

# Mycotoxin Occurrence in 2022 US Corn By-Products



JUNE 2023

**MYCOTOXIN** *monthly*



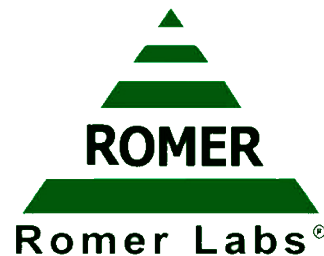
**DSM**

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# US Mycotoxin Survey



**LC-MS/MS**



The survey results represent samples sent in for surveillance testing only and does not include any sample submitted following clinical signs.

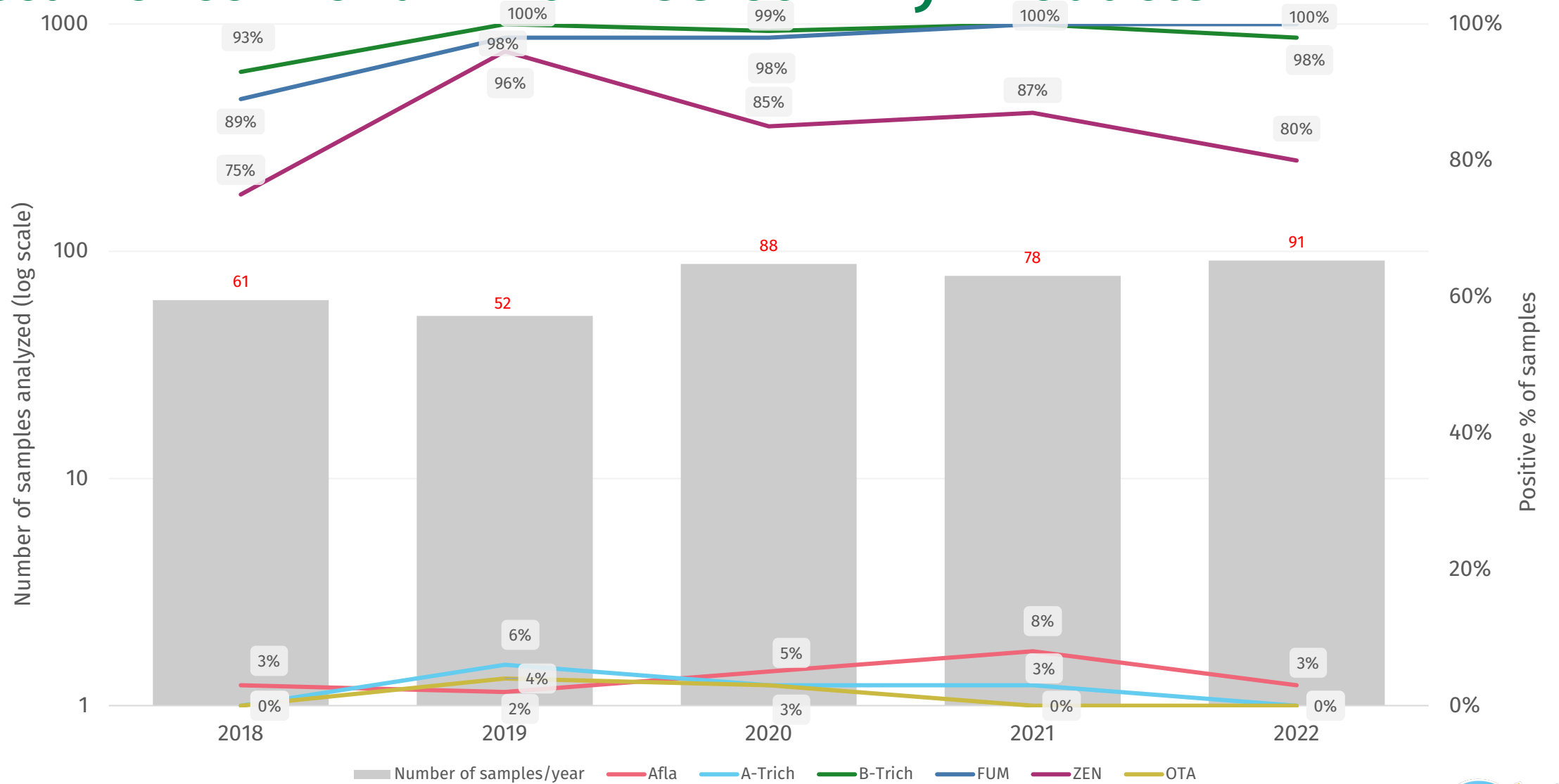
Mycotoxin Group*	Mycotoxins	Limit of Detection (ppb)
Aflatoxins (Afla)	Aflatoxin B1	1.3
	Aflatoxin B2	1.2
	Aflatoxin G1	1.1
	Aflatoxin G2	1.6
A-Trichothecenes (A-Trich)	T-2 Toxin	100.0
	HT-2 Toxin	100.0
	Neosolaniol	100.0
	Diacetoxyscirpenol (DAS)	100.0
B-Trichothecenes (B-Trich)	Deoxynivalenol (DON/Vomitoxin)	100.0
	Acetyl-deoxynivalenol (AcDON)	100.0
	Nivalenol (NIV)	100.0
	Fusarenon X (FusX)	100.0
Fumonisin (FUM)	Fumonisin B1	100.0
	Fumonisin B2	100.0
	Fumonisin B3	100.0
Zearalenone (ZEN)	Zearalenone (ZEN)	51.7
Ochratoxin A (OTA)	Ochratoxin A (OTA)	1.1

