

# T-2 and HT-2 toxin and some other *Fusarium* toxins in Norwegian cereals

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## Samples collected 2004-2008

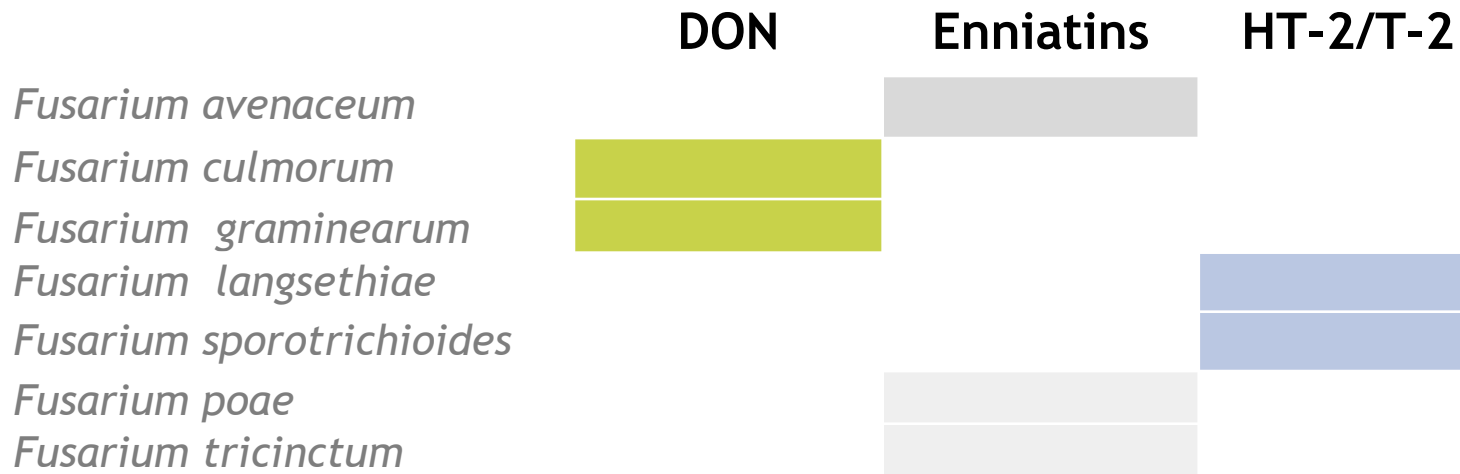


Samples were collected from fields of oats and spring wheat in the major cereal growing regions of Norway

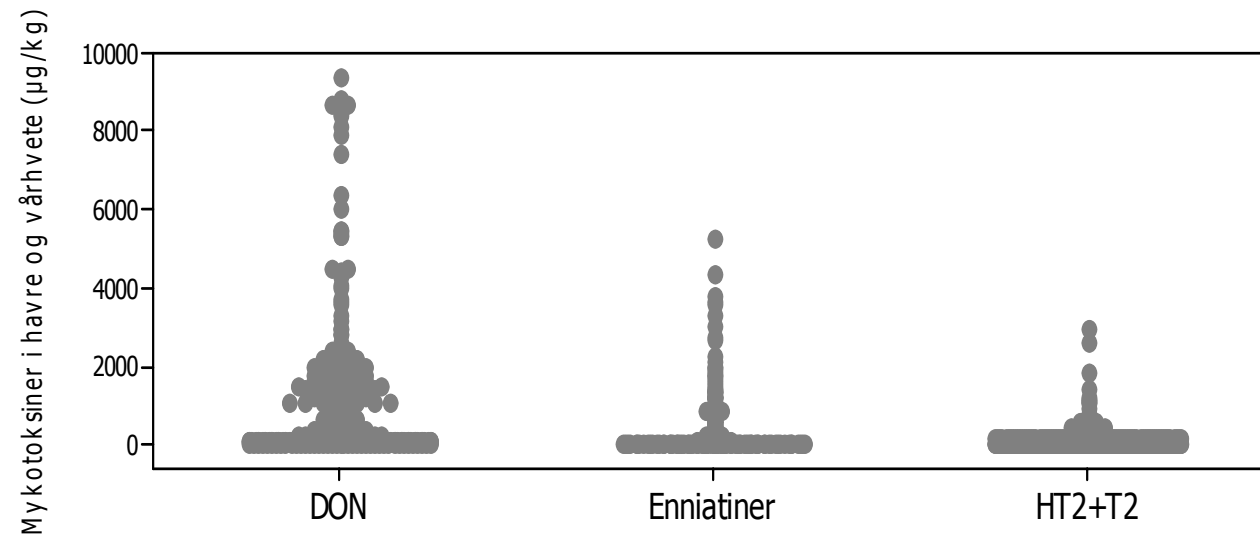
A total of 400 samples of grain were analysed for mycotoxins (18 different compounds)

Information regarding each single cereal sample is registred (location, species and cultivar, agronomic cultivation practice, previous crops, etc.)

