

The importance of water in mycotoxin control

There has been a huge amount of interest in fusarium toxins recently and aflatoxins have slipped into the background. However, aflatoxins remain a very important mycotoxin that affects all aspects of poultry production.

Aflatoxins in poultry result in poor FCR and weight gain, reduced feed intake, several immune disorders including vaccine failures, low egg production, liver and kidney problems, beak lesions and necrosis, poor feathering, pale bird syndrome or, in severe cases, death.

All moulds require moisture to grow and produce mycotoxins. Different moulds require different moisture levels in the feed which are measured as water activity or A_w (see table below).

So, in all but the worst possible

pre-harvest and storage conditions, aflatoxins will be the most common mycotoxins. Aflatoxins are more common as storage moulds. Any mould growth increases moisture due to respiration.

Insect pests also elevate temperature and moisture content. They also serve to inoculate the entire stack with mould spores if left unchecked.

Kiotechagil's MiteX, that has approval as a feed ingredient, is recommended for non-chemical insect control.

When mycotoxins are a threat, Sorbatox is ideal for adding to feed at 1kg/t to prevent background mycotoxin levels causing an issue.

If fusarium toxins are suspected increase the dose to 2.5kg/t.

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Mould	A_w for growth	A_w for toxin production	Toxin
Aspergillus flavus	0.78	0.84	Aflatoxin
Aspergillus ochraceus	0.77	0.85	Ochratoxin
Fusarium verticillioides	0.88	0.93	Fumonisin