

# Mycotoxin Occurrence in 2022 US Corn Grain



FEBRUARY 2023

**MYCOTOXIN** *monthly*



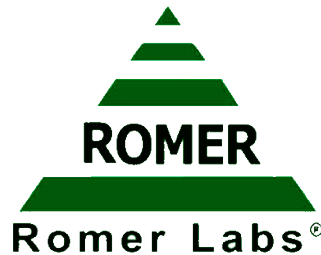
**DSM**

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# Mycotoxins & Analysis



**LC-MS/MS**



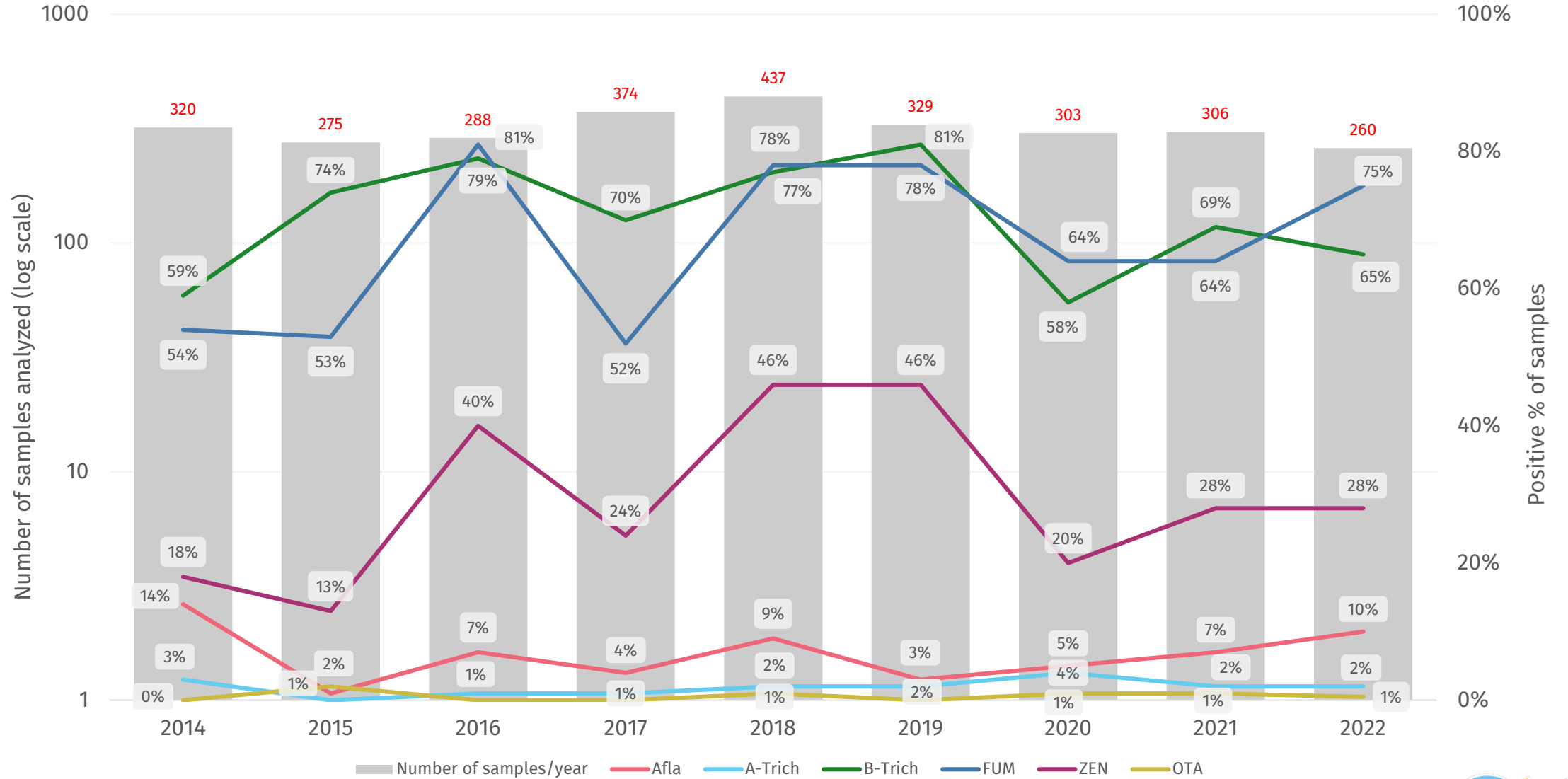
The survey results represent samples sent in for surveillance testing only and does not include any sample submitted following clinical signs.

