

ON SITE HAZARD RISK ASSESSMENT GUIDELINES

This document is provided to SFMCA full members as a guide to conducting an on-site hazard risk assessment as part of the implementation of a HACCP based feed quality and safety system.

The FeedSafe™ Code of GMP requires stock feed manufacturers to have a HACCP plan implemented. This guideline is provided to assist stock feed manufacturers in defining some of the risks that need to be managed under the Code. Companies should review this document and determine whether these risks exist in their operation and include them within their HACCP system.

This guideline relates to the following:

- Protecting the health of human consumers of food products derived from livestock fed prepared stock feeds.
- Protecting the health of livestock enabling livestock producers to achieve expected levels of performance by delivering stock feed of consistent quality to animals.
- Contributing to the delivery of livestock products of consistent and appropriate quality to enable livestock producers to market food commodities that account for trade risk and food standards.

The hazards identified below must be included within site Hazard Risk Assessments. The Hazard Plan must include the following seven HACCP principles:

- list all potential hazards associated with each step, conduct a hazard analysis and consider measures to control hazards.
- determine critical control points (CCP).
- establish critical limits for each CCP.
- establish a monitoring system for each CCP.
- establish corrective action plans for deviations that may occur at CCPs.
- establish verification procedures.
- establish record keeping and documentation.

This document is provided to assist stock feed manufacturers in completing Hazard Risk Assessments as they relate to feed safety. This document does not define hazards associated with OH&S, environment or other non-feed safety issues.

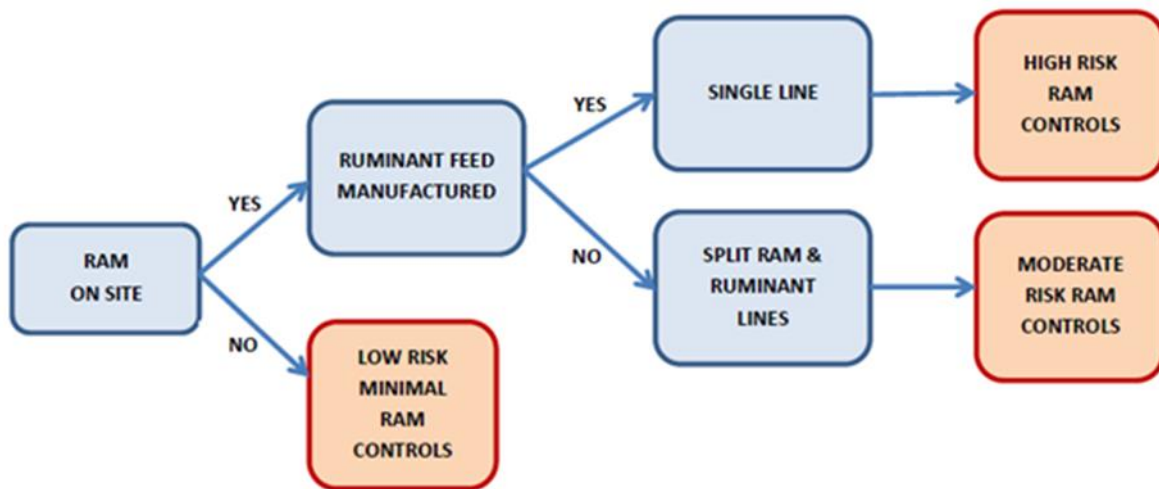
The following risks have been identified as being the typical minimum that should be included within site hazard assessment plans. Examples of critical control points are provided; each manufacturing site is required to determine their own critical control points.

1. Restricted Animal Material Use

Outcome Required: Controls in place to minimise cross transference risk of restricted animal materials contaminating ruminant feed.

Risk – Restricted animal material contaminates ruminant feed, this:

- increasing the risk of BSE amplification should BSE occur within Australia
- presenting trade implications for meat sales within domestic and export markets.



