RISK BACKGROUND

Pet food, pet food ingredients, and supplements for companion animals

Overview

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Importers need a permit to bring most pet food products into Australia. A permit will only be issued after a risk assessment has determined that:

- all ingredients are from sources (e.g. countries, species) that present a low level of biosecurity risk; and
- biological ingredients are processed in a way that ensures that product exported to Australia is not contaminated with exotic pests and diseases; and
- the product is manufactured in a facility that operates to standards consistent with those of Australian producers, including standards of hygiene and prevention of contamination; and
- the product is manufactured in a facility that complies with the department's audit policies.

Fortunately, Australia is free of many significant animal and plant diseases however contaminated animal feed could introduce these diseases into Australia.

Importers must satisfy all conditions of the relevant BICON case and import permit to bring pet food into Australia.

Key biosecurity risks[1]

Pet food is often produced using ingredients derived from downgraded meat (i.e. meat deemed unfit for human consumption) or by-products of abattoir production systems. Ingredients are sourced from food producing animals (e.g. cattle, sheep, pigs, chickens) with a single batch of ingredient often made using material sourced from many individual animals. If ingredients are inadvertently contaminated with animal pathogens, these pathogens may be present in the final pet food product.

Examples of exotic animal diseases that could be introduced into Australia through imported animal feed include:

- Transmissible spongiform encephalopathies (TSE's) e.g. bovine spongiform encephalopathy (BSE, mad cow disease), scrapie, chronic wasting disease (CWD) of deer

[1] 'Biosecurity risk' means the likelihood of a disease or pest entering Australia or establishing itself or spreading in Australia where that disease or pest can cause harm to humans, animals, plants, or the environment, and have significant economic consequences.

- Foot-and-mouth disease (FMD)
- African swine fever (ASF)
- Swine vesicular disease (SVD)
- Classical swine fever (CSF)
- Porcine epidemic diarrhoea (PED)
- Peste des petits ruminants
- Lumpy skin disease (LSD)
- Capripox (sheep and goat pox)
- Virulent Newcastle disease
- Highly pathogen avian influenza
- Infectious bursal disease

Please see the department's website for the following documents:

- FMD-Free Country List
- Sheep Pox and Goat Pox-Free Country List
- LSD-Free Country List
- BSE Country List

Repurposing imported goods: Feeding product to animals that are not pets

The way that goods are used once they are imported into Australia affects the level of biosecurity risk associated with those goods. Imported goods intended to be fed to pets will present a different level of biosecurity risk if they are repurposed as feed for production animals. Pets are less likely to be susceptible to diseases of biosecurity concern whereas production animals in Australia are naïve and highly susceptible to many of the exotic animal diseases referenced above.

Swill feeding is the feeding of certain food substances and food waste to Australian pigs. Australian states and territories strictly prohibit swill feeding.

Goods imported to be fed to pets cannot be fed to livestock animals in Australia unless the department has authorised this end use. As part of their import permit risk assessment, biosecurity officers will consider the likelihood of imported pet food being repurposed once it is brought into Australia.

Importing bulk ingredients to be used for pet food production

Pet food ingredients imported in bulk for further processing and packaging in Australia present a different level of biosecurity risk than those goods that are imported clearly labelled for consumption by companion animals. Without specific controls on how the bulk ingredients are used in Australia (e.g. see Approved Arrangements section below), there is the potential for these goods to be repurposed after they are released from biosecurity control at Australia's border.

Biosecurity officers will consider the potential for imported bulk ingredients to be fed to Australian livestock animals as part of their import permit risk assessment. This may mean that bulk ingredients are held to a higher standard of assessment and risk management than for commercially prepared and packaged pet food products.

Sources of contamination

Animal feed exported to Australia may be contaminated with exotic pests and diseases at any point along the pathways of production and supply. Contamination may be inadvertent or deliberate on the part of the manufacturer.

Opportunities for product contamination will vary depending on how product is made and the ingredients that are used:
- **Ingredients of animal origin**: Ingredients of animal origin are often sourced from large populations of animals

that may include diseased individuals. Disease agents can be distributed throughout bulk ingredients that will infect naïve animals that consume the contaminated animal feed.

- **Cross contamination or ingredient substitution at the manufacturing facility**: Pet food manufactured overseas for Australian pets is likely to be made on production lines used for a range of different products. These products may contain ingredients that, due to sourcing or processing shortfalls, are not compliant with Australia's biosecurity requirements. If batches of product made for Australian pets are produced after a run of non-compliant product, ingredient residues may contaminate the Australian batches.

Changes in demand and shortages of different ingredients can increase pressure on overseas manufacturers to look for different suppliers to meet customer orders. The department will look to ensure that pet food produced overseas is sourced from manufacturers that apply a high level of quality to their processes, ensuring that ingredients are sourced and processed in accordance with Australia's biosecurity requirements at all times.

