

# Occurrence of trichothecenes in Norwegian cereals 1990 - 2007

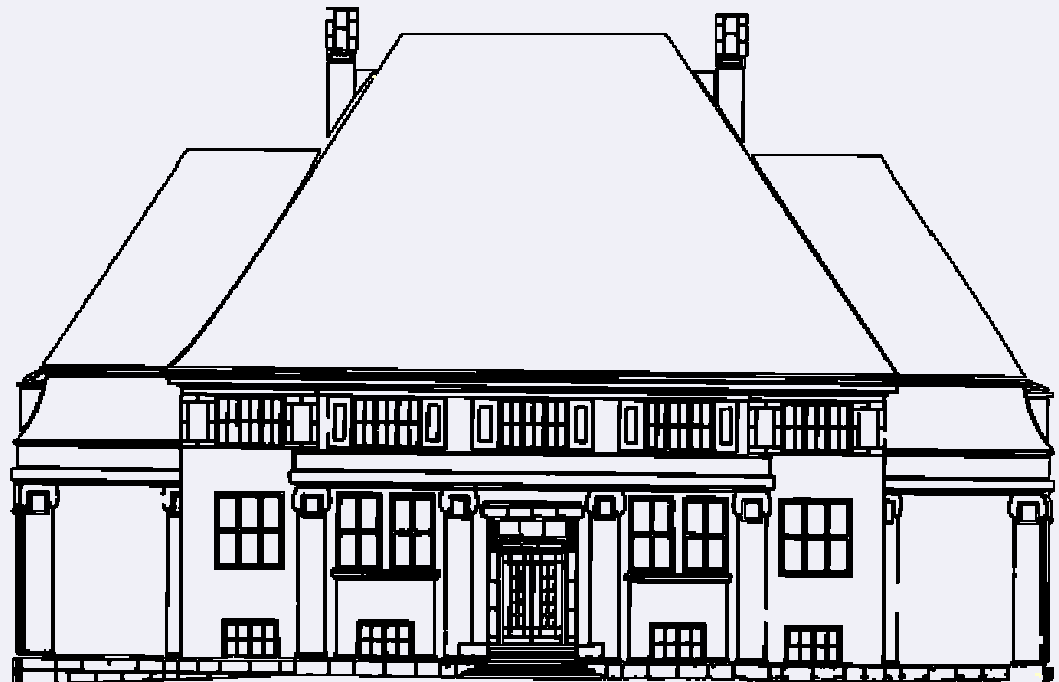
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Section for Toxicology



**Veterinærinstituttet**  
National Veterinary Institute

# National Veterinary Institute, Norway

- > 100 years experience of feed hygiene matters, including mycology
- > 30 years experience of analytical work related to mycotoxins and plant toxins in feed and other matrices

