal notices and reminders to all licensees prior to expiration. The notices indicate the type of licence and the status of the licensee's related training (e.g., when licensee must take additional training). To renew, the licensees must return the notices with any updated information and the fees; otherwise their licence automatically expires.

To promote education to all persons who apply pesticides, including those who are exempt from licensing, the Department makes information about common problems and products readily available through various methods. For example, the Department's website contains an abundance of information related to pests and pest management and includes links to other resources (e.g., its Guide to Crop Protection).<sup>7</sup> It also contributes articles to publications that target persons who apply pesticides (e.g., the Western Producer).

***Provide information on current best practices in safe pesticide use***

*To provide information on current best practices in safe pesticide use, we expected the Department to:*

- ◆ *facilitate access to current information*
- ◆ *provide guidance in clear language*
- ◆ *identify accessible experts*

The Department facilitates ready access to current information on pests and pest and soil management primarily through its website, various publications available at its locations and from its websites, its toll-free phone line, and its staff.

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<sup>7</sup> <http://www.agr.gov.sk.ca/docs/production/cropguide00.asp>



The Department has recognized the importance of the safe use of pesticides, making sure information is not only accessible but also understandable. The Department has developed clear and understandable information or identified quality information from other agencies with related expertise and resources. For example, its website includes a section on “frequently asked questions” by season (e.g., summer–pesticide application and choosing the right nozzle). Users without specific pesticide training or extensive knowledge of science should be able to understand the information.

The Department has focused on developing and updating information of specific interest or relevance to Saskatchewan. For example, it has produced reference material that helps the public to avoid cases of pesticide drift into neighbouring gardens, dugouts, and forage crops. It has also developed information to help farmers control insects (e.g., insect identification, methods of insect control, crop monitoring techniques, and selection of appropriate insecticides).

The Department notes that primary sources for pesticide specific information are labels on pesticide products. Label application information normally describes effects on germination and impacts to crops, while label restrictions inform the user on environmental impacts and handling requirements. Precautions noted on labels inform the user of health risks and required safety measures. Even though this information is available on pesticide products, the Department reinforces the information through its website and other sources on the Internet.<sup>8</sup>

Also, the Department, through its research branch, funds various pesticide-related research studies at educational institutions. These studies provide current information on practices and pesticide use. It posts these research studies on its website.

Department staff, particularly agrologists, are available for consultation at its Agriculture Knowledge Centre in Moose Jaw and its nine regional Agriculture Business Centres. These offices also provide links to information and other experts (e.g., scientists at Saskatchewan Research Centre).

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<sup>8</sup> <http://eddenet.pmra-arla.gc.ca/4.0/4.0.asp>

***Monitor and enforce compliance with pesticide control laws***

*To monitor and enforce compliance with provincial pesticide control laws, we expected the Department to:*

- ◆ *administer a compliance monitoring program*
- ◆ *inspect facilities that handle pesticides*
- ◆ *investigate reported incidents and complaints*
- ◆ *take necessary action to enforce compliance*

*An effective compliance-monitoring program involves identifying key risks, developing a strategy to address those risks, and periodically re-evaluating the program.*

As noted above, the Department regulates the use, handling, and distribution of pesticides in Saskatchewan. The Department's pesticide unit maintains three full-time staff equivalents and a \$200,000 budget.

This unit leads the Department's compliance monitoring program. It is responsible for pesticide licensing and monitoring the appropriate use of pesticides. It works with other agencies to monitor and investigate complaints and possible violations (e.g., spills and accidents). These agencies include the provincial departments of Environment, Health, and Labour and various Federal Government departments (in particular, the federal Pesticide Management Regulatory Agency).

To monitor appropriate use, the Department relies primarily on inspections and its investigation of reported complaints and violations. It inspects about 100 licensed vendors, services, applicators, and unlicensed users each year. The Department has appointed one employee as the provincial Pesticide Investigator (who does about 80% of all inspections), and appointed eight other employees as inspectors who may also be called upon to make inspections.

The Department does not use a risk assessment process to guide the nature and extent of its inspection activities. Rather, it bases when and where to inspect on the results of previous inspections, reported complaints, and common concerns. These inspections are supplemented

with random inspections, often in the vicinity of other businesses being inspected.

Without assessing and documenting identified risks, the Department's inspection activities may not be sufficient to detect non-compliance with pesticide control laws and reduce the related risk of human or environmental harm. The Department needs to analyze the risks associated with monitoring and enforcing compliance with pesticide control laws, prioritize those risks, and document the strategy to address those risks.

- 1. We recommend that the Department of Agriculture and Food formally analyze the risks that licensees and exempt persons are not following pesticide control laws.**
- 2. We recommend that the Department of Agriculture and Food document its strategy to address identified risks associated with monitoring and enforcing compliance with pesticide control laws.**

The Department makes reporting of complaints and incidents accessible to the public through use of a toll-free number, regional offices, and the ability to contact department staff through the website. The provincial Pesticide Investigator is the primary contact for all complaints. The investigator records all complaints in a log together with information about their resolution.