As part of the import permit risk assessment, biosecurity officers will review a complete list of ingredients held at the manufacturing site, how these ingredients are used (i.e. on which production lines), and cleaning/sanitisation on production lines between batches of different product.

Key risk controls

The department's biosecurity risk assessment will determine whether there are adequate controls at critical steps along pathways of pet food production and supply. If controls are found to be effective at reducing the level of risk in line with Australia's Appropriate Level of Protection (ALOP) (i.e. risk levels that are very low but not zero) then a permit can be issued to import that product. It may also be necessary for the department to apply additional risk controls to the pathways of production and supply to achieve this outcome.

For some applications it may not be possible to reduce commodity risks to meet Australia's ALOP and, in these instances, the application for permit will be refused.

The following is a list of key risk controls that are relevant to a pet food risk assessment:

General risk controls

- **Production standards and government oversight:** The standards of construction of premises processing animals and product, standards of hygienic production and inspection, and standards of transportation of product should be equivalent to the most current version of the Australian Standard for the Manufacturing and Marketing of Pet Food.

All mammalian or avian-based meat and meat product ingredients, other than rawhide chews, must be derived from animals processed at establishments approved by the government competent authority. All pet food containing animal-based ingredients, including avian and aquatic animals, other than rawhide chews, must be processed, prepared and stored at establishments approved by the government competent authority in the country of manufacture.

- **Certification requirements:** It is a requirement for imported pet food (other than rawhide chews) to be accompanied by official government certification with a unique identifier (e.g. the veterinary control number) for the specific manufacturer. The certificate must confirm details of product, origin of animal-derived ingredients (i.e. country, species, and possibly tissue), and export details as well as confirmation that the product has undergone the minimum required processing. The government authority must also verify veterinary ante- and post-mortem inspection on the mammalian species (except meat and bone meal), or ante- or post-mortem inspection on avian species (excluding eggs and egg products).

- **Audit requirements:** A desktop assessment will be undertaken on all pet food permit applications to verify that the product and production process meet Australia's import requirements and that appropriate quality controls, government supervision and product integrity exist to ensure product consistently meets Australia's biosecurity requirements.

A site audit of the final product manufacturing facility and, under certain circumstances, individual ingredient suppliers will also be undertaken except:

- For canned/retorted pet food and rawhide dog chews treated at pH 14 for not less than 8 hours

- Food containing ingredients derived aquatic animals only

- Diets for laboratory animals

- Food for small pets including terrarium and aquarium animals

- Where product is manufactured in countries free of the major diseases of biosecurity concern to Australia (relevant to the species of origin) and where it is determined that the veterinary services, animal health status, pet food regulatory and inspection system, and associated mechanisms within these countries is equivalent to those in Australia.

- **Prion disease risk management:** The prion agent, which is responsible for bovine spongiform encephalopathy (BSE), scrapie, chronic wasting disease (CWD) of cervids, and other transmissible spongiform encephalopathies (TSEs) are extremely resistant to thermal processing.

Bovine-derived meat-and-bone meal may only be used in pet food manufacture if derived from bovine animals that have lived only in negligible BSE risk countries. Beef (bone-in or deboned) may also be sourced from bovine animals that have lived in controlled BSE risk countries providing:

- all animals passed ante- and post-mortem inspections, and

- the products do not include ruminant-derived meat-and-bone meal, and

- the products do not contain BSE risk material or other material derived from specified BSE risk material.[2]

Due to concerns with scrapie, pet food exported to Australia must not contain ovine or caprine-derived **meat-and-bone meal** or **milk** from countries that are not Australia or New Zealand (countries recognised free from classical scrapie). Pet food must not contain **meat or meat products** from sheep or goats originating from countries that are not Australia or New Zealand unless:

- the sheep or goats have passed ante-mortem and post-mortem government veterinary inspection, and

- scrapie risk materials (skulls including brains, ganglia and eyes, vertebral column including ganglia and spinal cord, tonsils, thymus, spleen, intestines, adrenal glands, pancreas, liver or products derived from them from animals of any age) have been excluded.

Due to concerns with CWD, pet food exported to Australia must not contain any meat, meat products, fluids, other tissues or meat-and-bone meal derived from deer, elk or other cervids, originating from countries that are not Australia or New Zealand.

- **Treatment with ionising radiation:** Treatment of goods in Australia with ionising radiation (e.g. 50 kGy) may, under certain circumstances, be used as an adjunct treatment for imported pet food. This is possible where offshore treatment falls just short of meeting Australia's biosecurity requirements **OR** the offshore manufacturing facility has not undergone a site audit by the department's biosecurity officers.

The consumption of some irradiated pet food has been associated with severe, chronic leucoencephalomyelopathy in cats. How the irradiated pet food causes this disease in cats is unknown however the department will not consider irradiation treatment for pet food that is for cats or for dog food where there

[2] The above BSE restrictions do not apply to the use of the following products in pet food: milk and milk derived products, protein free tallow, dicalcium phosphate with no trace of protein or fat, hides and skins, and gelatin and collagen derived exclusively from hides and skins.

is a likelihood of consumption by cats, such as dog kibble. The department also requires precautionary labelling to be applied to irradiated, imported dog food.

