



The voice of the European food and drink industry

T2 and HT2 Toxins

Food and Drink Industry Point of View

Commission Stakeholder Forum 10-11

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CIAA



Important Points to Consider

- T2 and HT2 are field mycotoxins. Understanding of why and how they are formed is still lacking;
- No plant protection products available to control T2 and HT2;
- Interrelationship between toxins: Reductions in levels of DON forming fungi may lead to a natural increase in T2 and HT2 forming fungi;
- Seasonal and geographic variation and crop variety should all be taken into account (trend is important);
- Impossible to make uniform predictions for cereals, as T2 & HT2 affect some more than others;
- Certain nutritionally-rich ingredients will be excluded from innovation



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Issues with Sampling

- Current EU defined sampling methods are for legal control purposes, and not suitable for control within the field (e.g. insufficient time available at critical sampling points during and post-harvest)



Issues with Analysis

DATA ANALYSIS

- No rapid method to test compliance of crops – necessary for field mycotoxin checks
- Lack of consistent data also makes exposure difficult to calculate

ANALYTICAL METHODS

- No EU validated test methods published (research ongoing in Member States);
- Analytical method capability developments affect meaningful comparisons between crop years:
 - Different methods have different analytical performances, eg. recovery rate, measurement uncertainty, Limits of Detection etc
 - In 2002-2003, higher Limit of Detection for T2 & HT2 in malt & barley; Acceptable Limit of Detection for 2004 crops only;
- For some foodstuffs, methods only recently available (2006)



Processing Impact

- **De-hulling**
 - De-hulling effect on reduction varies according to initial concentration in the raw material
- **Dry Milling**
 - In most cases, T2 and HT2 toxins are not destroyed but unevenly redistributed between fractions – eg. In wheat, it is reduced in white flour but higher in bran
- **Wet Milling (Starch Production)**
 - is expected to achieve a reduction in wheat and maize starch, however at this stage only data for one crop year is available
- **Other processes (final processing, e.g. Snacks, Fine Bakery Wares)**
 - No impact, as T2-HT2 is heat stable



Potential Impact of Legislation

- Insurance: Insurers in certain MS are refusing to provide coverage in the event of contamination => SIGNIFICANT costs for industry;
- Without realistic assumptions of the impact of processing, restrictive raw material purchase specifications will be necessary to make compliant finished products;
- Inappropriate limits will have impact upon crop availability, market for intermediates and final products on the market
(eg increased transport of raw materials over long distances and subsequent negative environmental impact; reduced consumer choice; rising cereal costs and consequent negative impact on competitiveness of EU market; and increased risk of non-compliance from non-EU imports)
- Absence of suitable test methods will impact logistics.



Conclusions and Recommendations

- Any regulatory controls should be realistically achievable:
 - Set in accordance with a risk-benefit (eg. nutrition quality) approach;
 - Recognising the limitations and non-uniform effect of processing, in order to avoid serious supply chain implications;
 - Consistent for raw and finished products;
 - Acknowledging that foods made from cereals are divergent in their composition of cereal ingredients, both quantitatively and qualitatively;
 - Taking agricultural reality into account (seasonal, geographic & crop variations, etc);
- A formal regulatory impact assessment exercise should be carried out beforehand.



Summary

- **The food chain is committed to ensuring the safety of food products;**
- However, we believe that there is insufficient knowledge and definition of critical parameters to permit legislative limits to be set at this moment;
- ***The food industry is actively committed to supporting further work in:***
 - ***Effective controls for T2 & HT2 toxin formation;***
 - ***Data collection;***
 - ***Development of methods of analysis and sampling***