\*Results are reported as the summation of mycotoxin levels detected per Mycotoxin Group. (For example, B-Trich represents total contamination detected for DON + AcDON + NIV + FusX)

# 2022 US Corn By-Products\* (dry matter basis)

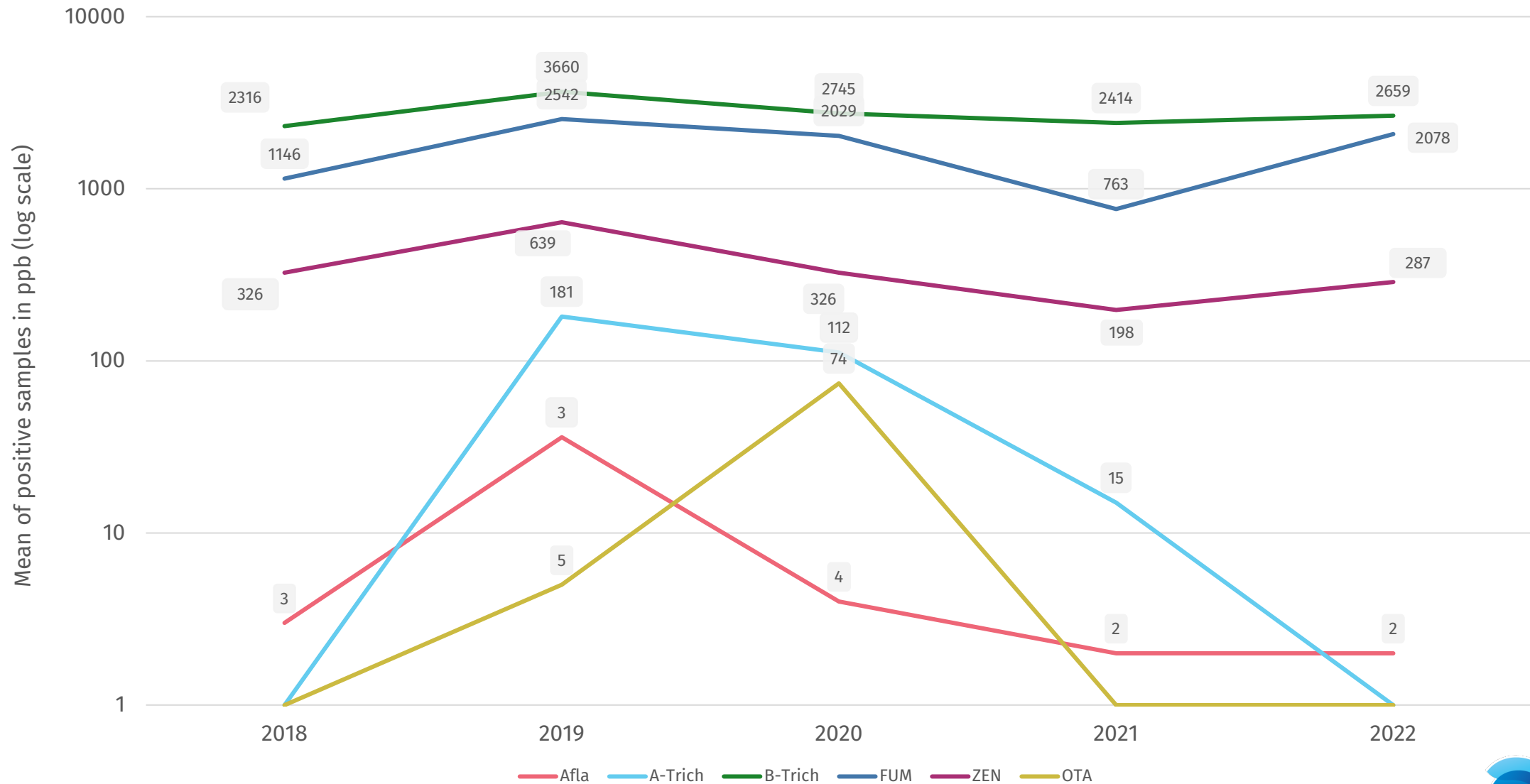
\*Including distillers grains and corn gluten products