Examples of Critical Control Points

Mills manufacturing ruminant feeds and not having RAM on site

- Inwards ingredient transport and cross contamination prior to receipt within transport vehicles.
- Cross transference within feed delivery vehicles prior to loading ruminant feed, where external contract or owner driver vehicles are loaded.
- Product labelling

Multi Species Mills – storing or using RAM and also manufacturing ruminant feed

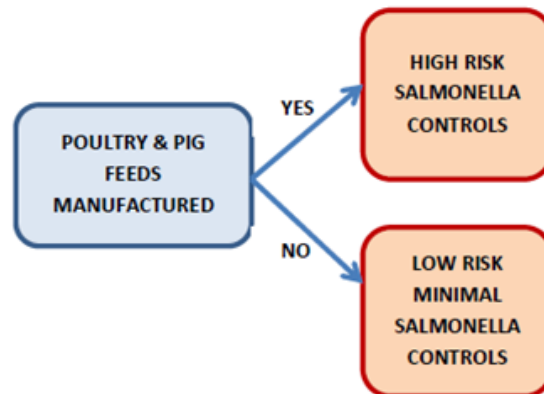
- RAM raw material intake and conveying equipment
- RAM bulk and bag storage integrity.
- Raw material dust collection and waste disposal.
- Batching hoppers and weigh scales
- Transfer equipment from batching to mixing.
- Mixers
- Mash feed conveying equipment and bulk and bagging bins.
- Pelleting line holding bins, pellet press, cooler and sieve.
- Finished pellet conveying equipment and bulk and bagging bins
- Packing line equipment
- Bulk delivery vehicles
- Production line dust collection and waste disposal
- Reworks and returns
- Product labelling

Risk analysis must be completed addressing each of these critical control points. Control measures include use of sequencing and flushing with supporting inspection, sampling and testing to verify adequacy of controls.

2. Salmonella contamination of meat products

Outcome Required: Controls in place to minimise the risk of microbiological contamination of animal feeds.

Risk – Feed supplied to pig or poultry producers contains micro-organisms which result in transmission to meat or eggs.



Examples of Critical Control Points

- Raw materials – sourcing from approved suppliers based upon prior knowledge, sampling and testing.
- Raw material storage – stock rotation and integrity of silos and storage sheds.
- Heat processing – adequacy of pelleting or extruding temperatures to reduce salmonella.
- Vermin control to reduce presence of rats, mice and birds.
- Use of salmonella inhibitors as and when required.
- Mill hygiene and cleaning plant and equipment.

3. Chemical Residues

Outcome Required: Chemical residue levels above MRL do not occur in meat, milk or eggs as a result of chemicals being in stock feed supplied.

Risk – Feed is supplied which results in chemical residues in meat, milk or eggs.

Examples of Critical Control Points

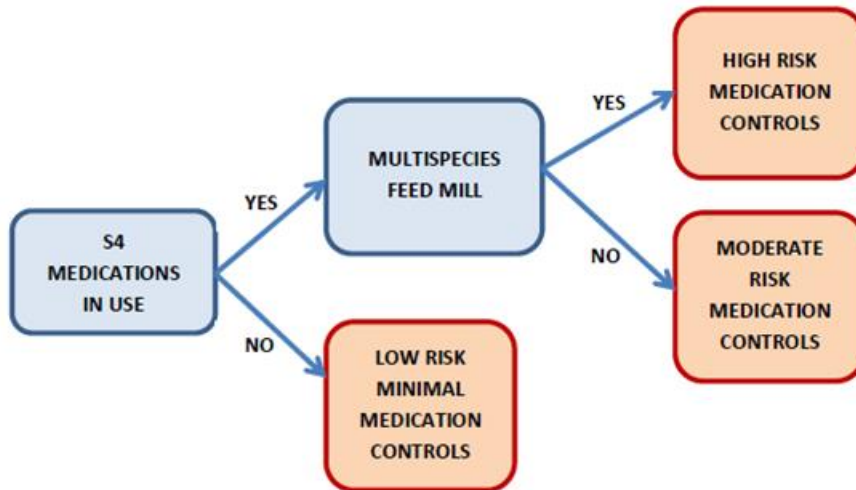
- Raw materials – sourcing from approved suppliers based upon prior knowledge, sampling and testing.
- Use of supplier vendor declarations relating to chemical use.
- Use of industry contracts relating to chemical status.
- Use of registered grain storage chemicals at label direction rate.
- Controlled use of chemicals for vermin control.
- Recognition and control of non-feed chemical products held on site.

