

Mycotoxin Occurrence in 2022 US Corn Grain



DECEMBER 2022

MYCOTOXIN *monthly*



DSM

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Mycotoxins & Analysis



LC-MS/MS



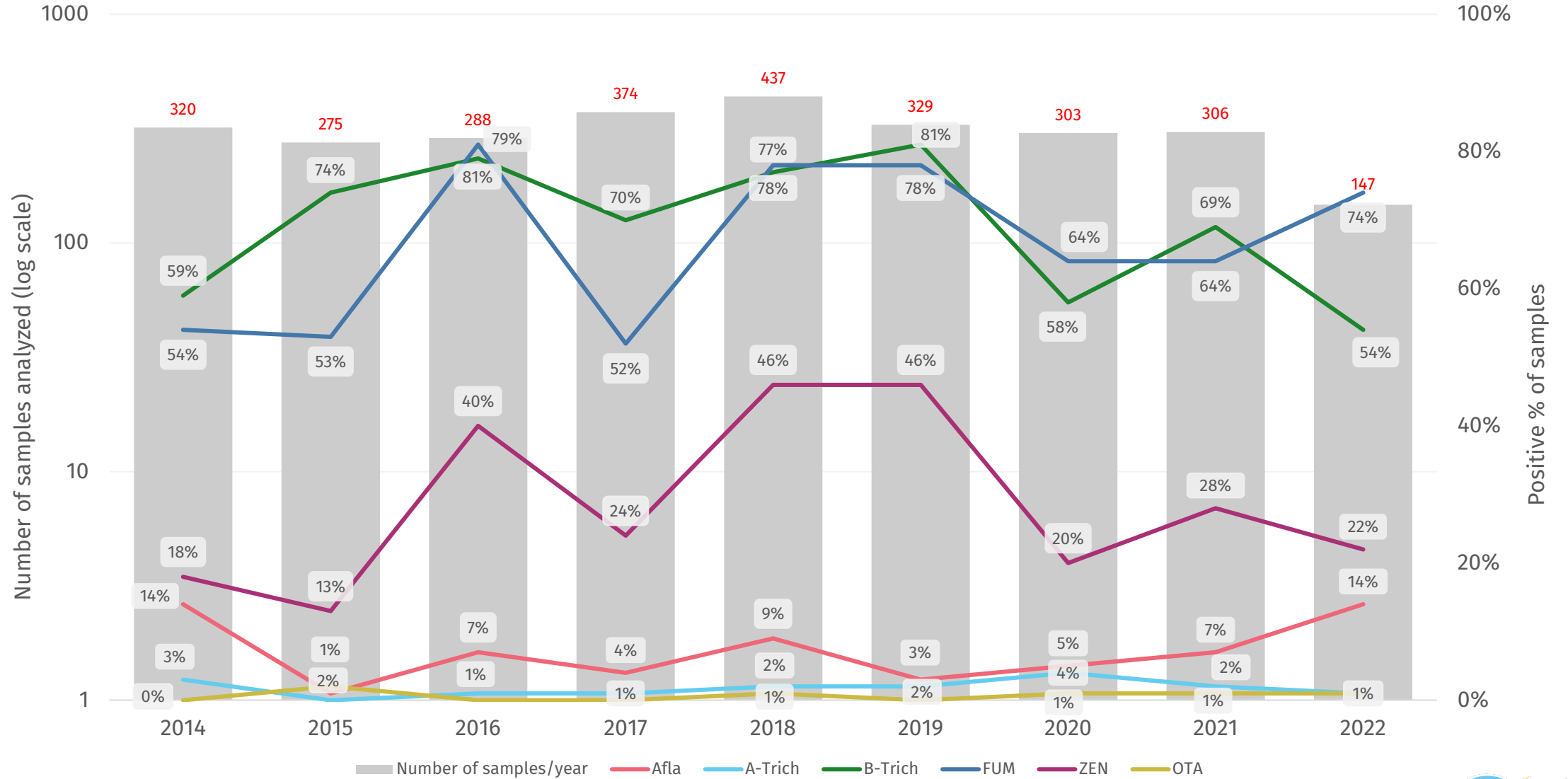
The survey results represent samples sent in for surveillance testing only and does not include any sample submitted following clinical signs.