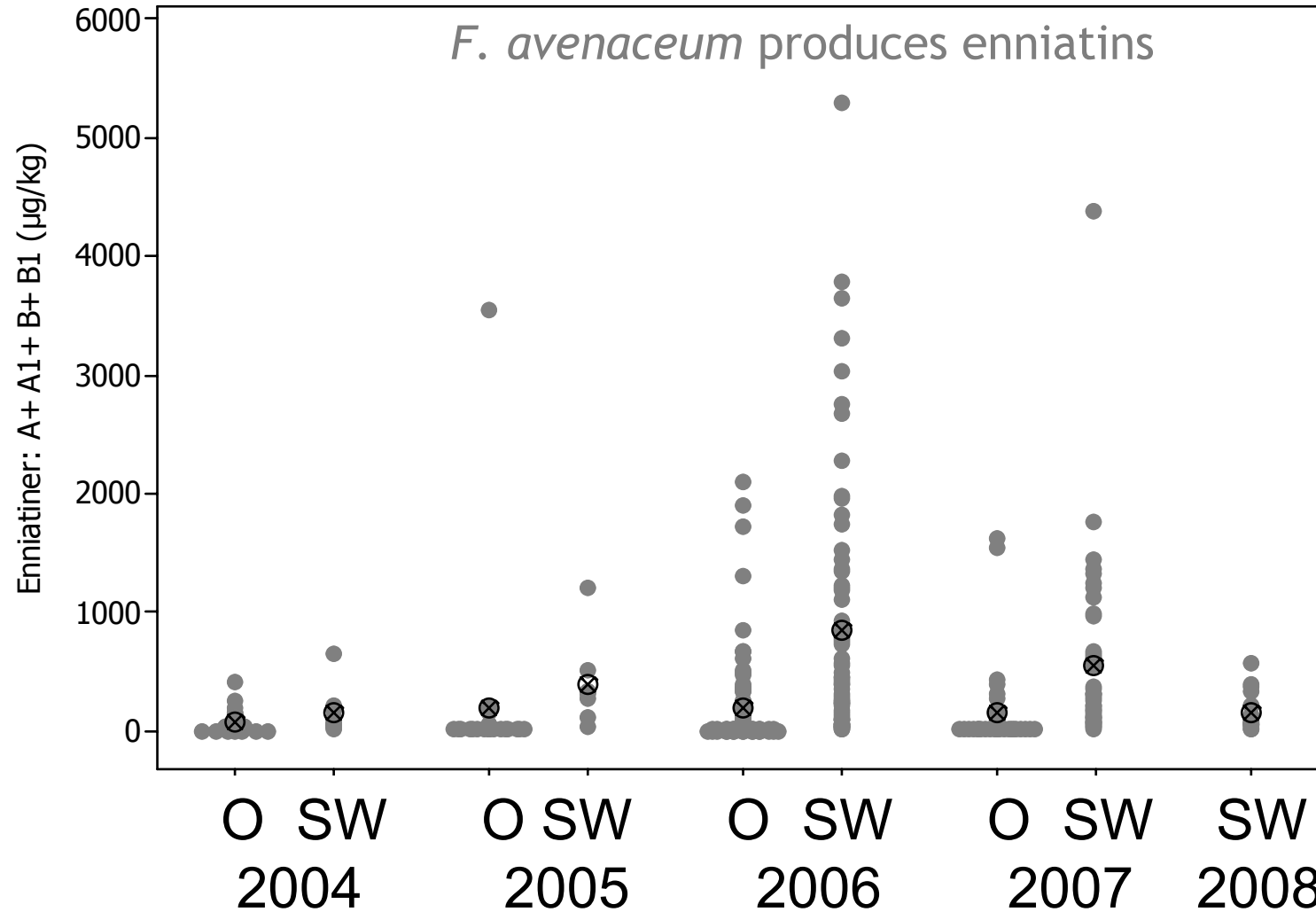




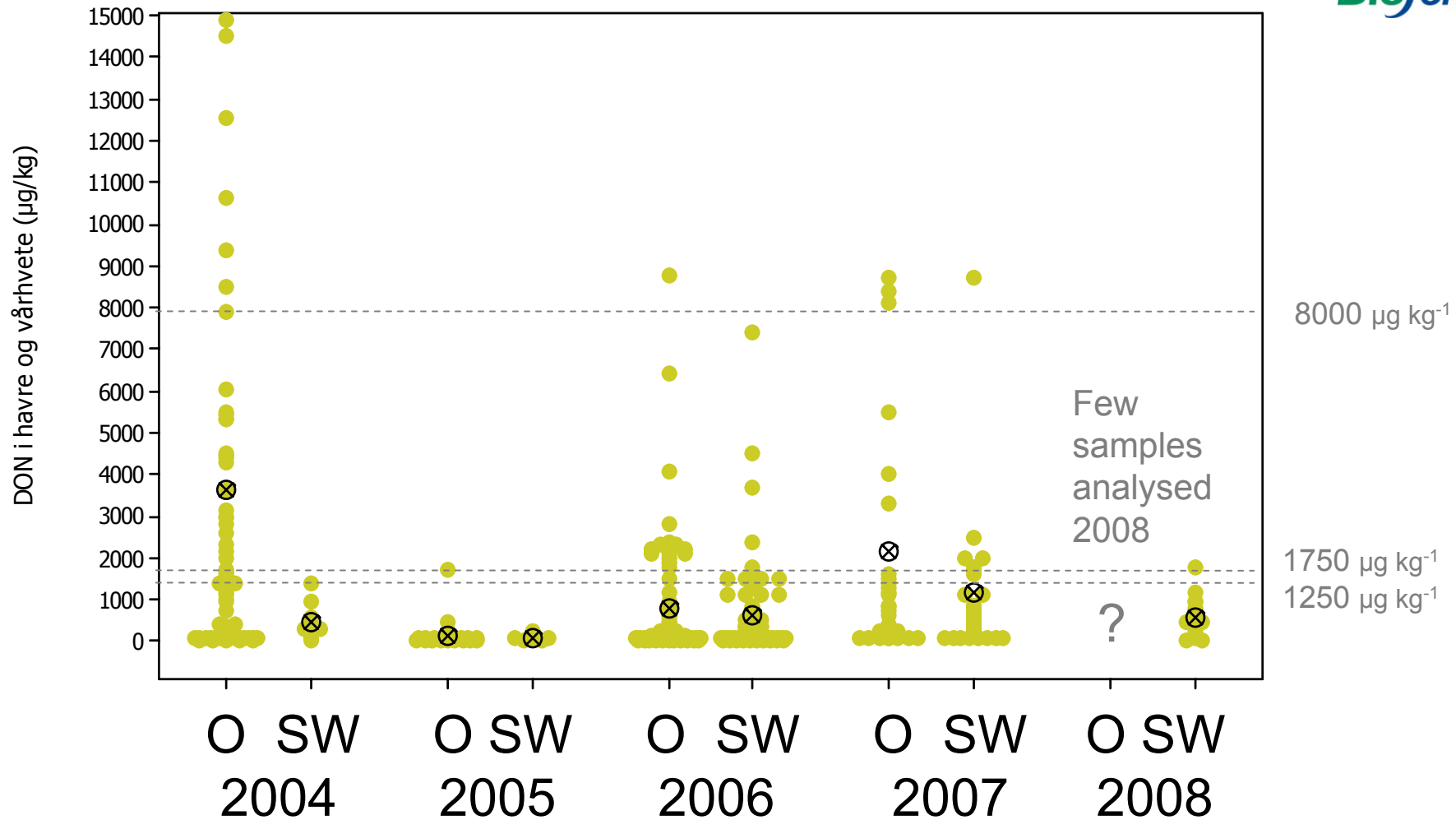
Levels of selected mycotoxins in cereal grain lots of oats and spring wheat (2004-2008):



