

# Mycotoxins

FACT SHEET

ruminants

## What are mycotoxins?

Mycotoxins are toxic metabolites produced by fungi (moulds) which grow on animal feeds including pasture, forages, cereal grain, by-products and straw. Hundreds of mycotoxins have been identified and one mould species can produce many different types.

## Negative effects of mycotoxins in ruminants

**Chronic exposure:** Quite often problems are due to low levels of mycotoxins and may be expressed as just minor increases in “common cow problems”, especially with freshly calved cows.

**Acute exposure:** Consumption of high levels of mycotoxins may give rise to symptoms including abrupt drops in milk production and feed intake, abortions, lameness and, in the most severe cases, mortality.

## Diagnosis of mycotoxin issues

Symptoms are often either sub-clinical or are non-specific and easily confused with other disorders. Poor response to veterinary therapy is frequently an indicator that mycotoxins are implicated in a condition. Feed can be tested for mycotoxins but the accuracy of sampling and the cost of routine testing limit its practicality at farm level.

## Mycotoxin threat to ruminants?

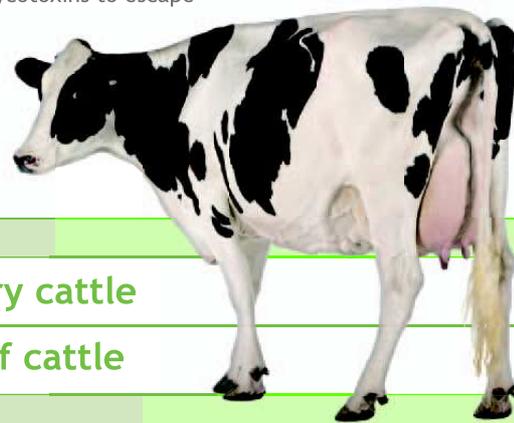
Although ruminants have some capacity to protect themselves against the harmful effects of mycotoxins due to the detoxifying action of rumen microorganisms, the combination of high production (high feed intake and faster rate of passage), challenging rations (subclinical acidosis) and high mycotoxin loads frequently allow mycotoxins to escape detoxification and be absorbed by the intestine, thereby causing problems for animal health and production:



### Calves

### Heifers

- Decreased feed intake
- Reduced weight gain
- Inhomogenous growth
- Higher mortality
- Diarrhoea
- Gastroenteritis
- Enlarged and reddened teats in heifers
- Poor response to vaccination
- Lesions on the muzzle, lips, tongue, and pharynx



### Dairy cattle

### Beef cattle

- Decreased feed intake, increased feed refusal, anorexia
- Reduced weight gain, weight loss
- Decreased milk production, agalactia
- Depressed butterfat in milk
- Elevated somatic cell count, mastitis
- Diarrhoea
- Gastroenteritis
- Higher incidence of ketosis (fatty liver), retained placenta, metritis, fertility disorders, displaced abomasum
- Lameness, hoof necrosis
- Ovarian cysts
- Vaginitis, vaginal secretions
- Increased body temperature/heat stress
- Staggering gait
- Poor response to vaccination
- Aflatoxin M1 in milk