4. Medication Use

Outcome Required: Medications are used in target species, with minimisation of cross transference into non medicated feeds.

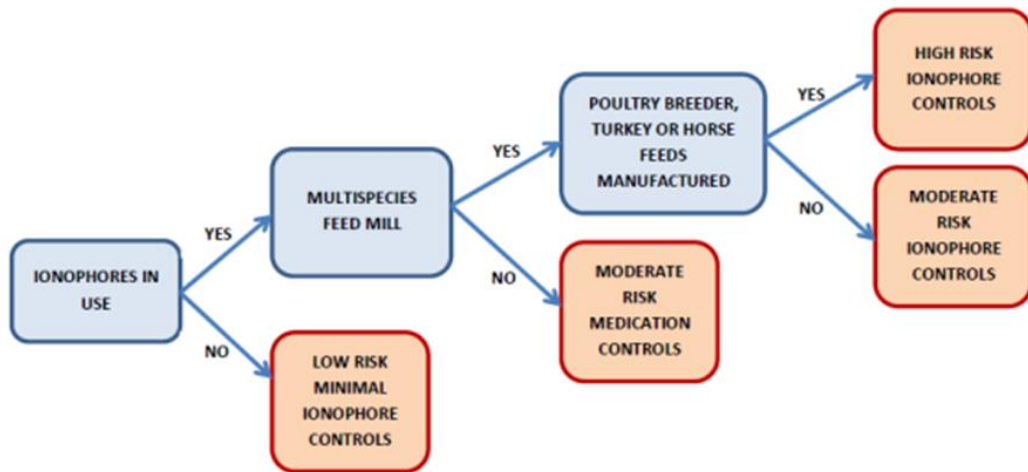
Risk – Meat, milk, eggs, leisure and racing animals are found to contain medication residues which are linked to feed supply.

S4 MEDICATION RISK DECISION TREE



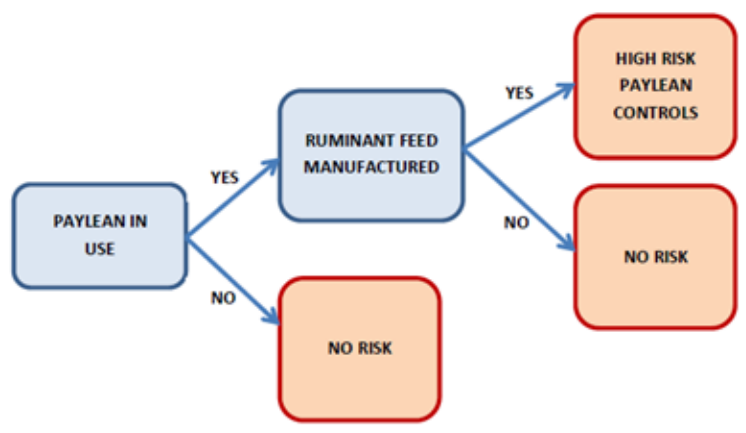
IONOPHORE MEDICATION RISK DECISION TREE

Ionophores are a group of medications registered for use in animal feeding and include the active materials monensin, lasalocid and salinomycin. These medications can be toxic in some non-target species



PAYLEAN (RACTOPAMINE) MEDICATION RISK DECISION TREE

Paylean is a medication registered for use in pigs and presents trade risks when residues occur in ruminant meat and dairy products.



