Pet Food Safety: The Roles of Government, Manufacturers, and Veterinarians

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Abstract: Food safety is of concern for both human and companion animal health. Government agencies, pet food manufacturers, and veterinarians play crucial roles in ensuring the safety of pet food and safeguarding pets and their owners. Recent legislation will increase the government’s role in regulating pet food and will affect many manufacturers. Veterinarians continue to play a vital role by recognizing and reporting pet food safety issues and by educating clients on matters related to pet food safety.

Role of the Government

Food safety is of concern for human and companion animal health. The Centers for Disease Control and Prevention estimates that 48 million cases of foodborne disease in humans occur annually in the United States, resulting in 3000 deaths.1 Despite this statistic, the United States enjoys one of the world’s safest food supplies, and the Food and Drug Administration (FDA) has systems in place to help ensure that the US food supply is wholesome, safe to eat, and produced under sanitary conditions.2

Food safety hazards are diverse, including contamination with foreign material (e.g., plastic shards), chemicals or adulterated ingredients (e.g., the 2007 pet food recall due to adulteration with melamine and cyanuric acid), and microbiologic agents, including contamination with microbial pathogens or with microbial toxins, such as mycotoxins (e.g., aflatoxin) and bacterial toxins (e.g., botulism toxin). Nutrient deficiencies or excesses in pet foods intended to provide complete and balanced nutrition are also potential food safety hazards. Contaminated or adulterated foods, treats, and supplements can all pose food safety hazards.

Pet food manufacturers, government agencies, and veterinarians play vital roles in ensuring the safety of pet food and safeguarding pets and their owners. It behooves veterinary practitioners to be aware of recent federal legislation affecting pet food safety, the role of the manufacturer in producing safe foods, and their own role in identifying potential pet food–related illness, reporting suspected cases, and educating pet owners about pet food safety.

While there have been some notable pet food safety recalls (including the intentional adulteration of a food ingredient for financial gain), overall, commercial pet foods are safe.3 In the first annual report of the Reportable Food Registry,4 published in January 2011, pet food represented 5.7% (13 of 229) of the total primary reports.

The Reportable Food Registry,5 now part of the Safety Reporting Portal, launched in September 2009 according to the requirements of the FDA Amendments Act of 2007 (FDAAA),6 one of several recent laws that should further strengthen the current robust system of food safety for humans and pets. The FDAAA gives the FDA increased responsibility and authority over food safety. Title X of this act relates to the safety of products marketed for either human or pet consumption, while section 1002, which applies to pet food, includes the establishment of ingredient standards and definitions, processing standards, and labeling standards. The Reportable Food Registry was established in accordance with FDAAA section 1005 and applies to all foods under the FDA’s jurisdiction, including animal feed and pet food. Registered food facilities must report when there is “a reasonable probability that the use of, or exposure to, [an] article of food will cause serious adverse health consequences or death to humans or animals.”7

To enhance information sharing between the FDA and other federal and state regulatory agencies with regard to pet food–related incidents, a secure Web-based system, the Pet Event Tracking Network (PETNet), was launched in August 2011.7 PETNet allows
all members, including federal and state regulatory agencies, equal access to reported data to enable rapid, coordinated efforts to prevent or limit adverse events associated with pet food products.

In July 2010, the FDA released a Compliance Policy Guide outlining conditions for regulatory action concerning *Salmonella* spp in animal feeds. Under these guidelines, pet food, treats, and supplements are considered “direct human contact feed.” If a product is contaminated with any *Salmonella* serovar and will not undergo a commercial “kill step” (e.g., heating, rendering, extrusion, irradiation), it is considered adulterated and subject to recall, seizure, or importation detention. These changes provide more government oversight and shift the federal responsibility from a reactive response to a more proactive preventive role.

In January 2011, the Food Safety Modernization Act (FSMA) was signed into law. The FSMA provides the FDA with more enforcement authority and the tools to prevent food safety problems (e.g., risk-based food safety standards) as well as respond to them (e.g., mandatory recall authority) if necessary. As with FDAAA, this law also applies to pet food and treats. The prevention measures include mandatory preventive controls for food facilities, mandated inspections based on risk assessment, testing by accredited laboratories, and access to manufacturers’ food safety plan records. The law provides unprecedented FDA authority over imported food. On the response side, the FSMA calls for enhanced product traceability and suspension of a facility’s registration, preventing distribution of food, if the FDA deems that a reasonable risk of serious adverse health consequences exists.

**Role of the Manufacturer**

Manufacturers are responsible for producing safe food. Methods employed by manufacturers to accomplish this include sourcing of safe raw materials; effective processing designed to destroy potential pathogens; using preventive measures, such as hygienic design; record keeping; and pathogen monitoring to detect any breaches in food safety. Most pet food companies have had stringent food safety measures in place for years. As part of the FSMA, pet food manufacturers that are required to register with the FDA as a food producer and do not currently have a documented safety protocol will need to create written risk-based hazard control point

**Box 1. Elements of AAFCO Model Good Manufacturing Practice Regulations**

- Personnel training
- Maintenance and housekeeping of the manufacturing plant and equipment
- Appropriate handling and record keeping of incoming ingredients
- Proper packaging and labeling
- Proper storage and inventory of finished products
- Inspection and sampling of the product
- Record keeping to permit a rapid and effective recall

