

Table S1. Temperature and precipitation data in the three locations and two years of the natural multi-mycotoxin test in wheat, 2021, 2022.

2021 Temperature (°C)	April	May	June
Szeged	10.1	16.3	23.1
Törökszentmiklós	8.9	14.6	22.3
Iregszemcse	8.9	14.2	22.3
2021 Precipitation (mm)	April	May	June
Szeged	27.4	57.2	21.6
Törökszentmiklós	37.1	77.6	5.5
Iregszemcse	35.1	93.1	14.8
2022 Temperature (°C)	April	May	June
Szeged	11.7	18.2	24.7
Törökszentmiklós	10	17.7	23.1
Iregszemcse	9.8	17.2	21.4
2022 Precipitation (mm)	April	May	June
Szeged	31.3	31.6	21.7
Törökszentmiklós	57.4	29.7	21.4
Iregszemcse	60	59.4	59.1

Table S2. PCR reaction methods for ITS, TEF, and CMD primers.

Step in PCR	ITS		TEF		CMD		Number of Repeat
	Temperature	Time	Temperature	Time	Temperature	Time	
Initiation	95 °C	2 min	95 °C	5 min	95 °C	5 min	1
Denaturation	95 °C	30 s	95 °C	1 min	95 °C	1 min	35
Annealing	56 °C	30 s	51 °C	30 s	55 °C	30 s	
Elongation	72 °C	2 min	72 °C	40 s	72 °C	40 s	
Final elongation	72 °C	10 min	72 °C	5 min	72 °C	5 min	1
Cooling	10 °C		4 °C		10 °C		1

Table S3. Mass spectrometer parameters for the analysis of the mycotoxins.

Compounds	Precursor ion (m/z)	Product ions (m/z)	Fragmentor (V)	CE (V)
AFB ₁	313.3	285.1	190	20
AFB ₁	313.3	241.1	190	40
AFB ₂	315.1	287.1	190	24
AFB ₂	315.1	259.1	190	28
AFG ₁	329.1	311.1	240	20
AFG ₁	329.1	243.1	240	28
AFG ₂	331.1	313.1	240	24
AFG ₂	331.1	115.0	240	80
DON	297.1	249.2	120	4
DON	297.1	77.0	120	80
DAS	384.0	307.0	105	4
DAS	384.0	240.0	105	6
FB ₁	722.4	352.3	240	40
FB ₁	722.4	334.3	240	36
FB ₂	706.4	336.3	240	36
FB ₂	706.4	318.4	240	40
HT-2	442.2	263.2	120	4
HT-2	442.2	215.2	120	4
NIV	371.0	281.0	90	10
NIV	371.0	59.0	90	30
OTA	404.1	239.0	140	20
OTA	404.1	221.0	140	36
STC	325.0	310.0	150	20
STC	325.0	281.0	150	36
T-2	484.2	215.2	140	12
T-2	484.2	185.1	140	4
ZEN	319.2	301.2	120	4
ZEN	319.2	185.1	120	24

Table S4. LOQ values of the mycotoxins.

	DON	FB₁	FB₂	AFB₁	AFB₂	AFG₁	AFG₂
	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
LOQ	5.0	2.5	0.8	0.8	0.6	0.8	0.6
	HT-2	T-2	ZEN	DAS	OTA	STC	NIV
	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
LOQ	4.0	5.0	1.0	0.5	0.8	0.08	8.0

Table S5. Multitoxin wheat contamination test, natural infection, DON data µg/kg, 2021/2022

