



ILLUMINATE®

Summary Data on Toxin Assays

Presenter: Ken Purser, PhD, NUTRIQUEST

Special thanks to contributors of information:

David Schmale, PhD, Virginia Tech
Technical team at POET Nutrition

Objective

To gain insight into the prevalence of DON and ZEA in DDGS produced in December 2011 and January 2012.

- Two surveys conducted
 - NUTRIQUEST
 - POET Nutrition

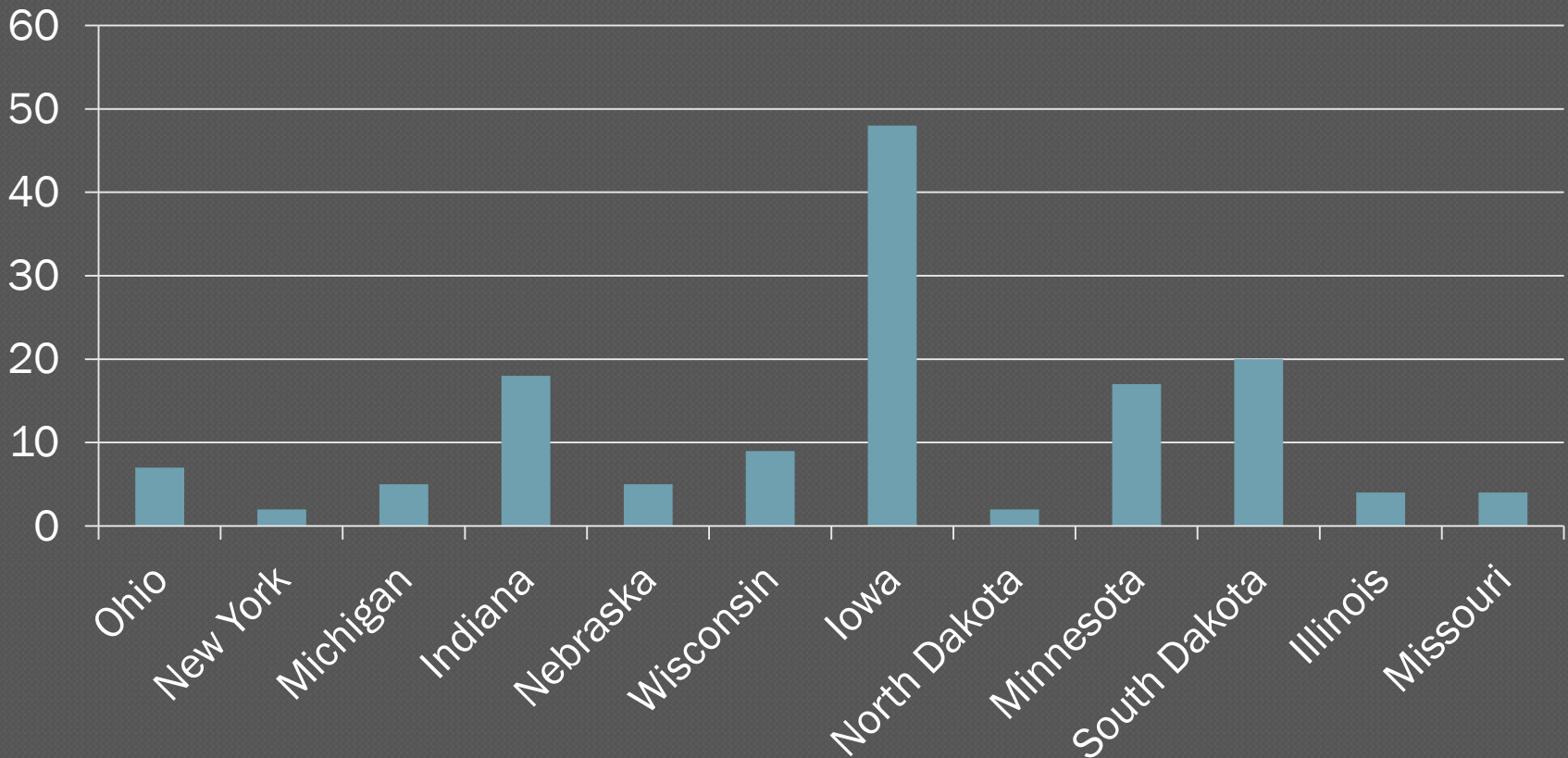
NUTRIQUEST Procedure

- DDGS samples were obtained from ILLUMINATE customers during December 2011 and January 2012.
- A total of 141 samples from 83 ethanol plants were analyzed.
- No more than two samples from a single ethanol plant were included.
- Samples were sent to Dr. David Schmale, Department of Plant Pathology, Virginia Tech for DON analysis.

