

## Buying stock feeds – minimising chemical residue risks

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### Introduction

This Primefact is intended to alert stock feed buyers to the issues regarding the potential for chemical residues in stock feed. It explains the risks involved, how to get guarantees when buying stock feeds and what records to keep. It should be read in conjunction with Primefact 311 *Dangers in feeding waste materials to livestock*.

Most stock feeds come from plant-based material. The crops from which this material is derived may have been treated with an agricultural chemical (herbicide, insecticide or fungicide) before or after harvest. Such chemical exposure makes stock feeds a potential source of residues. The stock producer needs to identify and manage these risks.

All food animals are covered by residue monitoring programs. Standards of acceptance are based on maximum residue limits (MRLs), which are the maximum levels of an agricultural or veterinary chemical allowed in a particular agricultural commodity or food. Australian MRLs are set out in the MRL Standard which is published by the Australian Pesticides and Veterinary Medicines Authority (APVMA) and is available at: [www.apvma.gov.au/residues/mrl\\_standard.shtml](http://www.apvma.gov.au/residues/mrl_standard.shtml)

### Exceeding the MRL

If routine checks at the abattoir find an animal with residues exceeding the Australian MRL, the following actions will be taken.

- The carcass is condemned and the owner is not entitled to payment. No compensation is available.
- If other animals from the consignment have already been slaughtered their carcasses will also be condemned unless testing done at vendor's cost confirms that they meet food standards.
- Any remaining stock in the same lot may be returned to the property of origin at the owner's cost.
- Affected stock are traced to their property of origin. Other potentially affected stock are detained and the work of identifying and resolving the source of the problem is undertaken.
- Where there is an ongoing residue risk, stock from that property may be targeted for additional testing to ensure that meat and dairy products meet the standards required by export and domestic markets.

### Meeting export standards

Some countries have not established MRLs for particular chemicals or may have set their MRLs at lower levels than in Australia. For this reason, longer intervals, which are known generally as export intervals (EIs), may be required between a chemical treatment and grazing, cutting or use of treated material as feed for stock produced for export markets.

Export slaughter intervals (ESIs) have been set for a range of veterinary medicines. These ESIs are listed inside the cover of National Vendor Declarations and are also available on the Meat and Livestock Australia web site: [www.mla.com.au](http://www.mla.com.au)

Export intervals have also been determined for some crop chemicals. Details of crop chemical EIs are not currently available in a consolidated form. However, information on EIs for particular crop chemicals may be available from the manufacturer or from the APVMA.



## Withholding periods

To assist in the management of agricultural and veterinary chemicals so as to avoid unacceptable residues, the labels on most of these chemicals include withholding periods (WHPs). A WHP is the specified time between treatment with the chemical and the commencement of some other production process such as harvesting, grazing or slaughter. The WHP stated on the label is the minimum requirement at all times. However, there are some deficiencies in this system that producers and stock feed purchasers should note.

Some older crop chemicals do not specify a grazing withhold period, but only a harvest withhold period. Observing the harvest withhold period should ensure that any residues in the harvested commodity will not result in animals fed that commodity developing residues that exceed the Australian MRL. However, it does not guarantee that animals fed other parts of the crop, such as stubble and trash, will not develop unacceptable tissue residues. Seek further information from the manufacturer before using crop chemicals that do not have a specific grazing WHP on the label.

## Understanding the nature of the risks

Animals can be affected by residues that occur in stock feeds as a result of:

- Chemicals used on the crop from pre-planting through to harvest;
- Chemicals used for insect control in storage;
- Storing grain and hay in facilities which have been previously treated with organochlorine (OC) pesticides;
- Spray drift from nearby chemical applications;
- Persistent chemicals in soils from which the product is harvested if significant amounts of soil are incorporated into the harvested feed;
- The addition of veterinary chemicals to medicated stock feeds – medicated feeds generally require a withholding period to ensure that animals meet residue standards;
- Some materials were never intended for use as stock feeds, such as waste fruit and vegetables. Such by-products present a particular stock residue risk. See Primefact 311 *Dangers in feeding waste materials to livestock*.
- Stubble and crop trash that are not primarily produced for use as stock feed may also carry residues. Problems are most likely to arise where the crop has been treated with or exposed to spray drift of a chemical that has:
  - no grazing/fodder withhold period; and/or
  - label directions prohibiting the use of stubbles/wastes as stock feeds.

Some processed stock feeds can present a higher stock residue risk than the raw commodity from which they are processed. For example, bran milled from contaminated grain can have higher residue levels than the parent grain.

