



***Fusarium* toxins in cereals and cereal products – some data from Austria**

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Methods

parameter	extraction	clean up	derivative	separation	detection
A-Trichothecenes T-2 toxin, HT-2 toxin, Monoacetoxyscirpenol, Diacetoxyscirpenol	Acetonitrile/water	Mycosep	HFBI	GC (2 columns)	EC
B-Trichothecenes Deoxynivalenol (DON), Nivalenol, Fusarenone X, 3- AcetylDON, 15-AcetylDON	Acetonitrile/water	Mycosep	TMS	GC (2 columns)	EC
Zearalenone (ZON)	Acetonitrile/water	IAC	-	RP-HPLC	FL
Fumonisin B1, B2	Acetonitrile/methanol/ water	IAC	OPA	RP-HPLC	FL

***Fusarium* toxins in unprocessed cereals (2004, 2005)**

N (2004)=202

**wheat=122, barley=25, oats=10, rye=21,
triticale=16, durum wheat=8**

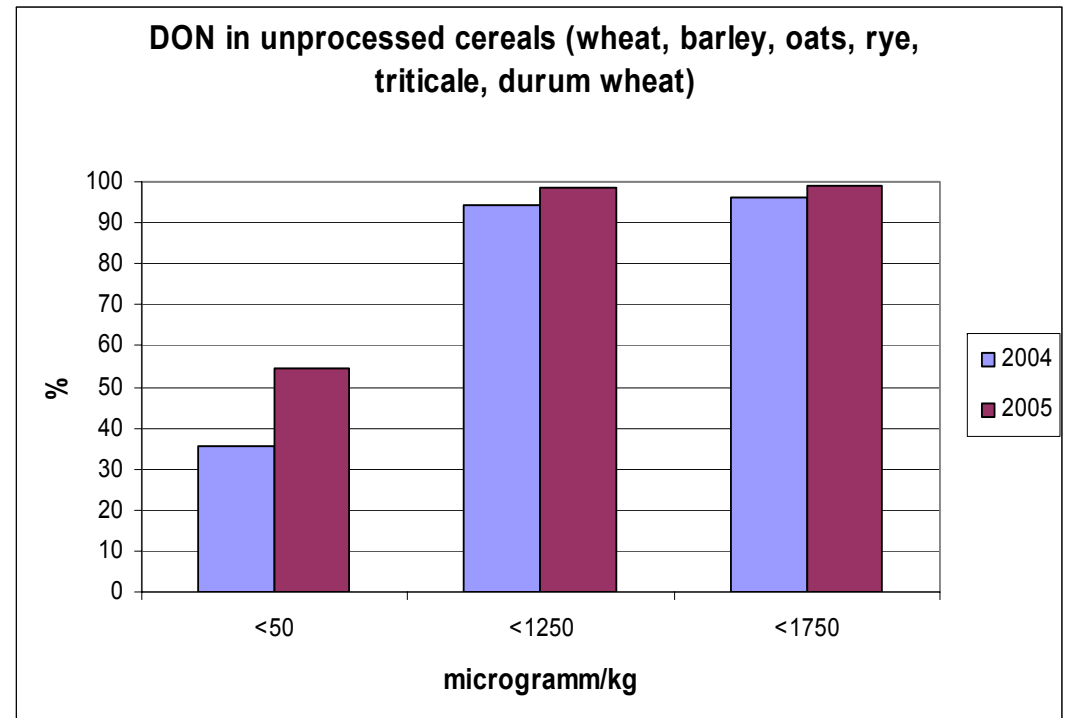
Range: LOD (<25 ppb) – 8200 ppb

N (2005)=245

**wheat=156, barley=27, oats=11, rye=14,
triticale=20, durum wheat=17**

Range: LOD (<25 ppb) – 6700 ppb

LOQ: 50 µg/kg



***Fusarium* toxins in unprocessed cereals (2004, 2005)**

N (2004)=202

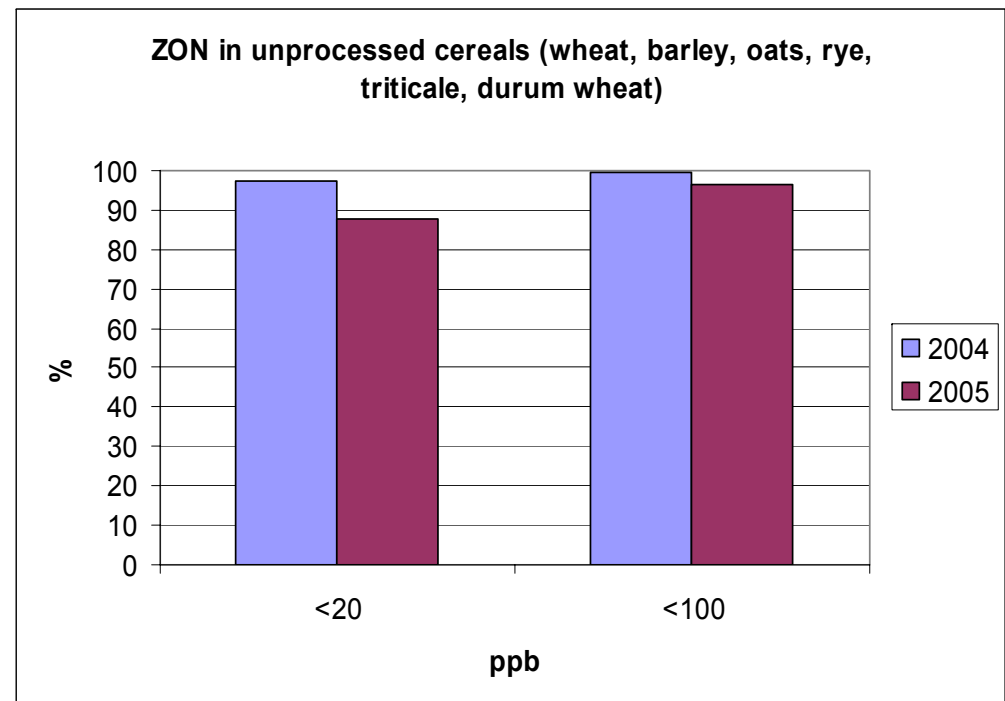
wheat=122, barley=25, oats=10, rye=21,
triticale=16, durum wheat=8

Range: LOD – 230 ppb

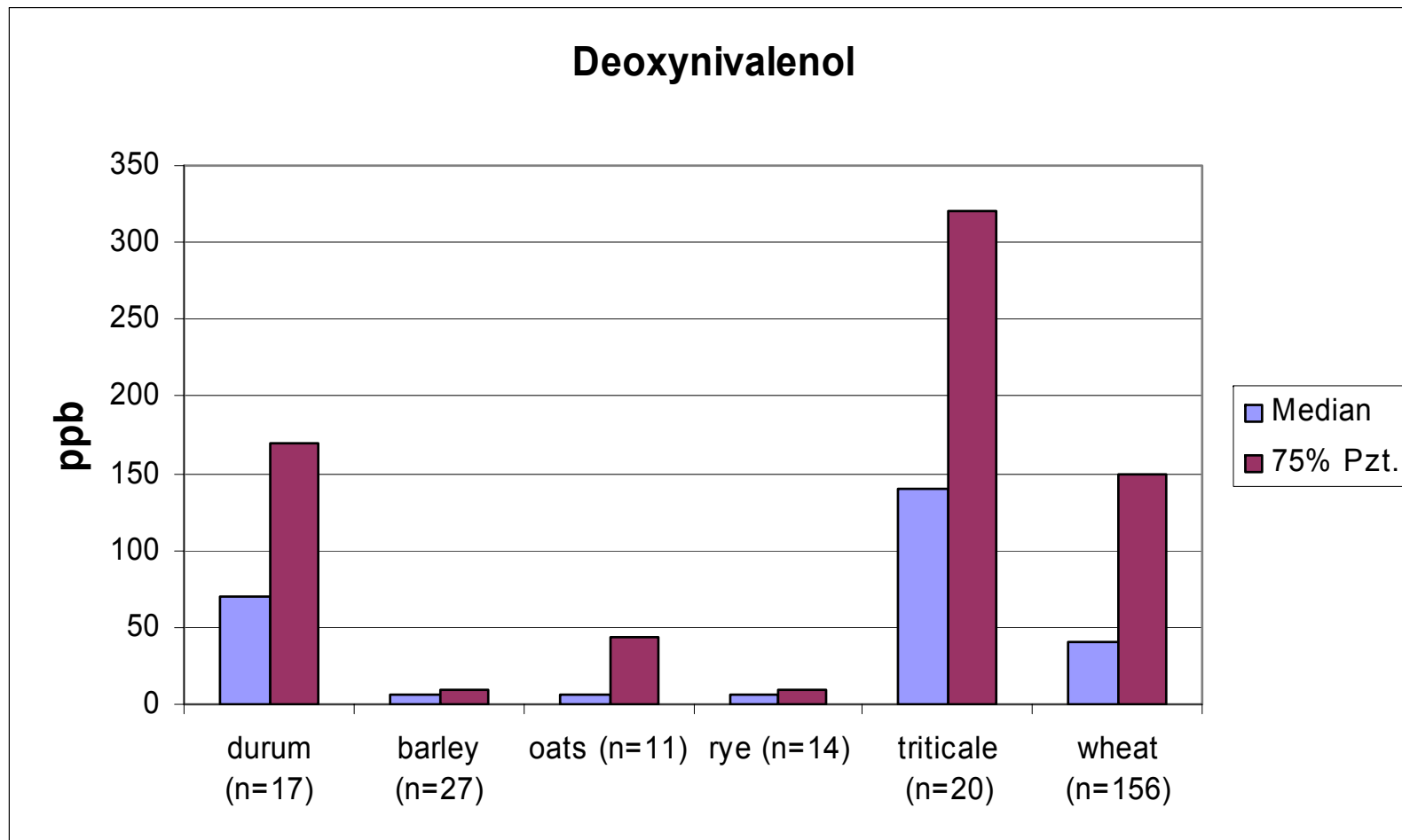
N (2005)= 58 („a posteriori“ selection due
to high DON values; not representative)

