

# New Feed Quality and Safety Issues

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## ■ Enhancing Canada's Feed Ban as a Response to BSE

As a BSE-free country prior to May, 2003, the Government of Canada had already had in place a ban on the feeding of mammalian-derived proteins (with exceptions) to ruminants for almost 6 years. However, the finding of this case of BSE in Alberta makes it necessary to review existing controls over the inclusion of inedible materials of animal origin in animal food. In so doing, the Government of Canada must bear in mind that feed controls must be effective to ensure BSE is not transmitted via animal food to eliminate further spread of the disease to other animals and potentially to humans. In addition, the controls must contribute to a competitive Canadian agricultural industry in line with the expectations of our trading partners and within the context of international guidelines and an integrated North American market.

In close collaboration with the United States Food and Drug Administration (US-FDA) and industry stakeholders, the Canadian Food Inspection Agency (CFIA) and US-FDA implemented essentially identical mammalian-to ruminant (with exceptions) feed bans in their respective countries on August 4, 1997. In Canada's case, amendments were made to the federal Health of Animals Regulations. This action was taken in response to a World Health Organization recommendation in 1996 that all countries of the world undertake to ban the feeding of ruminants with proteins from other ruminants in light of the spread of BSE in Europe at that time.

The exceptions in the ban are for proteins from pigs and horses, blood and milk proteins from all species, gelatin and rendered animal fats. On the basis of the best available science at the time, these materials were excepted from the ban as they were considered to pose a very low risk of transmitting BSE. In addition, proteins derived from non-mammalian animals like poultry byproduct meal, feather meal and fish meal are also excepted from the ban. These materials can be fed to all animals, including ruminants. Proteins banned from feeding to ruminants, termed "prohibited material" in section 162 of the Health

of Animals Regulations, still can be used in feeds for non-ruminant species such as swine and poultry. The ban also requires imports of rendered animal protein products from outside of Canada be governed by conditions set out in import permits.

In changing Canada's existing feed ban, consideration must be given to the implications change may have on:

- animal and human health;
- industry competitiveness;
- federal, provincial and territorial government capacity to implement change;
- Canada's conformity with international standards and reputation for animal health;
- trading partners' expectations; and
- market integration in North America.

At the present time, the Government of Canada is evaluating the merits of implementing one of the three following options:

### **Option 1 Enhanced Ban**

Enhance the current mammalian-to-ruminant ban by mandating dedicated lines facilities and increasing numbers and frequencies of compliance inspections.

This option would therefore allow bovine meat and bone meal to be manufactured and used as animal feed for other species such as hogs and poultry.

#### **Dedicated Lines / Facilities**

Introduction of dedicated lines and facilities would reduce the possibility of cross- contamination of non-prohibited material or feed destined for the ruminant feed chain with ruminant material/MBM at slaughter facilities, rendering facilities, feed mills, and on-farm feed mills.

### **Option 2 SRM Removal and Enhanced Ban**

Remove and re-direction of bovine "Specified Risk Materials (SRMs)", including bovine dead stock, so they cannot be included in animal feed and pet food, and continue to permit the use of non-SRM ruminant meat and bone meal (MBM) in non-ruminant feeds

Collectively, SRMs are considered to be the bovine tissues most highly infected with the BSE agent in an affected animal. Canada has already acted to remove

SRMs from the human food chain in July 2003. SRMs comprise the skull, brain, trigeminal ganglia, eyes, tonsils, spinal cord and dorsal root ganglia of cattle over 30 months of age as well as the distal ileum of cattle of all ages.

### **Option 3 Ruminant to Animal Ban**

Remove and re-direct all ruminant MBM from the animal feed chain, including protein meals derived from sheep, goats, deer and elk.

#### **■ Update - Regulations Respecting the Making of Medicated Feeds**

The CFIA published the proposed regulations, Canada Gazette, Part 1, on February 5, 2000 under the authority of the Health of Animals Act after lengthy consultation and negotiation with the commercial feed and livestock industry groups since 1993. This process utilized a Steering Group which included stakeholder representation from the CFIA, Animal Nutrition Association of Canada, Canadian Animal Health Institute, Canadian Pork Council and Canadian Cattlemens Association. The proposed regulations contain standards respecting the manufacture of medicated feeds in Canada to better protect animal and human health and food safety. The Compendium of Medicating Ingredient Brochures (MIB) will continue to be the backbone of proper drug use.

A number of pre-pilot and pilot projects were conducted on 30 farms and at 1 commercial feed mill across Canada from February to June 2001. A variety of different mixing systems were evaluated. Taking into consideration stakeholder comments and experiences arising from the pilot projects, a "Manual of Procedures" has been drafted that is intended to assist regulated stakeholders with interpreting the regulations in plain language once the regulations come into effect. Key parts of this manual are: mixer performance testing procedures; scale verification/equipment calibration procedures; validation of equipment clean out procedures.