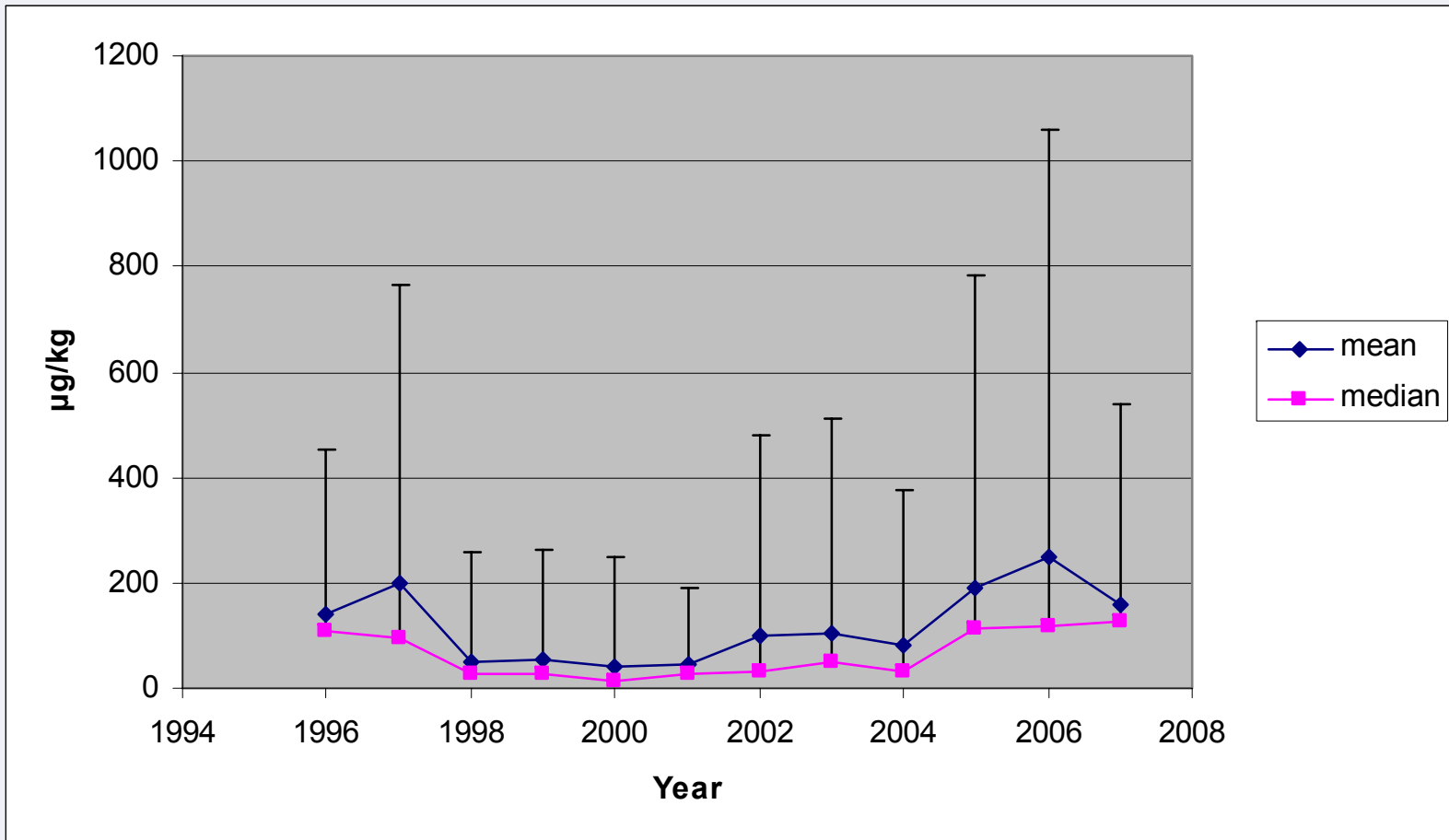


# Trichothecenes at NVI

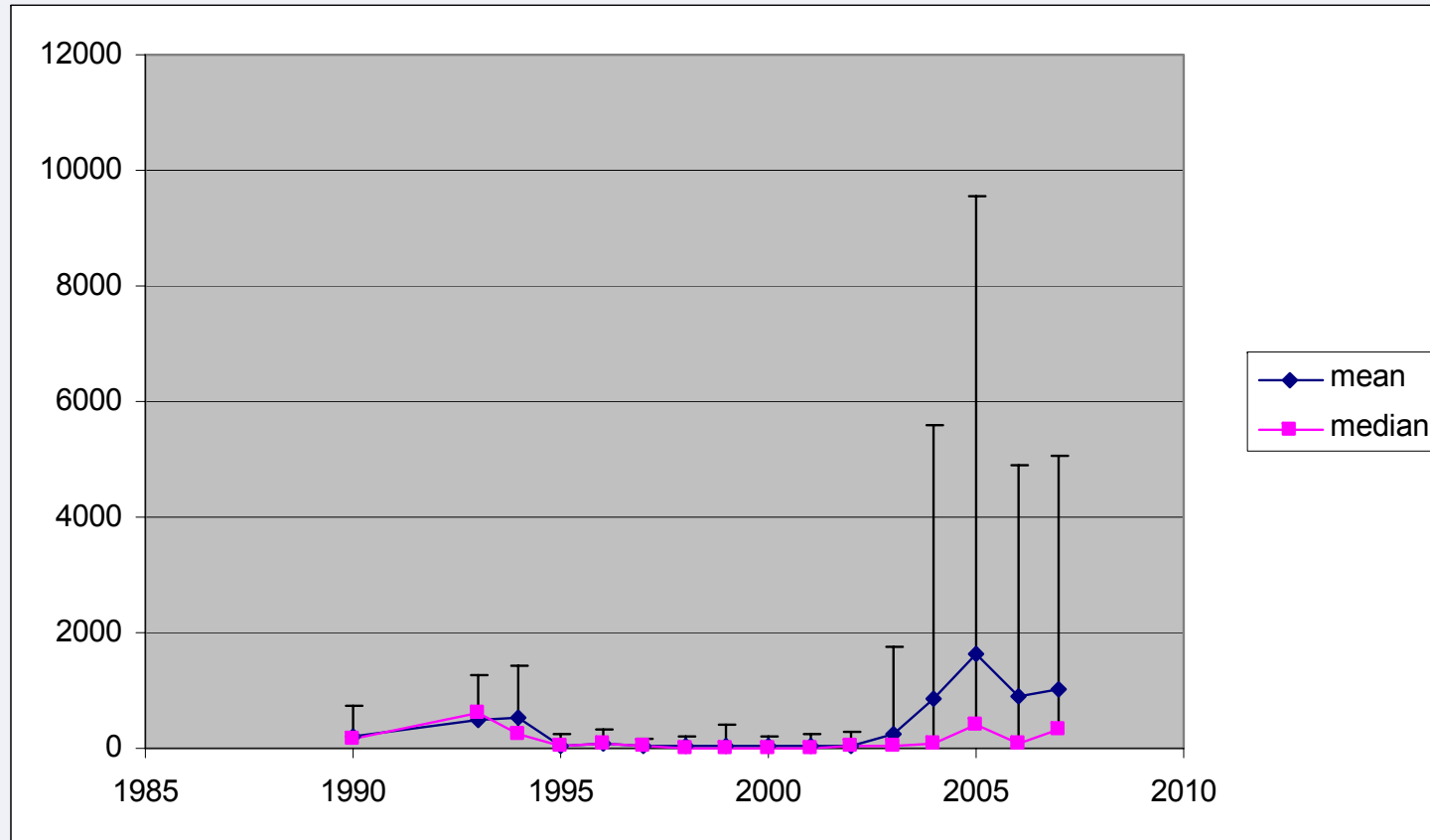
- NVI has analyzed trichothecenes type B in cereals for the authorities as well as the industry since the 80-ties and type A since 1998
- GC-ECD and GC-MS (and now LC-MS) have been used.
- The methods have been compared and give comparable results
- Unfortunately some of the data older than 1998 is not easily accessed at the level of individual samples



