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Mycotoxin Summary Results

October 2023 – February 2024

Mycotoxin assays of TMR and corn silage samples indicate regional variations in mycotoxin contamination levels across the US. The summary of the 452 TMR samples and 232 corn silage samples collected between October 1, 2023, and February 29, 2024 are displayed in Tables 1 and 2 and Figures 1 and 2 for TMR and corn silage, respectively.

Consistent with the past several years, the TMR assays suggest DON contamination is the greatest concern in the northeastern third of the country with nine states averaging high risk results and another three states almost making that list. Although state-wide WI TMR samples averaged 980 ppb DON, a wide range existed between extreme contamination in eastern WI near Lake Michigan and clean TMR samples in western WI next to the Mississippi River.

Zearalenone (ZEA) contamination averaged medium risk in only six states; however, each of those states were also high risk for DON, which compounds the negative effects of each individual mycotoxin. Interestingly, fumonisin contamination has been trending up over the last several years and TMR assays from IL, OH and MI averaged in the medium risk level during the sampling period.

Corn silage assay results continue to implicate this important feed ingredient as the major mycotoxin source. As previously mentioned for TMR samples, WI showed a tremendous east-to-west variation in DON contamination of corn silage, and in fact was the second-highest state for corn silage DON levels. Although the GA corn silage sampling was limited in scope, with only 9 submittals, the assays results averaged in the high-risk level for DON, ZEA, fumonisin and in the medium risk category for T-2. University research evaluating fungicides, application timing and hybrid susceptibility to mycotoxin contamination of corn silage should be closely followed.

Agrarian Solutions encourages nutritionists and livestock producers to submit TMR and feed ingredients for mycotoxin evaluation to determine correct protection strategies. Please contact your regional Agrarian representative for assistance with sample submittal and result evaluation.

Video Summary



Scan QR Code



**MYCOTOXIN
REPORT**

OCTOBER 2023 – FEBRUARY 2024

TMR MYCOTOXIN VALUE STATE AVERAGES (all values in ppb) | OCTOBER 2023 – FEBRUARY 2024

State	Total DON, ppb	Zearalenone, ppb	Total T2, HT2, ppb	Total Fumonisin, ppb
IA	700	9	29	80
IL	1,584	98	0	933
IN	1,974	118	22	547
KY	993	50	0	450
MD	1,362	44	0	330
MI	2,237	150	34	1,204
MN	420	99	33	432
MO	170	0	0	300
NC	963	41	31	263
NY	2,316	176	46	494
OH	3,003	213	12	836
PA	1,781	195	27	520
SD	70	50	0	0
VA	1,307	101	100	332
VT	1,205	57	22	0
WI	980	85	4	160

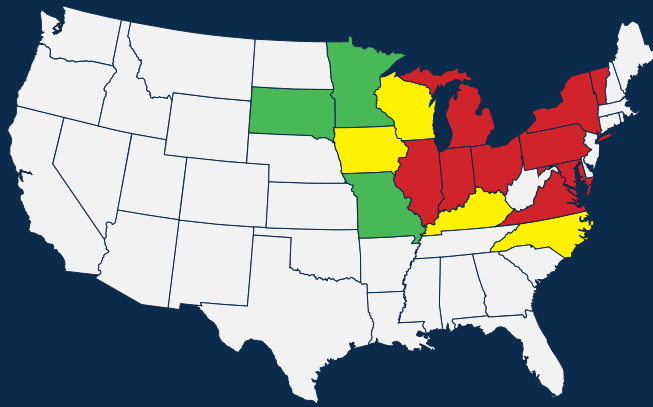
nd = none detected
 ■ = low risk
 ■ = medium risk
 ■ = high risk
 ppb = parts per billion