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)

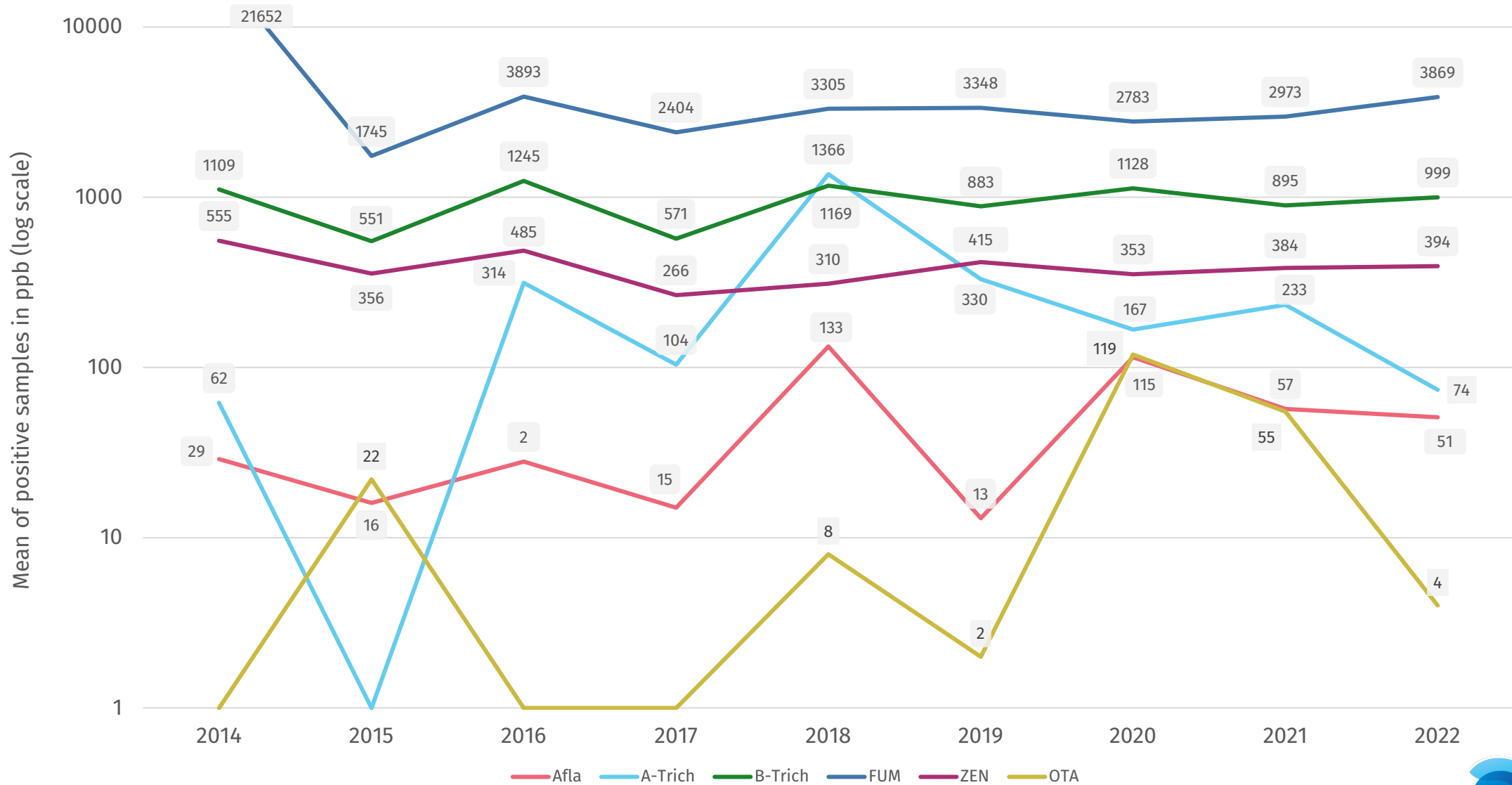
# Occurrence Trend in 2022 US Corn



Based on the samples analyzed.