## Minimising your risks as a stock feed buyer

What can you do as a stock feed buyer to minimise the risks of buying stock feed that is contaminated with pesticide or other chemical residues?

- Make sure you inform the seller of your intended use for the feed and what type of animal it will be fed to. Stress to the seller the importance of your knowing the chemical history of the stock feeds you buy. A written statement or letter is the best way to inform the seller.
- When you are negotiating the purchase of stock feed direct from the grower, request a Commodity vendor declaration (CVD) or By-product vendor declaration (BVD) (see below) and make this a condition of the purchase. Inspect the vendor declaration before you finalise the purchase and make sure the details are complete. If you do not understand the implications of any part of it, check with an independent source before you close the deal.
- If you are buying a single commodity stock feed direct from the grower or on-seller, obtain a written statement which specifies:
  - the brand and type of chemical(s) used on the specific crop from which the commodity was harvested, the property and paddock on which the crop was grown and the date/season in which it was harvested
  - that the chemicals were used according to label directions
  - that the WHPs have been observed
  - known spray activity on adjacent and nearby land, to allow you to assess the risk of contamination from possible spray drift
  - the potential for organochlorine (OC) contamination from soil, including DDT, dieldrin, and BHC – always inquire about past use of OCs on the land and the ‘T’ status of the land (see page 4)
  - the potential for contamination from OCs or other persistent chemicals during storage.
- When purchasing stock feed from a stock feed manufacturer, trader or reseller, request a certificate or statement about its pesticide status.
- The National commodity vendor declaration should be supplied when you buy stock feeds, particularly single commodity stock feeds. Grain, hay and produce/commodity traders and producers may provide this vendor declaration to buyers.

- Check the label or invoice to ensure you are purchasing the appropriate product. Stock feed bought from stock feed manufacturers must have a label or invoice which clearly states the intended purpose of the stock feed, e.g. 'cattle fattener' or 'calf pellets'. This indicates that the manufacturer is under an obligation to ensure that the contents are reasonably fit for the purpose stated on the label.
- The Stock Feed Manufacturers Council of Australia (SFMCA) has developed a stock food supplier declaration form which is used for manufactured stock feeds bought from a miller, agent or produce store. If your supplier cannot give you a declaration form, ask for a statement as to the quality assurance and/or pesticide monitoring practices adopted by the stock feed manufacturer to ensure that its products are fit for the purpose and do not contain unacceptable residues.
- Keep clear records of the points above and retain the records.
- When you land the stock feed on farm, take a representative sample of the feed from whole load and store it in a place where deterioration will be minimal. This way, if problems occur with the feed, further testing can be done. For bagged stock feeds, keep the bag labels with the sample as a further record of delivery. More information about sampling and storage is set out on page 4.
- Keep a feeding record that includes, as a minimum, details of stock fed, feeding dates, manner of feeding, amount fed and the paddocks in which the stock were fed. Cattlecare/Flockcare have good record systems that you can use whether or not you are accredited under either scheme.
- Do not buy or use unusual feeds unless you can satisfy yourself that they do not present a residue risk.

### Livestock production assurance

The revised National vendor declaration (NVD) and basic on-farm food safety guidelines introduced in July 2004 provide the basis for the Livestock Production Assurance (LPA) on-farm product integrity program.

When you, as a cattle, sheep and lamb or goat producer, join the LPA program you are agreeing to keep records for the five elements of that program.

Two of these elements relate directly to stock feeds:

- Grain and fodder treatment records
- Livestock feeding records.

A third element covers:

- Crop, pasture and paddock treatment records.

When you buy in stock feed the LPA program asks for a Vendor declaration to support each purchase.

The Commodity vendor declaration and By-products vendor declaration for stock feeds are endorsed by SAFEMEAT and managed by Meat and Livestock Australia, as is the National vendor declaration/waybill you will use when you sell cattle, sheep and lambs or goats.

### Remember

You, as the buyer, need to be confident that your suppliers are applying chemicals to the feed crop or pasture as the label on the container directs, observing withholding periods and not using chemicals 'off label' for an unregistered period. In some cases a permit may be supplied for 'off label' use of an agricultural or veterinary chemical. In such a case, the WHP could be different from that specified on the label. If this is the case, follow the directions on the permit.

Like buyers, produce merchants and stock feed manufacturers rely on farmers who supply them with stock feed to 'do the right thing' with chemical usage. A stock feed reseller can only give a certificate or statement if they have obtained relevant information from the suppliers or if they have in place an appropriate testing or quality assurance program.