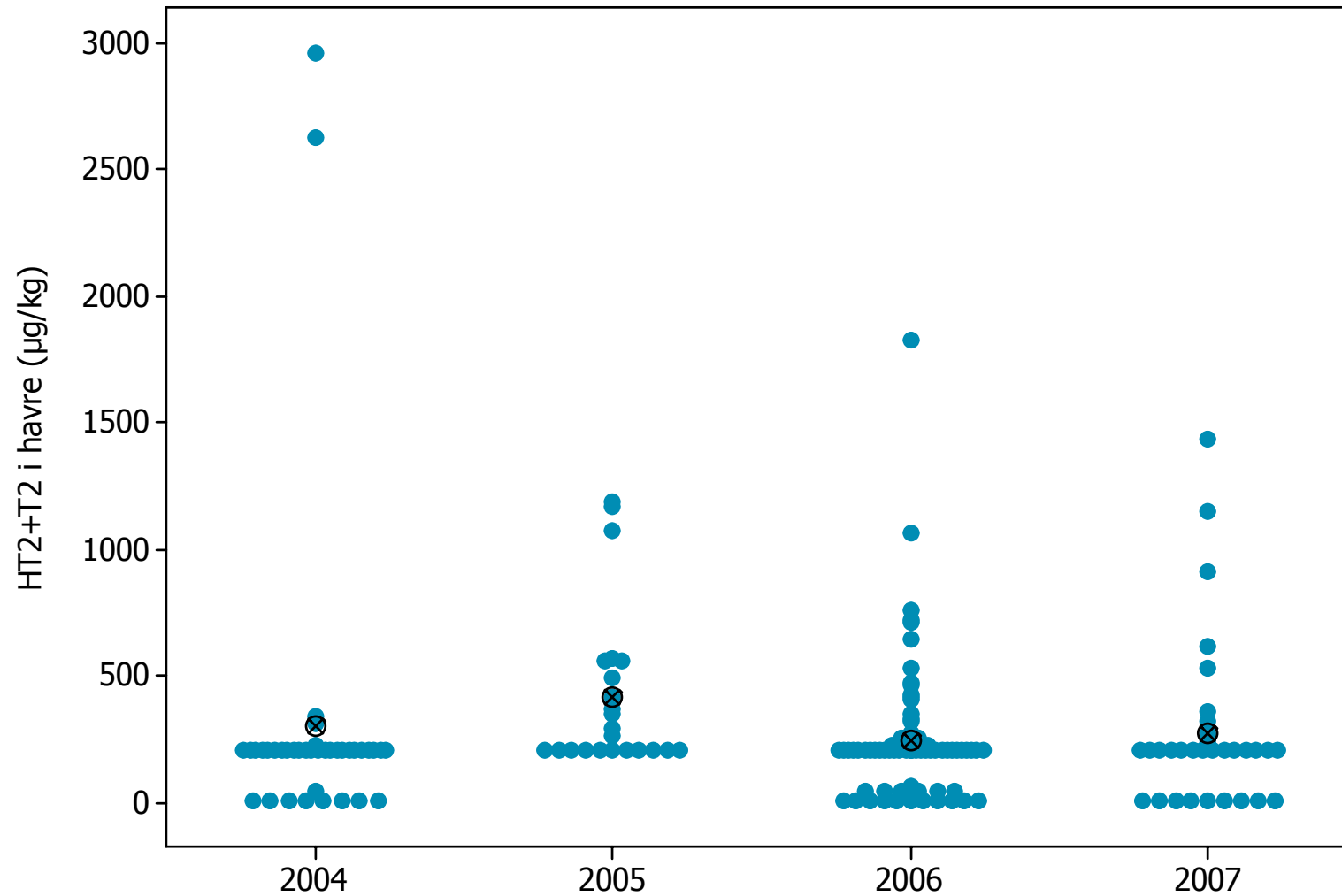
# Enniatins in oat and spring wheat



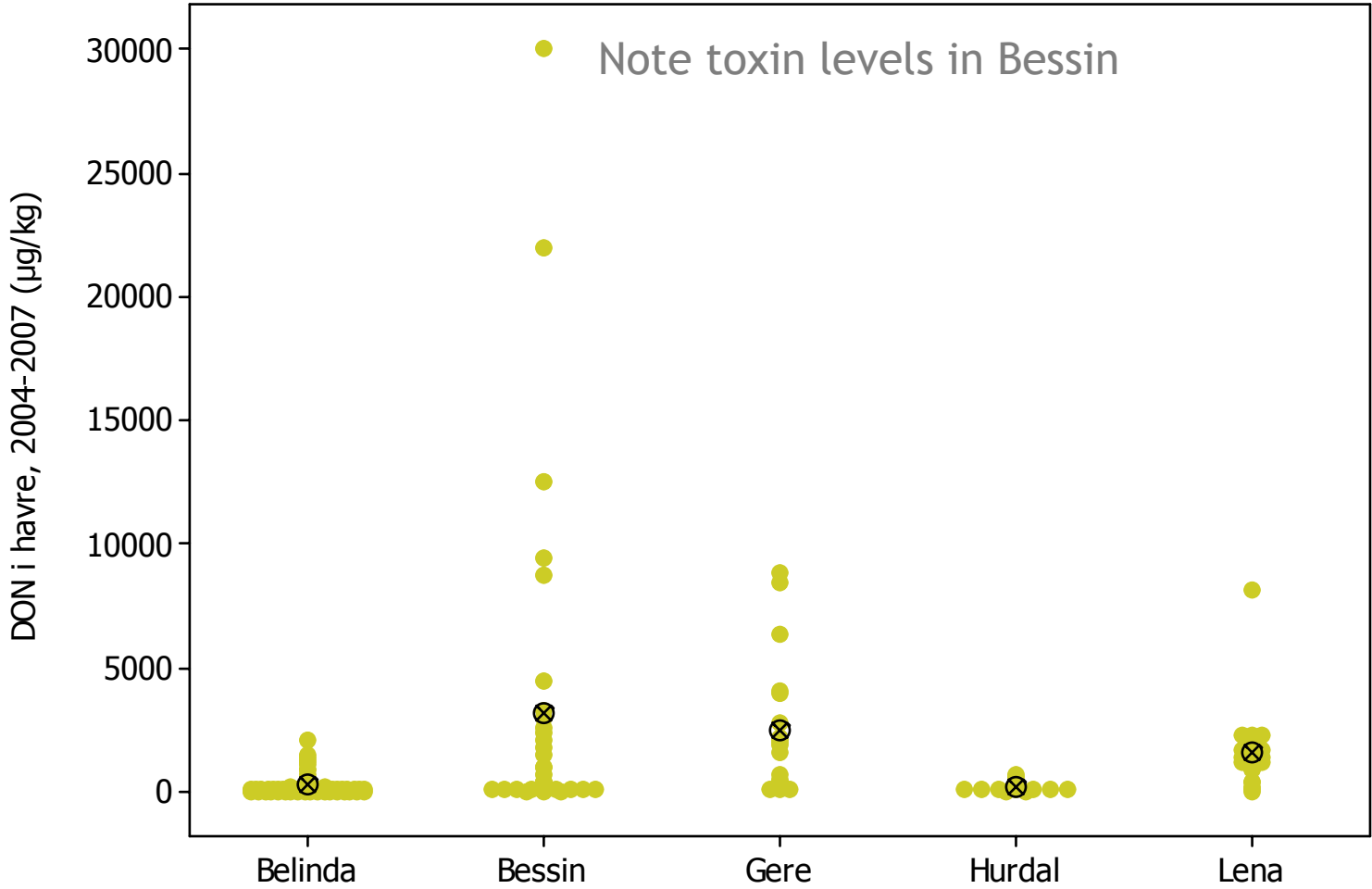