Variety	Szeged		Iregszemcse		Törökszentmiklós		Mean	Variance
	2021	2022	2021	2022	2021	2022		
18	19.72	0.00*	0.00	0.00	8.68	0.00	4.73	66.0
14	14.29	0.00	14.39	0.00	11.37	0.00	6.67	54.6
7	10.43	0.00	18.88	9.92	6.37	0.00	7.60	51.5
8	5.13	0.00	12.87	6.74	15.68	8.93	8.22	31.4
9	14.20	0.00	5.98	16.97	12.76	0.00	8.32	54.6
4	17.75	0.00	18.76	0.00	22.64	0.00	9.86	119.3
11	32.50	0.00	8.36	0.00	12.75	7.64	10.21	144.4
13	16.00	0.00	9.83	0.00	37.54	0.00	10.56	218.5
3	6.91	0.00	7.71	20.71	40.47	0.00	12.63	243.2
12	5.36	0.00	18.03	0.00	34.91	44.32	17.10	356.4
2	31.32	0.00	15.96	8.82	12.54	81.36	25.00	868.1
16	15.68	0.00	7.36	0.00	7.88	141.31	28.70	3077.2
10	149.50	0.00	10.07	0.00	15.11	0.00	29.11	3518.8
6	0.00	0.00	13.78	11.46	9.84	215.05	41.69	7247.6
1	68.11	0.00	12.41	15.20	16.97	163.19	45.98	3851.6
5	84.77	0.00	14.14	0.00	10.78	192.54	50.37	5870.2
15	212.54	0.00	14.32	0.00	13.78	74.07	52.45	6909.7
17	987.58	0.00	8.02	46.02	5.00	0.00	174.44	158989.7
	93.99	0.00	11.71	7.55	16.39	51.58	30.20	
ANOVA								
	Source	SS	df	MS	F	p-value	F crit.	LSD 5%
	Variety A	476486.74	17	28028.6	9.24	7.95E-18	1.67	35.99
	Columns B	350107.83	5	70021.6	23.08	1.78E-18	2.26	20.78
	Replicates	8848.2	2	4428.1	1.46		3.04	ns
	AxB	2524982.7	85	29705.7	9.79	1.43E-41	1.33	
	Within	649330.4	214	3034.3				
	Total	4009755.9	323					

Above baby food limit 200 mg/kg *0.00 = mycotoxin contamination below detection limit.

Table S6. Multitoxin wheat contamination test, natural infection, Fumonisin B1 data mg/kg, 2021/2022

Variety	Szeged		Iregszemcse		Törökszentmiklós		Mean	Variance
	2021	2022	2021	2022	2021	2022		
16	7.29	0.00*	3.64	0.00	0.00	0.00	1.82	9.31
4	7.54	0.00	3.14	0.00	3.51	0.00	2.37	9.10
6	7.69	0.00	4.53	0.00	3.37	0.00	2.60	10.11
11	5.93	0.00	4.42	0.00	6.19	0.00	2.76	9.48
14	4.65	0.00	4.27	0.00	7.72	0.00	2.77	10.67
8	5.84	0.00	4.16	0.00	6.77	0.00	2.79	10.07
7	9.14	0.00	4.14	0.00	4.27	0.00	2.92	13.51
13	8.45	0.00	3.95	0.00	5.91	0.00	3.05	13.22
12	5.46	0.00	7.63	0.00	6.57	0.00	3.28	13.37
18	11.51	0.00	8.41	0.00	0.00	0.00	3.32	27.41
10	9.90	0.00	4.99	2.96	4.42	0.00	3.71	13.72
5	8.35	0.00	5.06	0.00	9.27	0.00	3.78	19.10
15	9.66	0.00	6.47	2.55	4.16	0.00	3.81	14.42
9	7.30	0.00	6.04	3.73	5.83	0.00	3.82	10.05
17	7.74	0.00	8.99	0.00	6.90	0.00	3.94	19.06
3	8.10	0.00	6.09	4.77	5.07	0.00	4.00	10.98
2	10.14	0.00	7.58	2.86	5.78	0.00	4.39	17.21
1	15.27	4.12	5.86	2.98	4.39	0.00	5.44	27.06
Mean	8.33	0.23	5.52	1.10	5.01	0.00	3.37	

ANOVA

Source	SS	df	MS	F	p-value	F crit.	LSD 5%
Variety A	217.7	17	12.8	1.46	0.116873	1.67	ns
Columns B	3147.8	5	629.6	71.54	9.4E-44	2.26	1.10
Replicates	26.9	2	13.5	1.53		3.04	ns
AxB	719.8	85	8.5	0.96	0.585143	1.33	
Within	1884.5	214	8.8				
Total	5996.7	323					

*0.00 = mycotoxin contamination below detection limit.

