



For Your Information FD2-07

Copra as a Feed for Milking Animals

New Zealand Food Safety Authority

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1 Background

In 2006 the dairy National Chemical Contaminants Programme (NCCP) identified three raw milk supplies that contained aflatoxin M1. The levels didn't represent a food safety issue but were of interest and some concern as aflatoxin M1 in milk is due to milking animals consuming feed that is contaminated with aflatoxin B1. With very rare exceptions, New Zealand milk has historically been free of any trace of aflatoxin M1. The results were also of some concern from a trade perspective as they were at or marginally above the limit imposed by the European Union for raw milk at the farm vat (refer to the Export Requirement for the EU notified under section 60 of the Animal Products Act 1999).

Investigations were undertaken by the Risk Management Programme Operator and the source was found to be imported copra meal being used as animal feed. Further work was done by the operator once the 2006/07 season was underway, and these findings were advised to NZFSA. Consequently the NZFSA Compliance and Investigation Group undertook an investigation into the issue to confirm details as the issue spans the Agricultural Compounds and Veterinary Medicines Act 1997 and the Animal Products Act 1999.

At no time has any dairy product exceeded the aflatoxin limit applied by any market, and all dairy material has remained safe at all times.

2 Findings

The findings of the investigations into the levels of aflatoxin B1 in imported copra meal found batches that were elevated and might result in milk at the farm vat failing to meet the requirement of 0.05 ug/kg (micrograms per kilogram or parts per billion) depending upon feed rates. This is the subject of on-going review by NZFSA.

The European Commission has published its own guidelines for feed (refer to the European Commission Council Directive 1999/29/EC), and for dairy animals set an acceptable limit for aflatoxin

B1 in the feed at 5 ug/kg. This is applied whether the feed is a whole ration or a supplemental feed. For feed for other food producing animals the tolerance is much greater at 20 ug/kg to manage the toxicity to animals. Higher levels can be applicable to specific classes of stock depending on species, pregnancy or lactation.

It should be noted that the NZFSA concern is limited to milk and feed for milking animals. There is absolutely no evidence to date that any animal products other than milk has been affected, and with the possible exception of feedlot situations no new precautionary actions are considered necessary where good agricultural practices are followed.

The European Food Safety Authority has published further information on the subject in The EFSA Journal (2004) 39, 1-27: Opinion of the Scientific Panel on Contaminants in the Food Chain on a request from the Commission related to Aflatoxin B1 as undesirable substance in animal feed. It refers to copra, peanut and sunflowers cakes, and corn gluten as the most important carriers but note that palm kernel, maize gluten or germ, cottonseed, rice bran and soy beans are other possible sources. In New Zealand recent testing has repeatedly found palm kernel to be free of aflatoxin B1 and at this time the only concern amongst the common dairy feeds is copra.

3 Code of Practice

The Feed Manufacturers Association is developing a Code of Practice in conjunction with the importers of copra meal that will ensure the feed available to all farmers, including dairy farmers, will be of suitable quality when it enters the farm gate. Once in place, this code will enable dairy companies to review any controls that are being applied at this time.

4 On-farm Feed Storage

An important aspect in controlling aflatoxins in feed is to ensure that feeds that are readily susceptible to mould growth are stored appropriately. For dry feeds this means keeping the feed dry and cool. Mould growth in a susceptible feed such as copra can occur at any time prior to feeding, so on-farm storage must not be ignored. Likewise feed waste should be removed so that the animals do not have access to any mouldy waste.

5 Recommended Actions

To manage the immediate risk of aflatoxins in milk in New Zealand, the NZFSA recommends that the feed used for milking animals that produce milk intended for the manufacture of dairy products for the EU should meet the same standard as that for feed in the EU. There are many ways in which this may be managed, but most importantly dairy farmers who buy in feed should be aware that some form of control is required and that they should:

- appropriate feed storage facilities on farm that meet the requirements of NZCP1 with respect to proximity to the farm dairy, and either:
 - a. require their supplier to provide a statement that the feed meets the EU recommended limit of 5 ug/kg, or

- b. require their feed supplier to demonstrate that the feed is suitable by testing a representative sample of the batch at an IANZ accredited laboratory and providing the certificate of analysis, or
- c. not accept any feed containing copra.

The actions taken now should be done as an interim measure. In the longer term it is anticipated that the code of practice for feed importers and manufacturers will manage the risk. In addition, the appropriate criteria for managing feeds generally under a farm dairy risk management programme is expected to be reviewed.

Copra is not the only feed material susceptible to aflatoxins, and while it is the only feed material implicated in New Zealand to date, farmers should apply the same criteria to any susceptible feed.

Dairy companies have an obligation to ensure that the milk used for manufacture is fit for its intended purpose. Failing to do so would put all dairy products manufactured at risk of being ineligible for their intended use or market. As such, each company may choose the means they determine to be most appropriate in managing any risk.

Further information has been provided by Codex in CAC/RCP 45-1997: *Code of Practice for the reduction of Aflatoxin B1 in raw materials and supplemental feeding stuffs for milk producing animals.*

6 Summary

The current concern regarding aflatoxin M1 in milk only applies to feed for animals that produce milk intended for the manufacture of dairy products exported to the EU, or for a market that applies the same limit for aflatoxin M1 as the EU (that is, 0.05 ug/kg).

Affected dairy farmers, dairy companies and farm dairy risk management programme operators will need to consider if control is required as recommended above and if so, the most appropriate form of control.

Farmers with meat producing animals or producing milk for products not intended for the EU need not be concerned, but farmers who store and/or use dry feed should also review their storage facilities to ensure they are appropriate and keep the feed dry and cool.

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