# Occurrence Trend in 2022 US Corn By-Products\*



\*Including distillers grains and corn gluten products. Based on the samples analyzed.

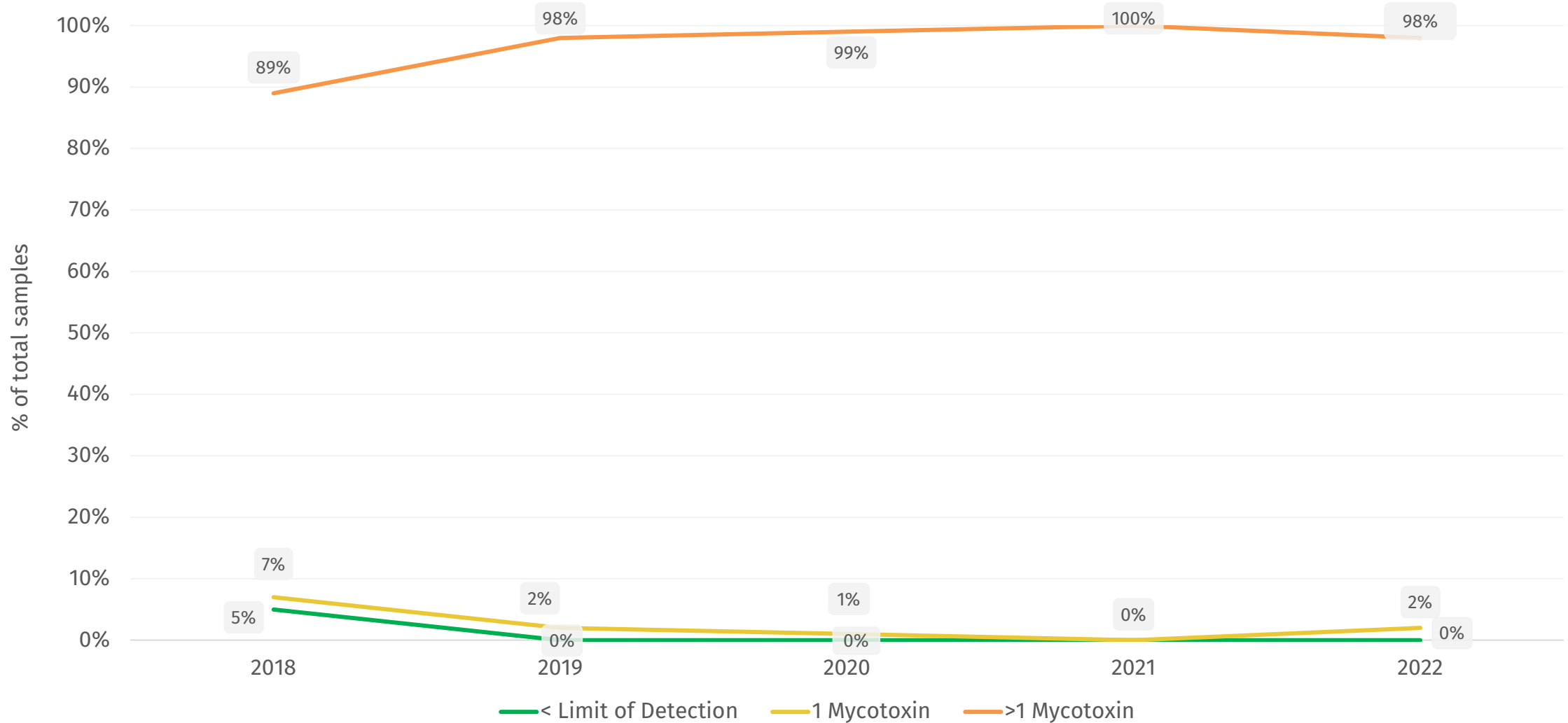
# Mean of Positives Trend in 2022 US Corn By-Products\*



\*Including distillers grains and corn gluten products. Based on the samples analyzed.



