

Mycotoxin Occurrence in 2021 US Corn Silage



JUNE 2022

MYCOTOXIN *monthly*



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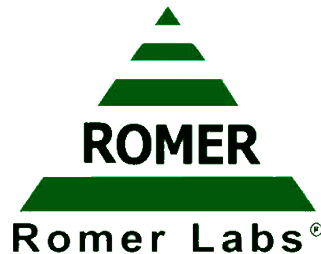
DSM

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Mycotoxins & Analysis



LC-MS/MS



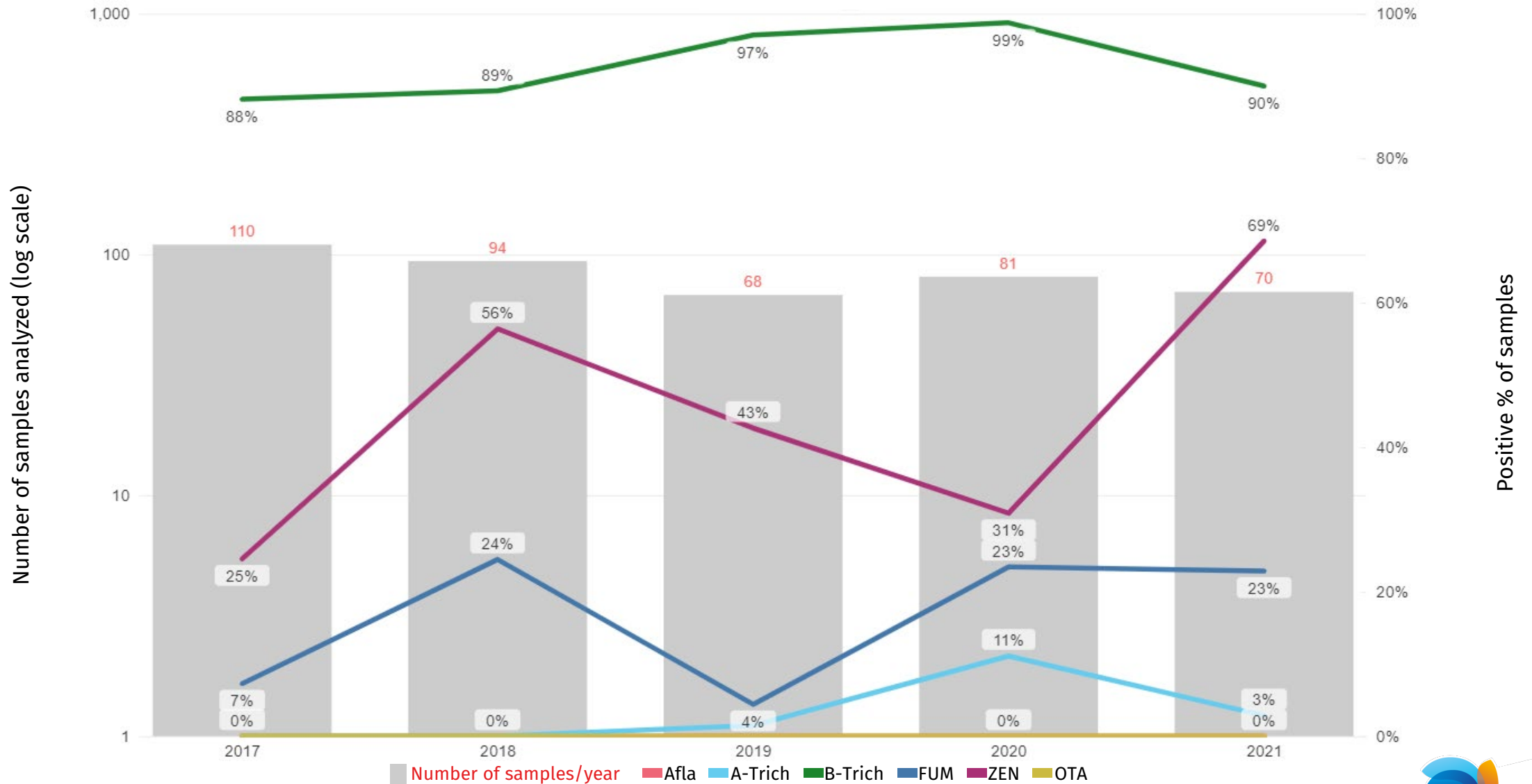
The survey results represent samples sent in for surveillance testing only and does not include any sample submitted following clinical signs.