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

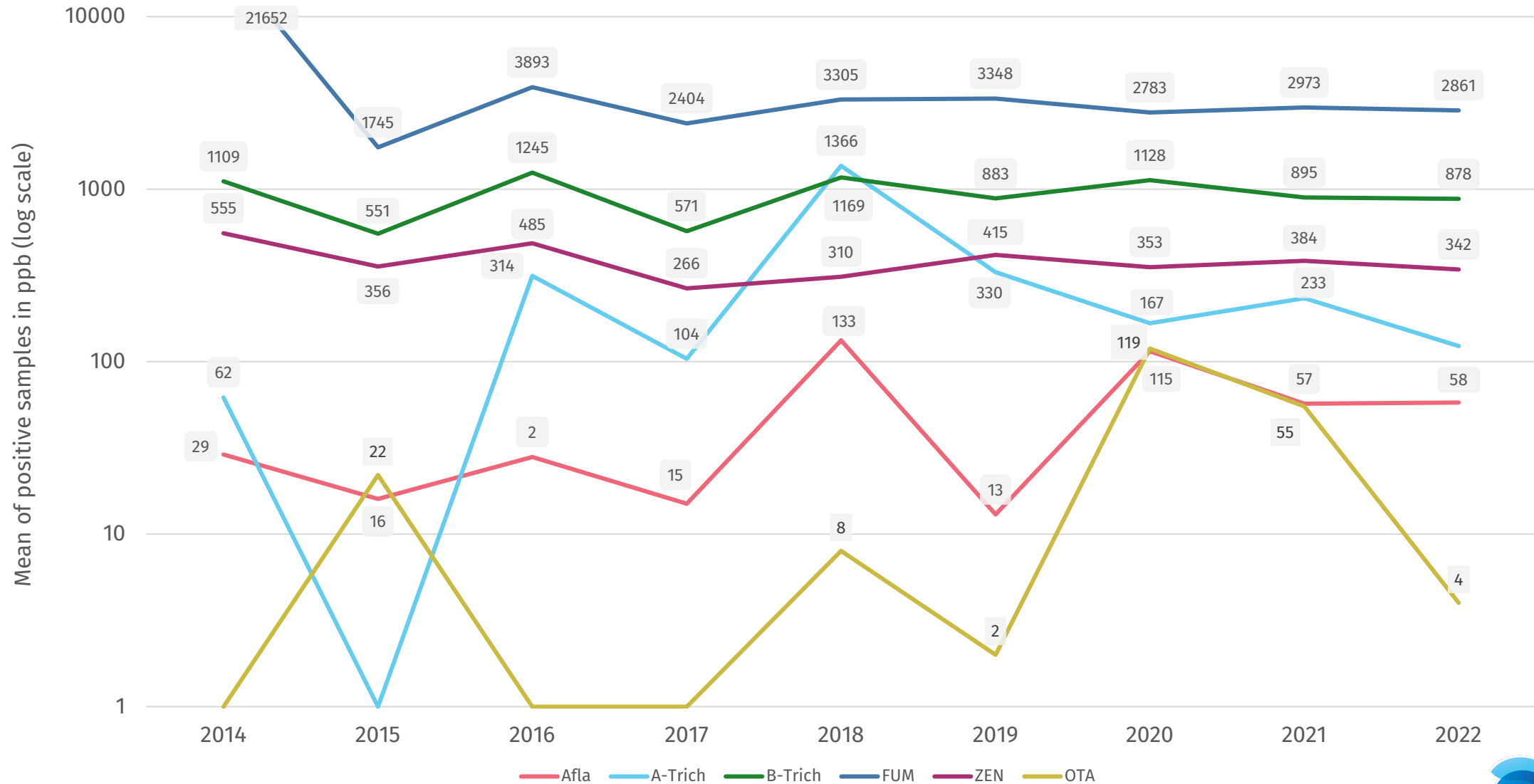
*Results are reported as the summation of mycotoxin levels detected per Mycotoxin Group. (For example, B-Trich represents total contamination detected for DON + AcDON + NIV + FusX)