# DON in oat and spring wheat



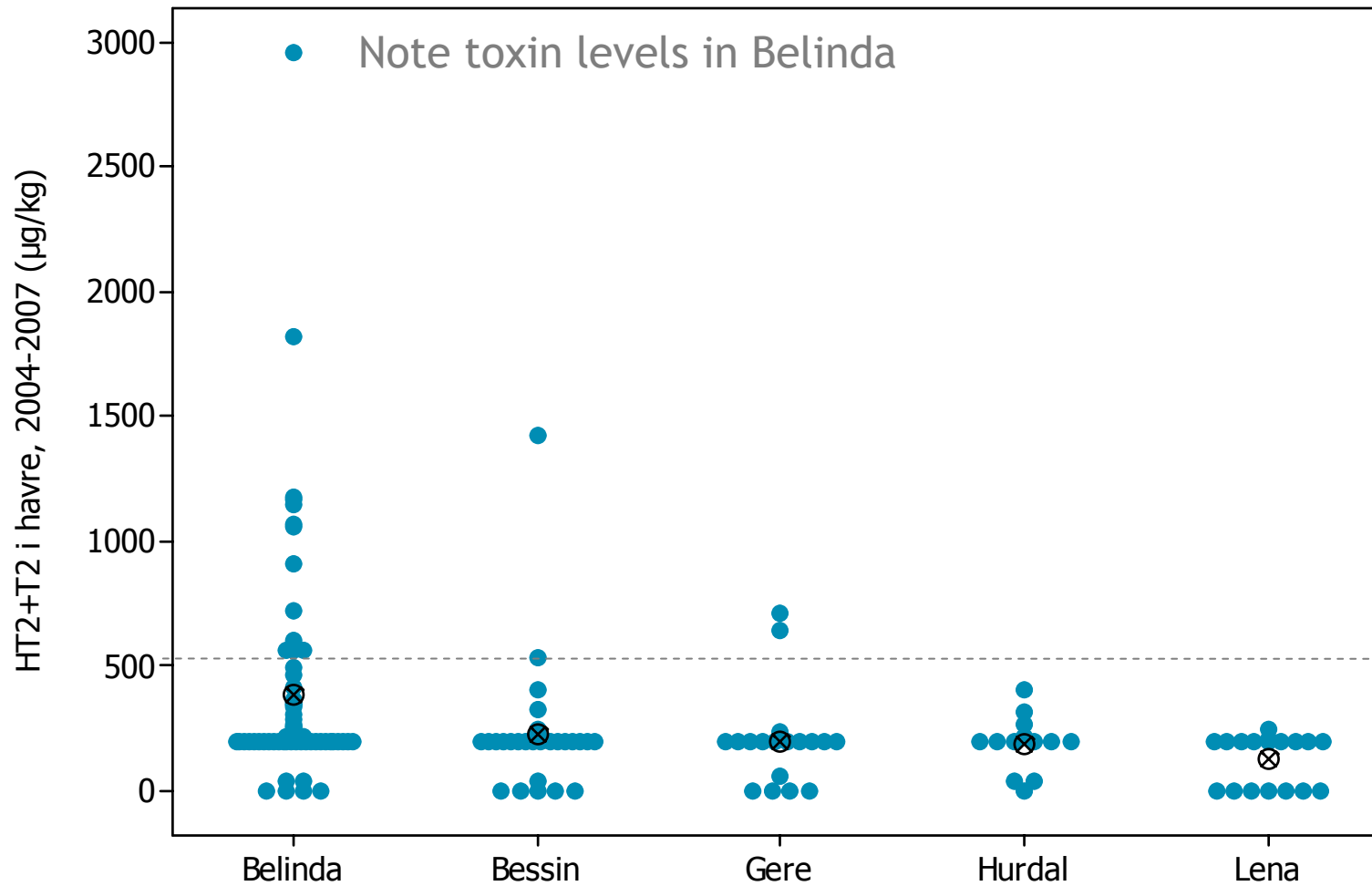
# HT2+T2 in oats



# DON in different cultivars