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
	Acetyldeoxynivalenol (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)

2021 US Corn Silage (dry matter basis)

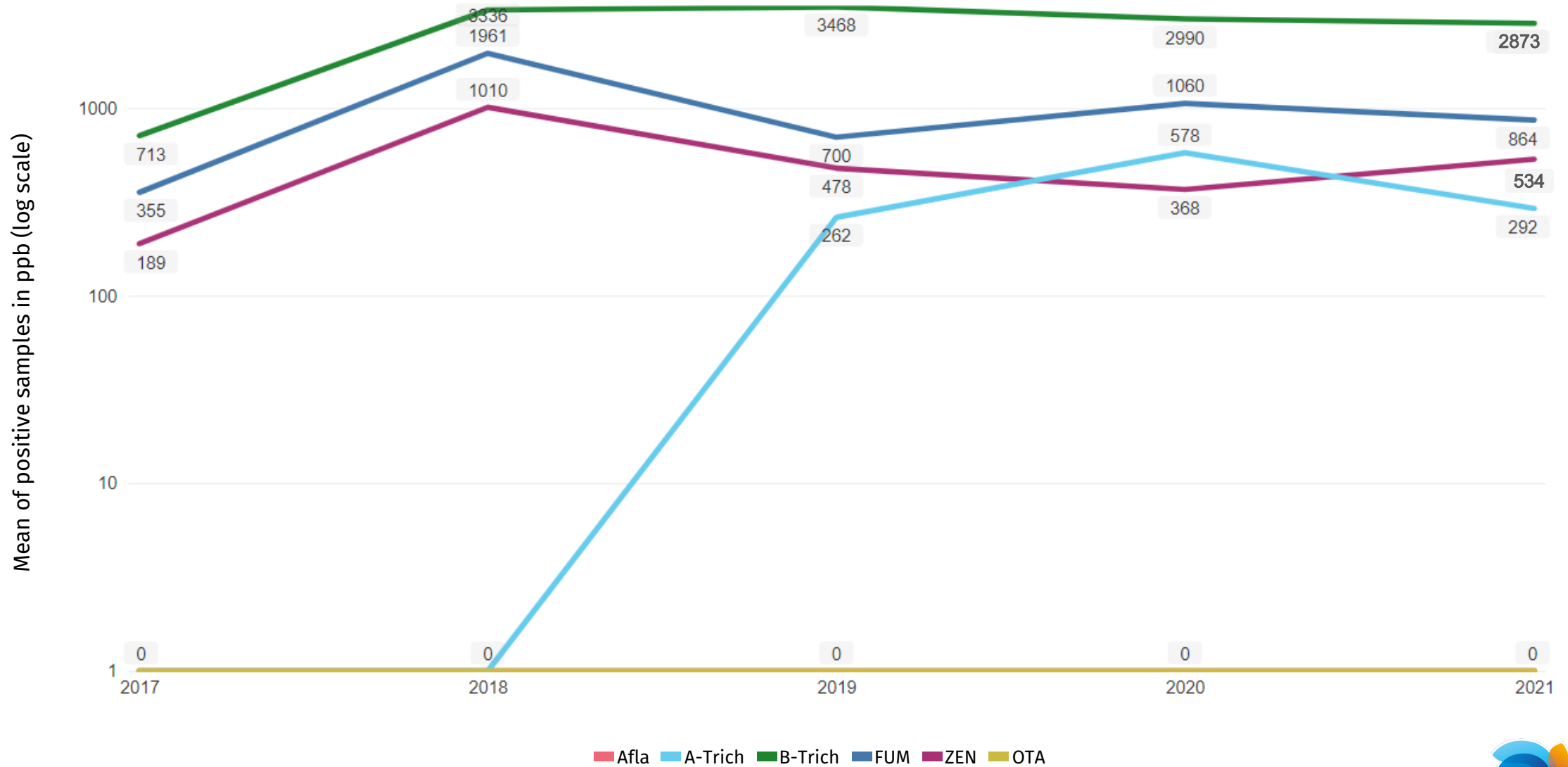
Occurrence Trend in 2021 US Corn Silage



Based on the samples analyzed.



