International Poultry Production's

Poultry health

BYTES

YOUR OWN REFERENCE SOURCE ON POULTRY HEALTH

062 – Mycotoxins IX

© Positive Action Publications Ltd

DSM

PRESERVE INTERNATIONAL

Hy-Line.

Ceva

AB Vista

Amlan

Aviagen Ross

Aviagen Turkeys

Biomin

CID Lines

Lubing

Norel

Plumatech

Phytobiotics

Systel

Vetech

Special Nutrients • ISA
DACS • Fienhage
Rotem • Intracare
Socorex • Vitfoss
Chr Hansen • Marshalls
Gasolec • Micro-plus

Pre-harvest grain management

Good management practices on the farm that promote crop health will reduce, but not eliminate, pre-harvest mycotoxin contamination.

Insect resistant germplasm crops such as Bt maize have reduced levels of fumonisin and regular irrigation of crops like peanuts prevents drought stress, which leads to fungal contamination.

However, good management practices may not always be possible because of factors like location, cost or the production system. Hybrids which are less susceptible to moulds are available but identification of predominating mould type(s) must precede strain selection.

An interesting development is the application of non-mycotoxin producing mould strains from the same fungal species – a sort of competitive exclusion.

.

Post-harvest grain management

Stored grains should be regularly checked for mould development to detect hot spots of mould growth, which often occurs. Corrective action can then be considered.

Correct temperature and moisture levels should be maintained and bins should be regularly cleaned to remove old grain and residues, which preferentially harbour fungi. Grain moisture levels should be <15% within 48 hours of harvest. In this context, good air circulation through storage bins is very important.

Grain damage should be minimised as this provides easy routes for mould entry into grains, which facilitates mould growth. In this context, insect management is also important.

The use of fungistatic agents is a useful management tool providing application is before mycotoxin production. Such agents include organic acids which change the pH of the grain, thereby preventing fungal development.