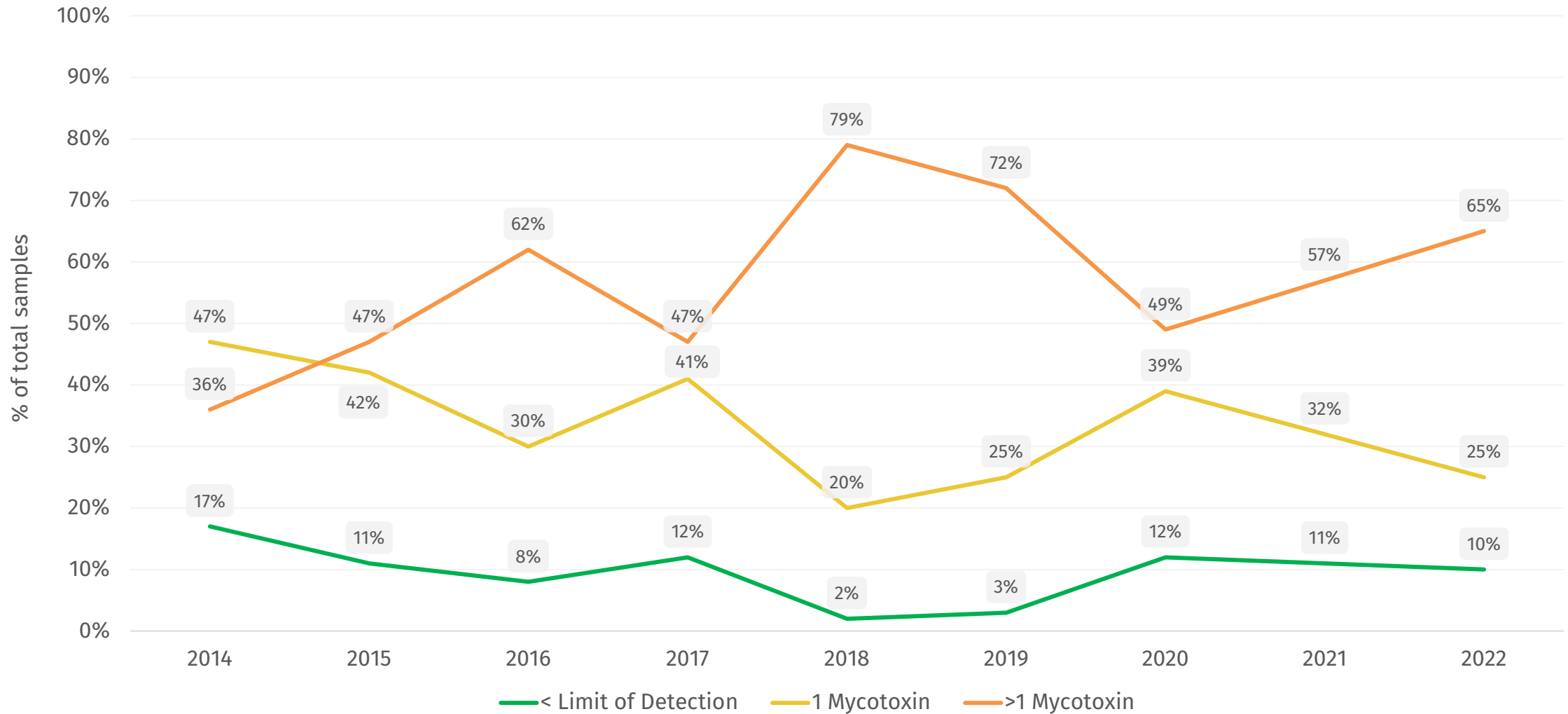
# Mean of Positives Trend in 2022 US Corn



