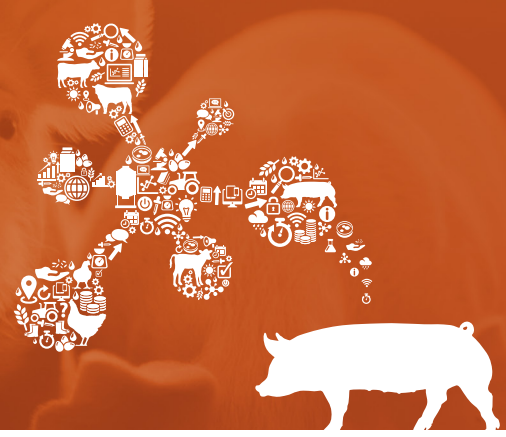


Alltech[®] MYCOTOXIN MANAGEMENT



Common Mycotoxin Symptoms in Pigs

Aflatoxins/DON Group/T-2 Group/Fumonisins:

- Damage to gut integrity
- Ulcers and hemorrhages
- Decreased villus height and surface area
- Poor intestinal digestion and absorption
- Undigested feed particles in feces
- Diarrhea
- Enteritis/colibacillosis
- Salmonella infection

Aflatoxins/Zearalenone/DON Group:

- Poor fertility
- Embryonic mortalities
- Stillborn piglets/mummies
- Abortions
- Vulvovaginitis/increased vulva size/prolapses
- Decrease in number of piglets born alive

Aflatoxins/Ochratoxins/T-2 Group/DON Group:

- Poor antibody production/vaccine titers
- Poor cell-mediated immunity
- Altered cytokine profile
- Increased mortality

Aflatoxins/Ochratoxins/Fumonisins:

- Liver damage
- Liver enlargement
- Fatty liver

T-2 Group/DON Group:

- Poor feed intake

Fumonisins/Moniliformin:

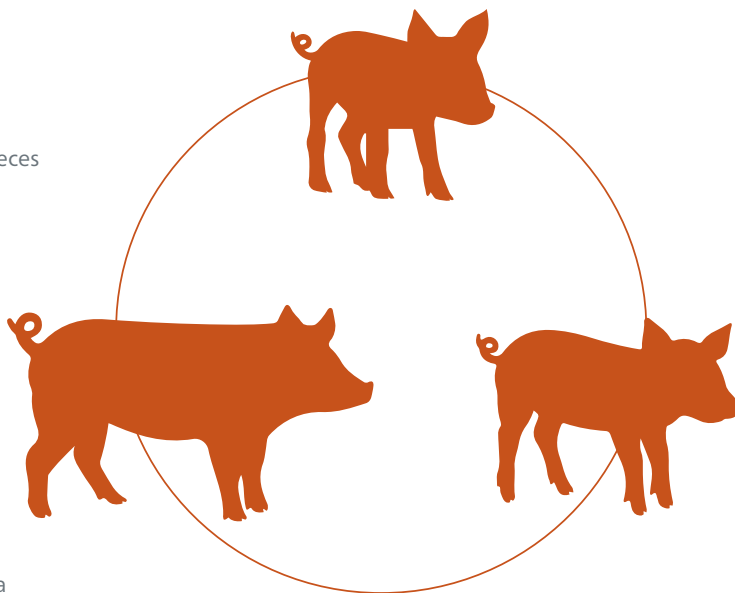
- Heart enlargement
- Heart failure

Fumonisins:

- Pulmonary edema (water accumulation in lungs)

Ochratoxins/Citrinin/Penicillic acid:

- Kidney damage
- Uric acid crystals in kidneys (gout) and joints
- Increased water consumption/loose feces



Alltech[®] MYCOTOXIN MANAGEMENT



Mycotoxin Quick Guide - Symptoms in Pigs

Symptoms	Aflatoxins	Ochratoxins	Type B Trichothecenes	Type A Trichothecenes	Zearalenone Group	Fumonisin	Other <i>Penicillium</i> mycotoxins	Other <i>Aspergillus</i> mycotoxins	Ergot Alkaloids	Fusaric Acid
Abortions					✓				✓	
Acute Hepatitis	✓									
Anemia	✓									✓
Anorexia	✓		✓	✓					✓	✓
Bloody Diarrhea				✓				✓		
Convulsions								✓	✓	
Dehydration		✓								
Delayed Sexual Maturity					✓					
Depression			✓	✓						✓
Diarrhea			✓	✓			✓			
Digestive Disorders	✓		✓	✓		✓	✓			
Pulmonary Edema						✓				
Enlarged Nipples/Udders or Mammary Glands					✓					✓
Enlarged Prepuce					✓					
Feed Refusal	✓	✓	✓	✓			✓			✓
Hyperestrogenic Syndrome					✓					
Impaired Thermoregulation									✓	✓
Increased Mortality	✓	✓	✓	✓					✓	
Increased Urine Production & Water Intake		✓								
Infertility			✓		✓				✓	
Inhomogeneous Groups	✓	✓	✓	✓						
Internal Organs Hemorrhaging	✓	✓	✓	✓		✓				
Irregular Heats					✓					
Kidney Damage		✓								
Lameness	✓		✓	✓		✓			✓	✓
Lethargy		✓	✓	✓		✓				✓
Liver Damage	✓	✓	✓	✓		✓		✓		
Malformation Of Embryo/Fetus			✓	✓	✓				✓	
Milk Contamination	✓				✓					
Oral Lesions			✓	✓						
Prolapsed Vagina or Rectum					✓					
Pseudopregnancy					✓					
Reduced Milk Production	✓		✓	✓		✓	✓		✓	

*The toxicity of Fusaric Acid is significantly enhanced when the feed is co-contaminated with the Type B Trichothecene, Deoxynivalenol (DON).

Alltech[®] 37+[®]

The Alltech 37+[®] mycotoxin analysis considers the mycotoxin challenge in each sample as a whole, rather than looking at the individual mycotoxins present. In this way it more closely reflects commercial production and the challenges facing producers around the world. Utilizing the most advanced mycotoxin detection technology available (LCMS/MS), Alltech 37+[®] provides producers with a more accurate picture of mycotoxin contamination. It shows how likely it is to impact their animals' health and performance through tailored species-specific risk assessment reports and recommendations.

*Your herd is your business.
Protecting it is ours.*



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