



Integrated Ruminant Nutrition

Mycotoxins

- a. Toxic contaminants which can occur in grains or forages as a result of mould infection (see fact sheet on ensiling problems; mould).
- b. This can occur both in the growing crop and during grain storage.
- c. *Aspergillus*, *Penicillium* and *Fusarium* are the primary toxigenic moulds.
- d. Diseases in animal resulting from mycotoxins are called mycotoxicoses.
- e. Aflatoxin, Sterigmatocystin zearalenone, Patulin, Ochratoxin, T-2 toxin and Fumonisin are examples of mycotoxins that can result in mycotoxicoses.
- f. Aflatoxins are the most common mycotoxins encountered on farms.
- g. Aflatoxin is produced by the fungus *Aspergillus flavus*.
- h. Aflatoxin is a potent liver toxin and known to cause cancer in animals.
- i. They are also immunosuppressive.
- j. There is no safe level of mycotoxins in feeds.
- k. Toxicity is a function of concentration, presence of other toxins, health and nutritional status of the animal.
- l. There is no specific diagnostic measure for mycotoxins. In most cases it is referred to as the hidden enemy that can only be diagnosed after all possibilities have been excluded. In some instances, lack of response to antibiotic treatment is used as a pointer for mycotoxins by some vets.
- m. There are effective binders that can now be used against all common mycotoxins encountered on farms.
- n. Taking the necessary measures (see the fact sheet on ensiling process and tips) to prevent it at the outset is however a lot better and far more cost effective than trying to control the problem.