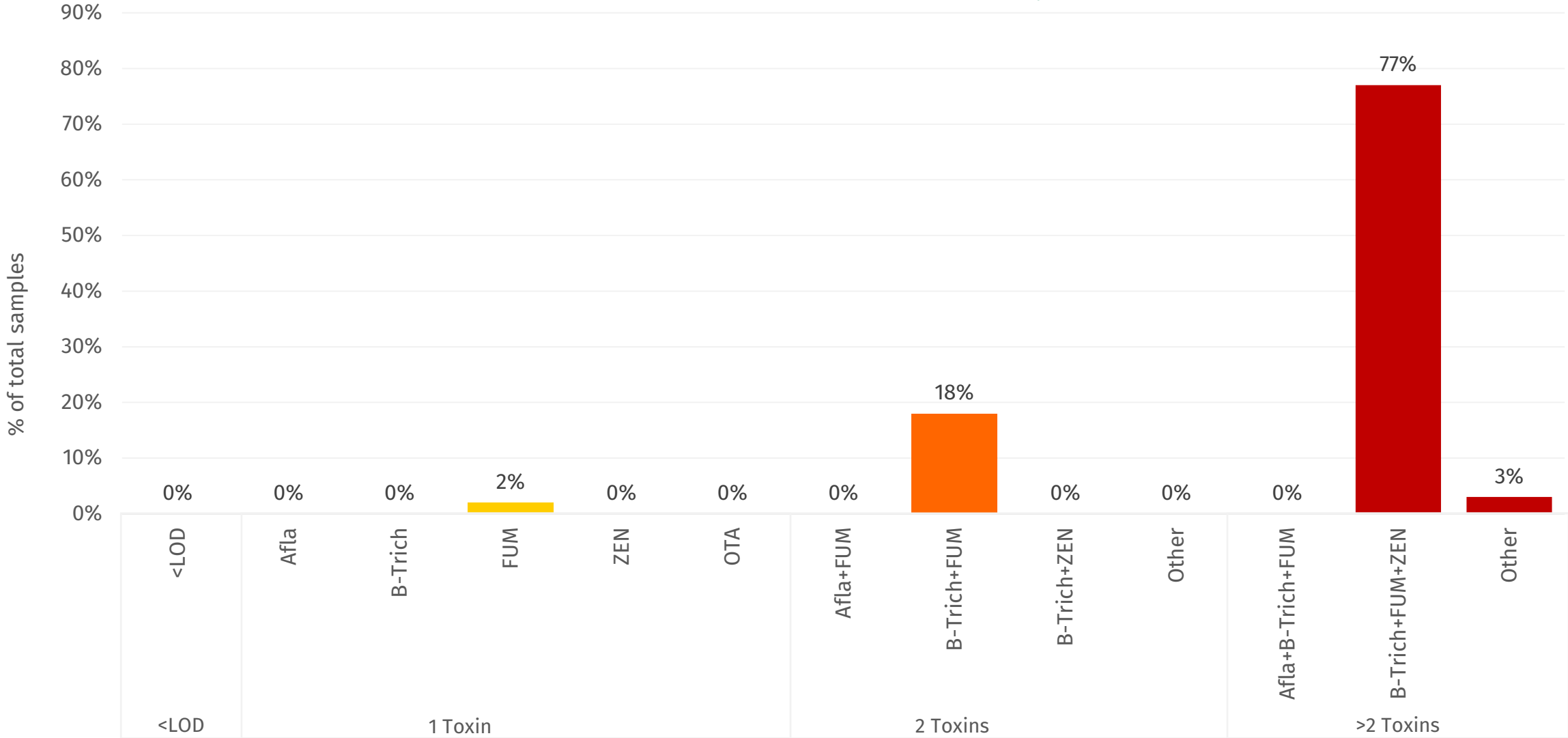
# Co-occurrence Trend in 2022 US Corn By-Products\*



\*Including distillers grains and corn gluten products.  
Based on the samples analyzed. Values may not total 100% due to rounding.



