CanadaGAP Program: Participation Means Advantage

Not only does the CanadaGAP Program offer relevant and functional guidelines to help potato growers and packers answer consumers' demands for more transparency and vigilance surrounding on-farm food safety, participation has its benefits.

OVER THE PAST FEW YEARS, "food safety," "food safety measures," "food safety requirements," and similar phrases have passed into the lexicon of the potato industry. These expressions are here to stay—as a matter of fact, producers and processors will be hearing about these concepts more and more, especially after the next "food scare" hits us.

The unfortunate part of this reality is, those individuals involved in the industry have no choice but to add the practical implications of these concepts to the long list of issues they already need to deal with such as pests, disease, Mother Nature, an unpredictable market, and much more. But there is no doubt the average consumer of potato products will demand more transparency and ever greater vigilance when it comes to on-farm food safety in the future—the concept of food safety is not a fad, and is not going away.

From this perspective, where do potato growers and packers start when considering how to ensure they can answer, satisfactorily, the demands of consumers as far as safe production and handling of potato products is concerned? Fortunately for them, the Canadian Horticultural Council has been toiling for several years to provide growers and packers with very specific guidelines on most aspects of the production and packaging chain when it comes to food safety measures. This work culminated in the CanadaGAP Program.

The CanadaGAP Program is an on-farm food safety program for producers, packers, and storage managers of horticultural crops, including potatoes. It is designed to help the industries involved implement effective food safety procedures into their operations. Under the umbrella of the CanadaGAP Program, six crop-specific *On-Farm Food Safety* manuals have been developed by the horticultural industry and have been reviewed for technical soundness by the Canadian government.

These manuals are based on the seven basic principles set forth by the internationally-recognized HACCP (Hazard Analysis and Critical Control Point) approach. The CanadaGAP Program is administered and maintained by the CHC, with audit and certification services delivered by an accredited Certification Body. One of the six manuals deals exclusively with potatoes.

Good Guidance

The *Potato Producer and Packer On-Farm Food Safety* manual is intended for all potato producers and/or packers. It covers production, storage, and packing of field-grown potatoes. In essence, the manual focuses on potential sources of biological, chemical, and physical hazards for potato products from the field through shipping. It contains basic information to support the potato industry and its development, and implements measures to enhance the safety of the Canadian food supply.

Most of the food safety practices included in the manual are not new. Canadian producers, storage managers, and packers have been using these practices for years. The CHC OFFS manuals provide a useable and consistent way of *keeping records* of these practices, and provide users with a means to demonstrate these practices to buyers and consumers.

The manuals—and the guidelines contained within them—were compiled from the standpoint that once produce is contaminated, removing or killing pathogens is difficult. Therefore, *prevention* of microbial contamination at all steps from production to distribution is the sensible goal and strongly favoured over treatments to eliminate contamination *after* it has occurred.

The manual for potatoes is a very practical document and not simply a long list of theoretical rules, regulations, and guidelines. The 150-page manual contains guidelines for on-farm safety measures organized in relevant sections (e.g., Premises, Transportation, Traceability, etc.). The manual also provides growers and packers with two types of useful record-keeping form templates based on the frequency of completion by the grower/packer:

- forms that need to be completed annually or as changes are made to the operation;
- forms that need to be completed on an ongoing basis during the season (i.e., daily, weekly, monthly)

Participation Means Advantage

In June, the Canadian OFFS standard for produce was internationally recognized and successfully benchmarked against the Global Food Safety Initiative requirements. This approval means CanadaGAP is recognized as equivalent to other GFSI-benchmarked programs, such as GlobalGAP, which many buyers require in Canada and abroad. Growers, processors, and packers participating in the program have an obvious advantage in the international arena, and will be on par with foreign competitors when negotiating deals with customers outside of Canada.

Within Canada, the benefit of participating in the CanadaGAP Program assures credibility with local buyers of potato products, whether they are retailers, customers in the food service industry, or consumers at large.