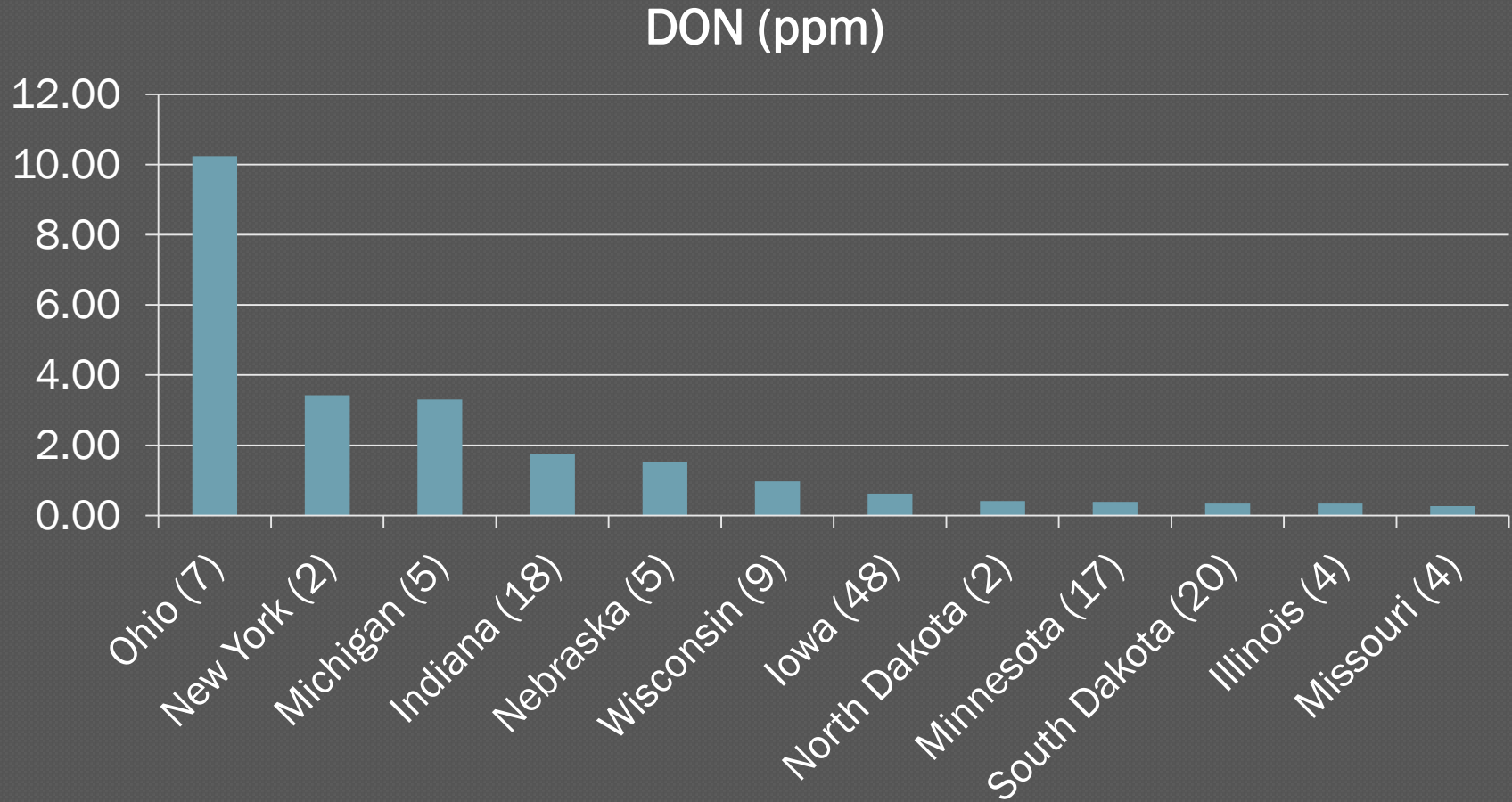
NUTRIQUEST Survey Results

Data Coverage by NUTRIQUEST

Number of Samples per State



DON Levels of DDGS Dec 2011/Jan 2012

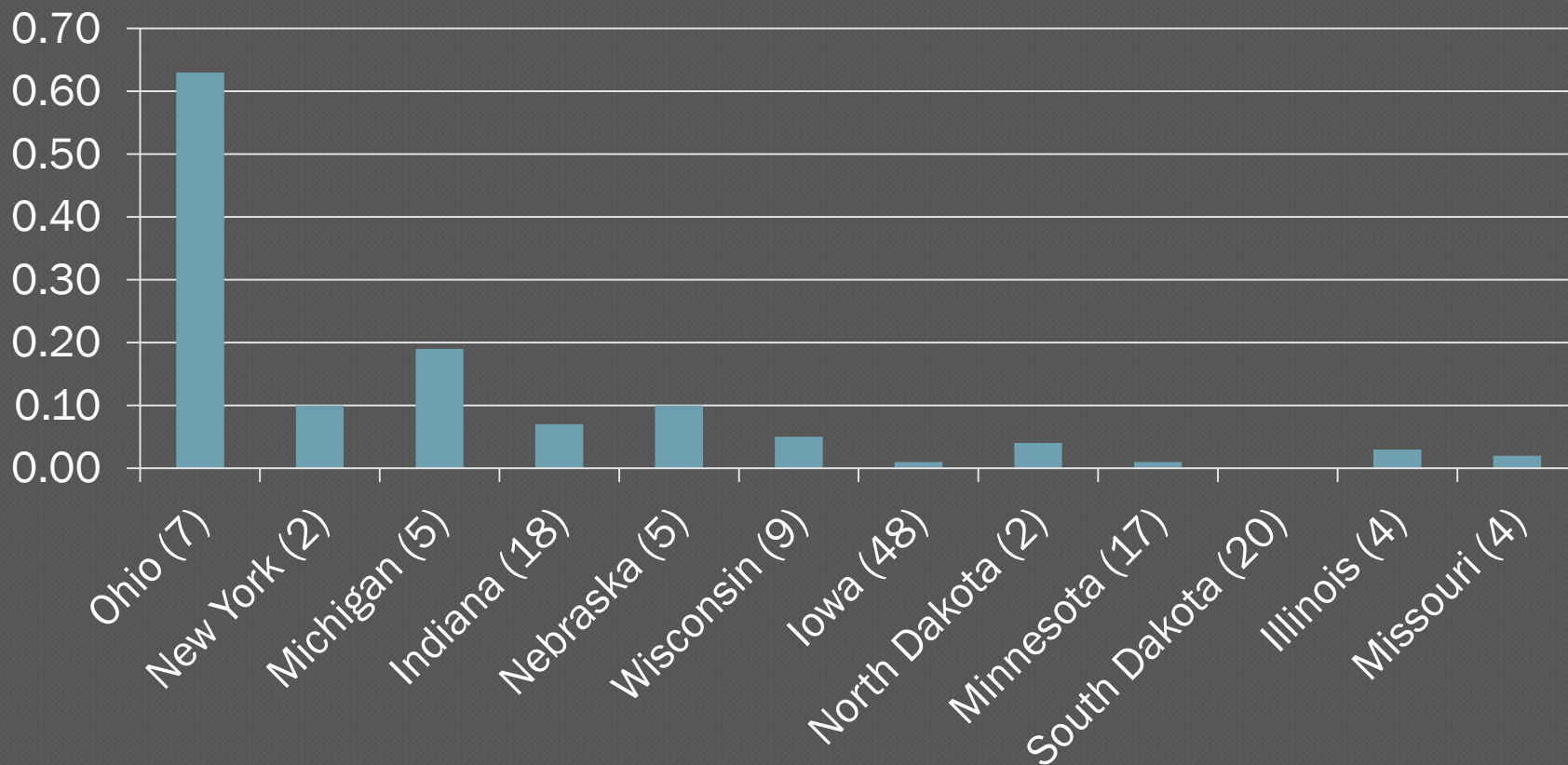


DON Levels, ppm

Item	All	OH	NY	MI	IN	NE
n	141	7	2	5	18	5
Mean	1.34	10.24	3.43	3.31	1.76	1.53
Std. Dev.	2.44	4.74	0.19	1.46	1.22	0.90
High	16.99	16.99	3.56	4.96	3.24	2.48
Low	0.04	3.50	3.29	1.81	0.47	0.49

