

HOW TO COMBAT THE 2018/19

‘MYCOTOXIN CHALLENGE’

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Mycotoxins are toxic chemical molecules produced by fungi. They resist high temperature and anti-mould treatments. Mycotoxins are found in all cereals, oilseeds (soya bean, rapeseed) and forages.

Grain maize, maize & whole-crop silages, corn by-products followed by cereals and various fibre supplies are the highest risk raw materials. Mycotoxins are polycontaminates, with trichothecenes (DON, T-2, HT-2) and fumonisins being the most occurring worldwide.

Mycotoxins are synthesised during plant growth (exacerbated at times of stress), during crop handling, processing and storage. They can be divided into two defined types: field mycotoxins and storage mycotoxins.

All animal species (ruminant & mono-gastric) are sensitive to mycotoxins (mycotoxicosis) which represent a serious threat to health and productivity, causing immune suppression with a variety of symptoms, economic loss and, in worst-case scenarios, even death.

Mycotoxin disorders are species dependant but share many common symptoms, such as reduced feed intake, diarrhoea, decreased fertility rates and liveweight gain with increased veterinary costs, symptoms which are not usually directly linked to mycotoxicosis. These effects occur with high contamination but can also occur under chronic exposure to low levels of several mycotoxins.

The first target of mycotoxins is the digestive tract. Several mycotoxins also have synergetic effects on gut functions including lower nutrient absorption, intestinal barrier damage and impaired immune function, lowering overall performance in relation to meat and milk production and reproductive success.

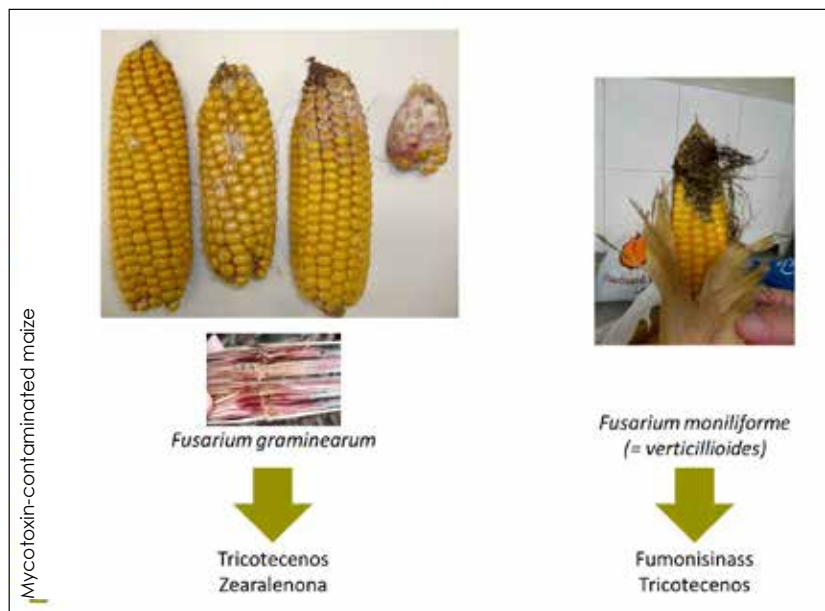
Due to last year's prolonged hot, dry summer and the much earlier than expected feeding of winter forage stocks, grass silage supply has tightened with reserves either very low or non-existent. Maize silage yields have been extremely variable depending on location, with certain areas experiencing quantity issues (minus 20-30%).

Grass silage is being targeted at production animals with low yielders and dry stock being feed alternatives. Forage extending products

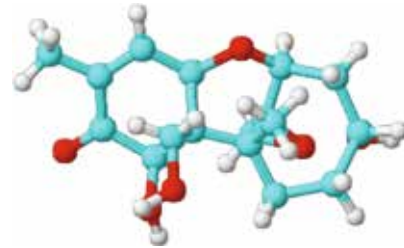


Above: Ulva algae (Green seaweed)

have low availability and increased in price, reportedly around 15 percent. Typically, when grass silage stocks are tight, more concentrates are fed to compensate, which can lead to butterfat issues. If more available maize is being fed, especially to later lactating cows and dry cows, then over conditioned animals may be seen, which could lead to metabolic issues. If we were to experience a cold, wet, delayed spring this will only exasperate the present situation further.



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How to efficiently protect animals

The last resort is, therefore, to work on reducing the intestinal absorption of mycotoxins, by incorporating a toxin binder in the feed at the right dosage. Unfortunately, binder products sold in the market place are not all equal, so it is important to use a product with proven efficacy and a product that will bind the appropriate issue-causing toxins, thereby reducing mycotoxins to a manageable level and protecting the animals.

Several materials can be used to bind different mycotoxins.

Polycontamination being the dominant case, the use of a toxin binder that can adsorb a wide range of mycotoxins is necessary. The form of toxin binder may also be adapted to the type of feed.

For dairy diets or mash feed, it is strongly recommended to use a micro-granulated toxin binder that will

ensure a good homogenisation in the feed. In fact, the homogeneity of the toxin binder in the diet is very important to ensure a “meeting point” between mycotoxins and toxin binder. Olmix solution gathers all these qualities in a single product, including unique algae and clay technologies.

All in all, mycotoxins are a threat to dairy herd performance, due to the toxicity they can exert individually, or together in the case of polycontamination. Managing mycotoxin risk, to prevent any impairment in performance, entails the implementation of an adequate control plan to properly evaluate the risk, and an appropriate interpretation of the results, in order to take the adequate measures in terms of diet formulation and toxin binder usage.

Olmix has developed a full set of comprehensive tools to help nutritionists implement a smart mycotoxin risk management on farms.

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