of oat (2004-2007)



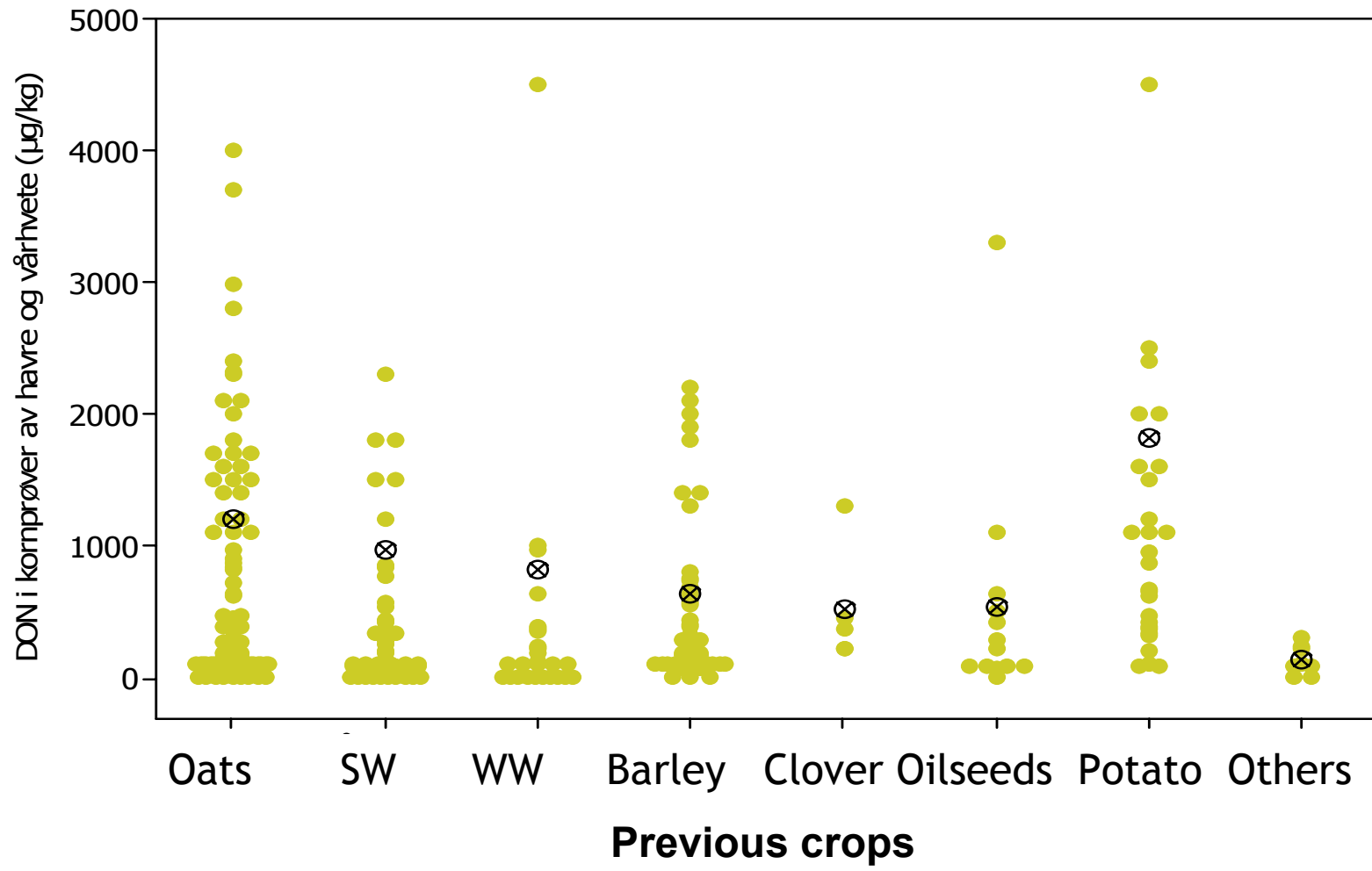
# HT2+T2 in different cultivars of oat (2004-2007)



