



Up to now experience from the control of mycotoxin risk during crop and feed production in the Czech Republic

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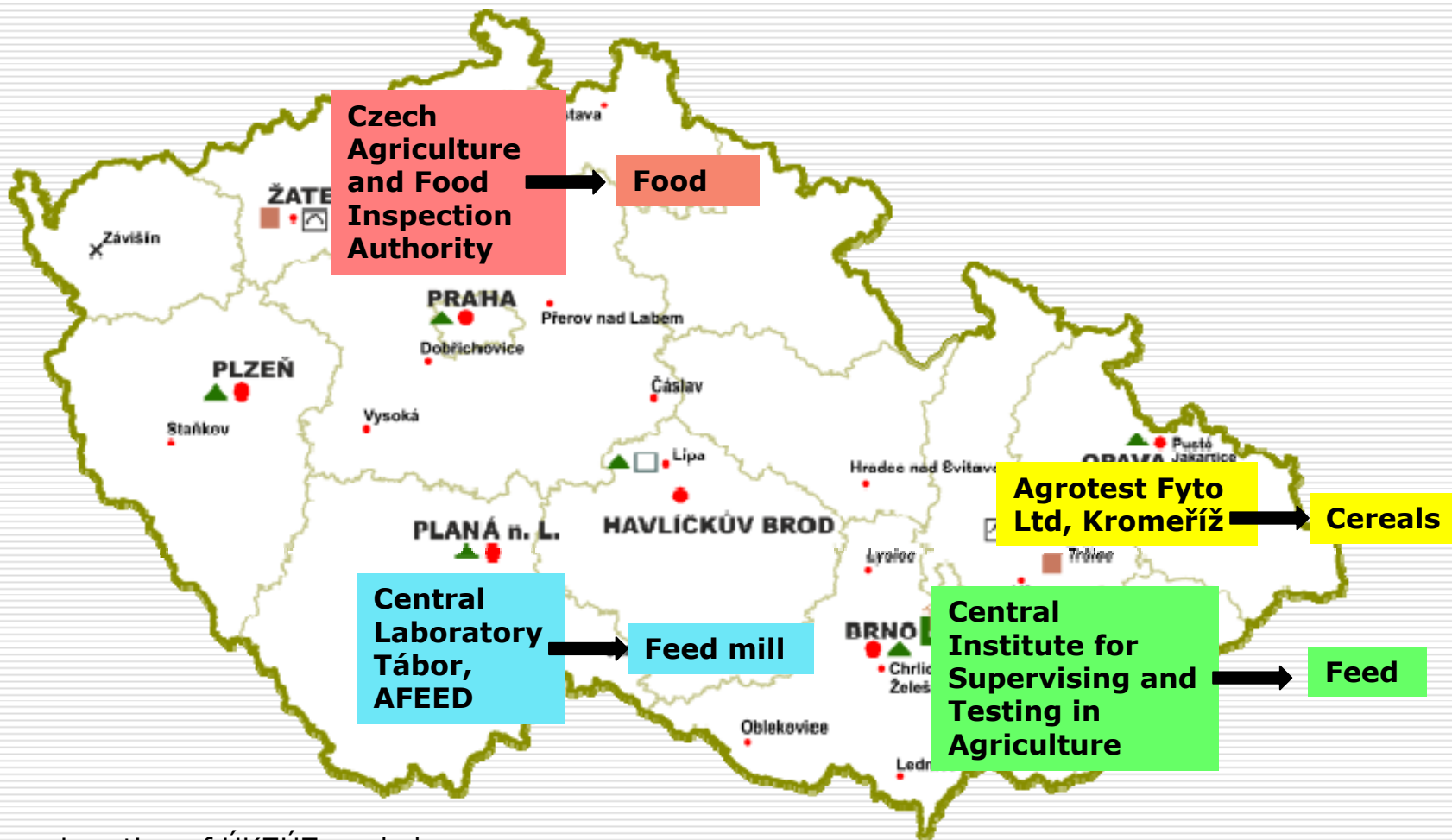
Central Institute for Supervising and Testing in Agriculture (ÚKZÚZ)