**Box 2. Steps for Developing an HACCP Plan**

- Consider every aspect of the manufacturing operation, including the raw ingredients, equipment, process (e.g., extrusion, packaging), storage, and distribution.
- Analyze potential hazards based on probability of occurrence and severity.
- Control significant hazards by instituting a critical control point (CCP), such as a thermal treatment to destroy a specific pathogen.
- State how the CCP will be monitored and how a situation will be handled if a problem arises.

programs. Currently, the Official Publication of the Association of American Feed Control Officials (AAFCO) includes model Good Manufacturing Practice regulations that states can use to implement good manufacturing practices for animal feed. Key elements from these guidelines are listed in **BOX 1**. Many companies already have a hazard analysis and critical control points (HACCP) program that identifies key points in the manufacturing process where hazards should be controlled. Veterinarians may recognize the concept of HACCP principles from familiarity with programs instituted by the US Department of Agriculture Food Safety and Inspection Service.

HACCP methodology is an accepted concept used in food safety management systems. **BOX 2** lists the steps involved in developing an HACCP plan. As an example, to prevent *Salmonella* contamination of a dry pet food, the manufacturer may determine that the extrusion process is a critical control point—that is, the main point in the manufacturing process where a control measure is needed to eliminate this risk. Therefore, guidelines for monitoring the proper functioning of the extruder are imperative. In addition, preventive measures and monitoring the environment and product after extrusion are critical, as are preventing cross-contamination and controlling air and water flow from pre-extrusion to post-extrusion areas. Ingredients applied to the kibble after extrusion, such as flavorings added as a coating during the enrobing process, require careful screening for *Salmonella* and/or hygienic control because they are added after the thermal kill step. For cooked commercial pet foods, much of the focus is on monitoring and using environmental management systems to prevent microbial recontamination after the cooking process.

Advances in technology have provided manufacturers with sophisticated equipment that is able to detect low levels of potential microbial contamination in a timely fashion. Advances in information management allow accurate record keeping so that the food supply chain can be traced quickly to determine ingredient sources (“step back”) and product distribution (“step forward”). Traceability is necessary for identifying the source of a foodborne illness and removing affected product from the market and is required by law.

**Role of the Veterinarian**

Veterinary practitioners play a critical role in pet food safety by identifying and diagnosing food-related illness. A complete history,
### Box 3. Pet Food Recall Resources

- **FDA Recall and Safety Alerts:** [http://www.fda.gov/Safety/Recalls/default.htm](http://www.fda.gov/Safety/Recalls/default.htm)
- **AVMA Pet Food Safety:** [http://www.avma.org/petfoodsafety/recalls/default.asp](http://www.avma.org/petfoodsafety/recalls/default.asp)
- **Veterinary Information Network:** [http://www.vin.com](http://www.vin.com)
- **Food Safety.gov:** [http://www.foodsafety.gov/keep/types/petfood/](http://www.foodsafety.gov/keep/types/petfood/)

including a detailed diet history, may suggest a food-related illness. Clinical signs correlating with feeding a new bag of food or multiple pets with similar clinical signs consuming the same diet may raise the index of suspicion. Exploring all diagnostic differentials, ruling out non–food-related causes, collecting food and/or biologic samples to confirm a diagnosis, and maintaining detailed medical records are required. Veterinary diagnostic laboratories can be contacted to obtain guidance on the most appropriate samples to submit for testing. As soon as a food-related issue is suspected, the veterinarian should notify the pet food manufacturer and the FDA, either by contacting the appropriate FDA district office consumer complaint coordinator or using the Safety Reporting Portal ([www.safetyreporting.hhs.gov](http://www.safetyreporting.hhs.gov)). Owners should retain the original product package with product code information, the remainder of the suspect food, and receipts. The pet owner should also contact the manufacturer to report the issue. A suggested checklist for dealing with suspected contaminated food has been published elsewhere.

Veterinarians can provide valuable client education regarding pet food safety, including advising owners to retain product labels, to store and handle pet food properly, and to practice good hygiene when handling pet food and food bowls. The FDA provides tips for safe handling of pet food and treats, such as washing hands before and after handling these items, using a dedicated scooping utensil for pet food, washing food bowls and utensils with soap and hot water after each use, and storing pet food in a cool, dry place. (To read all the FDA tips, go to [www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates](http://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates).) If pet food is placed in a bulk container, owners should wash and thoroughly dry the container periodically.

Veterinary practitioners can also provide information regarding pet product recalls. Several Web sites can help busy veterinarians up-to-date on recalls (Box 3). The FDA has designed a “Pet Health and Safety Widget” that clinics can add to their own Web sites to automatically alert clients and the clinical staff when pet product recalls are announced. (To get the widget, go to [www.fda.gov/AnimalVeterinary/ResourcesForYou](http://www.fda.gov/AnimalVeterinary/ResourcesForYou).)

Food safety involves many factors, including government regulation and pet food manufacturer quality assurance programs. However, it also requires veterinary expertise to identify potential foodborne illness and to work with manufacturers and government officials to confirm a problem so that appropriate measures can be taken to prevent illness in other pets. The public is increasingly aware of food safety issues, and pet owners are turning to their veterinarians for guidance and assistance to keep their pets safe and healthy.

### References


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