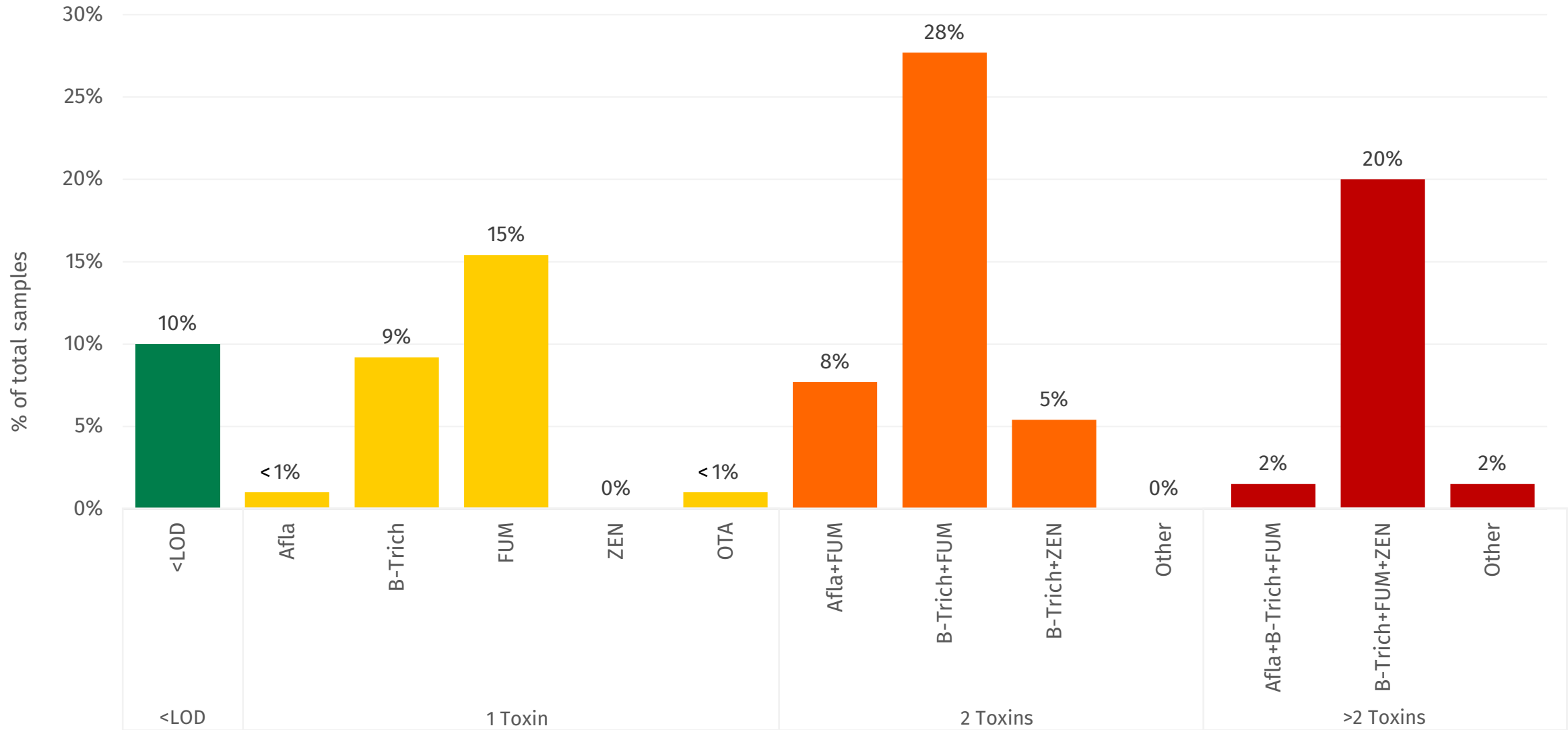
Based on the samples analyzed.