Mean of Positives Trend in 2021 US Corn Silage

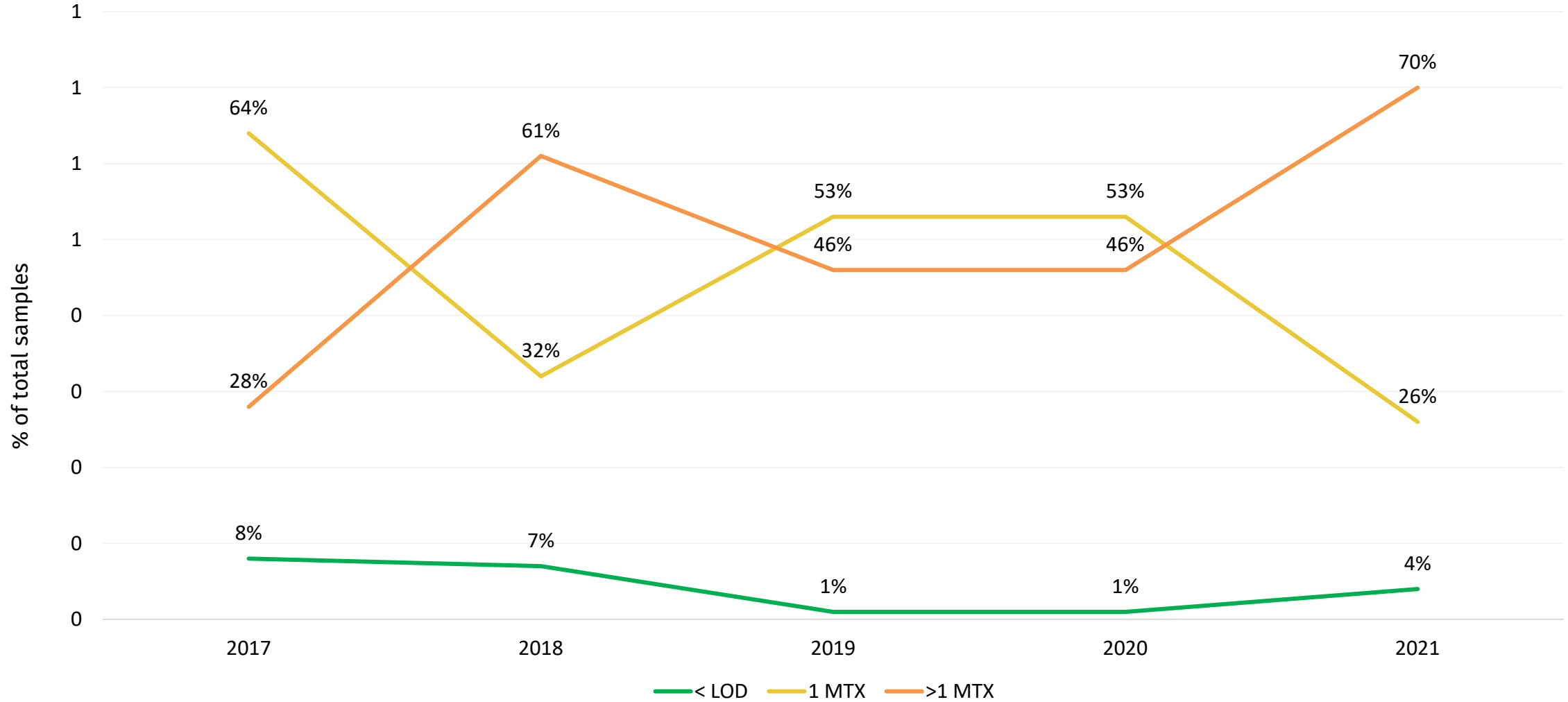


■ Afla
 ■ A-Trich