It is not compulsory for stock feed manufacturers, traders and resellers to provide a certificate or statement about the pesticide status of a particular stock feed. However, if you have made known to the seller the purpose for which you want the product, the seller is under a legal obligation to ensure that the product will be reasonably fit for the purpose and of 'merchantable quality'.

See the *Trade Practices Act 1974*, *Sale of Goods Act 1923*, and *Fair Trading Act 1987*.

### Vendor declarations

The National commodity vendor declaration and By-products vendor declaration have been introduced following extensive negotiations with the stock feed industry. Use of these industry standard declarations is encouraged when buying single commodity stock feeds. Copies of these forms are available from the MLA [www.mla.com.au](http://www.mla.com.au) and SAFEMEAT [www.safemeat.org](http://www.safemeat.org) websites or by contacting either the

- Australian Lot Feeders Association (ALFA), phone (02) 9290 3700, or the
- National Agricultural Commodities Marketing Association (NACMA), phone (02) 9402 9402.

The Australia Fodder Industry Association Inc. (AFIA) has introduced a Vendor fodder declaration form. Each form applies only to a single cut or paddock and covers a maximum 100 t of product. This form is primarily for hay but can be used for grain.

The Stock Feed Manufacturers' Association of Australia has a Stock food supplier declaration form for use where a manufactured stock food is bought through a miller, agent, produce store or other trader.

Note that none of the current vendor declarations asks about feed storage conditions. Feeds stored in contaminated areas such as old OC-treated hay sheds and silos can absorb significant OC residues and have been the source of OC residues in stock in the past. Always ask about storage conditions, but especially when buying feeds ex-farm.

### **Residue classification – T status**

Both the National commodity vendor declaration form and the Vendor fodder declaration form currently ask vendors if the feed has been produced on properties with a chemical residue status classification ('T' status) under the National Organochlorine Residue Management Program.

A 'T' status is applied following evidence of OC contamination in cattle or soil rather than OC residues in feeds produced on the land.

The status applies to the whole property even if the contaminated area is quite small or well defined. However, fodders cut from OC contaminated land can contain unacceptable residues. This is particularly so if the fodder is cut close to the ground – this results in significant amounts of contaminated soil and dust being incorporated into the harvested product.

OC-contaminated land is unlikely to have a 'T' classification unless it is associated with cattle production. Ask about the past use of OC pesticides on paddocks from which fodders are harvested.

### **Sampling and storage**

As outlined earlier in this Primefact, you should take a sample of stock feed when it arrives on farm and store it so as to avoid deterioration. Some buyers also supply the vendor with a sample, in case of a later dispute.

Grain and feed samples should be kept in an airtight container in a cool place. For roughages, use a heavy-duty garbage bag, sealed tightly and placed inside a vermin-proof container.

The recommended sample storage procedure is:

1. Securely seal the sample with a tamper-evident seal, such as a piece of masking tape with your signature on it.
2. Clearly label the sample with at least the following information:
  - name of the feed
  - date of purchase
  - delivery date
  - name of supplier
  - invoice number or delivery docket number
  - cross-reference to vendor declaration if provided.
3. Securely attach label to sample.
4. Keep samples in a secure place in case they are later needed as evidence.
5. Dispose of the samples when you are satisfied that there is no possibility of problems resulting from the feed, i.e. after animals that have been given the feed are slaughtered or, for lactating animals, after slaughter of the relevant progeny.

### **Testing stock feed samples**

The only way to determine if a stock feed contains unacceptable residues of a particular chemical is through laboratory testing.

Unfortunately there is no such thing as a general test for residues so you have to work out what chemicals might have been used that might have residue problems, and specify those for laboratory analysis. This reinforces the importance of only buying and using stock feeds that are either quality assured or have a documented history, which would reveal any past chemical exposure.

Without such information it is simply not possible to fully assess the chemical residue status of an intended stock feed. Information on laboratories that provide accredited chemical residue testing services for stock feeds is available from:

- The National Association of Testing Authorities (NATA), 7 Leeds St, Rhodes NSW 2138  
Phone (02) 9736 8222,  
Fax (02) 9743 5311.  
Website: [www.nata.asn.au](http://www.nata.asn.au)

The NSW Department of Primary Industries laboratory at Lismore provides a NATA-accredited residue testing service for most pesticide residues in stock feeds. Contact details are:

- Wollongbar Environmental Laboratories  
NSW Department of Primary Industries  
Bruxner Highway,  
Wollongbar NSW 2477  
Phone (02) 6626 1103  
Fax (02) 6626 1133.