Mycotoxin Forum, 5 – 6th September 2013, Brussels





Periodical controls of mycotoxin risk

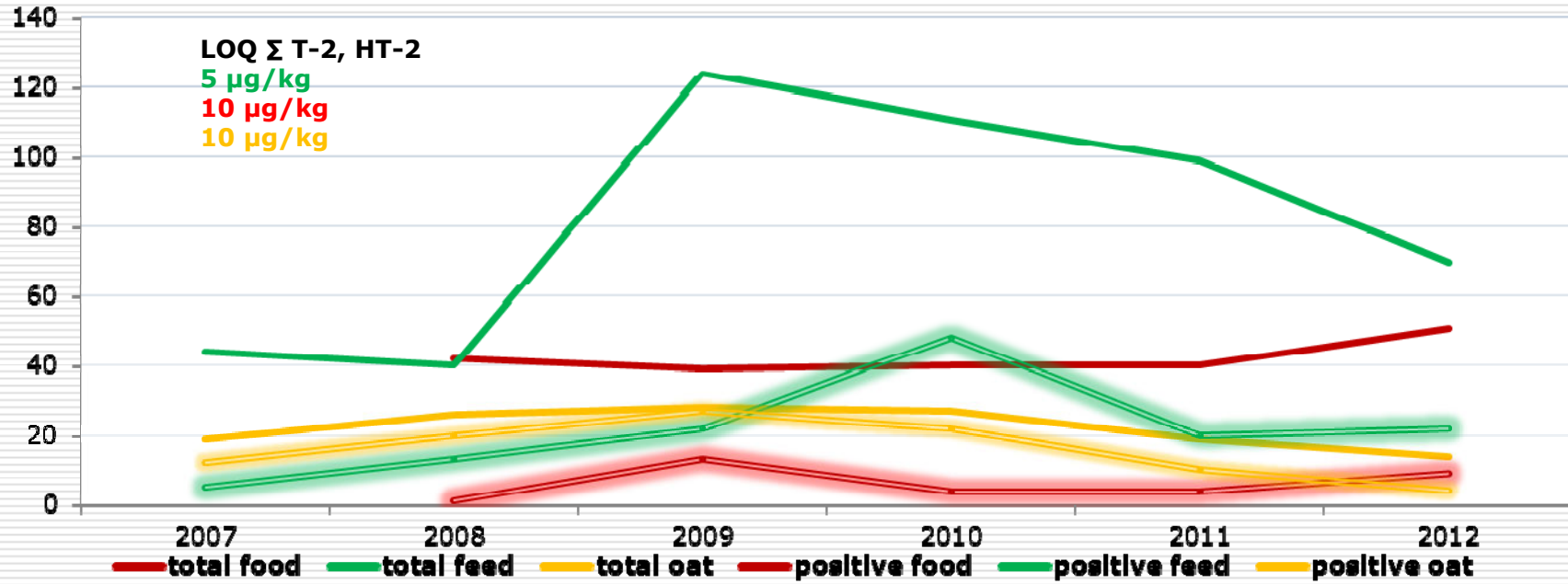


Location of ÚKZÚZ workplaces

- | | | | |
|-----------------------|--------------------------|------------------------------|-----------------------------|
| Ústředí | Zkušební stanice | Biologická testovací stanice | Laboratoře |
| Regionální pracoviště | Veřejné známkovny chmele | Samozatavná pracoviště | Lukářsko-přemýšlská stanice |