# Co-occurrence Profile in 2022 US Corn By-Products\*



\*Including distillers grains and corn gluten products.  
Based on the samples analyzed. Values may not total 100% due to rounding.

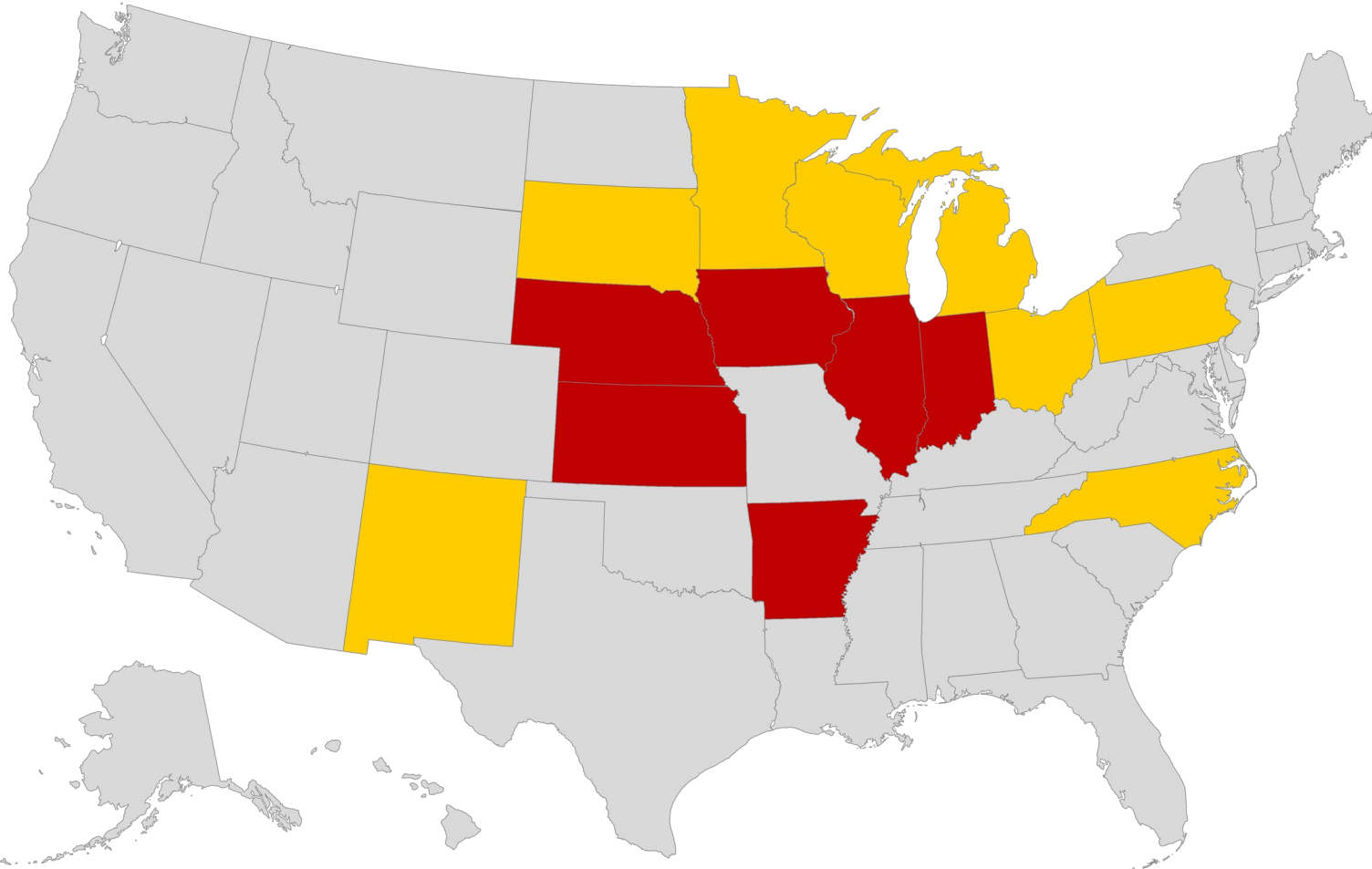








# 2022 Corn By-Products\* Risk by State – FUM



State	Number of Samples	% Positive Samples	Avg of Positive Samples
KS	3	100	8000
NE	3	100	4865
AR	1	100	4100
IN	3	100	3333
IA	31	100	2261
IL	8	100	2150
MI	3	100	1833
OH	3	100	1467
PA	1	100	1400
NC	4	100	1225
NM	2	100	1200
WI	25	100	1132
MN	2	100	750
SD	2	100	350