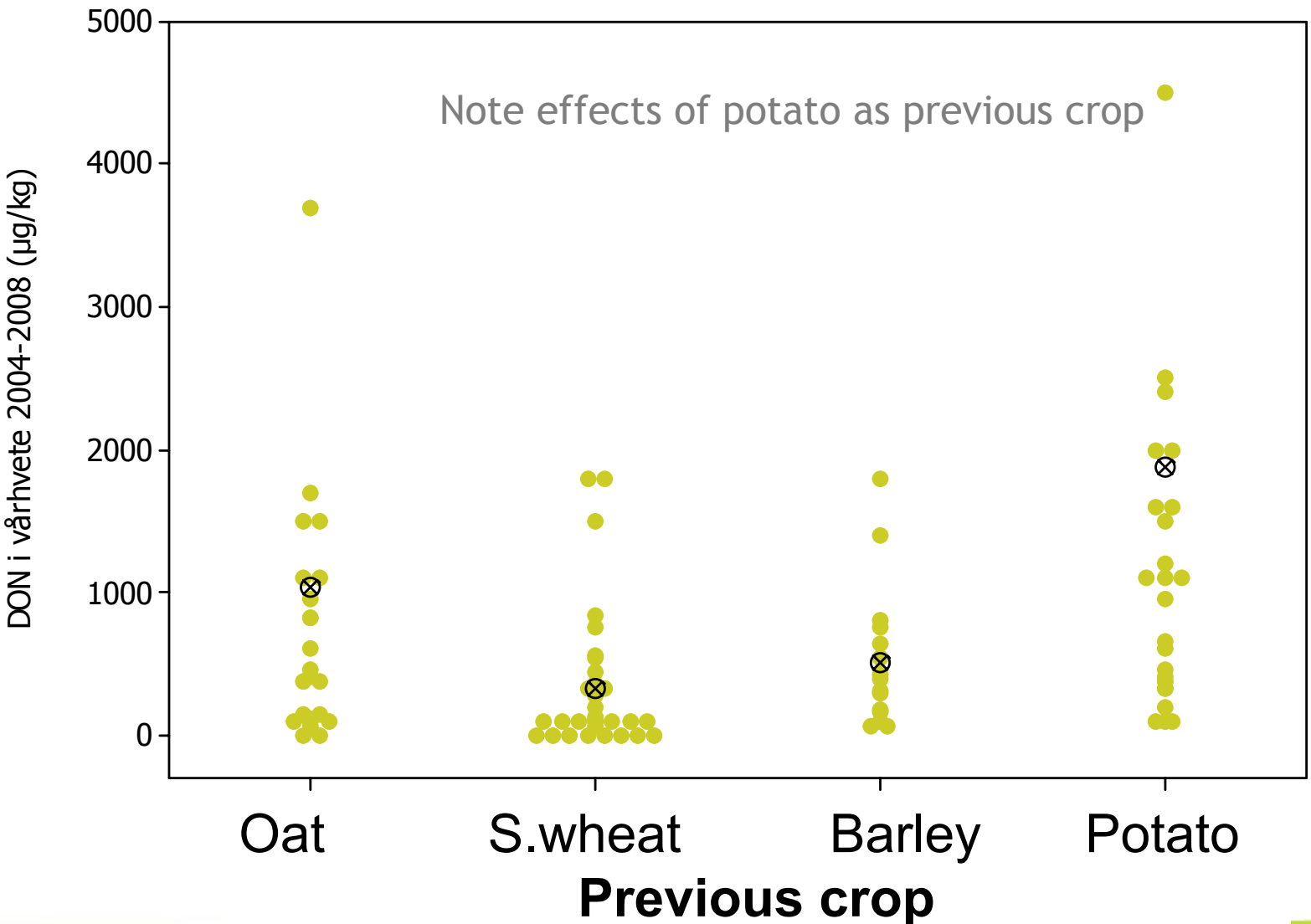




# Effect of previous crops on DON in oats and spring wheat



# Effect of previous crop on DON in spring wheat

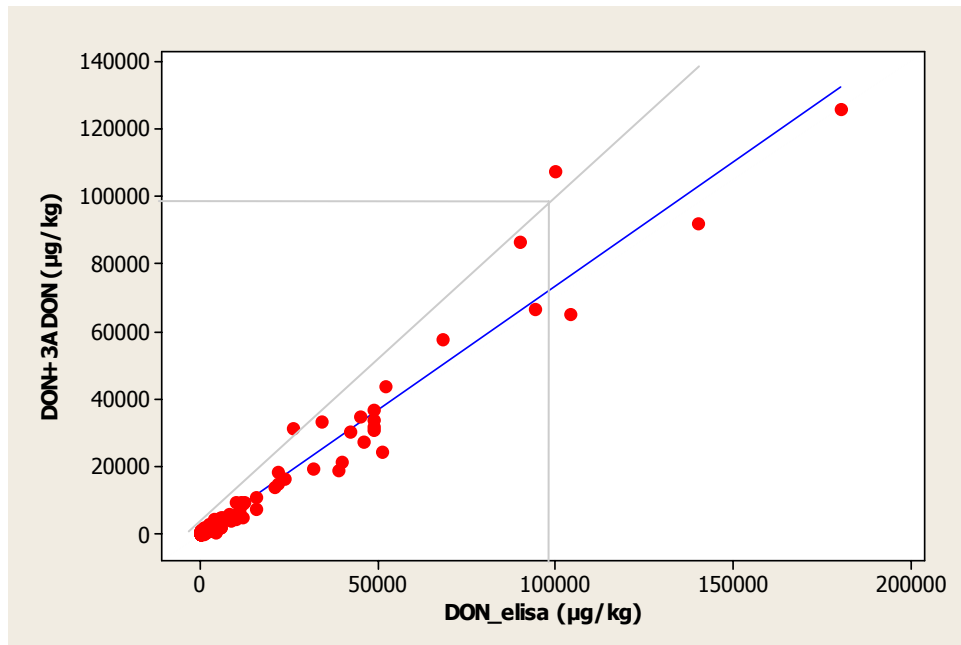


# No effect of fungicide treatment on T-2 / HT-2 level ( $\mu\text{g}/\text{kg}$ )



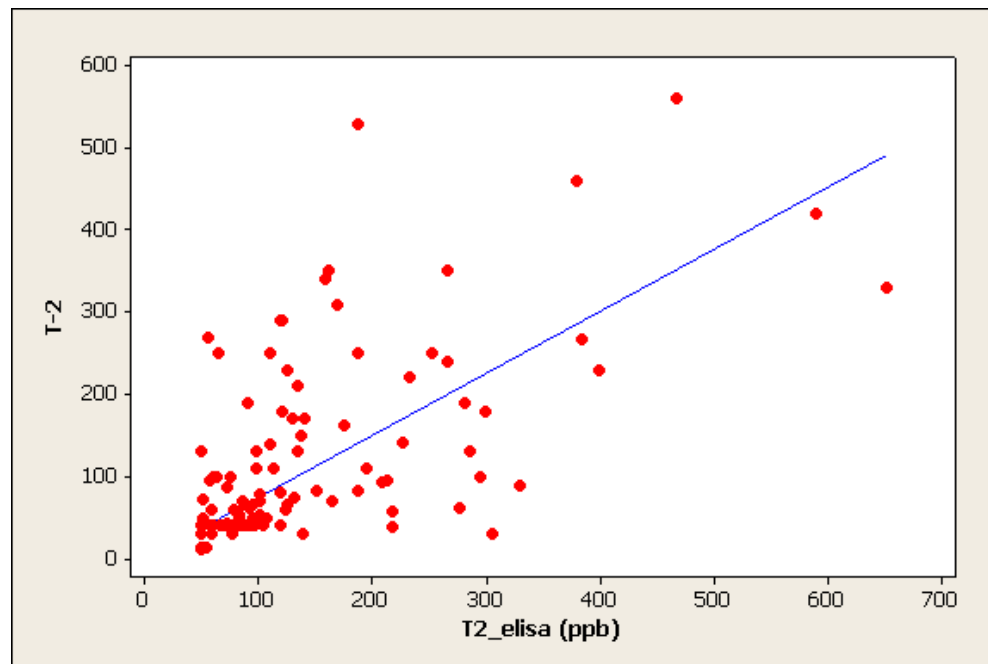
Treatment	Dose/ daa	Dev. stage	DON+3ac DON	T2+HT2
Untreated	-		252	264
Amistar Duo	100 ml	Z55	264	249
Proline	80 ml	Z55	142	291
Proline	80 ml	Z60	73	261
Proline	80 ml	Z65	137	301

# ELISA vs. Chemical analysis



- Number of samples: 291 (156 oats og 135 wheat)
- $r^2$ : 95,7%
- ELISA - results are higher

## ELISA vs. Chemical analysis (T-2)



- Number of samples : 190 (145 oats and 45 wheat)
- $r^2$ : 25%

# Summary

- DON, HT2/T2 and Enniatins was recorded in several samples of oats and spring wheat (2004-2008)
- Some samples of oats (mainly cultivars Bessin and Belinda) had a mycotoxin content well above recommended maximum limits
- Especially high levels of HT2/T2 was recorded when oat was grown after oats
- Samples of spring wheat with DON above maximum limits was recorded, also when potato was grown as the previous crop
- T-2 levels determined by ELISA did not correlate well with results obtained by chemical analysis
- Fungicide treatment did not have an effect on the development of T-2 and HT-2