Range: LOD (<25 ppb) – 160 ppb

LOQ: 20 µg/kg



***Fusarium* toxins in unprocessed cereals (2005)**



***Fusarium* toxins in unprocessed cereals (2004, 2005)**

Nivalenol (2005; n=245):

88,8% <LOQ (<75 µg/kg)

9,5% 75-200 µg/kg

1,7% >200 µg/kg

Range: LOD – 400 ppb

Durum wheat (17):	24% >LOQ
oats (11):	36% > LOQ
rye (14):	7% > LOQ
barley (27):	11% > LOQ
wheat (156):	12% > LOQ
triticale (20):	0% > LOQ

Nivalenol (2004; n=202):

98% <LOQ (<75 µg/kg)

2% >200 µg/kg (oats)

Range: LOD -690 ppb

Fusarenone X, 3-Acetyldeoxynivalenol, 15-Acetyldeoxynivalenol (2004, 2005; n=447):

n.d. (<25 µg/kg)

A-trichothecenes (2004; n=202):

**T-2 toxin , HT-2 toxin, monoacetoxyscirpenol,
diacetoxyscirpenol**

n.d. (<25 ppb)

***Fusarium* toxins in wheat flour (2005)**

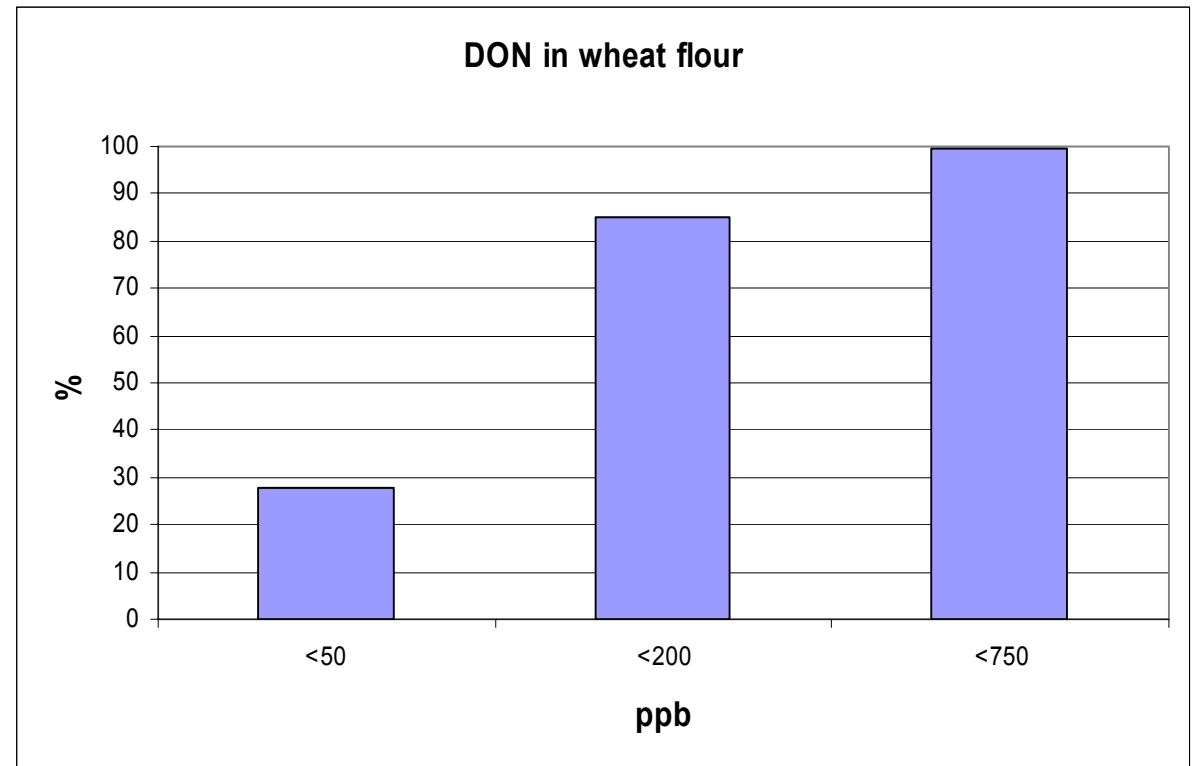
LOQ: 50 µg/kg

<200 µg/kg: 84,9 %

n.d. : 8,2 % (LOD: 25 µg/kg)

Range: LOD – 1300 ppb

n = 159



***Fusarium* toxins in wheat flour (2005)**



Nivalenol (NIV), Fusarenone X, 3-Acetyldeoxynivalenol, 15-Acetyldeoxynivalenol (n=159):

n.d. (LOD: 40 µg/kg NIV; 25 µg/kg)

Zearalenone (n=159):

100% < LOQ (<20 µg/kg)

Fumonisin B1 und B2 (n=86):

100% <LOQ (<100 µg/kg)

A-Trichothecenes (n=159):

n.d. (LOD: 30 µg/kg)

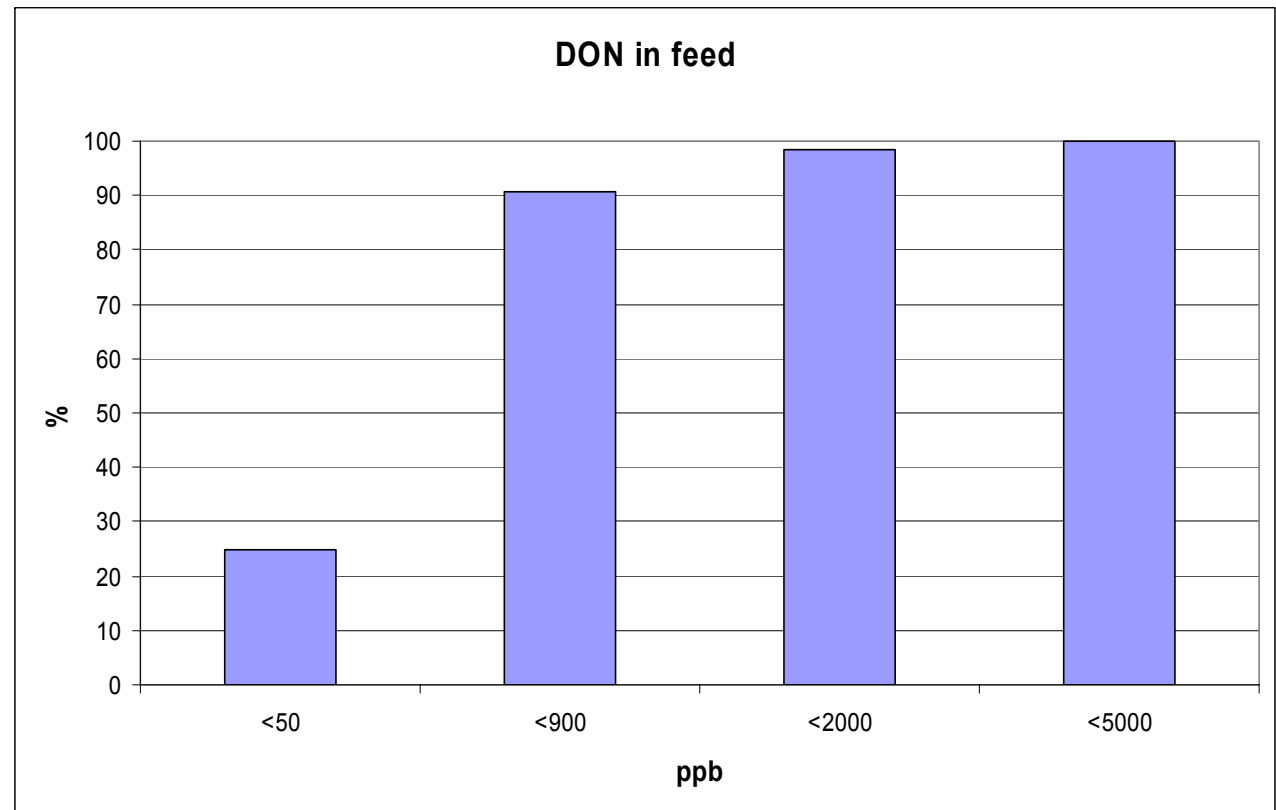
Fusarium toxins in feed (2005)

