

# Mycotoxins – the hidden danger in maize and cereal silages



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Of all the feeds included in dairy rations, maize and wholecrop cereal silages pose perhaps the greatest threat when it comes to mycotoxins. It's a threat that is more widely recognised than ever before, yet is a hidden danger still too often overlooked.

A 2014-15 survey of silage samples in the south west of England found that while no mycotoxins were found in grass silage, a surprising 90% of the maize silage samples tested contained detectable levels of at least one type of mycotoxin. The figure was lower for wholecrop cereal silages, but at 66% still highlighted the potential risk to cow health and performance.

The potential for contamination is particularly acute in maize, since it remains in the field until much closer to maturity, with many of this season's maize crops exposed to extended periods of wet weather before harvest. This allows the main culprit, *Fusarium* moulds, much more time to infect the crop and grow – of the various *Fusarium* mycotoxins, deoxynivalenol (DON) was found in nine out of every ten contaminated maize silage samples, whilst zearalenone (ZON) was detected in more than half.

Common symptoms of mycotoxin ingestion are a reduction in milk yields, lower butterfat levels, worsening body condition and infertility. Research has shown that dairy heifer conception rates fell from 87% to 62% where ZON was present at higher levels in the ration, for example.

Other indicators include rough coats, listless activity, variable manure consistency and the presence of mucus tags – pieces of gut wall – in the manure. Even chronic lameness, foot lesions that won't heal, an increase in somatic cell counts or more mastitis can indicate that a mycotoxin problem is negatively affecting immune function.

The typical milk yield response when the ruminant-specific mycotoxin de-activator Ultrisorb R is added to a heavily contaminated ration is 2-3 litres/cow/day!

So if cows aren't performing or seem more prone to health problems – particularly if there's a high risk of sub-clinical acidosis, which can increase susceptibility – make sure mycotoxins are on the list of potential causes. Adding Ultrisorb R to the ration for 3-4 weeks is probably the most cost-effective way to confirm the diagnosis, with any improvement in performance a clear indicator that mycotoxins are implicated.

**For more information on Ultrisorb R  
mycotoxin de-activator phone  
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