2022 US Corn (as-fed basis)

Occurrence Trend in 2022 US Corn



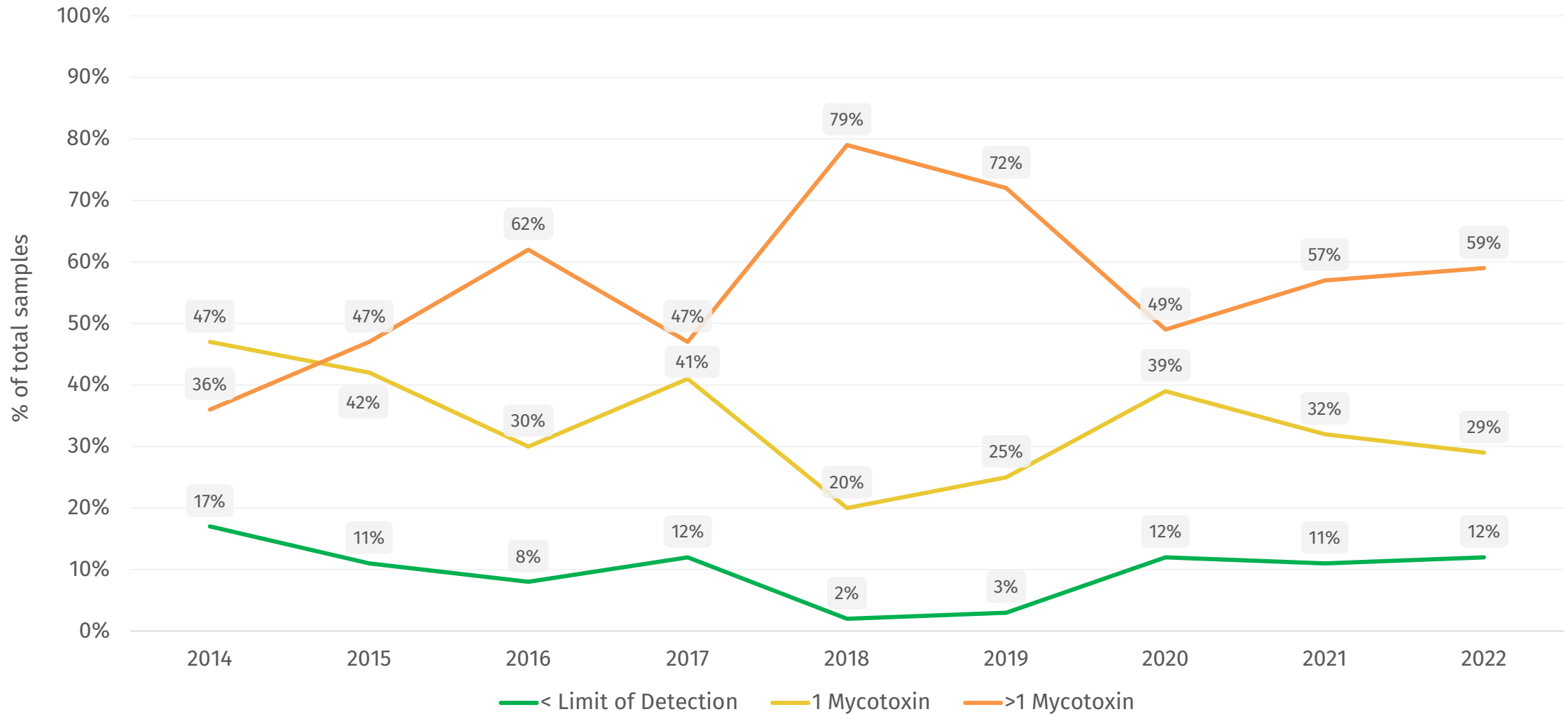
Mean of Positives Trend in 2022 US Corn



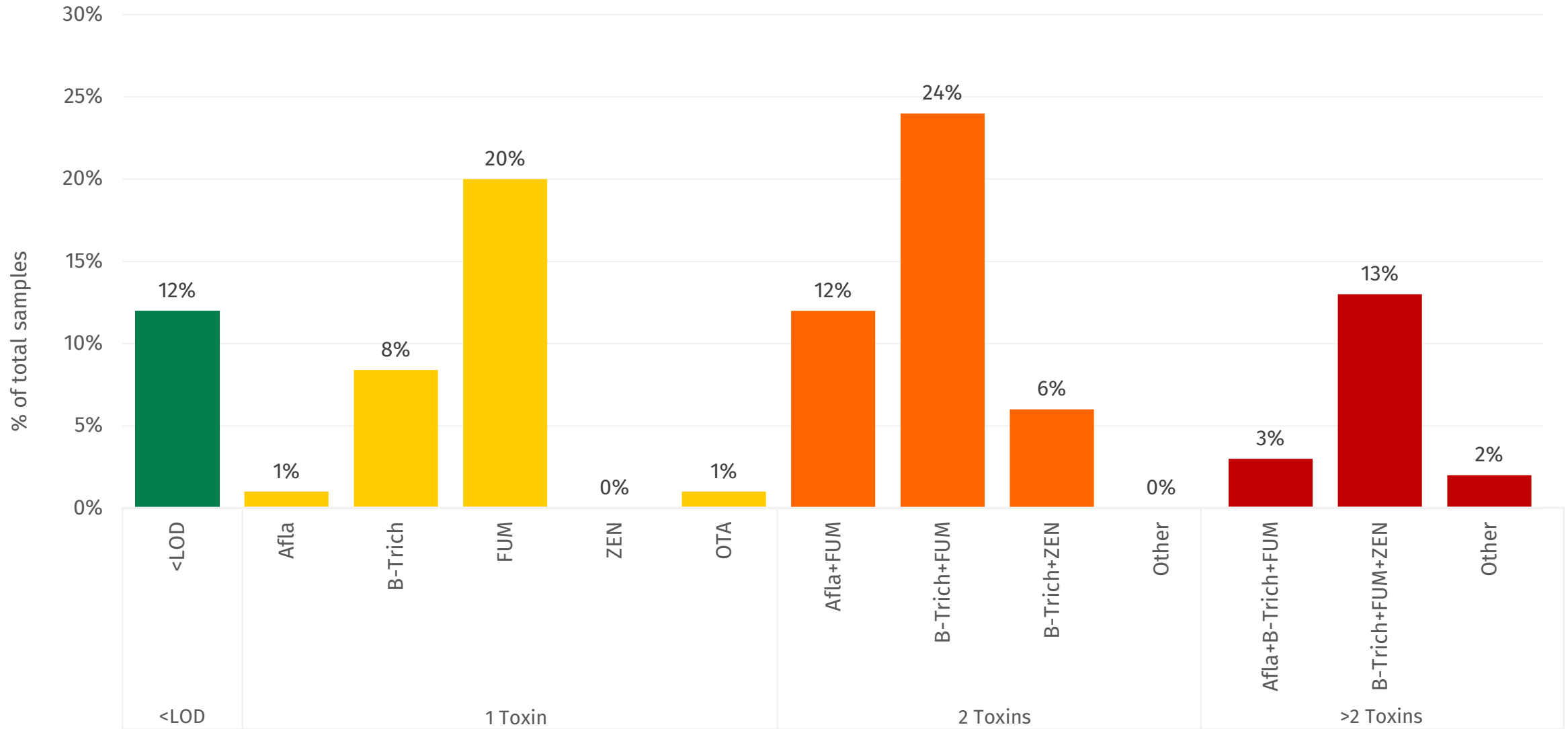
Based on the samples analyzed.