N = 525

<LOD: 20%

LOQ: 50 ppb

Range: LOD – 4000 ppb

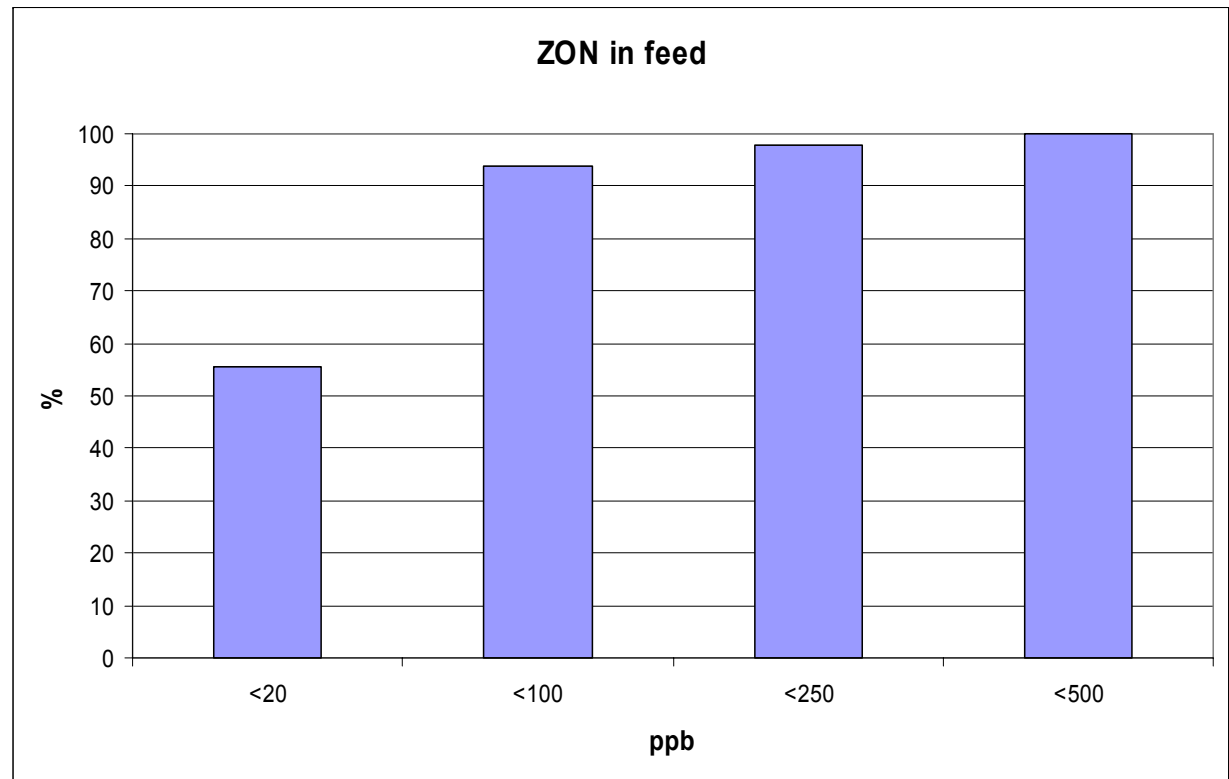


***Fusarium* toxins in feed (2005)**

N = 486

LOQ: 20 ppb

Range: LOD – 490 ppb



***Fusarium* toxins in feed (2005)**

Nivalenol (n=525):

93% < LOQ (<75 µg/kg)

84 % < LOD (<40 µg/kg)

Range: LOD - 750 µg/kg

Fumonisin B1 (n=58):

88% <LOQ (<100 µg/kg),

Range: LOD - 800 µg/kg

A-Trichothecenes (n=42):

n.d. (< 30 µg/kg)

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Thank you for your attention

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