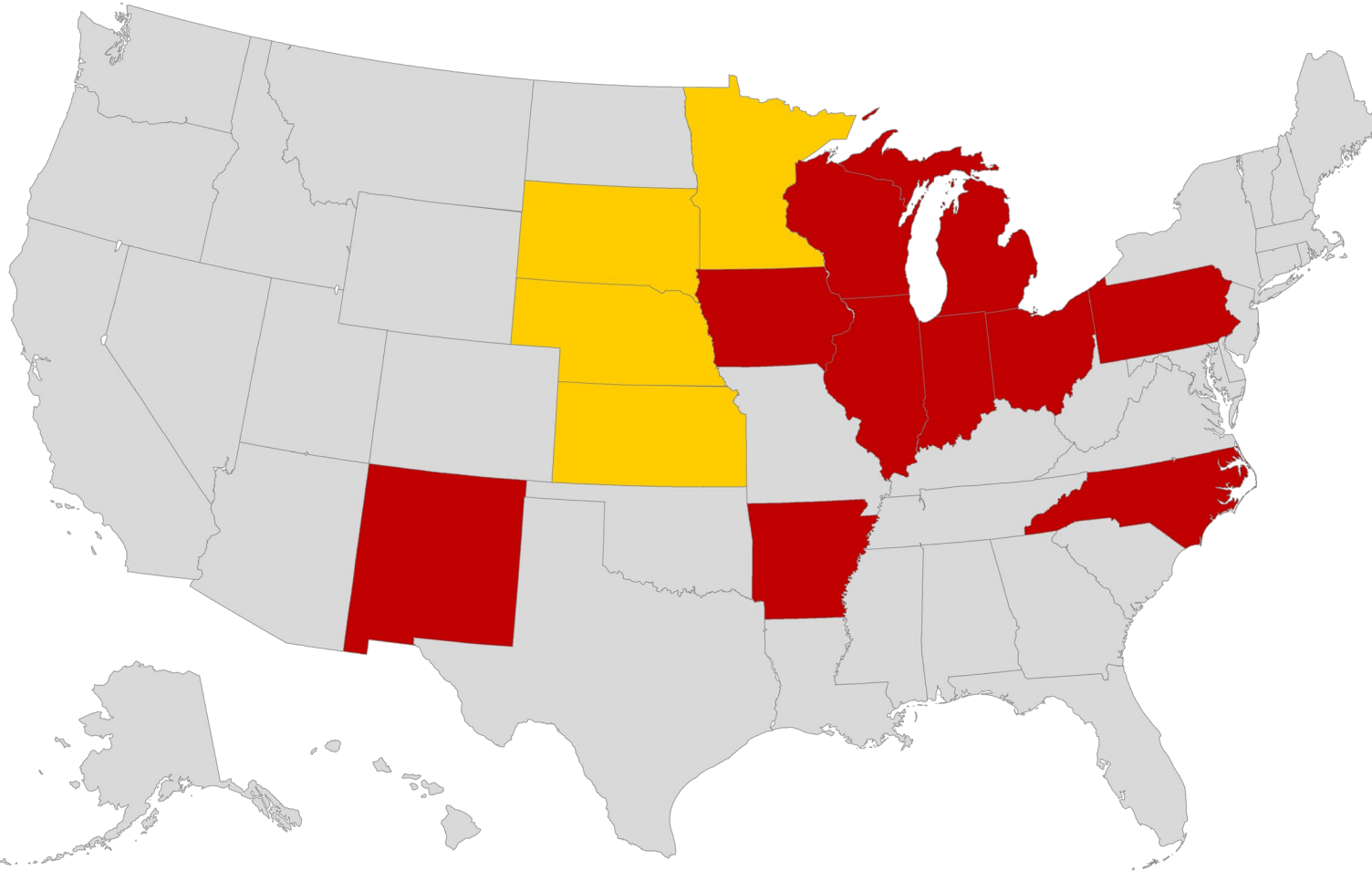
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- State with average > 2000 ppb
- State with average < 2000 ppb
- State with samples < LOD (100 ppb)
- No sample submitted

\*Including distillers grains and corn gluten products.  
Based on the samples analyzed in this region.