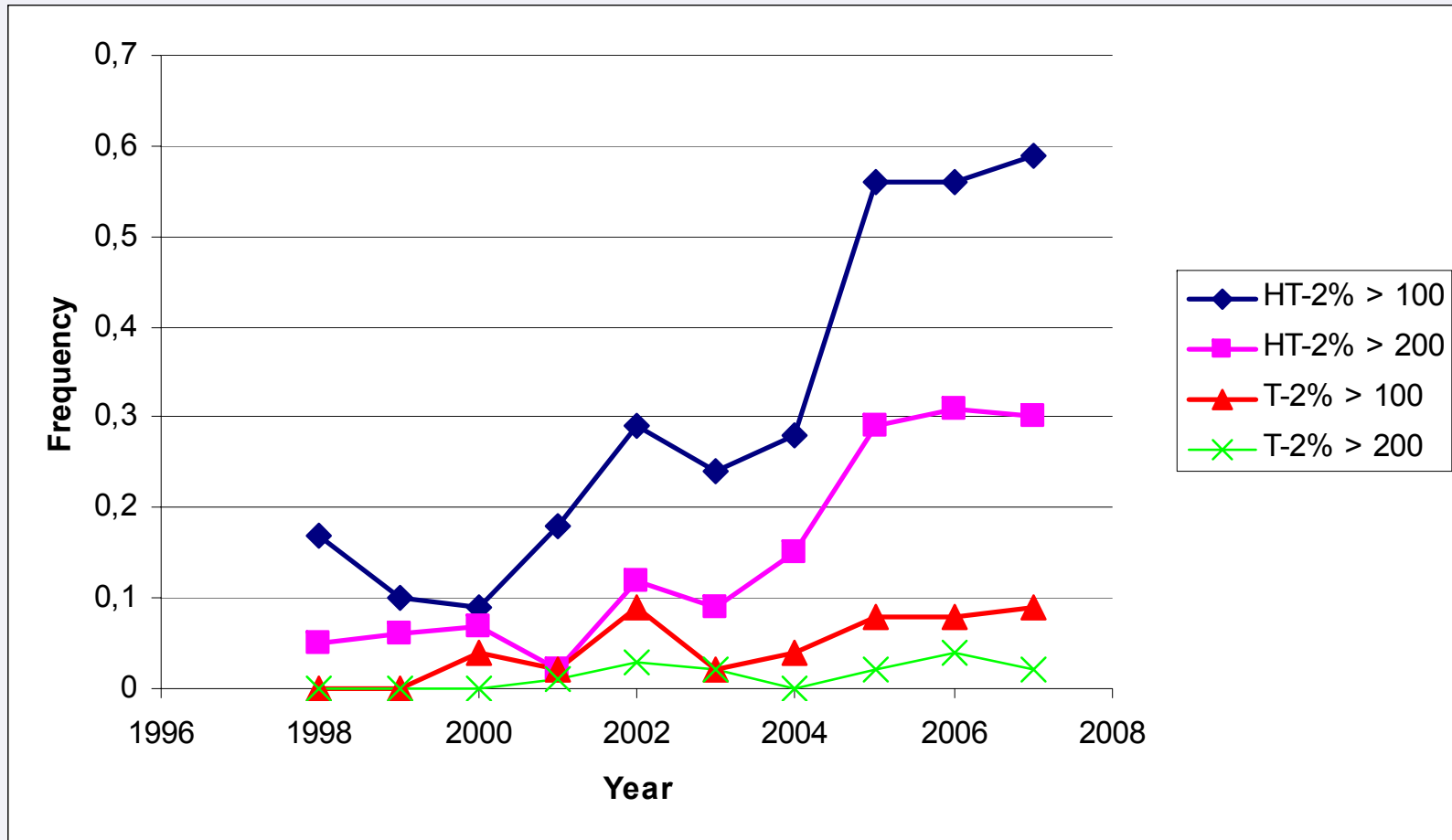
# HT-2 in oats