The end-users of all potato products—consumers—are becoming more demanding in terms of the on-farm safety procedures employed at the source of the potatoes they buy and, ultimately, eat. Several important buyers of Canadian processing and table potatoes, including Loblaw Companies Ltd., McCain Foods Canada, Simplot Canada, and Lamb Weston in the United States, are now requiring the growers who supply them to be certified under the CanadaGAP Program. These buyers view the CanadaGAP Program as an important way of providing their clients—fast-food outlets, retailers, restaurants, and the public—with an official assurance of the safety of their potato products.

The following is a brief overview of some of the guidelines and requirements set out in the manual relating to specific issues affecting OFFS and potato products:

Commodity Starter Products

Commodity starter products such as seed potatoes may be a source of chemical contamination if not treated properly or if certain cultivars/varieties are selected (i.e., those with high levels of glycoalkaloids, or plants with novel traits). Seed potatoes must be purchased and received properly to minimize chemical contamination. Plants with novel traits must be assessed for food safety by the federal government before being grown in Canada for food use. Seed potatoes must be prepared and stored in a manner that minimizes sources of contamination.

Premises

Direct and indirect contamination of potatoes can occur due to previous activities on a site or activities on adjacent lands. Animals (both wild and domestic), insects, and birds are potential sources of contamination to potatoes because they may carry a variety of pathogens. Therefore, production sites must be assessed before use to ensure all biological, chemical, and physical hazards are minimized. The design and construction of both the interior and exterior of buildings are important in preventing the contamination of potatoes. For example, improper drainage results in standing water or wet areas around facilities that can create breeding grounds for insects and other pests. Long grass and bushes around the exterior walls of buildings may also harbour pests. Pests allowed to live and breed directly outside of buildings have a greater chance of entering the buildings and contaminating potatoes.

Agricultural Chemicals

Agricultural chemicals of the appropriate type must be purchased and received to minimize chemical contamination of potatoes, and must be applied by

the appropriate person following label instructions. Producers have to ensure agricultural chemicals are stored in an area dedicated only to agricultural chemicals; in a clearly identified location (i.e., sign on door); in a locked or controlled-access location; and in a covered, clean, and dry location that is temperature appropriate (e.g., to prevent chemicals from freezing).

Agricultural Water

Agricultural water is an essential element used for multiple purposes in the production of potatoes. However, water may also be a source of biological or chemical contamination. Each agricultural water source must be identified, potential hazards must be assessed, and preventative measures and/or corrective actions must be taken when necessary. It is strongly recommended that producers test their agricultural water sources. The test will provide a general idea of the quality of water and help to determine if possible contamination is present. Producers would test water for total Coliforms and *E. coli* using an accredited lab.

Equipment

A good agricultural practice is to clean and maintain production site, packing house, and storage equipment to reduce the potential for biological, chemical (residues), and physical (e.g., metal, glass, plastic, wood) contamination. The appropriate cleaning methods and materials will depend on the type of equipment and the nature of the potatoes. Procedures may include the removal of debris from equipment surfaces, application of soaps/detergents, scrubbing/friction, rinsing with water, and, where appropriate, disinfection/sanitization. When required, equipment must be calibrated to ensure accurate application and delivery.

Growing and Harvesting

Potatoes harvested less than four months after the application of manure may be a source of biological contamination. Similarly, potatoes harvested before a pre-harvest interval has elapsed may be a source of chemical contamination. Certain conditions during the growing period may encourage the formation of glycoalkaloids in potatoes.

These are just a few of the 18 sections related to on-farm food safety addressed in the *Potato Producer and Packer On-Farm Food Safety* manual.

Growers and packers are encouraged to contact their local grower organizations for further details on how to get enrolled in the CanadaGAP Certification Program. Further details are also available on the CanadaGAP web site at www.canadagap.ca

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