START DATE **October 1, 2023** | END DATE **February 29, 2024**

NO. OF SAMPLES **452**

1 DON = DON + 3-Acetyl-DON + 15-Acetyl-DON; FUM = fumonisin B1 + fumonisin B2; T-2 = T-2 toxin + HT-2 Toxin

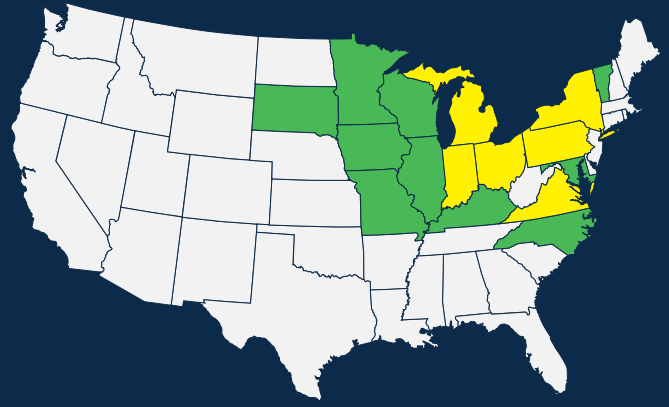
DON Average



ppb (parts per billion)

nd <300 300-1000 1001+

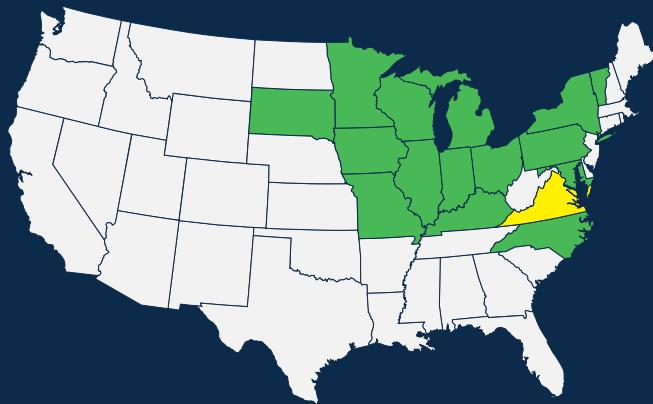
Zearalenone



ppb (parts per billion)

nd <100 100-300 301+

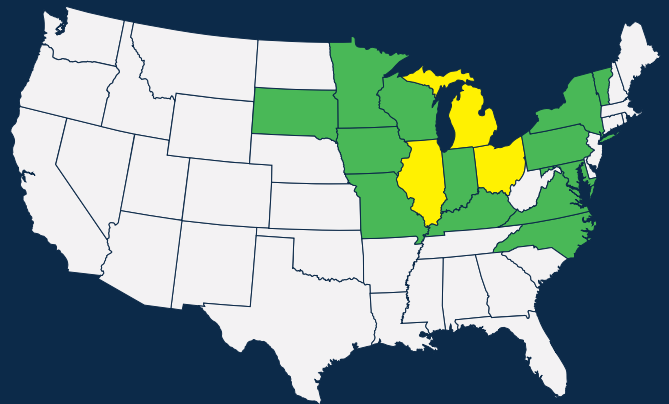
T-2 Toxin Average



ppb (parts per billion)

nd <75 75-150 151+

Fumonisin Average



ppb (parts per billion)

nd <600 600-1500 1501+

CORN SILAGE VALUE STATE AVERAGES (all values in ppb) | OCTOBER 2023 – FEBRUARY 2024

State	Total DON, ppb	Zearalenone, ppb	Total T2, HT2, ppb	Total Fumonisin, ppb
FL	5,305	165	54	ND
GA	3,267	453	110	2,429
IA	484	25	12	804
IL	2,178	354	0	943
IN	2,158	154	133	217
MI	3,991	77	326	165
MN	1,292	175	16	391
NC	793	51	0	234
NY	2,690	173	146	368
OH	4,622	436	0	238
PA	2,447	169	13	315
VA	1,513	164	33	1,250
VT	2,086	120	73	184
WI	4,685	245	368	308