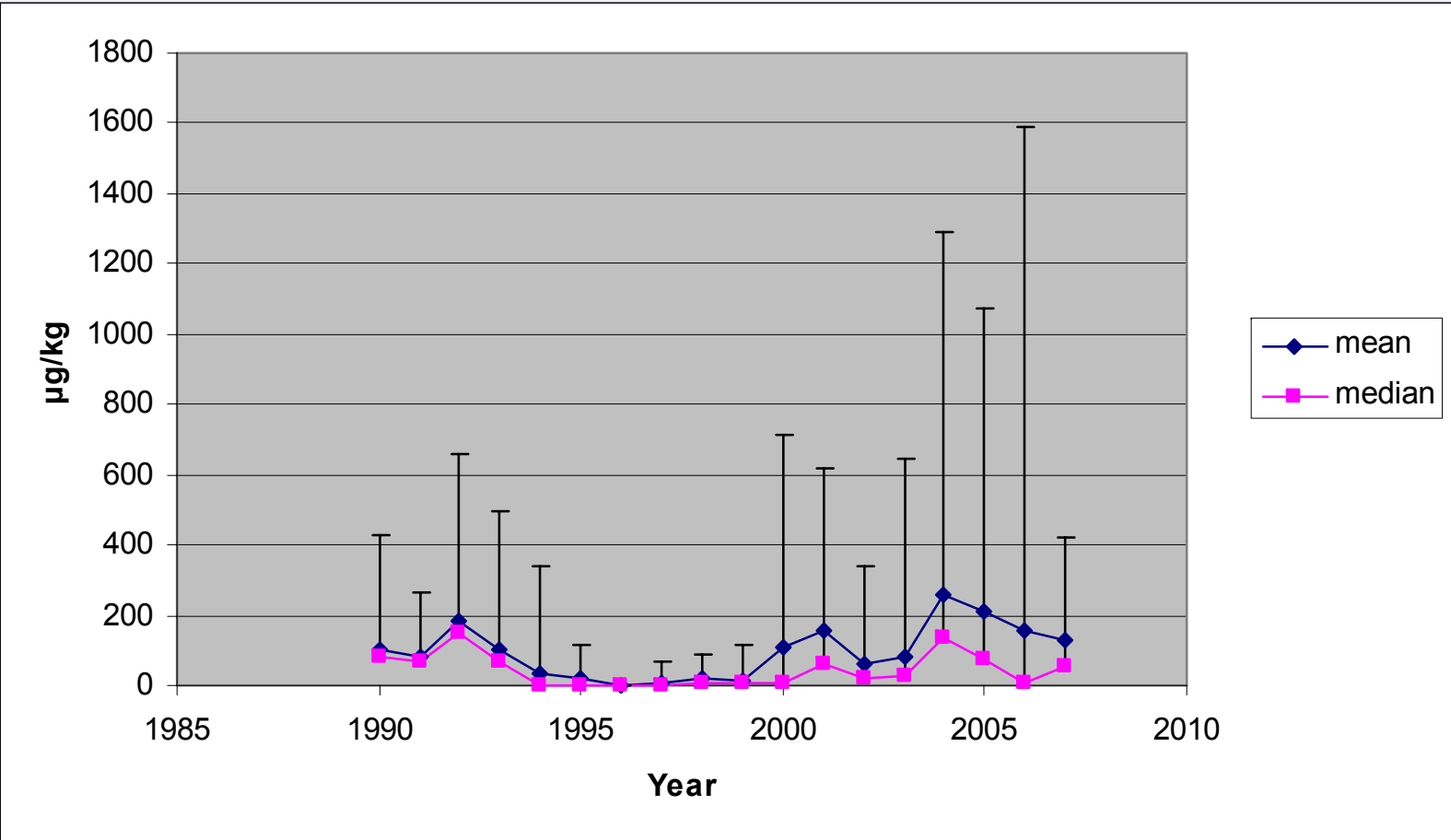
# DON in oats



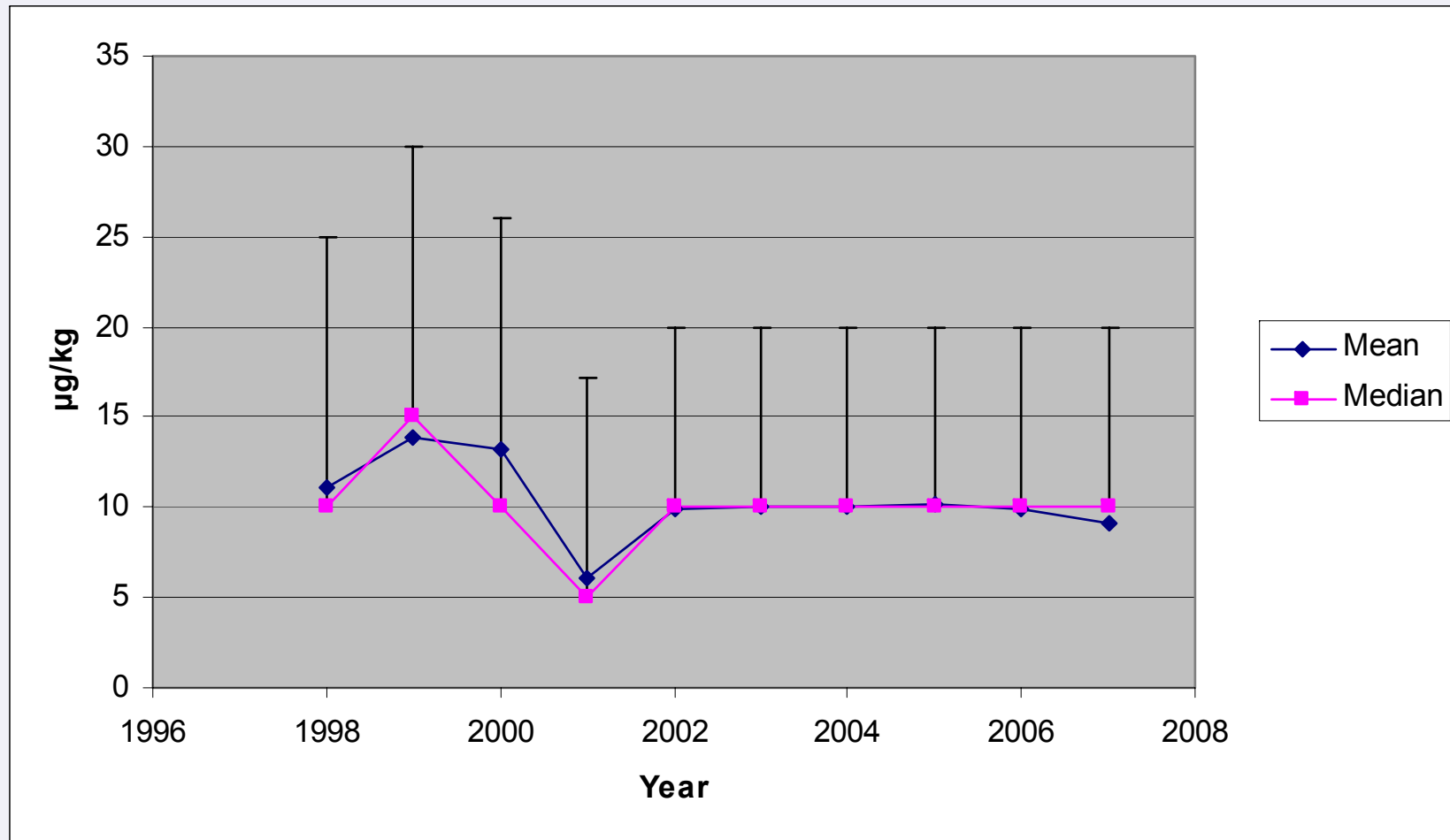
# Proportion of samples exceeding defined levels in oats