The implementation of the regulations is contingent on the CFIA receiving additional funds to administer, deliver and enforce this legislation. A funding request in support of this is contained in the approved Agricultural Policy Framework. The CFIA is working with Agriculture and Agri-Food Canada on a formal process to acquire the funds.

There is a proposed three-year phase-in process for the regulations, which would allow the commercial feed and livestock sector to adapt operations. Year one would include commercial feed mills, year two would include farms using drug premixes (DIN) and year three would include farms using medicated

premixes and supplements or other medicated feeds requiring additional mixing prior to consumption.

### ■ **Developing a Regulatory Framework for Toxic Substances in the Health of Animals Regulations**

The CFIA is proposing to further strengthen its regulatory control for instances of contamination along the entire food production continuum. If a contamination has occurred, federal regulations currently permit the CFIA to take action on inputs such as livestock feeds and veterinary biologics, and outputs such as meat, milk, eggs and other food commodities. The CFIA cannot currently take regulatory action in instances where animals are suspected of being, or are known to have been, contaminated by toxic substances. The addition of a list of toxic substances to the federal Health of Animals Regulations is therefore being proposed.

The contamination of animals by chemicals or toxins has the potential to affect animal health, or public health via the human food chain. Such contaminations may be widespread, as was the dioxin contamination of animal feeds in Belgium in 1999, or more localized, as for example, the accidental exposure of cattle on farm to seed treated with a herbicide or fungicide. Control and elimination of the contaminant is essential to protect animal health, consumer health, food safety, consumer confidence and trade.

The 1990 revision to the Health of Animals Act contains provisions that allow for the control of toxic substances. The term "toxic substance" in the Act was intended to deal with contamination issues resulting from animals ingesting contaminated feed, being exposed to unapproved pest control agents, or other accidental types of exposures. While the Act provides the authority to prescribe "toxic substances", none are presently prescribed. The Act further specifies the way in which "toxic substances" can be prescribed.

A proposed schedule of toxic substances may comprise a number of reference lists to best coordinate actions on contaminants nationally and internationally. For example, nationally, the schedule could list veterinary drugs and pesticides for which Health Canada has established Maximum Residue Levels (MRLs), and prohibited substances. Similarly at the international level, MRLs established by CODEX Alimentarius could be referenced. These documents are most useful as they are published and they have generally been consulted upon. The Agency may have to define and administer a separate list to include other substances not found in these documents or to supercede a regulatory listing which may be contradictory.

Should a list of substances be prescribed, control authorities such as those already existing for diseases in the Act could be enabled. For example:

- Owners, veterinarians, laboratories would have to report the presence of a toxic substance in or around an animal, or if it is suspected that an animal is contaminated by a toxic substance. (s. 5.(1) + 5.(2))
- No person could take a contaminated animal to a market, fair, etc. without a licence by an inspector. (s. 10.)
- No person could sell, offer for sale, expose for sale or transfer ownership of an animal, animal product or by-product that is contaminated with a toxic substance. (s.11.)
- Animals or their products contaminated with a toxic substance would have to be presented to an inspector when imported. (s. 16.)
- Any place where an inspector suspects or determines that a toxic substance exists could be declared an “infected place” in order to limit the movement of animals or food produced from those animals from that place. (s. 22. - 25.)
- If a toxic substance is believed to exist, the area could be declared a control area and measures to mitigate or remedy the situation could be taken. (s.27.)
- For the purpose of detecting toxic substances or ensuring compliance with any of the requirements of the Act and regulations, inspectors could enter any place, conduct tests, take samples, etc., to complete an investigation. (s. 38.)
- Any toxic substance, or any animal or thing, which is suspected of being contaminated, could be disposed of or the owner required to dispose of it in a specified manner and time. Treatment could also be required. (s. 48.)

## ■ Conclusion

The Canadian Food Inspection Agency has found it necessary to enhance our feed ban. Products exempted from the ban included proteins from pigs and horses, blood and milk protein from all species, as well as gelatin and rendered fat. Other mammalian proteins are termed “prohibited material”, and can only be fed to non-ruminant species such as swine and poultry. Options evaluated by the Government of Canada included; separate production lines or facilities, and removal of specified risk materials from animal feed and pet food.

Proposed regulations for the making of medicated feeds will better protect animal and human health. Food safety and antimicrobial resistance are major public concerns. Following good manufacturing practices should help ensure compliance with the Compendium of Medicating Ingredient Brochures specifications.

Finally, the addition of a list of toxic substances to the Health of Animals Regulations will allow CFIA to take action where animals are suspected of being contaminated. The Health of Animals Act regulates all animals, birds and fish. Suspected contamination by these substances will require all persons to notify us, and restrict the movement of such animals.

The initiatives outlined here are all designed with “prevention” being the objective. CFIA recognizes the need for quality control throughout the entire food production chain. Process control versus product sampling is simply much more effective and efficient. We look forward to your collaboration and participation in on-farm food safety programs.