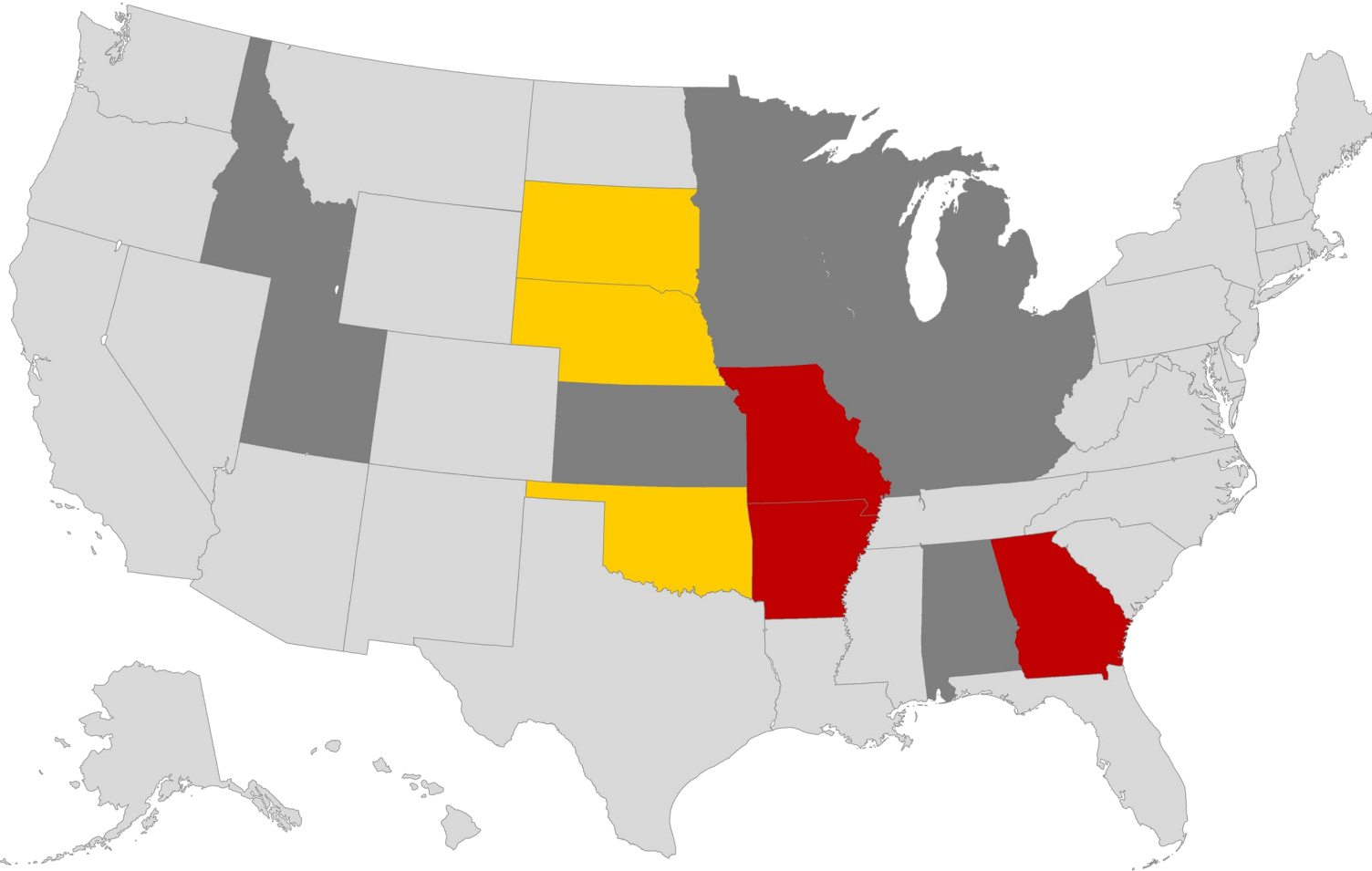
Co-occurrence Trend in 2022 US Corn



Co-occurrence Profile in 2022 US Corn



2022 Corn Risk by State – Afla

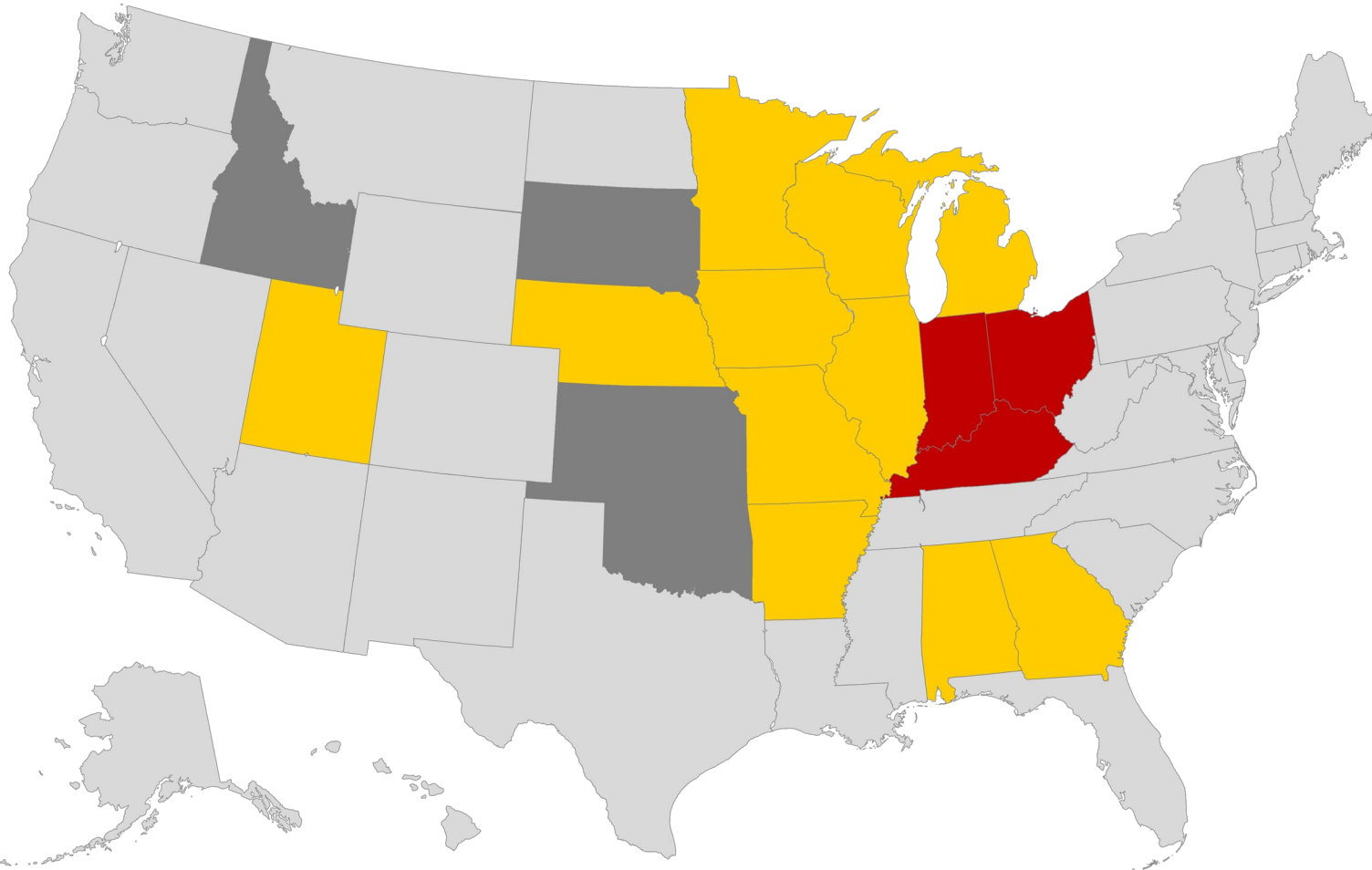


State	Number of Samples	% Positive Samples	Avg of Positive Samples
AR	3	33	602
MO	14	14	58
GA	15	100	32
OK	1	100	9