 ■ B-Trich
 ■ FUM
 ■ ZEN
 ■ OTA

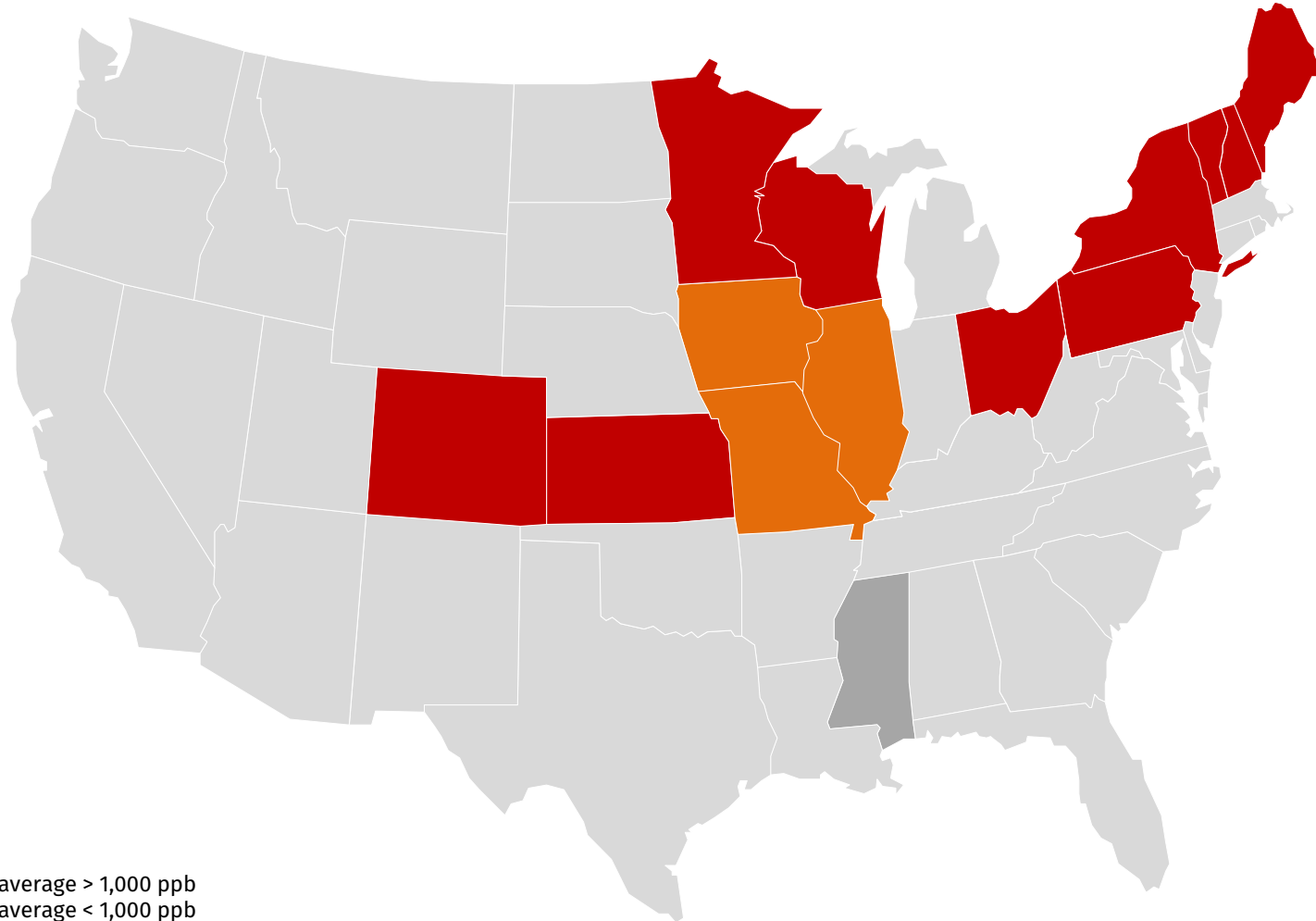
Based on the samples analyzed.