ZEA Levels of DDGS Dec 2011/Jan 2012

ZEA (ppm)

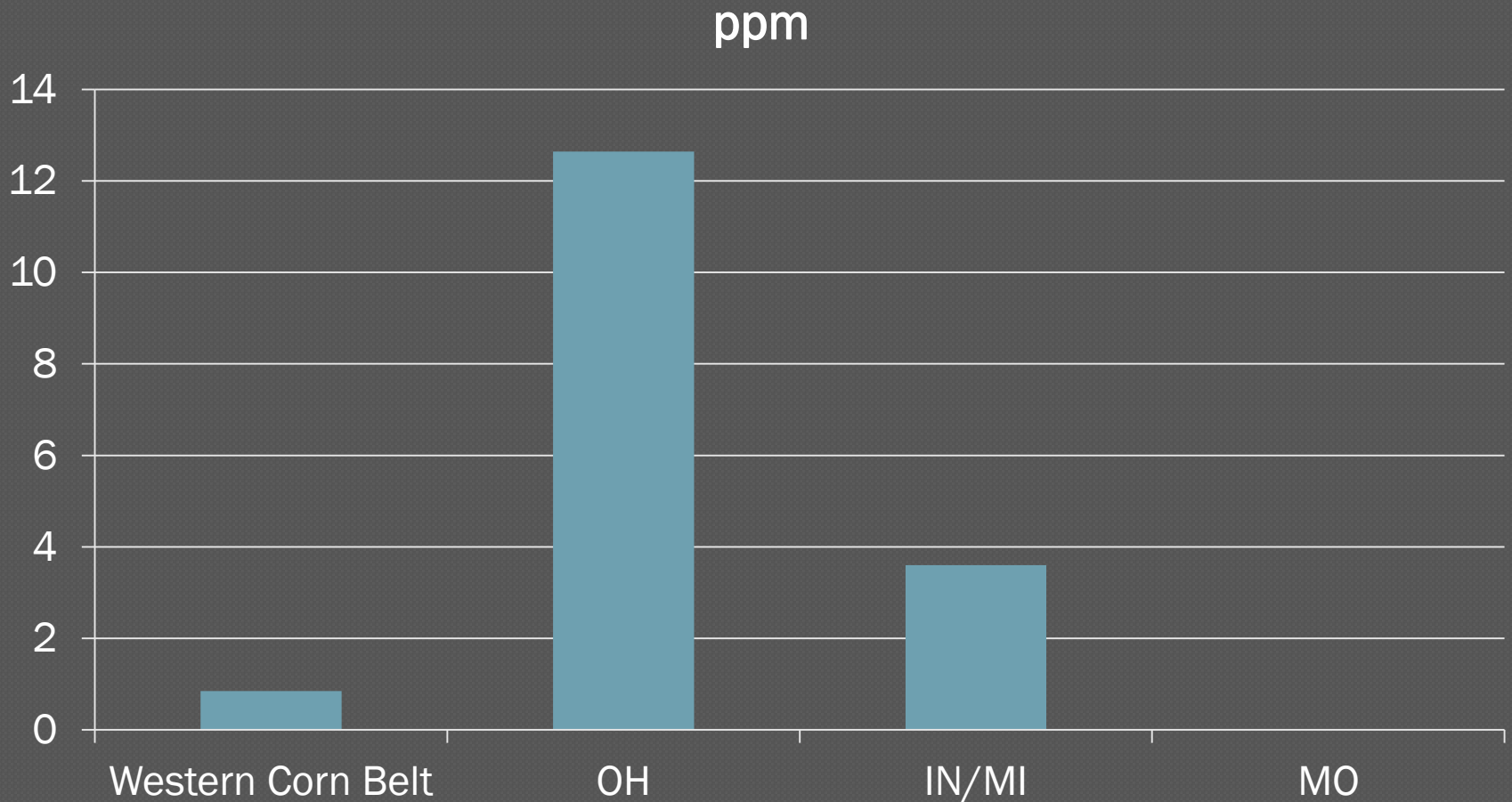


POET Survey Results

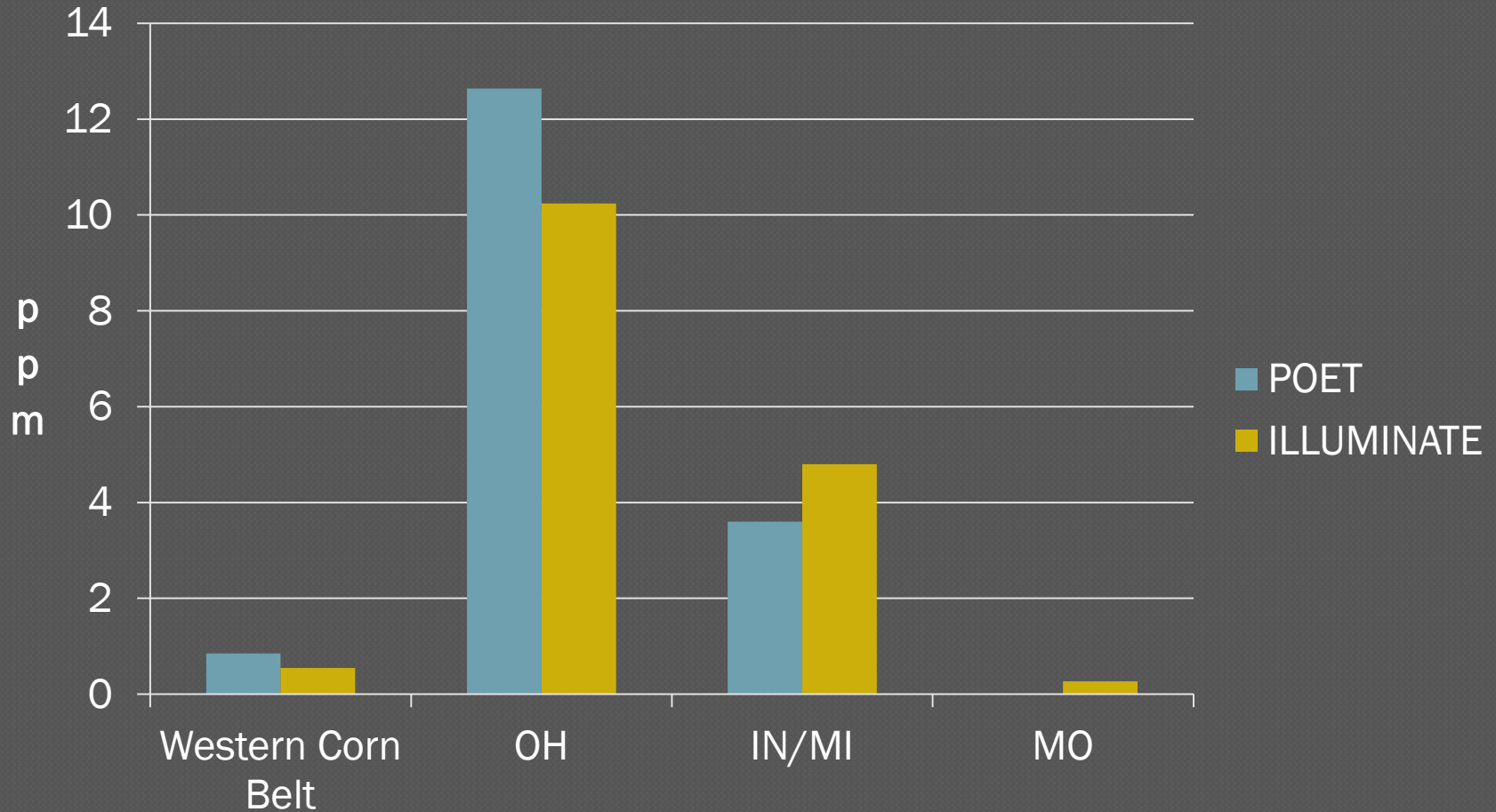
POET Procedure

- Data from POET for 2011 crop corn DDGS
 - Samples taken 11-1-11 to 3-8-12
 - Western Corn Belt: 53 samples
 - MO: 8 samples
 - IN/MI 52 samples
 - OH: 80 samples
- Measured by HPLC

POET DON Results



Comparison of DON Results



Summary

- Only DDGS samples from plants in Ohio exceeded the FDA advisory level for swine of 5 ppm DON
- For swine feed DDGS from Ohio should be monitored carefully due to high DON levels and potential zearalenone contamination
- DDGS from other states appear to be less affected by DON and zearalenone

Thank you!