



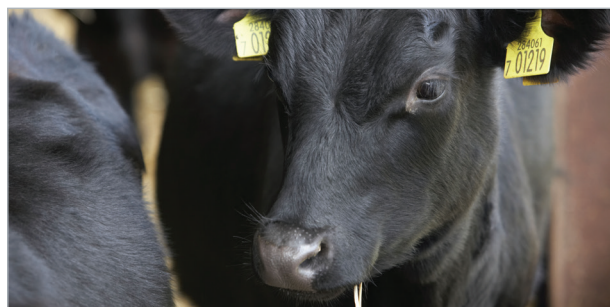
## Alltech<sup>®</sup> MYCOTOXIN MANAGEMENT

Safeguarding the health of your animals starts with the quality of your feed. Produced by molds, mycotoxins affect animal performance and producer profitability in a number of ways. Effective mycotoxin management is about seeing the whole challenge. From the farm to the feed mill and from risk assessment to feed management, the Alltech Mycotoxin Management program consists of solutions tailored to address challenges impacting animal health and performance.



### Identifying a mycotoxin issue

Increased demand in animal performance brings new challenges and risks to today's farm. Mycotoxins, and their impact on the health and performance of animals, are inherently linked to these demands and if left untreated can affect farm profitability.



### Commonly seen mycotoxin symptoms in beef cattle

#### Zearalenone:

- Vulvovaginitis
- Vulva prolapse
- Embryo mortality
- Cystic ovaries
- Poor conception rates

#### T-2 Toxin:

- Gastroenteritis
- Intestinal hemorrhage
- Bloody feces
- Immune suppression

#### DON:

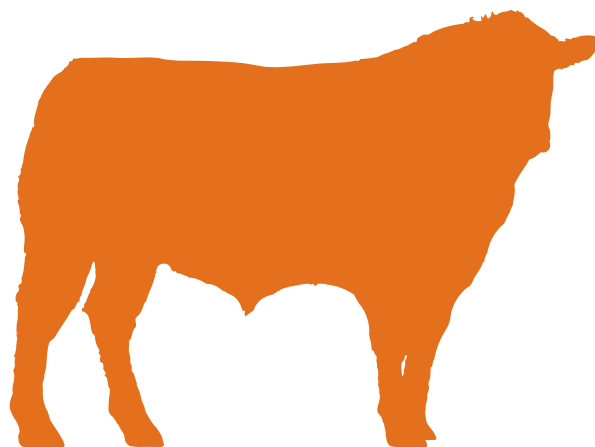
- Reduced feed intake
- Reduced meat production
- Diarrhea

#### Patulin, PR Toxin, Roquefortine C (Penicillium Toxins):

- Reduced meat production
- Compromised rumen function
- Reduced fiber digestion
- Variable dry matter intake
- Acidosis-type symptoms

#### Aflatoxin:

- Reduced meat production
- Liver damage
- Immune suppression
- Reduced feed intake and fiber digestion



#### Fusaric Acid:

- Lower leg swelling
- Feed refusal
- Lethargy
- Lower blood pressure





## Mycotoxin quick guide – Symptoms in beef

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/Loose Feces			✓	✓			✓			
Digestive Disorders	✓		✓	✓		✓	✓			
Udder Edema					✓					✓
Enlarged Nipples/Udders or Mammary Glands					✓					✓
Enlarged Prepuce					✓					
Feed Refusal	✓	✓	✓	✓			✓			✓
Hyperestrogenic Syndrome					✓					
Impaired Thermoregulation									✓	
Increased Somatic Cell Counts	✓		✓	✓		✓		✓		
Increased Mortality	✓		✓	✓					✓	✓
Infertility			✓		✓				✓	
Internal Organs Hemorrhaging	✓	✓	✓	✓		✓				
Irregular Heats					✓					
Ketosis							✓			
Lameness	✓		✓	✓		✓			✓	✓
Lethargy		✓	✓	✓		✓				✓
Liver Damage	✓	✓	✓	✓		✓		✓		
Malformation of Embryo/Fetus			✓	✓	✓				✓	
Milk Contamination	✓				✓		✓			
Poor Antioxidant Status	✓		✓	✓			✓			
Prolapsed Vagina or Rectum					✓					
Pseudopregnancy					✓					
Reduced Milk Production	✓		✓	✓		✓	✓		✓	
Reduced Feed Efficiency	✓		✓	✓		✓			✓	✓
Reduced Feed Intake	✓		✓	✓		✓			✓	✓
Reduced Growth	✓		✓	✓		✓			✓	✓
Reduced Immunity	✓	✓	✓	✓		✓	✓	✓		✓
Reduced Reproductive Performance (males & females)	✓		✓	✓	✓				✓	
Reduced Testicular Size & Lower Libido					✓					
Reduction in Rumen Functions	✓		✓	✓			✓			
Skin Lesions			✓	✓	✓					
Stillborn Births			✓		✓					
Swelling of Female Reproductive Organs					✓					✓
Tremors								✓	✓	
Vomiting			✓	✓						✓

\*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.

# Alltech®

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

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