# 2022 Corn By-Products\* Risk by State – ZEN



State	Number of Samples	% Positive Samples	Avg of Positive Samples
NC	4	100	1321
OH	3	100	976
PA	1	100	466
IN	3	100	392
IL	8	100	231
NM	2	50	218
WI	25	96	211
MI	3	100	149
IA	31	68	147
AR	1	100	116
KS	3	67	92
NE	3	33	77
MN	2	50	54
SD	2	0	0

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- State with average > 100 ppb
- State with average < 100 ppb
- State with samples < LOD (51.7 ppb)
- No sample submitted

\*Including distillers grains and corn gluten products.  
Based on the samples analyzed in this region.

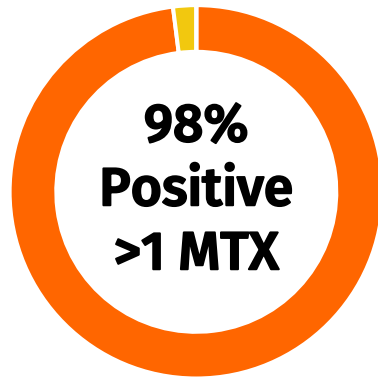


# Mycotoxin Survey Summary – 2022 US Corn By-Products\*

91 corn by-product samples submitted from 14 states



vs. 100% in 2021



vs. 100% in 2021

vs. 2021

**B-Trich**

- 98% positive / ↓ from 100%
- 2659 ppb / ↑ from 2414 ppb

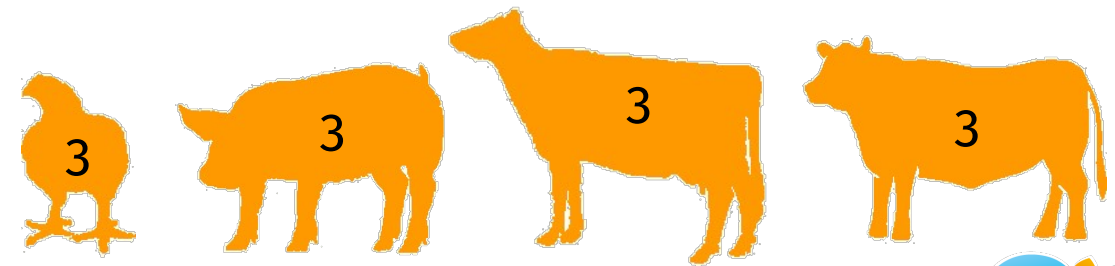
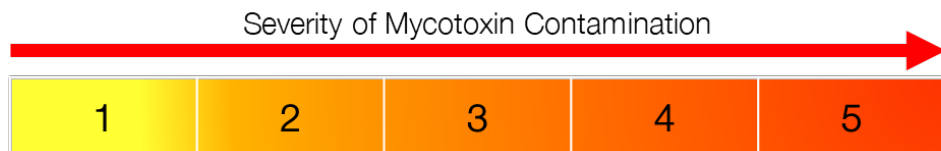
**FUM**

- 100% positive / ↓ from 100%
- 2078 ppb / ↑ from 763 ppb

**ZEN**

- 80% positive / ↓ from 87%
- 287 ppb / ↑ from 198 ppb

## Forecasted potential risk for livestock production\*\*:



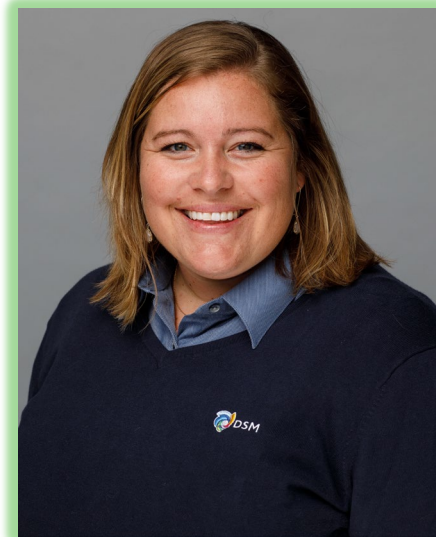
\*Including distillers grains and corn gluten products.  
 \*\*Based on the samples analyzed.

# Questions?



# Thank you!

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