Table S7. Multitoxin wheat contamination test, natural infection, Fumonisin B₂ data µg/kg, 2021/2022

Variety		Szeged		Iregszemcse		Törökszentmiklós		Mean	Variance
		2021	2022	2021	2022	2021	2022		
	12	0.00*	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	1.00	0.00	0.00	0.17	0.17
	11	0.00	0.00	0.00	0.00	1.45	0.00	0.24	0.35
	9	1.49	0.00	0.00	0.00	0.00	0.00	0.25	0.37
	15	1.69	0.00	0.00	0.00	0.00	0.00	0.28	0.47
	4	1.05	0.00	0.00	0.00	0.99	0.00	0.34	0.28
	2	0.00	0.00	1.77	0.00	0.78	0.00	0.43	0.53
	7	2.56	0.00	0.00	0.00	0.00	0.00	0.43	1.09
	14	1.03	0.00	1.55	0.00	0.00	0.00	0.43	0.47
	5	2.08	0.00	0.00	0.00	0.86	0.00	0.49	0.73
	6	1.38	0.00	0.85	0.00	0.82	0.00	0.51	0.35
	18	1.55	0.00	1.60	0.86	0.00	0.00	0.67	0.60
	1	1.65	1.21	1.82	0.00	0.00	0.00	0.78	0.77
	8	2.24	0.00	1.66	0.00	2.07	0.00	1.00	1.23
	10	2.74	0.00	1.12	0.96	1.33	0.00	1.03	1.03
Mean		1.08	0.07	0.58	0.16	0.46	0.00	0.39	0.47

ANOVA

Source	SS	df	MS	F	p-value	F crit.	LSD 5%
Variety A	31.38	17	1.85	2.71	0.0006	1.67	0.54
Columns B	44.72	5	8.94	13.11	5.54E-11	2.26	0.31
Replicates	3.87	2	1.94	2.84		3.04	ns
AxB	81.89	85	0.96	1.41	0.030	1.33	
Within	145.92	214	0.68				
Total	307.79	323					

*0.00 = mycotoxin contamination below detection limit.

Table S8 Multitoxin wheat contamination test, natural infection, Fumonisin B1+ B2 data µg/kg, 2021/2022

Variety	Szeged		Iregszemcse		Törökszentmiklós		Mean	Variance
	2021	2022	2021	2022	2021	2022		
16	7.29	0.00*	3.64	0.00	0.00	0.00	1.82	36.47
4	8.59	0.00	3.14	0.00	4.51	0.00	2.71	10.25
11	5.93	0.00	4.42	0.00	7.64	0.00	3.00	19.00
13	8.45	0.00	3.95	0.00	5.91	0.00	3.05	25.15
6	9.07	0.00	5.38	0.00	4.19	0.00	3.11	13.01
14	5.67	0.00	5.82	0.00	7.72	0.00	3.20	27.35
12	5.46	0.00	7.63	0.00	6.57	0.00	3.28	22.01
7	11.70	0.00	4.14	0.00	4.27	0.00	3.35	19.37
8	8.09	0.00	5.82	0.00	8.84	0.00	3.79	17.73
17	7.74	0.00	8.99	0.00	6.90	0.00	3.94	40.25
18	13.05	0.00	10.02	0.86	0.00	0.00	3.99	57.38
9	8.79	0.00	6.04	3.73	5.83	0.00	4.07	13.90
15	11.35	0.00	6.47	2.55	4.16	0.00	4.09	32.71
3	8.10	0.00	6.09	5.77	5.07	0.00	4.17	9.74
5	10.43	0.00	5.06	0.00	10.13	0.00	4.27	21.36
10	12.64	0.00	6.11	3.92	5.75	0.00	4.74	22.44
2	10.14	0.00	9.35	2.86	6.57	0.00	4.82	18.16
1	16.92	5.33	7.68	2.98	4.39	0.00	6.22	32.22
Mean	9.41	0.30	6.10	1.26	5.47	0.00	3.76	24.36