## Unusual feeds

Unusual or 'funny' feeds include a wide range of materials such as by-products of food processing industries in or near major cities. The high moisture content or light bulk density make transport costs high per tonne of dry matter for most of these feeds.

Common examples are:

- cereals used in brewing (brewer's grain, distiller's solubles)
- starch extraction (corn steep liquor)
- breakfast cereal manufacture (hominy meal, cereal stock feed)
- bread, biscuits, cake (stale, out-of-date product)
- vegetable and fruit processing (peelings, pulp).

Most suppliers who produce unusual feeds as by-products of food manufacturing have historically been reluctant to provide statements or declarations about chemical residues or to indicate whether the feed is fit-for-purpose (feeding to ruminants).

Other unusual feeds may be offered, particularly during drought. These are usually baled roughage feeds such as cane tops or peanut stubble. Such products may contain chemical residues, either through direct treatment or because they contain OC-contaminated soil.

The new By-products vendor declaration covers material such as failed crops, fruit, cotton and sugar cane by-products and fibre crops including peel, pulp, stems, pressing and leaf material.

## Further information

### Information on stock feeds

- **Australian Fodder Industries Association**  
Phone (03) 9890 6855  
Fax (03) 9890 2330

This is the fodder industry's peak body, recognised by government and incorporated in February 1996. Its key objectives are to represent the industry nationally and support the fodder industry to reinvest funding targeted at research and development.

- **National Agricultural Commodities Marketing Association**  
Phone (02) 9402 9402  
Fax (02) 9144 3526.

This body represents stock feed and produce merchants nationally. It maintains close links with the Australian Lot Feeders' Association and the State-based Stock Feed Manufacturers Associations.

- **Australian Lot Feeders Association**

Phone (02) 9290 3700

Fax (02) 9290 2808

[www.feedlots.com.au](http://www.feedlots.com.au).

The association represents the feedlot industry nationally and has been the driving force behind fodder declaration forms, striving for a national system.

- **NSW Department of Primary Industries**  
*Stock Foods Act 1940*  
*Stock Foods Regulation 2005*

The Act and the Regulation are available on the Internet at the NSW legislation web site at [www.legislation.nsw.gov.au](http://www.legislation.nsw.gov.au)

Contact the NSW Department of Primary Industries Biological and Chemical Risk Management Unit on 02 6391 3100 in relation to legislative requirements and application or interpretation of the legislation.

- **Stock Feed Manufacturers' Council of Australia**  
Phone (03) 9769 7027  
Fax (03) 9769 7174.

The council represents the national stock feed manufacturers (including block licks and supplement makers) and will answer questions about stock feeds, declarations and statements.

### Information on withholding periods (WHPs) and export intervals

- Agricultural and veterinary chemical labels
- Chemical manufacturers and distributors
- **Australian Pesticides and Veterinary Medicines Authority**  
Phone (02) 6272 3795 (residues contact number)  
[www.apvma.gov.au/residues/subpage\\_residues.shtml](http://www.apvma.gov.au/residues/subpage_residues.shtml)
- **Meat & Livestock Australia**  
Phone (02) 9463 9333  
Fax (02) 9463 9393  
[www.mla.com.au](http://www.mla.com.au)

### Information on maximum residue limits

- **Australian Pesticides and Veterinary Medicines Authority**  
Phone (02) 6272 3795 (residues contact number)  
[www.apvma.gov.au/residues/subpage\\_residues.shtml](http://www.apvma.gov.au/residues/subpage_residues.shtml)

### Other residue management information:

- Livestock production assurance program  
Phone 1800 683 111  
[www.mla.com.au](http://www.mla.com.au)
- Cattlecare quality assurance program  
[www.ausmeat.com.au/programmes/cattlecare](http://www.ausmeat.com.au/programmes/cattlecare)

The following Primefacts are available through your local NSW Department of Primary Industries office or on the NSW Department of Primary Industries web site: [www.dpi.nsw.gov.au/agriculture](http://www.dpi.nsw.gov.au/agriculture)

- Primefact 318 *Manufactured stock food requirements*
- Primefact 313 *Feed controls – stopping BSE (Mad cow disease)*
- Primefact 311 *Dangers in feeding waste material to livestock*
- Primefact 319 *Beef cattle and fenitrothion plague locust spray*
- Primefact 312 *Drought increases residue risks*

## **Acknowledgements**

The author thanks Gary Want, Manager Extensive Livestock Industry Development, for editorial review and Sally Pearmain, Former Risk Management Officer, Wollongbar, for risk review.

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ISSN 1832-6668

Replaces Agnote DAI-265

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Job number 7099