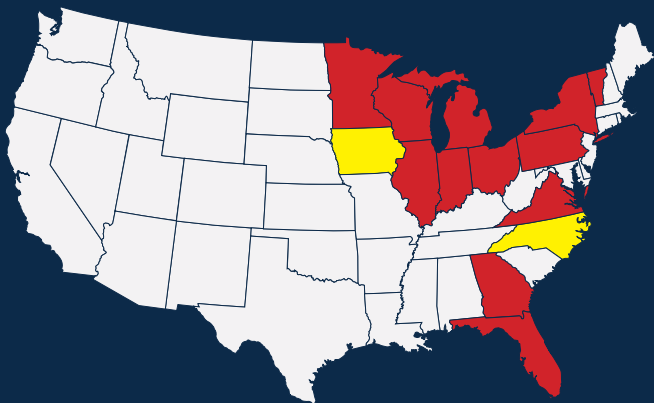
nd = none detected
 ■ = low risk
 ■ = medium risk
 ■ = high risk
 ppb = parts per billion

START DATE **October 1, 2023** | END DATE **February 29, 2024**

NO. OF SAMPLES **232**

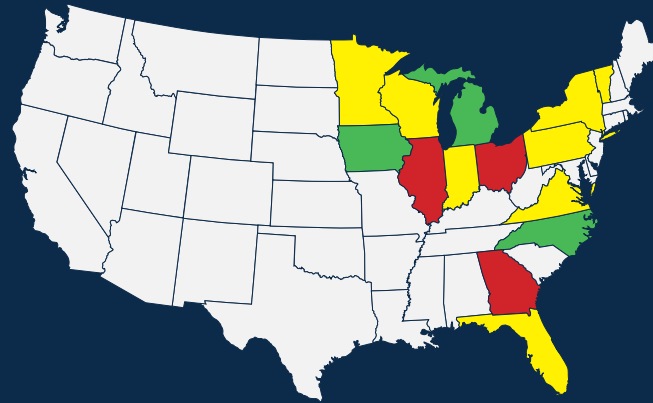
1 DON = DON + 3-Acetyl-DON + 15-Acetyl-DON; FUM = fumonisin B1 + fumonisin B2; T-2 = T-2 toxin + HT-2 Toxin

DON Average



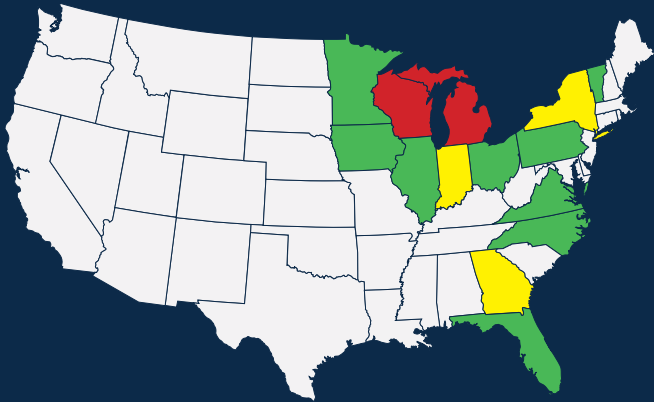
ppb (parts per billion)
 nd <300 300-1000 1001+

Zearalenone



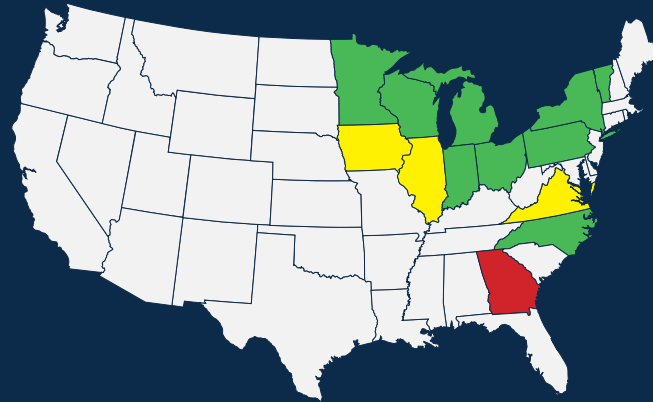
ppb (parts per billion)
 nd <100 100-300 301+

T-2 Toxin Average



ppb (parts per billion)
 nd <75 75-150 151+

Fumonisin Average



ppb (parts per billion)
 nd <600 600-1500 1501+