ANOVA

Source	SS	df	MS	F	p-value	F crit.	LSD 5%
Variety A	286.39	17	16.85	1.62	0.060089	1.67	2.11, 10%
Columns B	3927.34	5	785.47	75.53	1.42E-45	2.26	1.22
Replicates	14.68	2	7.34	0.71		3.04	ns
AxB	949.80	85	11.17	1.07	0.330816	1.33	
Within	2226.24	214	10.40				
TotalA123:A130	7404.45	323					

*0.00 = mycotoxin contamination below detection limit.

Table S9. Multitoxin wheat contamination test, natural infection, AFB₁ data µg/kg, 2021/2022

Variety	Szeged		Iregszemcse		Törökszentmiklós		Mean	Variance
	2021	2022	2021	2022	2021	2022		
2	0.00*	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.93	0.00	0.00	0.00	0.00	0.15	0.14
6	0.00	0.00	0.00	1.29	0.00	0.00	0.22	0.28
1	2.96	0.00	0.00	0.00	0.00	0.00	0.49	1.46
8	3.07	0.00	0.00	0.00	0.00	0.00	0.51	1.57
14	3.29	0.00	0.00	0.00	0.00	0.00	0.55	1.81
4	3.61	0.00	0.00	0.00	0.00	0.00	0.60	2.18
7	2.82	0.00	0.00	0.82	0.00	0.00	0.61	1.28
9	3.75	0.00	0.00	0.00	0.00	0.00	0.62	2.34
12	2.82	0.00	0.00	1.75	0.00	0.00	0.76	1.51
11	4.99	0.00	0.00	0.00	0.00	0.00	0.83	4.15
16	5.68	0.00	0.00	0.00	0.00	0.00	0.95	5.37
3	3.08	2.90	0.00	0.00	0.00	0.00	1.00	2.39
Mean	2.00	0.21	0.00	0.21	0.00	0.00	0.41	
Above food limit 2.00 mg/kg			Above limit for total AF toxin content					

ANOVA

Source	SS	df	MS	F	p-value	F crit.	LSD 5%
Variety A	39.68	17	2.33	0.58	0.904	1.67	ns
Columns B	168.62	5	33.72	8.35	2.8300E-07	2.26	0.76
Replicates	2.84	2	1.42	0.35	ns	3.04	ns
AxB	198.64	85	2.34	0.58	0.998	1.33	
Within	864.80	214	4.04				
Total	1274.57	323					

*0.00 = mycotoxin contamination below detection limit.

Table S10. Multitoxin wheat contamination test, natural infection, AFB₂ data µg/kg, 2021/2022

Variety	Szeged		Iregszemcse		Törökszentmiklós		Mean	Variance
	2021	2022	2021	2022	2021	2022		
1	0.000*	0.000	0.000	0.000	0.000	0.000	0.000	0.00
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
10	0.000	0.853	0.000	0.000	0.000	0.000	0.142	0.12
3	0.000	1.406	0.000	0.000	0.000	0.000	0.234	0.33
7	0.000	0.000	0.000	2.686	0.000	0.000	0.448	1.20
6	0.000	0.000	0.000	3.069	0.000	0.000	0.512	1.57
12	0.000	0.000	0.000	3.318	0.000	0.000	0.553	1.84
Mean	0.000	0.126	0.000	0.504	0.000	0.000	0.105	

ANOVA

Source	SS	df	MS	F	p-value	F crit.	LSD 5%
Variety A	11.61	17	0.68	25.92	6.14E-43	1.67	0.105
Columns B	11.00	5	2.20	83.56	1.5E-48	2.26	0.061
Replicates	0.13	2	0.07	2.47		3.04	ns
AxB	64.87	85	0.76	28.98	4.07E-83	1.33	
Within	5.69	216	0.03				
Total	93.17	323					

*0.00 = mycotoxin contamination below detection limit.