Commodity-specific risk controls

- **Rawhide dog chews:** An official government veterinary certificate or a government endorsed manufacturer's declaration from the country in which the goods were manufactured is required for rawhide chews certifying that the goods are hide/skin that has been soaked in a liming solution of pH 14 for not less than 8 hours and were made using hide/skin only with no other biological materials (for example, bone, cartilage).

- **Composite rawhide dog chews:** These products are usually rawhide with additional colours/dyes. In addition to the requirements above, certification will need to verify that apart from the rawhide and added colours, there are no additional ingredients in the product.

- **Retorted (e.g. canned) pet food:** During the canning/retorting process the product must be heated to a minimum core temperature of 100°C, obtaining an F0 value of at least 2.8. TSE restrictions on animal-derived ingredients also apply.

- **Dry, semi-moist (e.g. kibble), and other heat processed products:** Individual ingredients from animals susceptible to FMD must be sourced from countries recognised free of this disease. In addition, porcine-derived ingredients must be sourced from countries recognised free of CSF, SVD, and ASF. Product must also be treated using a process that ensures that the **core of the product** achieves a minimum temperature of 100°C for 30 minutes (or equivalent) using **moist heat**.

- **Fresh pet food:** With the exception of fresh pet food from New Zealand, the department does not have a policy for the importation of fresh meat for pet food use.

- **Baked ears:** Ears are subject to the same thermal processing (100°C, 30 minutes) requirements under baking and must be sourced from animals residing in countries recognised free of FMD, CSF, SVD and ASF (for the relevant species). As an alternative to country disease freedom, ears may be treated upon arrival in Australia at the importer's expense using ionising radiation such that the product receives a minimum absorbed dose of 50 kGy.

Additional requirements may be necessary based on the case-specific risk assessment undertaken by the biosecurity officer.

Notes on thermal processing

- **Spray drying** is the process whereby small particles of product are sprayed through hot air. The process effectively reduces the water content of the product but, due to the rapid temperature increase and then decrease, protein denaturation is minimal as is the effect on virus inactivation. Little confidence is placed in the ability of typical spray drying to inactivate most pathogens of biosecurity concern.

An additional concern for spray drying is that the effectiveness of heat in pathogen inactivation decreases substantially when applied to dry product (i.e. effectiveness of inactivation is proportional to product water activity). Therefore, further heat treatment of a spray dried product is less effective than heat treatment prior to spray drying.

- The cumulative effect of more than one treatment on the ingredient and/or final product may be considered by the department in determining the equivalence of the processes to meet Australia's biosecurity requirements.

- Dry pet food (kibble) is produced using **extrusion processing**. There is considerable variation between extruders, ingredients used, water activity and a range of other input variables which determines the product

core temperature and time and which relate directly to the effectiveness of the process to inactivated pathogens of biosecurity concern.

Approved arrangements

Under section 405 of the *Biosecurity Act 2015*, an importer may apply to the department for approval to undertake biosecurity activities on behalf of the department. This may include the receipt and further processing of imported goods at a particular place.

This is relevant for Australian manufacturers seeking to import bulk ingredients to be used for pet food production. Importers may submit with their application details of the processing undertaken at their production facility if the department has accredited that facility under an approved arrangement.

Onshore treatments performed at the manufacturing facility will then be taken into consideration by the department as part of the biosecurity risk assessment.

Definitions

Composite product

A composite product is a product that contains the commodity as an ingredient, mixed together with other ingredients.

Restricted animal material (RAM)

Any material taken from a vertebrate animal, other than tallow, gelatine, milk products or oils. It includes rendered products such as blood meal, meat meal, meat and bone meal, fishmeal, poultry meal, feather meal, and compounded feeds made from these products (Australian Ruminant Feed Ban National Uniform Guidelines 2021- 22). Although RAM is defined as 'any material taken from a **vertebrate** animal other than tallow, gelatine, milk products or oils', meals from aquatic animals that are without a spine (e.g. crustacea meal) are also RAM under this definition.

Specified BSE risk material

1. Tonsils and distal ileum of bovine origin from a controlled or undetermined BSE risk country.

2. Brains, eyes, spinal cord, skull and vertebral column (including mechanically separated meat from the skull and vertebral column) from cattle that were at the time of slaughter over 30 months of age originating from a controlled BSE risk country.

3. Brains, eyes, spinal cord, skull and vertebral column (including mechanically separated meat from the skull and vertebral column) from cattle that were at the time of slaughter over 12 months of age originating from an undetermined BSE risk country.

4. Meat and/or meat products from animals subjected to a stunning process, prior to slaughter, with a device injecting compressed air or gas into the cranial cavity or slaughtered by laceration of central nervous tissue by means of an elongated rod-shaped instrument introduced into the cranial cavity (i.e. a pithing process).