# DON in Wheat

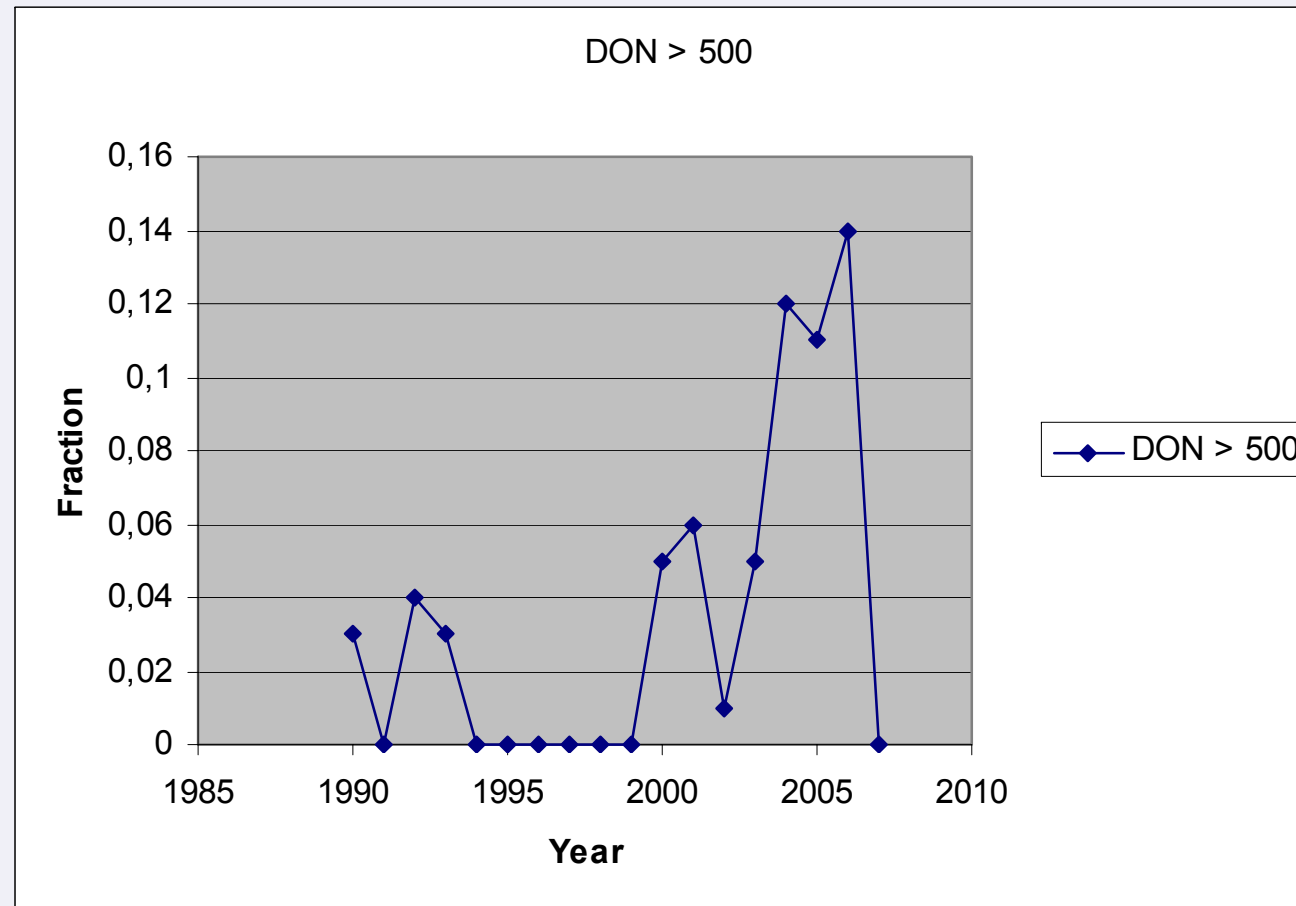


# HT-2 in wheat





# Proportion of samples exceeding defined levels of DON in wheat



# Distribution of DON and T-2 + HT-2 between kernel and bran

- Oats and wheat were sampled 2000 - 2001.
- Oats: 29 positive samples ( $>20 \mu\text{g}/\text{kg}$ ) of oat were found in the project. No traces of trichothecenes were found in the kernel in any of these samples
- Similar results from wheat, but a low number of positives makes it difficult to draw any conclusions.



# Conclusions

- There are occasionally very high levels of trichothecenes in cereals in Norway
- The levels of HT-2 toxin in oats may be increasing
- There are lots not suitable for consumption (humans and animals)
- There seems to be a specific problem related to the use of whole oats for feeding of horses
- Other uses are less problematic due to reduction during processing, but this has not been extensively studied in Norway