# Co-occurrence Trend in 2022 US Corn

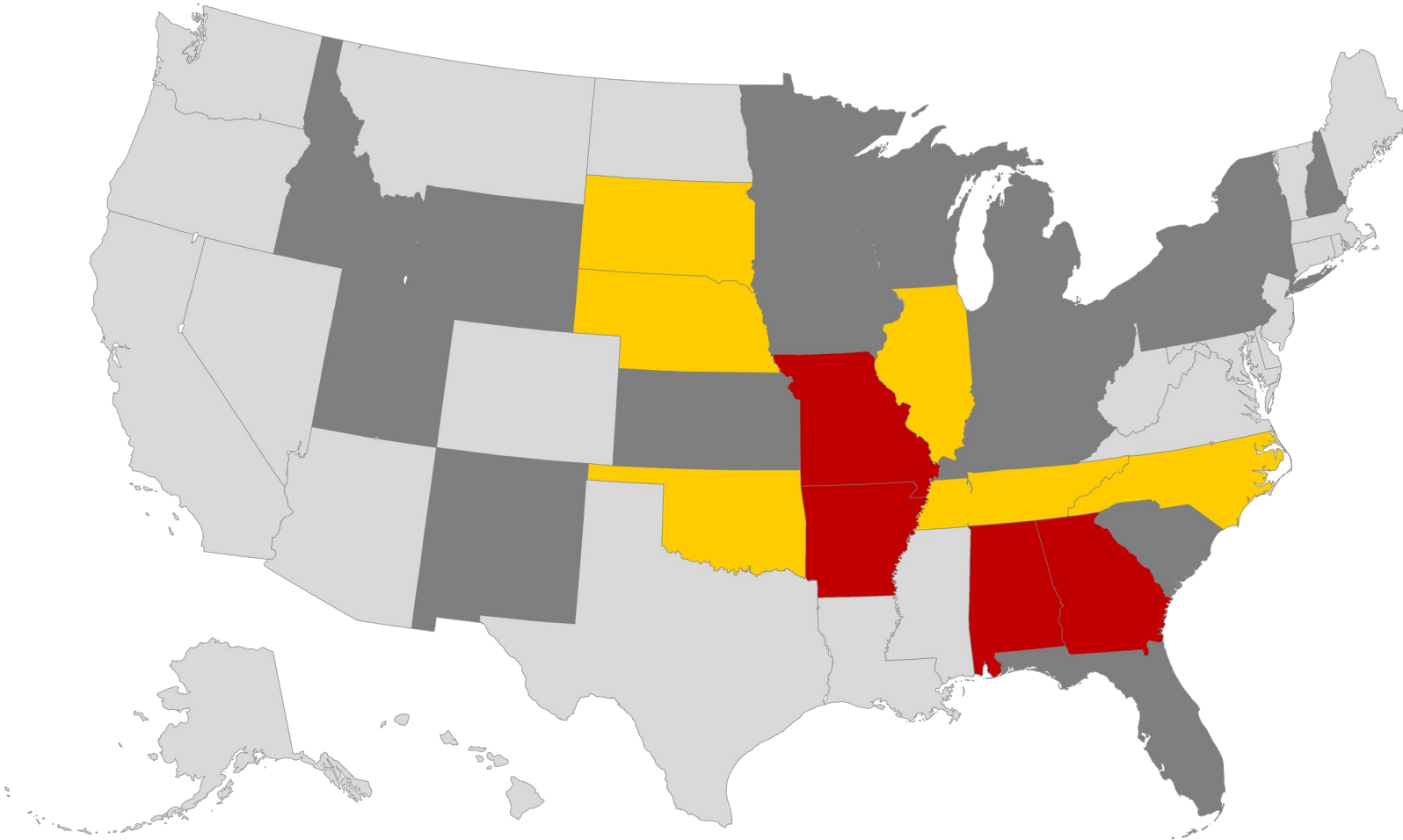


# Co-occurrence Profile in 2022 US Corn





# 2022 Corn Risk by State – Afla



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

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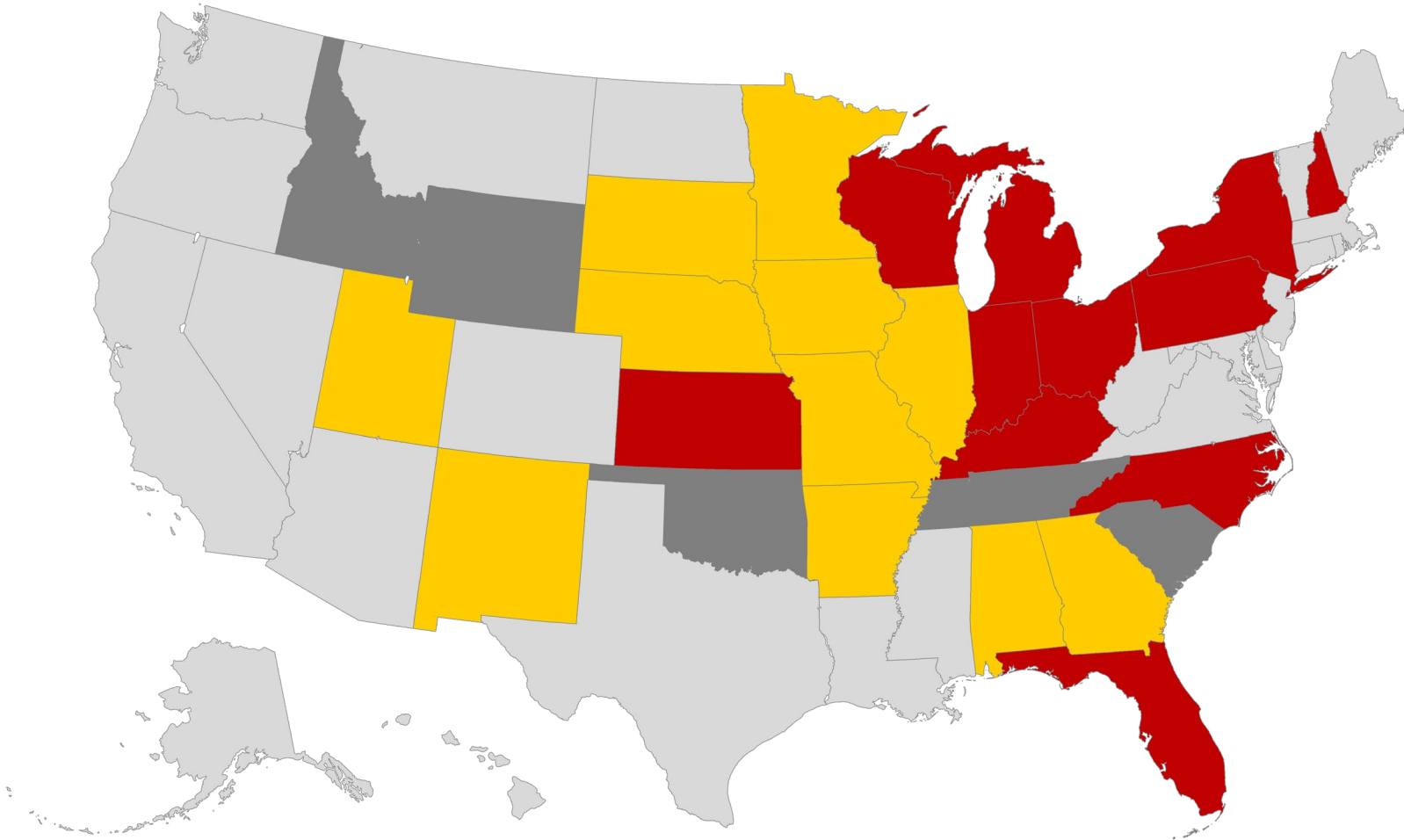
State	Number of Samples	% Positive Samples	Avg of Positive Samples
AR	3	33	602
AL	4	25	63
MO	18	11	58
GA	25	60	32
IL	18	11	17
TN	2	50	17
OK	1	100	9
NE	27	4	7
SD	13	8	5
NC	4	25	2
FL	3	0	0
IA	27	0	0
ID	1	0	0
IN	19	0	0
KS	5	0	0
KY	2	0	0
MI	7	0	0
MN	23	0	0
NH	1	0	0
NM	2	0	0
NY	3	0	0
OH	25	0	0
PA	3	0	0
SC	2	0	0
UT	1	0	0
WI	20	0	0
WY	1	0	0

Based on the samples analyzed in this region.