Table S11. Multitoxin wheat contamination test, natural infection, AFG1 data µg/kg, 2021/2022

Variety	Szeged		Iregszemcse		Törökszentmiklós		Mean	Variance
	2021	2022	2021	2022	2021	2022		
1	0.00*	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	1.08	0.18	0.20
16	0.00	0.00	0.00	0.00	0.00	1.33	0.22	0.30
13	0.00	0.00	0.00	0.00	0.00	1.40	0.23	0.32
7	0.00	0.00	0.00	0.00	0.00	2.21	0.37	0.81
2	0.00	0.00	0.00	0.00	0.00	2.23	0.37	0.83
6	0.00	0.00	0.00	0.00	0.00	2.36	0.39	0.93
8	0.00	0.00	0.00	3.75	0.00	0.00	0.62	2.34
11	0.00	0.00	0.00	3.05	0.00	3.93	1.16	3.33
Mean	0.00	0.00	0.00	0.38	0.00	0.81	0.20	0.50
Above the 2 mg/kg limit								

ANOVA

Source	SS	df	MS	F	p-value	F crit.	LSD 5%
Variety A	28.90	17	1.70	1.32	0.19	1.67	ns
Columns B	30.27	5	6.05	4.69	0.000452	2.26	0.43
Replicates	3.50	2	1.75	1.36		3.04	ns
AxB	105.48	85	1.24	0.96	0.58	1.33	
Within	276.38	214	1.29				
Total	444.53	323					

*0.00 = mycotoxin contamination below detection limit.

Table S12. Multitoxin wheat contamination test, natural infection, T-2 data µg/kg, 2021/2022

Cultivars	Szeged		Iregszemcse		Törökszentmiklós		Mean	Variance
	2021	2022	2021	2022	2021	2022		
2	0.00*	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	1.14	0.19	0.22
3	0.00	7.55	0.00	0.00	0.00	0.00	1.26	9.49
Mean	0.00	0.42	0.00	0.00	0.00	0.06	0.08	

ANOVA

Source	SS	df	MS	F	p-value	F crit.	LSD 5%
Variety A	27.03	17	1.59	3.31	2.31E-05	1.67	0.45
Columns B	7.61	5	1.52	3.17	0.008802	2.26	0.26
Replicates	1.05	2	0.53	1.10		3.04	ns
AxB	139.06	83	1.62	3.38	3.81E-13	1.33	1.11
Within	102.73	214	0.48				
Total	276.44	323					

*0.00 = mycotoxin contamination below detection limit.

Table S13 Multitoxin wheat contamination test, natural infection, ZEN data µg/kg, 2021/2022