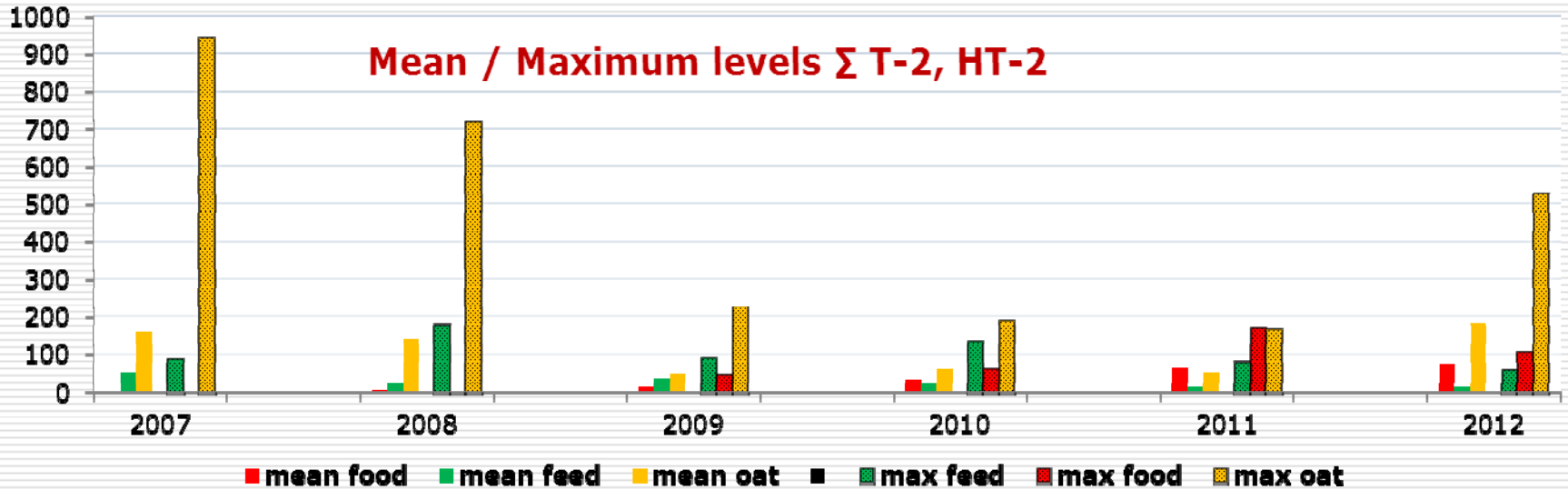
Number of samples

Inspected samples / Positive samples T-2, HT-2

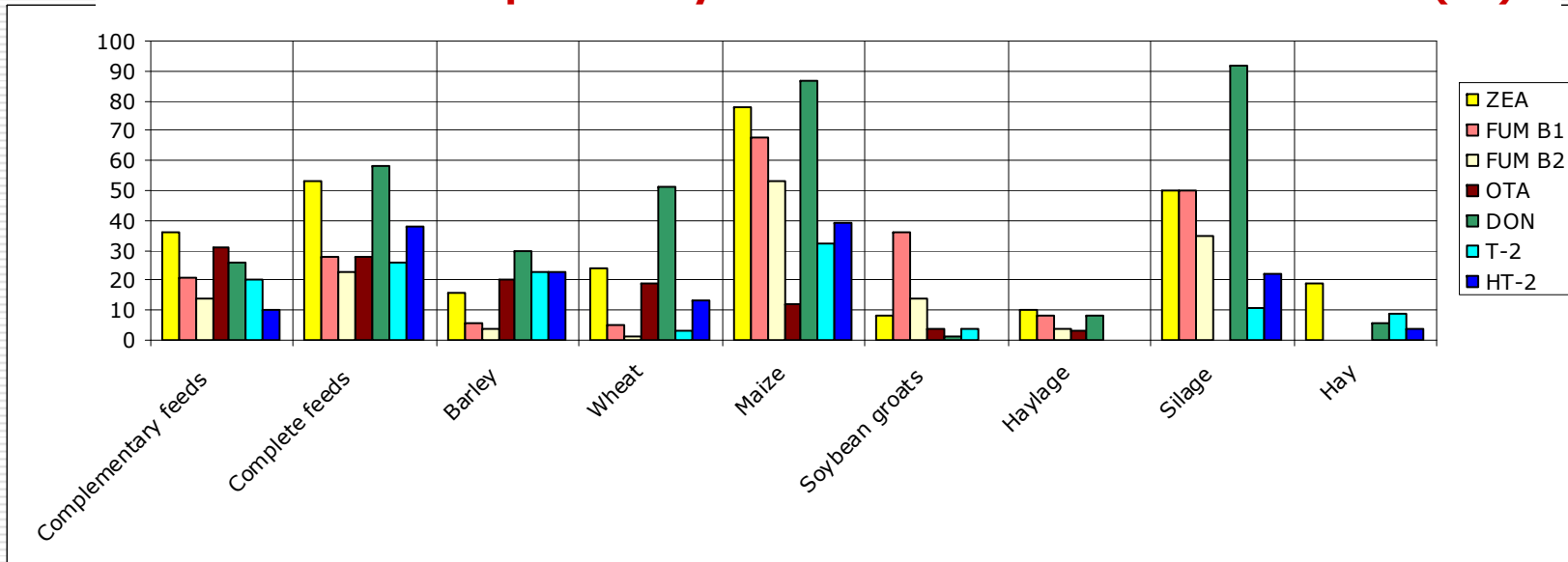


ppb

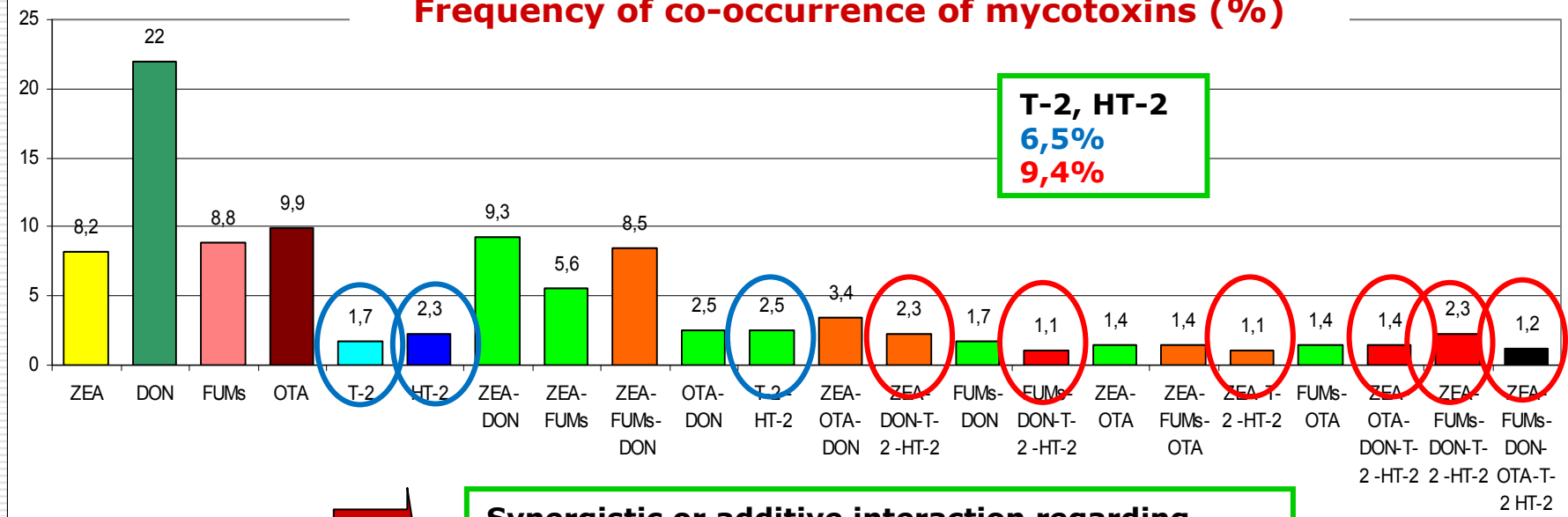
Mean / Maximum levels Σ T-2, HT-2



Distribution of inspected mycotoxins in selected feed materials (%)



Frequency of co-occurrence of mycotoxins (%)



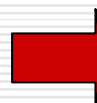
Synergistic or additive interaction regarding adverse effects on animal performance !!