# 2022 Corn Risk by State – B-Trich



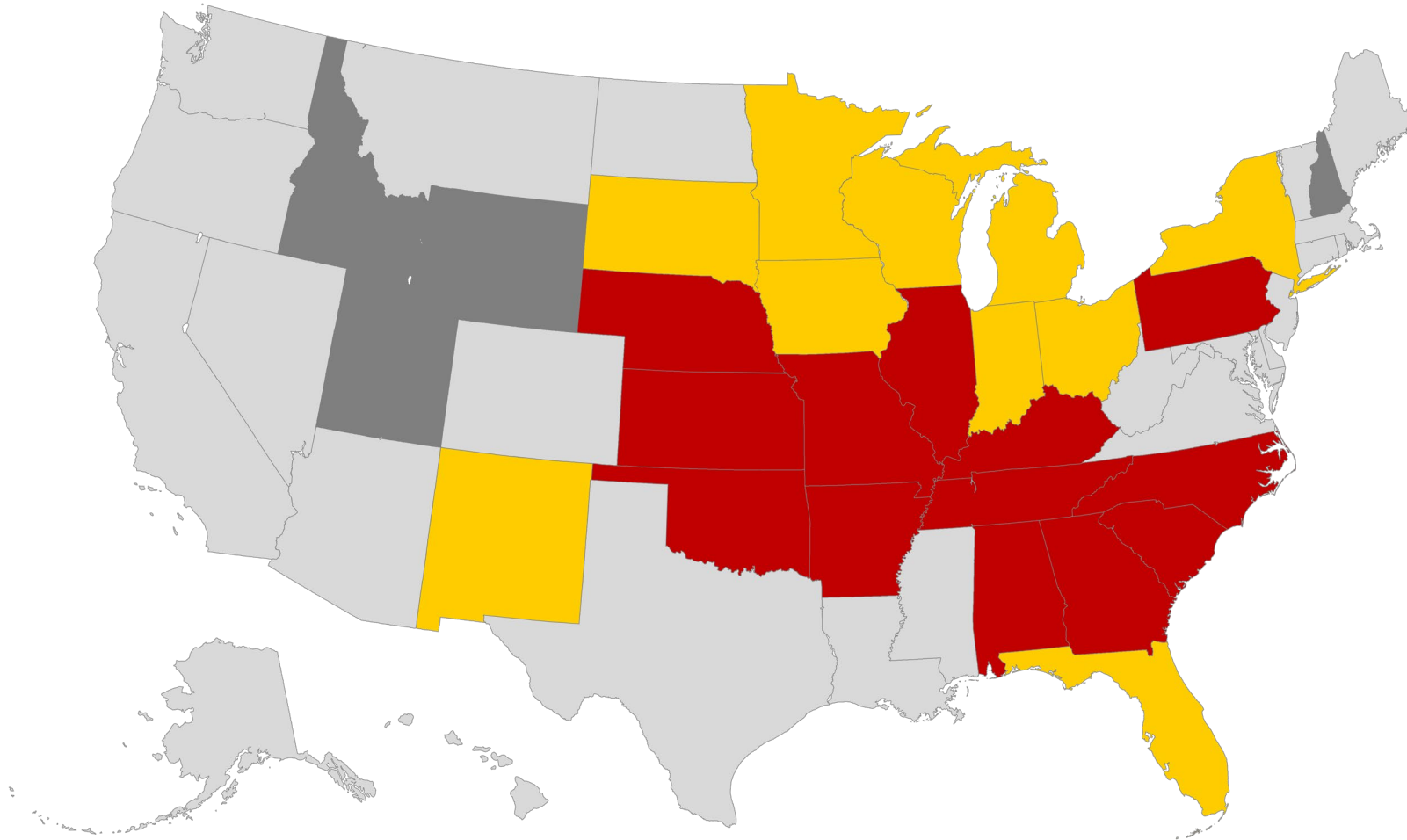
- State with average > 1000 ppb
- State with average < 1000 ppb
- State with samples < LOD (100 ppb)
- No sample submitted

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State	Number of Samples	% Positive Samples	Avg of Positive Samples
NH	1	100	3384
OH	25	100	2169
PA	3	100	2084
NC	4	100	2035
KS	5	20	1626
NY	3	100	1455
FL	3	100	1445
MI	7	86	1366
IN	19	89	1208
KY	2	100	1175
WI	20	85	1039
AL	4	75	803
IL	18	100	702
NE	27	56	503
GA	25	44	490
IA	27	67	275
MN	23	52	272
AR	3	33	266
NM	2	50	257
MO	18	39	252
SD	13	8	135
UT	1	100	119
ID	1	0	0
OK	1	0	0
SC	2	0	0
TN	2	0	0
WY	1	0	0