NE	18	6	7
SD	3	33	5
AL	3	0	0
IA	14	0	0
ID	1	0	0
IL	3	0	0
IN	18	0	0
KS	4	0	0
KY	2	0	0
MI	5	0	0
MN	14	0	0
OH	21	0	0
UT	1	0	0
WI	7	0	0

- State with average > 20 ppb
- State with average < 20 ppb
- State with samples < LOD (1 ppb)
- No sample submitted



2022 Corn Risk by State – B-Trich



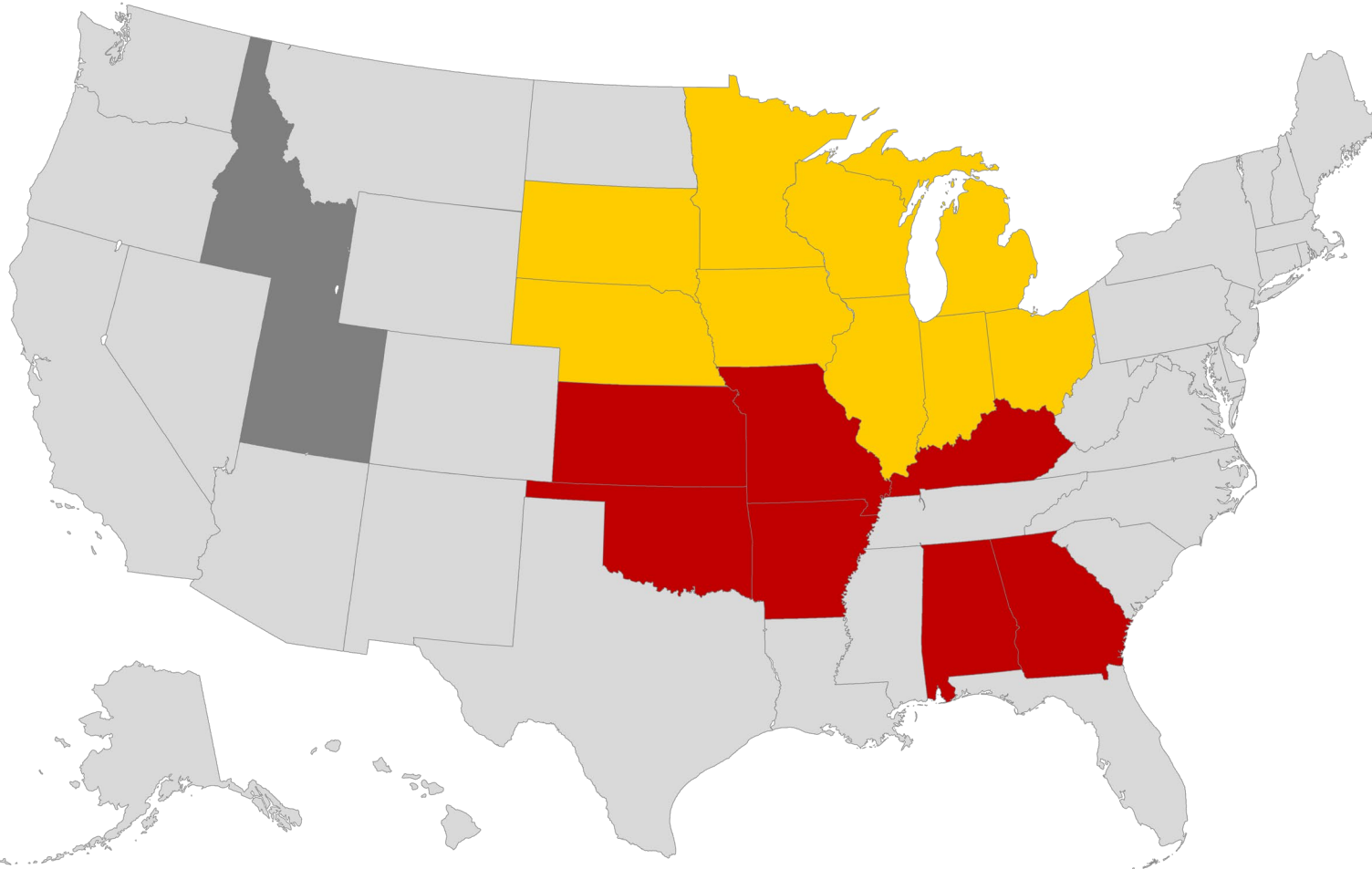
State	Number of Samples	% Positive Samples	Avg of Positive Samples
OH	21	100	1784
KY	2	100	1175
IN	18	89	1074
AL	3	100	803
IL	3	100	451
NE	18	33	432
WI	7	57	301
MI	5	80	295
AR	3	33	266
MO	14	43	253
IA	14	57	224
MN	14	29	168
GA	15	7	136
UT	1	100	119
ID	1	0	0
KS	4	0	0
OK	1	0	0
SD	3	0	0