Activities focused on minimizing mycotoxin contamination

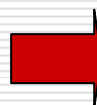
Regulation EC No 882/2004 of the European Parliament and of the Council on official controls ensures the verification of compliance with feed and food law: ... **at preventing, eliminating or reducing to acceptable levels risks to humans and animals...**

RASFF, official controls, targeted controls, monitoring, post-harvest controls, feed mill in house controls



Data evaluating

PT Mycotoxin determination in food and feed
2012: 2 samples, ZON, OTA, AF B1,
20 participants
2013: 2 samples, DON, ZON, OTA, FUM B1,
31 participants



Comparison of analytical results

Training, cooperation, workshops, conferences



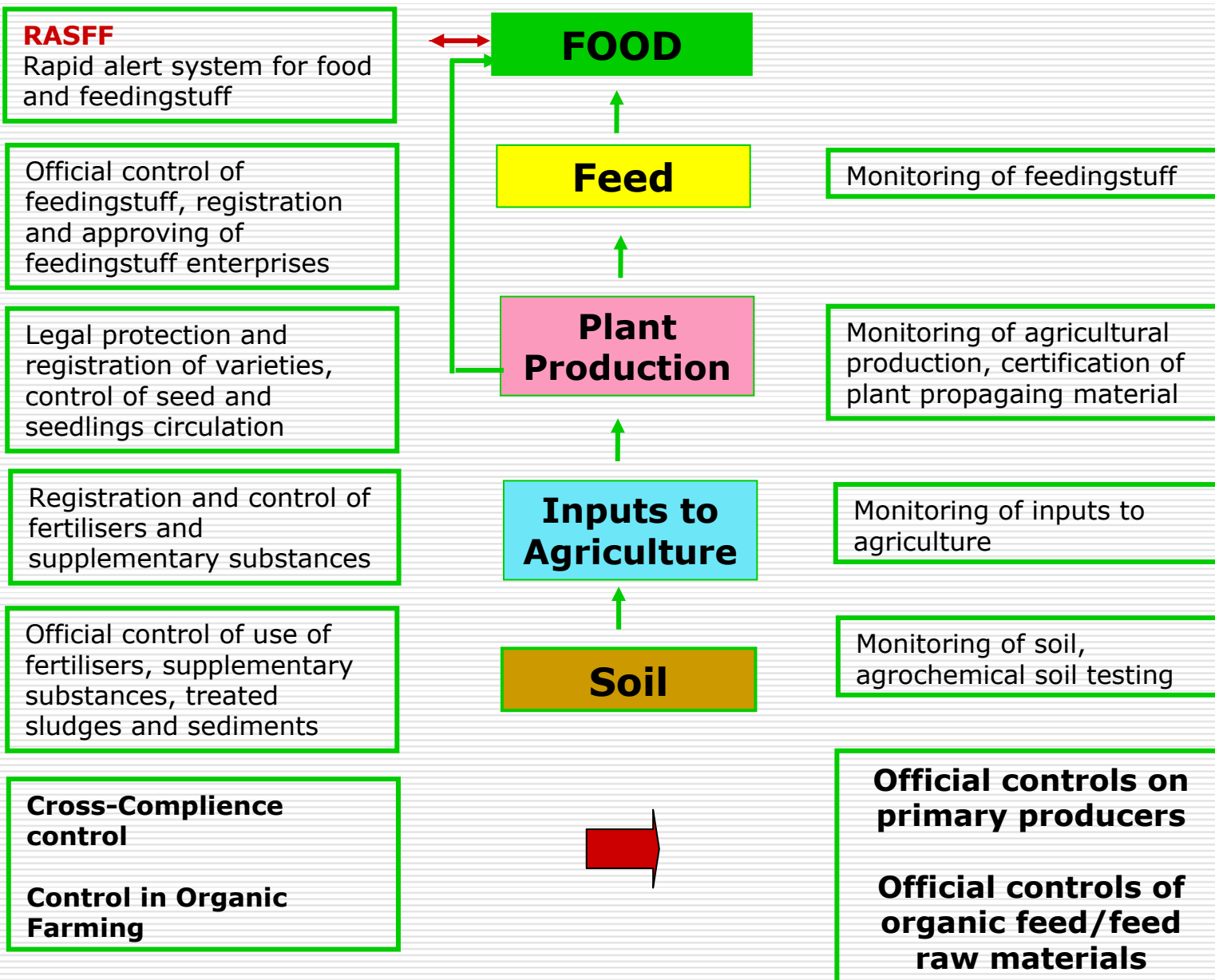
Exchange of information

Need to increase the farmers awareness to the issue of mycotoxins in feed

Need to evaluate the farmers questions/initiatives/requirements with appropriate response