Co-occurrence Trend in 2021 US Corn Silage



2021 Corn Silage Risk by State – B-Trich

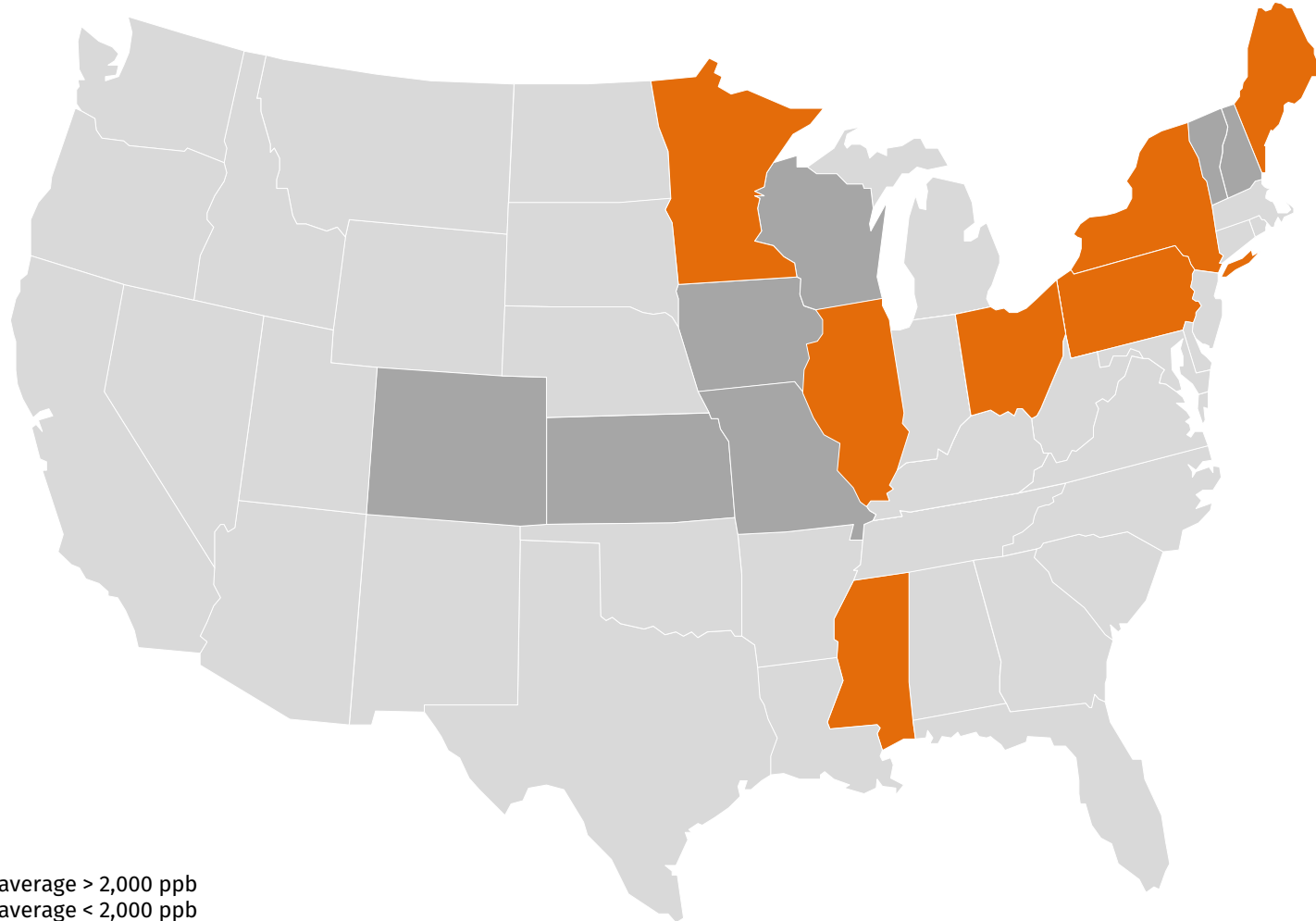


- State with average > 1,000 ppb
- State with average < 1,000 ppb
- State with samples < LOD (100 ppb)
- No sample submitted

State	Number of Samples	% Positive Samples	Avg of Positive Samples
PA	15	100%	4705
WI	6	100%	4272
ME	2	100%	2900
NH	2	100%	2354
NY	16	94%	2218
OH	13	85%	1995
VT	3	100%	1942
KS	1	100%	1885
MN	2	100%	1668
CO	2	100%	1206
IL	1	100%	928
IA	2	100%	900
MO	1	100%	297
MS	4	0%	0