# 2022 Corn Risk by State – FUM



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

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State	Number of Samples	% Positive Samples	Avg of Positive Samples
KY	2	100	18300
TN	2	100	12900
MO	18	94	11547
AL	4	100	10675
IL	18	89	9013
NC	4	100	7325
OK	1	100	4700
GA	25	100	3948
PA	3	100	3700
NE	27	93	2828
KS	5	100	2560
AR	3	100	2367
SC	2	100	2000
NM	2	100	1650
IN	19	68	1531
FL	3	100	1167
IA	27	74	995
MI	7	100	871
OH	25	56	837
WI	20	60	450
NY	3	100	433
MN	23	39	256
SD	13	31	225
ID	1	0	0
NH	1	0	0
UT	1	0	0
WY	1	0	0





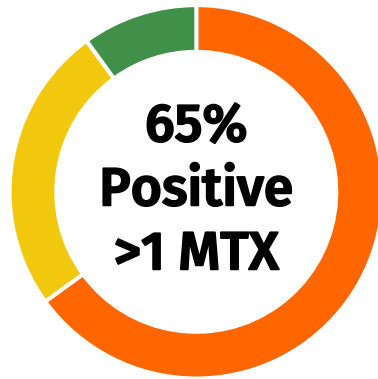
# Mycotoxin Survey Summary – 2022 US Corn



260 corn samples submitted from 27 states



vs. 89% in 2021



vs. 57% in 2021

vs. 2021

**B-Trich**

- 65% positive / ↓ from 69%
- 999 ppb / ↑ from 895 ppb

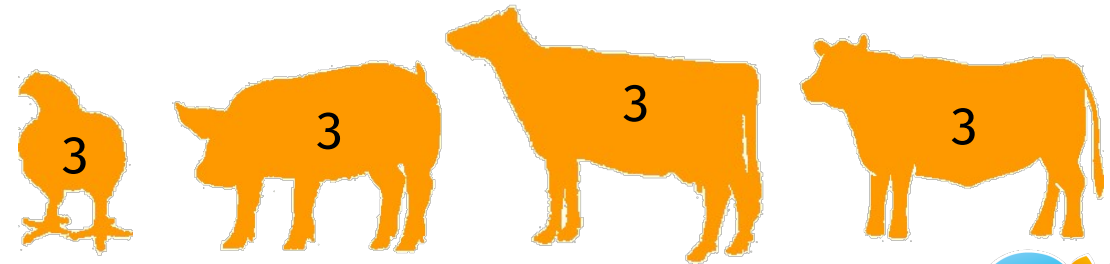
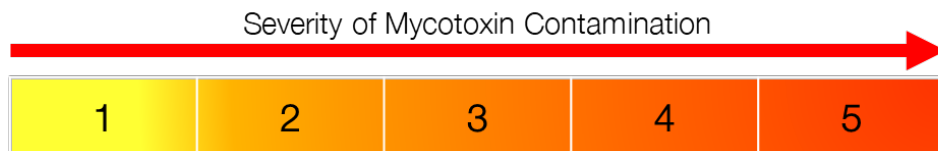
**FUM**

- 75% positive / ↑ from 64%
- 3869 ppb / ↑ from 2973 ppb

**ZEN**

- 28% positive / ↔ from 28%
- 394 ppb / ↑ from 384 ppb

## Forecasted potential risk for livestock production\*:



\*Based on the samples analyzed.

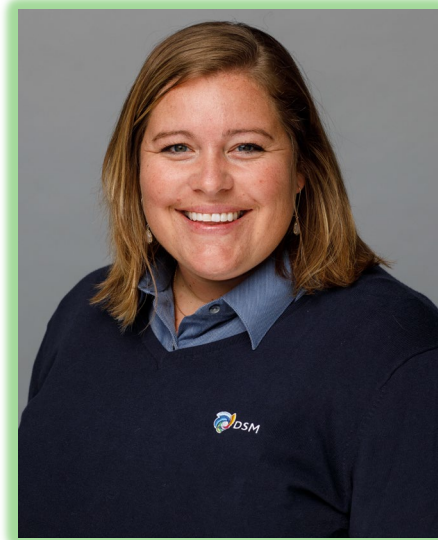


# Questions?

# Thank you!



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