ÚKZÚZ as a contributor to food and feedingstuff safety





Effect of storage duration on mycotoxin occurrence

January, February, March

April, May, June

July, August, September

October, November, December

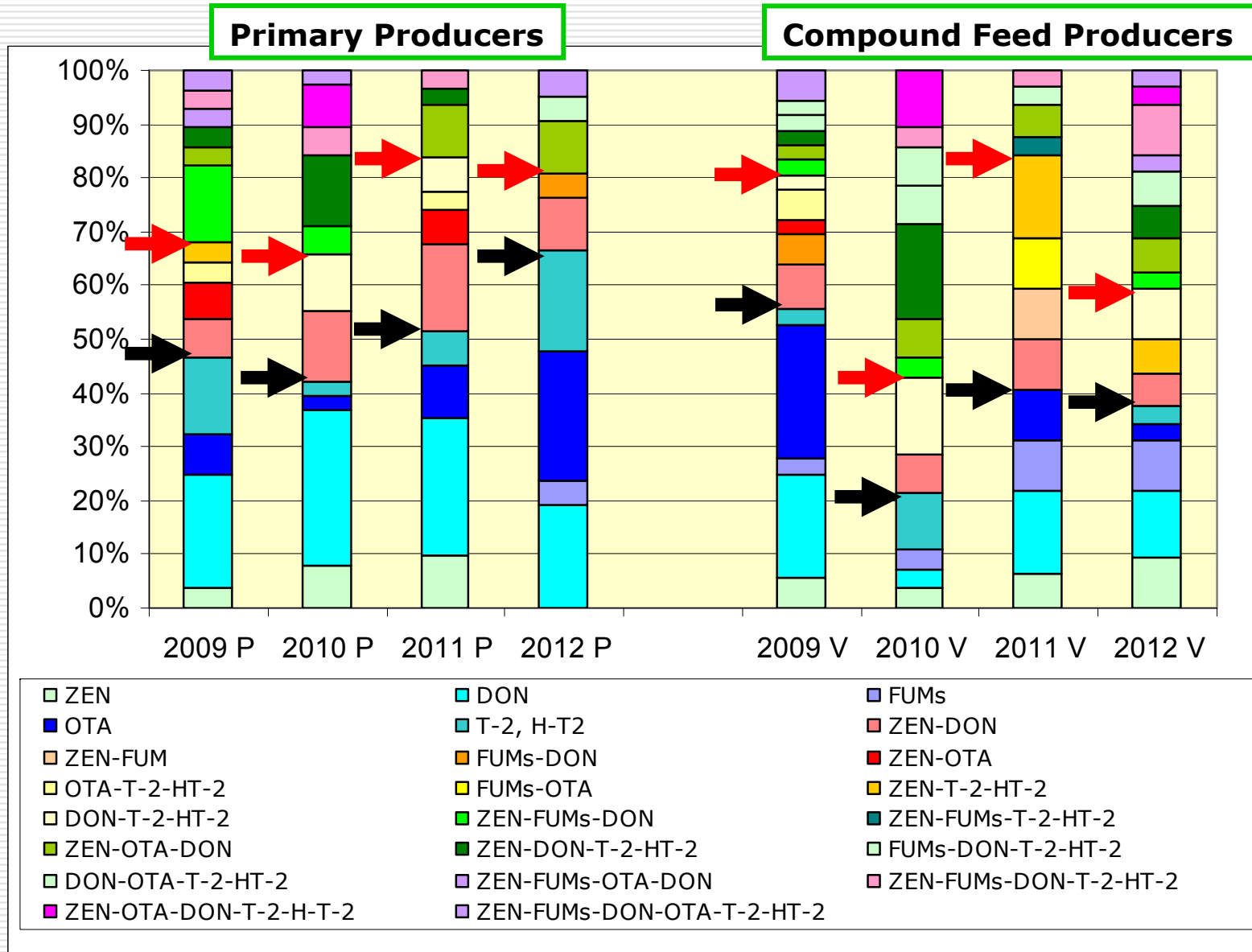
Maximum values

	Primary Producers				Compound Feed Producers			
	2009 P	2010 P	2011 P	2012 P	2009 V	2010 V	2011 V	2012 V
ZON	Maize	Wheat	Maize	Complete feed - P	Complementary feed	Complementary feed	Maize	Maize
FUMB1	Maize	Maize	Maize	Complete feed - P	Complete feed	Barley	Complete feed	Maize
FUMB2	Maize	Maize	Maize	Complete feed - P	Complementary feed	Barley	Complete feed	Oat
OTA	Haylage	Complete feed - P	Tritikale	Complete feed - P	Barley	Maize	Wheat	Complete feed
DON	Maize	Barley	Barley	Complete feed - P	Complete feed	Tritikale	Maize	Maize
T-2	Hay	Oat	Oat	Barley	Cocoa hulls	Maize	Complementary feed	Complete feed
HT-2	Maize	Oat	Oat	Barley	Complete feed - P	Complete feed - P	Complementary feed	Complete feed
	2009 P	2010 P	2011 P	2012 P	2009 V	2010 V	2011 V	2012 V
ZON	Maize	Silage	Complete feed	Wheat	Complete feed	Complete feed	Maize	Complete feed
FUMB1	Maize	Complete feed	Silage	Silage	Complementary feed	Complete feed	Soyabean groats	Maize
FUMB2	Silage	Maize	Barley	Haylage	Complete feed	Complete feed	Complete feed	Maize
OTA	Barley	Oat	Wheat	Barley	Complete feed	Complementary feed	Complete feed	Wheat bran
DON	Silage	Wheat	Complete feed	Wheat	Complementary feed	Complete feed	Wheat	Wheat bran
T-2	Barley	Wheat	Barley	Barley	Complementary feed	Complete feed	Complete feed	Complete feed
HT-2	Barley	Silage	Hay	Barley	Complementary feed	Wheat	Complete feed	Complete feed

