

**MYCOTOXIN FORUM 2013
5-6 September 2013****The role of maize mills in mycotoxins risk management**

Euromaisiers members apply the due diligence to comply with the existing legislation on food safety, both for their food and feed products. Protection of consumers' health is the daily business of the European maize millers which produce food for human consumption as well as by-products used by the animal feed sector.

Mycotoxins are naturally occurring contaminants developed after the infection of cereals with fungi of different species, which proliferate in certain conditions both during field production and storage. The field contamination is influenced by the weather condition. Extreme weather conditions (e.g. drought and/or high temperatures for long periods of time) are favourable to the development of mycotoxins and increase the risk of contamination. Mycotoxins that affect maize more frequently are Fumonisin, Zearalenone, Deoxynivalenol and Aflatoxins.

Mycotoxins risk management at maize mill level

Maize mills have strict HACCP¹ systems in place to monitor and manage mycotoxins in maize and maize milling products. There are a number of measures that are generally applied by maize millers to control and prevent mycotoxins contamination:

Contractual agreement: maize millers pay attention to the quality of maize even before its delivery to the mills. An increasing number of maize millers promote good farming practices and provide guideline to their suppliers through contractual cultivation agreements. This provides insurance that farmers are making extra efforts to manage the mycotoxin contamination already from the field and storage operations.

Routine sampling and analysis: maize millers are sampling and testing both the incoming maize and the resulting processed products and by-products (before delivery). The sampling and testing are carried out according to the EU legislation for official controls. Testing is carried out both in internal laboratories, following EU acknowledged protocols, and by external accredited laboratories for contractual analysis. These different levels of analysis guarantee accuracy and impartiality in the control of samples analysed.

In situ storage: during the mill storage period maize is kept under strictly controlled conditions of temperature and humidity. Millers pay particular attention to reduce the

¹ Hazard Analysis Critical Control Points

storage phase to a minimum. This measure is aimed mostly at managing the risk of storage mycotoxins.

Cleaning operations: maize is usually submitted to a series of physical cleaning treatments including screening and brushing before the grinding process. In support of physical treatments some mills are experimentally using optical sorters which individually check and sort the maize prior to the cleaning process.

Mycotoxins risk management in years of particular incidence

In years of particular incidence for one and/or another mycotoxin, the control points are intensified: the frequency of controls is increased and the size of samples reduced, going as far as a batch by batch analysis.

Batch by batch analysis: this is the strictest form of mycotoxin management performed by maize millers. In case of high risks of contamination, rapid tests are used on every incoming batch to determine its compliance with the EU food safety standards. In this context, the increased controls and use of rapid tests at the mills represent an investment, in both financial and human resources, to guarantee food and consumers safety.

Euromaisiers' role and contribution

Euromaisiers is constantly keeping its members informed on EU legislative developments as well as on any food safety issue relevant to the sector. In addition, statistical data collection on mycotoxins contamination is carried out yearly. The analysis of data is helpful for the understanding of mycotoxins contamination trends and gives members the possibility to evaluate the situation. The data collection confirms that the maize milling industry is using food grade maize as raw material for producing safe products and by-products.

Conclusions and recommendations

The delivery of safe products and the protection of consumers' health are on top of maize millers' priorities. Euromaisiers recommends increased attention and vigilance all along the supply chain to better ensure food and feed safety.

Mycotoxins contamination is related to external factors, e.g. weather conditions. Consequently, high levels of certain mycotoxins might occur despite the preventive measures taken by the operators along the supply chain. Such a situation would lead to shortages of cereals supply in compliance with the legislation, although the total quantities available would be sufficient.

The development of a temporary derogation from maximum mycotoxins levels in foodstuffs under extreme weather conditions would allow operators to quickly address any potential problem. Provided that the EFSA assessment would identify no significant risks for the consumers' health, such measure is welcomed by the maize milling sector. To this end, Euromaisiers supports the amendment proposed by DG SANCO to Regulation (EC) No 1831/2003 of 22 September 2003 setting maximum levels for certain contaminants in foodstuffs.

The good practices applied all along the supply chain could be reinforced by investments in research and development of new varieties of maize and other cereals resistant to mycotoxins, fungicides and/or seed selection. Euromaisiers is strongly supporting this approach.

Euromaisiers is the organisation representing the European maize milling sector. The maize milling sector produces natural and healthy maize-based ingredients, which are used for the production of food and drink products, including breakfast cereals, snacks and beer. The members of Euromaisiers are 21 small and medium enterprises, in most cases family-based, located throughout the European Union and representing the great majority of the sector. They produce about 1.5 million tons of maize flour and grits every year.