The Department follows up all complaints it receives. Each year, the Department handles about 100 complaints about the improper use of pesticides. These complaints are typically about licensing and pesticides drifting into unwanted areas. Other complaints include off-label use (i.e., used for other than for an approved purpose), improper storage or disposal of pesticides, non-performance, and spray planes.

When an inspection identifies a contravention, the inspector issues a notice identifying the contravention of the law, an order requiring remedial action, and a deadline for the item to be resolved. Typically, remedial actions may include building a fence to safeguard products. The Department rarely suspends or revokes licences.

The inspector follows up on the remedial action to determine if the matter has been corrected. This has been relatively successful for the Department. If sufficient remedial action is not taken, the Department may escalate enforcement actions to court action.

The Act does not contemplate penalties (e.g., fines) without legal action. Penalties dictated by the Act are a fine up to \$1,000 or up to 90 days imprisonment or both, upon summary conviction for an offence.

Due to the high costs associated with pesticides and their application in today's environment, penalties currently available under the Act are not always an effective disincentive. Other jurisdictions in Canada and the USA<sup>9</sup> provide regulatory bodies with more flexibility to assess monetary penalties and the ability to impose more punitive penalties than Saskatchewan. The Department should review the nature and adequacy of the penalties in its pesticide control laws.

### ***Review and recommend updates to pesticide control laws***

*To review and recommend updates to pesticide control laws, we expected the Department to:*

- ◆ *regularly review and assess regulations*
- ◆ *recommend changes so regulations are current*

The Department takes part in the Government's 10-year regulatory review process. Under this cyclical review process, the Department periodically reviews and updates all regulations it administers. The Department last reviewed the pesticide regulations during the 2005 and 2006 fiscal years. This review addressed matters such as consistency with government policy, alternative regulatory choices, feasibility, and understandability. The Department did not propose any substantial changes to the regulations following this review process.

More regularly, the Department can identify suggestions for improvements to the Act and regulations during the Government's annual call for new initiatives or enhancements. The Department recommends changes to laws and regulations to ensure they remain current and effective.

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<sup>9</sup> For example, Alberta, Manitoba, and Minnesota, USA.

## ***Report on pesticide use and control in the province***

*To report on pesticide use and control in the province, we expected the Department to:*

- ◆ *explain its control framework and processes*
- ◆ *report on incidents involving pesticides*
- ◆ *report on trends in pesticide use*
- ◆ *report on the effects of pesticide use*

The Department uses its website as its primary means to advise the public of its activities on pesticide control.

The legislation provides the basis for the pesticide control work in the province. The website adequately explains the control framework and processes the Department uses to regulate pesticides. The website provides links to the relevant legislation. It also contains information about the licensing and complaint process.

The Department's performance plan and annual report directly link its regulation of pesticide products to its objective of enhancing environmental stewardship. In its annual report, the Department briefly highlights its pesticide activities (e.g., related legislation, types of licences, number and types of licences issued, and number and type of complaints investigated). When significant, the Government has reported incidents, other than complaints, in news releases.

The Department tracks its licensing, inspections, and investigation of complaints. It relies on Statistics Canada to gather and report on trends in pesticide use. Statistics Canada gathers, on a 6-year cycle, information for all provinces on pesticide use in farming including the extent and reasons for pesticides use, use of licensed applicators, as well as use of alternative pest management methods. This allows for some inter-provincial comparisons. However, the level of information the Department needs to perform an adequate risk assessment is not present.

Some other provinces collect and report detailed pesticide trend information about their provinces.<sup>10</sup> The Department has the authority to

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<sup>10</sup> Ontario and British Columbia have produced provincial pesticide reports.

request copies of vendor records of all pesticides sold. However, it does not routinely exercise this authority on a province-wide basis. Gathering additional information would provide it with useful information necessary to prepare an overall risk assessment and pesticide regulation strategy. It would also enable the Department to enhance its reporting of information on trends in the quantity and efficacy of restricted, commercial, and domestic pesticides used in Saskatchewan.

As yet, the Department does not track or report on the long-term effects of pesticide use. Rather, it promotes a pesticide management methodology called Integrated Pesticide Management (IPM). IPM is an approach to managing pests that combines biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks.<sup>11</sup> IPM has emerged because increased sensitivity to pesticide use, pesticide resistance, and possible improper application limit the effectiveness and benefits of using pesticides. IPM relies on the coordinated use of pest and environmental information and the best available pest management methods to prevent unacceptable levels of pest damage by the most economical means and with the least possible hazard to people, property, and the environment.

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<sup>11</sup> Definition from the National IPM Network, US Department of Agriculture, Co-operative State Research, Education, and Extension Service.

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