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- State with average > 1000 ppb
- State with average < 1000 ppb
- State with samples < LOD (100 ppb)
- No sample submitted



2022 Corn Risk by State – FUM



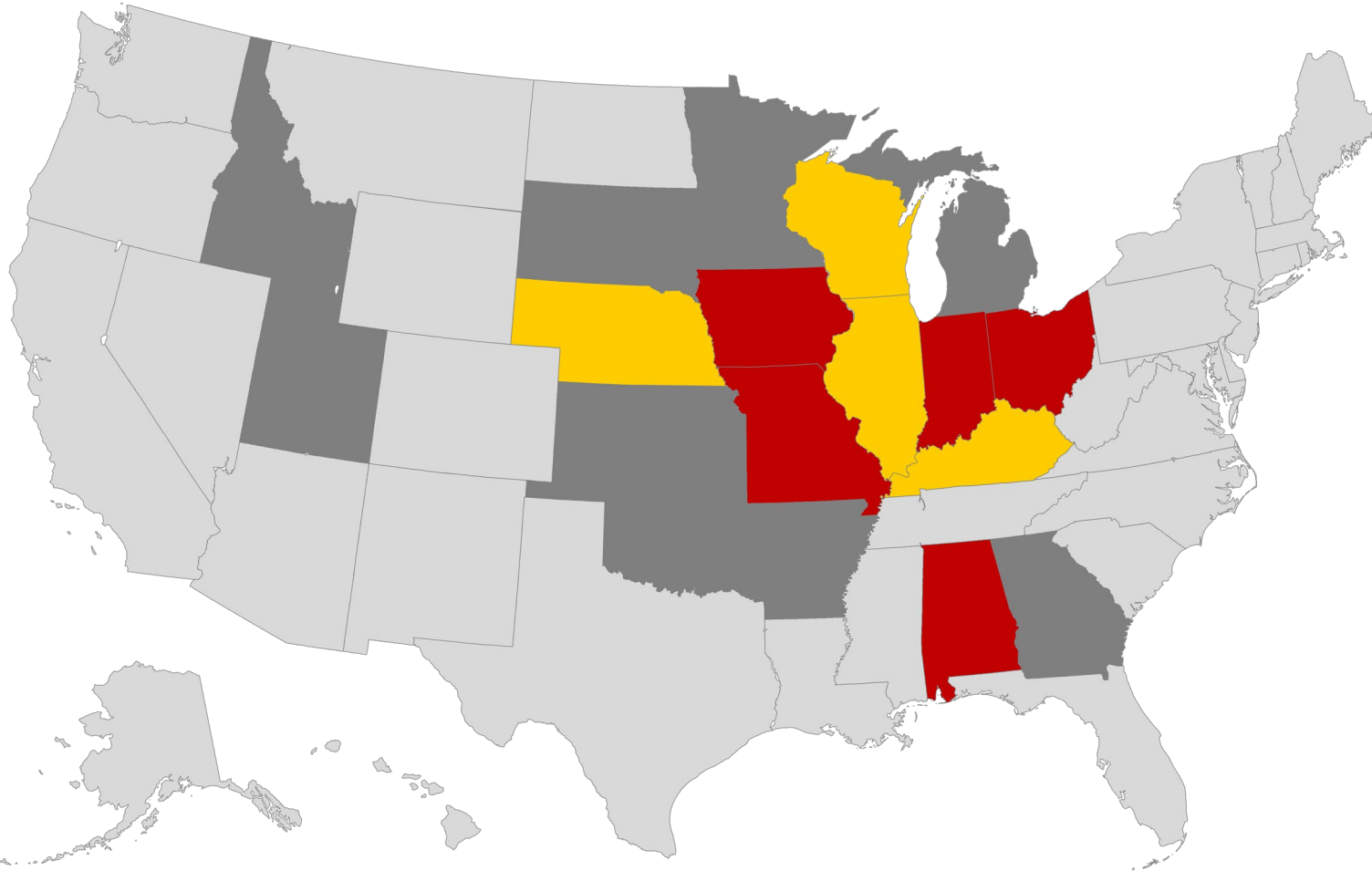
State	Number of Samples	% Positive Samples	Avg of Positive Samples
KY	2	100	18300
MO	14	93	7892
OK	1	100	4700
GA	15	100	4473
AL	3	100	3400
KS	4	100	2375
AR	3	100	2367
IN	18	67	1558
NE	18	89	1269
IA	14	86	1067
OH	21	57	950
MI	5	100	880
IL	3	67	400
WI	7	43	400
MN	14	29	325
SD	3	33	300
ID	1	0	0
UT	1	0	0