Median values



Frequency of co-occurrence of mycotoxins (%)





Initiative from a Compound feed producer



Central Laboratory Tábor, AFEED

Modern pigs hybrids – enormous susceptibility to mycotoxicoses
Farmers requirements: DON content in complete feed < 250 ppb!

Questionable maize from biogas plants

Local problems with biogas plants

Shortage of animal production

Maize

- good quality „fodder“ for biogas plant
- wide row crop that causes soil erosion
- risky pre-crop for mycotoxins
- problematic fulfilment of crop rotation





Conclusions

- ❖ Data evaluating of T-2, HT-2 toxins: inspected food and feed samples and post harvest oat samples show low levels contamination
- ❖ Data evaluating of T-2, HT-2 toxins in feed: co-occurrence with other mycotoxins in low levels (9,4% of positive samples)
- ❖ Guidelines or maximum levels should not be set only for each mycotoxin individually but also for their combination with respect to the impact on different animal species
- ❖ Modified/new requirements for official controls (Cross-Compliance, Organic Farming) mean controls on primary producers and controls of organic feed/ feed raw material
- ❖ NRL for mycotoxins: method development and validation, opportunity of training, comparison of analytical results in PT
- ❖ Training, cooperation, workshops, data presentations is useful tool to increase the farmers awareness to the issue of mycotoxins
- ❖ Will local problems with maize and biogas plants mean the danger of increased mycotoxin occurrence?

Acknowledgement

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Thank you for your attention