Examples of Critical Control Points

- Veterinary wholesale license and requirements.
- Medication storage and handling – control of S4 medications.
- Site security and access to medications
- Use of only APVMA registered veterinary chemical products.
- Veterinary prescription documentation and processing.
- Medication weighing and inclusion within feeds.
- Cross transference through batching and mixing.
- Feed delivery cross transference
- Advice to clients – medication use and withholding and EPI periods.
- Product labelling.

5. Weed Seeds

Outcome Required: Feeds supplied do not contain toxic compounds which impact on animal performance

Risk – animals are affected by weed seed toxins.

Examples of Critical Control Points

- Raw materials – sourcing from approved suppliers based upon prior knowledge, sampling and testing.
- Purchasing contracts defining specification
- Receival standards defining maximum thresholds
- Ingredient receival - sampling and testing – screening for weed seed contamination
- Operator training

6. Mycotoxins

Outcome Required: Feeds supplied do not contain mycotoxins which impact upon animal performance.

Risk – animals are affected by mycotoxins and there is transfer of mycotoxins to meat, milk or eggs

Examples of Critical Control Points

- Raw materials – sourcing from approved suppliers based upon prior knowledge, sampling and testing.

- Raw material sampling and testing – screening for high moisture and/or mouldy raw materials
- Retention of raw material integrity, no water damage
- Mill hygiene with cleaning of milling equipment preventing feed build-up
- Controlled use of water, steam during processing
- Finished feed moisture levels
- Finished feed storage facilities
- Wet weather-proof bulk and bag out loading facilities

7. Heavy Metals

Outcome Required: Heavy metal residue levels above MRL do not occur in meat, milk or eggs as a result of heavy metals being in stock feed supplied.

Risk – Feed is supplied which results in heavy metal residues in meat, milk or eggs. Heavy metals are known to accumulate in animals' organs such as the liver and kidneys; this presents greater risk in these products entering the human food chain.

Examples of Critical Control Points

- Identify all raw materials which present greater risk of heavy metal residues, this including residues of lead, cadmium, mercury and fluorine.
- Raw materials – sourcing from approved suppliers based upon prior knowledge, sampling and testing.
- Emphasis on purchasing from QA Accredited feed ingredient suppliers, such as FIAAA and FAMI-qs.
- Calculation of resulting heavy metal levels in finished feed based upon raw material inclusion rates. These levels need to be below State regulations for heavy metals (Refer FeedSafe Uniform Labelling Guidelines for heavy metal limits on feed).
- Matching batch numbers of higher risk products in use with provision of certificate of analysis test result data from suppliers.

8. Annual Ryegrass Toxicity

Outcome Required: Controls in place to prevent the supply of feeds containing ARGV.

Risk – Annual ryegrass toxicity (ARGV) is an often-fatal poisoning of livestock that may occur following ingestion of annual ryegrass that is infected by the bacterium *Rathayibacter toxicus*. The toxin is known as Corynetoxin. It is found from the end of flowering, through seed set, to seed maturity. Toxicity develops at flowering and seed set. Once the ryegrass is toxic, it remains so, even when it has senesced and dried off. Hay made from toxic ryegrass will also be toxic. Hay and chaff may be toxic where ryegrass is present within the crop. The use of hay or chaff infected with the ARGV toxins can result in feeds manufactured containing the toxin.

In addition, there are regulated controls on movement of hay and chaff between some Australian states and products for export. Oat, barley and wheaten hay and straw for export are subject to ARGV testing. Compound feeds made of a minimum of 80% hay and/or straw are subject to ARGV testing and must be sampled and inspected as per hay and straw before export.

Examples of Critical Control Points

- Knowledge of the ARGV regulations relevant to your state and comply with these regulations.
- Hay and chaff purchasing - utilise either or both on farm and on arrival inspection, sampling and testing to confirm ARGV is not present. Need to include training in taking fodder samples.
- Relationship with known suppliers who have documentation of ARGV testing. Use of vendor declarations supporting the fodder supply and testing results.
- Retention of samples for trace back purposes.



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9. Other Risks

Each stock feed manufacturer should assess whether there are other food safety risks which should be managed on the site. Critical control points for each of these risks need to be established.

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