

On-Farm Food Safety Certification

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Prairie strong, worldwide

The CWB and Food Safety

- Canadian farmers and agricultural and food processing industries have worked hard to ensure that food products grown in Canada are safe for consumption by domestic and international consumers.
- Food safety continues to be an extremely important and growing issue in wheat and barley marketing.
- What follows is a review of some current food safety issues, a look at an on-farm food safety assurance program under development and next steps.

Food Safety Issues

- **Grain safety cargo certification and monitoring:**
 - Increasing demand, particularly for highly discriminating customers (e.g. pesticide residues).
 - Canadian Grain Commissions grain safety monitoring program provides the scientific basis for statements of assurance.



Food Safety Issues

- **Mycotoxins:**

- International standards and customer specifications for several mycotoxins have been tightened to levels that require monitoring and in some cases logistical arrangements to satisfy these tolerances.
- **Deoxynivalenol (DON):** currently have grade tolerances for fusarium levels. July 1, 2006 a new EU requirement will be established for maximum 1.25ppm DON
- **Ochratoxin A:** increasing requests for assurances of EU limits at maximum 5ppb. CODEX is considering the same level.

Food Safety Issues

- **A little bit more on Ochratoxin A (OTA):**
 - The 5ppb limit is very low.
 - OTA is present in crops in Canada at levels that meet this standard.
 - There is no visual indication of the level of OTA present to make it a grade standard.
 - Storage time and conditions are a primary factor therefore following **On Farm food safety protocol will help.**



Food Safety Issues

- **Pesticide Residues** - questions being asked:
- What is the level of pesticide applicator safety training
- What pesticides and how are they used:
 - Use of only approved pesticides for the crop
 - Dose and frequency
 - Observation of appropriate pre-harvest intervals
 - Degree of documentation and record keeping



Food Safety Issues

- **Microbial Contamination:**

- An increasing number of customers are measuring levels of microbial contamination in grain shipments.
- There have been numerous requests to the CGC regarding elevated bacterial counts in milling wheat.
- Very little information exists in Canada on the presence and distribution of these substances in grain at harvest or in the **storage and handling system.**

Evolution of On-Farm Food Safety Certification for Grains

2001 Canada Grains Council Annual Meeting

- Discovery Session
 - Food safety in other sectors of agriculture
 - Food safety within grain industry in customer and competitive countries
- Recommendation
 - Create an On-Farm Food Safety Management Committee to develop an On-Farm Food Safety Strategic Plan for Canada's grains, oilseeds, pulses and special crops farms

On-Farm Food Safety Strategic Plan Vision

“To ensure the continued production and marketing of safe grains, oilseeds, pulses and special crops for domestic and export consumption by humans and animals.”



On-Farm Food Safety Strategic Plan Principles

- Strengthen economic position of individual producers and competitive position of Canada's grain industry
- Simple to understand and operate, functional under changing market conditions
- Develop program to be credible internationally: HACCP (Hazard Analysis Critical Control Point) based
- Accessible to all producers, national in scope, compatible to other on-farm and post-farm programs
- Consider use of traceability
- Restricted to food safety, voluntary, self ownership and administration

On-Farm Food Safety Assurance Program

- The Producer Manual:
 - The producer manual outlines the requirements for On-Farm Food Safety Assurance
 - This document was developed, tested in various pilot projects and revised with producer comments incorporated
 - The manual is currently in the final stages of technical review by CFIA (Canadian Food Inspection Agency) and provinces

Grain Safety Assurance Programs

- **The On Farm Food Safety Manual - what could it mean to you?**

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- C. PRINCIPLES OF HACCP
- D. PESTICIDE CONTROL
- E. GOOD PRODUCTION PRACTICES

Grain Safety Assurance Programs

- **The On Farm Food Safety Manual - what could it mean to you?**
 - Follow the good production practices
 - Document what you do
 - Be able to produce the documents if an audit is required
 - The protocol in the manual should cover all food safety certification needs for all crops. The ultimate goal is for one program (certification) on farm for all field crops for all customer needs

Marketing Safe Canadian Wheat and Barley

- **Canada Grains Council Food Safety Projects:**
 - CWB is actively involved with both On Farm and Post Farm pilot projects
 - The pilot projects to date have shown that the Canadian industry is largely already following the necessary food safety practices.
 - Manuals were also developed to provide guidelines for the post farm handling system. Most of this system has already received HACCP certification.

Marketing Safe Canadian Wheat and Barley

- **2005-06 Wheat Pilot Project**

- Federal funding became available to determine the operational and cost implications of introducing HACCP-based food safety models into grain exports (from field to the spout loading the export vessel).
- The CWB requested that a wheat pilot be conducted on one of their identity preserved production contracts that is exported via the bulk grain handling system. A decision was made to work with the contracts going to Warburton Bakeries in the United Kingdom.

Marketing Safe Canadian Wheat and Barley

- **2005-06 Wheat Pilot Project - Current Status**
 - Producers have been recruited to implement the project as planned but with an enhancement of the auditing role to incorporate orientation and gap analysis.
 - Producers are using an electronic copy of the producer manual and are already providing excellent feedback.
 - All rail cars have reached the lake terminal (Thunder Bay).

Marketing Safe Canadian Wheat and Barley

• 2005-06 Wheat Pilot Project - Next Steps

- Measure the models' effectiveness in managing food safety risks in wheat contract production;
- Determine the operational feasibility and cost of integrating food safety and IP quality assurance throughout the entire wheat supply chain;
- Determine the market and Canadian industry acceptability of this incorporation;
- Determine the ability of accredited service providers to competently provide food safety audits;

Marketing Safe Canadian Wheat and Barley

- **2005-06 Wheat Pilot Project - Next Steps**

- Evaluate the effectiveness of industry and auditor training programs;
- Identify any gaps or deficiencies within the Good Operating Practices of the HACCP-based food safety models, based on testing results, when applied along the entire supply chain;
- **Develop experience and capacity along the supply chain and among wheat growers** that can be harnessed to expand the introduction of the HACCP-based system, according to market demand.

CWB and On-Farm Food Safety

- There will be careful assessment of the results and recommendations of the On Farm and Post Farm food safety initiatives. This will determine if steps need to be taken to review and grading standards or analytical testing that ensure grain safety.
- Customers are being made aware of efforts to continue our reputation as a supplier of safe, high quality wheat and barley.
- The CWB is developing pilot projects for 2006-07 - stay tuned for details.
- General CWB approach is to be prepared, but do not encourage unnecessary expenses for Canadian farmers if there is no market return

CWB Product Development and Marketing Support