2021 Corn Silage Risk by State – FUM

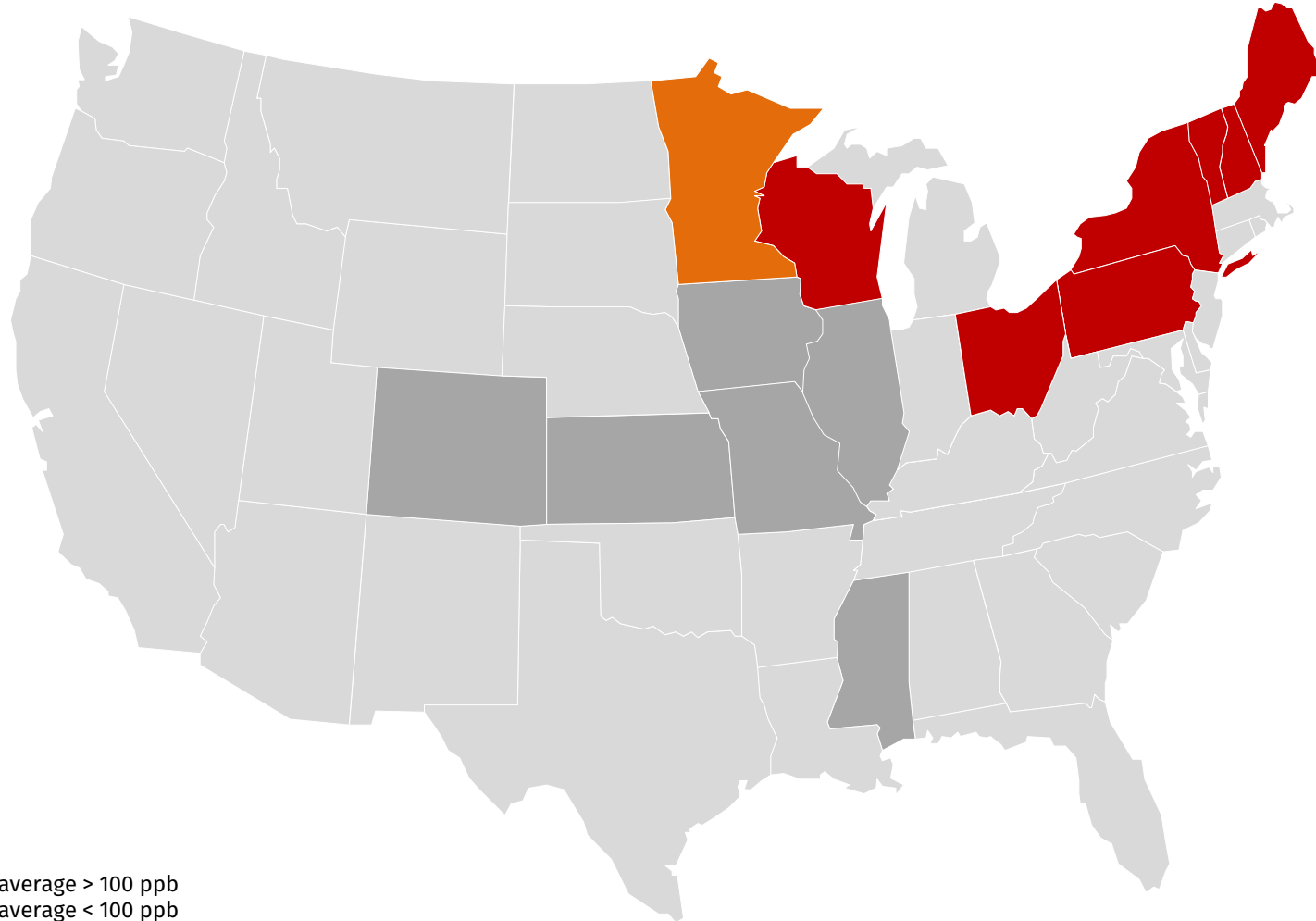


- State with average > 2,000 ppb
- State with average < 2,000 ppb
- State with samples < LOD (100 ppb)
- No sample submitted

State	Number of Samples	% Positive Samples	Avg of Positive Samples
MS	4	100%	1434
PA	15	47%	828
OH	13	8%	780
IL	1	100%	602
NY	16	6%	449
MN	2	50%	244
ME	2	50%	218
CO	2	0%	0
IA	2	0%	0
KS	1	0%	0
MO	1	0%	0
NH	2	0%	0
VT	3	0%	0
WI	6	0%	0



2021 Corn Silage Risk by State – ZEN



State	Number of Samples	% Positive Samples	Avg of Positive Samples
OH	13	77%	753
NY	16	81%	659
NH	2	100%	465
PA	15	87%	464
VT	3	100%	322
ME	2	100%	265
