Ultrabond offers the most effective mycotoxin control

The use of a mycotoxin binder is a most effective method of controlling the mycotoxin threat to herd health. Choosing the right control system is critical to providing most effective protection. It is important to understand that not all binders are the same. Certain binders are successful at binding a limited range of mycotoxins only; however mycotoxins are seldom present in isolation. It is imperative therefore to select a broad spectrum binder with proven success.

Ultrabond provides the broadest binding capacity of any product commonly used on the market. Backed by years of research and proven success it is the natural choice for effective mycotoxin control.

Ultrabond...born of original thinking

There is a huge amount of misinformation in the area of mycotoxins and mycotoxin binders. This led Optivite to undertake substantial research to be able to provide clarity and constructive advice to the global farming industry.

A specialist independent laboratory was used to test the binding capacity of mycotoxin binders currently available on the market to see how much toxin one gram of binder would bind. Results were compared on a microgram of toxin bound per gram of toxin binder, in order to overcome any inclusion rate effects. The research proved conclusively that not all mycotoxin binders are the same and many are not as good as assumed.

As a result of these trials, Optivite formulated Ultrabond; a unique mycotoxin binder that binds more toxins per gram than any other product commonly used.

Ultrabond will not interfere with supplements, medication, vitamins or other nutrients.

For more information contact: Richard Webster
Tel: 07703 203886
Email: richard@rwm.org.uk
www.rwm.org.uk

Richard Webster Nutrition Ltd

The information contained in this leaflet is intended for international use and is for information only. Specific details and bone-y arrangements may vary from country to country including the EU.
What are mycotoxins?
Mycotoxins are toxic by-products produced by fungi which develop in crops either in the field or during storage. Mycotoxins can be very harmful to cattle at extremely low levels which are commonly measured in parts per billion (ppb).

The six major mycotoxins and their effects on animals:
- **Aflatoxin** – can convert to Mt Toxin which in milk is toxic to humans
- **Deoxynivalenol** – symptoms include reduced appetite, reduced growth, and anaerobic conditions are more likely to harbour fungi and associated mycotoxins than dry forages, especially in poorly made silages, where the fermentation and anaerobic conditions are not strictly controlled. Even well ensiled forages can present problems as the higher sugar content can provide nutrients for fungus and higher than normal lactic acid levels may allow them to grow.
- **Fumonisin** – can cause respiratory problems, reduced appetite
- **Ochratoxin** – can lead to abortions, reduced appetite
- **Zearalenone** – causes leg swelling, reduced appetite, high feed intakes that the challenge to the animal by mycotoxins can have a much greater impact.

Why worry about mycotoxins now?
Over the years improved genetics have resulted in increased growth and performance of both dairy and beef cattle. As a result of this increased performance the modern animal has a much higher feed intake than at any point in the past. It is because of these high feed intakes that the challenge to the animal by mycotoxins can have a much greater impact.

Where can mycotoxins be found?
The greatest exposure to toxins by cows comes from forage. In a typical TMR formulation the majority of mycotoxin loading is likely to come from the forage.

Where can mycotoxins be found?
- **Grass**, **Grasses**
- **Oats**, **Grass Silage**
- **Wheat**, **Grass Silage**
- **Barley**, **Grass Silage**
- **Maize**, **Grass Silage**

How are dairy cows and beef cattle exposed to mycotoxins?
- **Dietary exposure**
- **Environmental exposure**
- **Inhalation**
- **Contact**

What is Ultrabond?
Ultrabond is a revolutionary broad spectrum, low inclusion mycotoxin control system. It consists of a synergistic blend of selected natural minerals and bioflavonoids. The natural minerals provide effective control against aflatoxins, ochratoxins, fumonisin, zearalenone, deoxynivalenol and the dangerous T-2 toxins. Bioflavonoids are powerful natural antioxidants which support liver function, the body’s principal organ of detoxification.

The greatest exposure to toxins by cows comes from forage. In a typical TMR formulation the majority of mycotoxin loading is likely to come from the forage. Ensilaged forages are more likely to harbour fungi and associated mycotoxins than dry forages, especially in poorly made silages, where the fermentation and anaerobic conditions are not strictly controlled. Even well ensiled forages can present problems as the higher sugar content can provide nutrients for fungus and higher than normal lactic acid levels may allow them to grow.

Field Mycotoxin (Fusarium)
- **Soya**
- **Soya By-products**
- **Cereal & Grass By-products**
- **Soyabean Meal**
- **Wheat, Barley, Oats**
- **Grass Silage**, **Whole Crop Silage**
- **Cereal & Grass By-products**, **Soyabean Meal**

Where can mycotoxins be found?

<table>
<thead>
<tr>
<th>Mycotoxin Family Tree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ergots</strong></td>
</tr>
<tr>
<td><strong>Grasses</strong></td>
</tr>
<tr>
<td><strong>Oats</strong></td>
</tr>
<tr>
<td><strong>Wheat</strong></td>
</tr>
<tr>
<td><strong>Barley</strong></td>
</tr>
<tr>
<td><strong>Grass Silage</strong>, <strong>Whole Crop Silage</strong></td>
</tr>
<tr>
<td><strong>Cereal &amp; Grass By-products</strong>, <strong>Soyabean Meal</strong></td>
</tr>
<tr>
<td><strong>Soya</strong>, <strong>Soya By-products</strong></td>
</tr>
<tr>
<td><strong>Wheat, Barley, Oats</strong></td>
</tr>
<tr>
<td><strong>Grass Silage</strong>, <strong>Whole Crop Silage</strong></td>
</tr>
<tr>
<td><strong>Cereal &amp; Grass By-products</strong>, <strong>Soyabean Meal</strong></td>
</tr>
<tr>
<td><strong>Soya</strong>, <strong>Soya By-products</strong></td>
</tr>
<tr>
<td><strong>Wheat, Barley, Oats</strong></td>
</tr>
<tr>
<td><strong>Grass Silage</strong>, <strong>Whole Crop Silage</strong></td>
</tr>
<tr>
<td><strong>Cereal &amp; Grass By-products</strong>, <strong>Soyabean Meal</strong></td>
</tr>
</tbody>
</table>

The difficulty in identifying mycotoxocoses
To effectively recognize mycotoxoses, herds have to be carefully inspected for symptoms. These are often very general and can vary greatly according to the mycotoxins present, making proper diagnosis difficult.

CEREALS, GRAINS & PROTEINS
These can also harbour toxins that are difficult to test for. It is often the case that even when batches are found to contain toxins, by the time the test results are confirmed the product has been fed.

BEDDING
Consistent exposure to mycotoxins can be introduced via bedding. Straw quality should therefore be considered a high risk factor. Cows which are fed below appetite often consume significant quantities of bedding and are therefore at particular risk. While some feeds may represent a low risk of mycotoxin exposure, what is important is the overall loading on the animal on a daily basis.

The economic cost of mycotoxins
Research on the effects of mycotoxins on dairy cattle showed:
- Reduced milk production of 1.4kg/h/4
- Increased somatic cell count of 40,000 per ml**

** 1: Katie Stephen, Pig Progress Magazine, Volume 29, Number 9, 19th November 2013


The difficulty in identifying mycotoxocoses
To effectively recognize mycotoxoses, herds have to be carefully inspected for symptoms. These are often very general and can vary greatly according to the mycotoxins present, making proper diagnosis difficult.

Identifying the level of contamination in a feed can also be difficult as sampling for toxins is measured in parts per billion and can be a hit or miss affair.

ultrabond