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



2022 Corn Risk by State – ZEN



State	Number of Samples	% Positive Samples	Avg of Positive Samples
IN	18	28	581
OH	21	67	440
IA	14	7	260
AL	3	100	253
MO	14	7	214
KY	2	50	89
WI	7	43	84
IL	3	100	81
NE	18	6	64
AR	3	0	0
GA	15	0	0
ID	1	0	0
KS	4	0	0
MI	5	0	0
MN	14	0	0
OK	1	0	0
SD	3	0	0
UT	1	0	0

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

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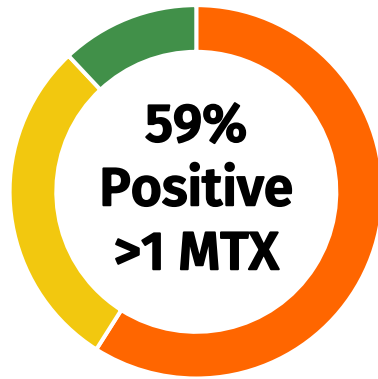
Mycotoxin Survey Summary – 2022 US Corn



147 corn samples submitted from 18 states



vs. 89% in 2021



vs. 57% in 2021

vs. 2021

B-Trich

- 54% positive / ↓ from 69%
- 878 ppb / ↓ from 895 ppb

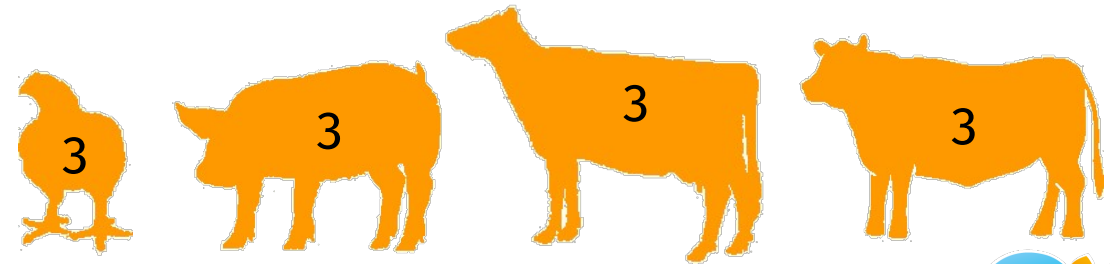
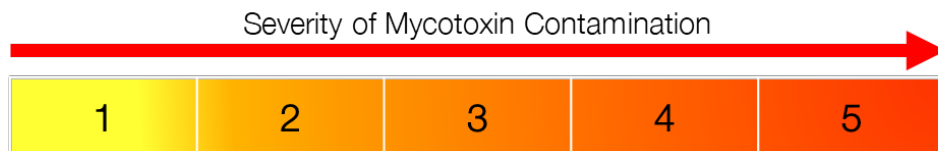
FUM

- 74% positive / ↑ from 64%
- 2861 ppb / ↓ from 2973 ppb

ZEN

- 22% positive / ↓ from 28%
- 342 ppb / ↓ from 384 ppb

Forecasted potential risk for livestock production*:



*Based on the samples analyzed.

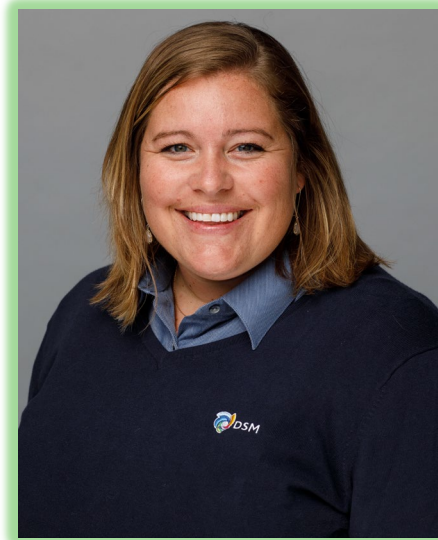


Questions?

Thank you!



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