WI	6	67%	254
MN	2	50%	57
CO	2	0%	0
IA	2	0%	0
IL	1	0%	0
KS	1	0%	0
MO	1	0%	0
MS	4	0%	0

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



Mycotoxin Survey Summary – 2021 US Corn Silage



96% positive vs.
99% in 2020



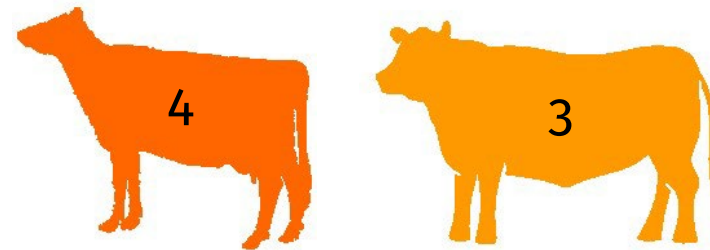
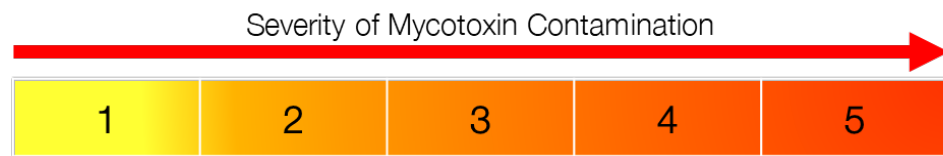
70% >1 MTX vs.
46% in 2020

B-Trich: 90% vs. 99%

FUM: 23% vs. 23%

ZEN: 69% vs. 31%

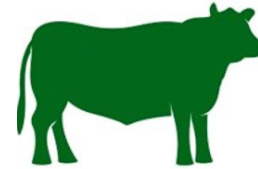
Forecasted potential risk for livestock production*:



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dsm.com/mycotoxin-survey

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