Variety	Szeged		Iregszemcse		Törökszentmiklós		Mean	Variance
	2021	2022	2021	2022	2021	2022		
3	0.00*	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	14.15	0.00	0.00	0.00	2.36	33.39
5	15.82	0.00	0.00	0.00	0.00	0.00	2.64	41.73
4	0.00	0.00	0.00	0.00	16.84	0.00	2.81	47.26
11	17.41	0.00	0.00	0.00	0.00	0.00	2.90	50.49
10	0.00	0.00	0.00	0.00	15.66	5.97	3.61	40.60
17	0.00	0.00	0.00	9.68	12.26	0.00	3.66	32.75
14	0.00	0.00	11.39	0.00	13.41	0.00	4.13	41.40
16	0.00	0.00	0.00	0.00	26.84	0.00	4.47	120.07
15	0.00	0.00	27.56	0.00	0.00	0.00	4.59	126.63
2	13.85	1.91	0.00	0.00	13.87	0.00	4.94	48.32
6	0.00	0.00	18.88	0.00	12.42	0.00	5.22	69.47
12	15.59	0.00	0.00	0.00	17.86	0.00	5.58	75.11
8	14.00	0.00	0.00	0.00	21.98	0.00	6.00	92.67
13	41.11	0.00	0.00	0.00	12.81	0.00	8.99	273.87
1	31.02	0.00	30.69	0.00	16.24	0.00	12.99	231.09
8.27		0.11	5.70	0.54	10.01	0.33	4.16	73.60

Not good for baby food <20

ANOVA

Source	SS	df	MS	F	p-value	F crit.	LSD 5%
Variety A	3063.12	17	180.18	0.86	0.70	1.67	ns
Columns B	5275.44	5	1055.09	5.06	0.00	2.26	5.67
Replicates	4211.55	2	2.11	0.01		3.04	ns
AxB	14597.43	85	171.73	0.82	0.93	1.33	ns
Within	44641.14	214	208.60				
Total	71788.68	323					

*0.00 = mycotoxin contamination below detection limit.

Table S14. Multitoxin wheat contamination test, natural infection, DAS data mg/kg, 2021/2022

Variety	Szeged		Iregszemcse		Törökszentmiklós		Mean	Variance
	2021	2022	2021	2022	2021	2022		
2	0.00*	0.00	0.00	0.00	0.00	0.00	0.00	0.000
8	1.00	0.00	0.00	0.00	0.00	0.00	0.17	0.168
9	0.00	0.00	0.00	0.00	0.86	0.16	0.17	0.119
7	0.92	0.00	0.00	0.00	0.52	0.00	0.24	0.155
18	0.20	0.00	1.26	0.00	0.00	0.00	0.24	0.253
3	0.94	0.76	0.00	0.00	0.48	0.00	0.36	0.180
5	0.61	0.45	0.52	0.00	0.00	0.66	0.37	0.089
14	0.16	0.00	1.35	0.53	0.57	0.00	0.44	0.265
4	0.68	0.00	0.64	0.54	0.80	0.00	0.44	0.125
11	0.81	0.34	0.51	0.00	1.03	0.00	0.45	0.179
10	0.93	0.00	0.63	0.00	0.56	0.62	0.46	0.141
16	0.97	0.00	0.12	0.00	1.65	0.00	0.46	0.484
15	0.98	0.00	0.98	0.00	0.92	0.00	0.48	0.277
13	1.22	0.00	0.80	0.00	0.64	0.54	0.53	0.225
17	0.65	0.00	0.56	0.65	1.47	0.00	0.56	0.296
1	0.69	0.81	1.46	0.80	1.02	0.00	0.80	0.226
6	0.61	1.33	0.99	0.80	1.16	0.00	0.82	0.225
12	1.14	0.00	1.75	4.16	1.06	0.00	1.35	2.362
Mean	0.70	0.20	0.64	0.42	0.71	0.11	0.46	

ANOVA

Source	SS	df	MS	F	p-value	F crit.	LSD 5%
Variety A	27.799	17	1.64	4.48	3.59E-08	1.67	0.39
Columns B	18.387	5	3.68	10.08	7.21E-09	2.26	1.66
Replicates	0.008	2	0.0040	0.01		3.04	ns
AxB	68.116	85	0.8014	2.20	1.31E-06	1.33	0.96
Within	77.139	214	0.3605				
Total	191.441	323					

*0.00 = mycotoxin contamination below detection limit.

Table S15. Multitoxin wheat contamination test, natural infection, OTA data mg/kg, 2021/2022

Variety	Szeged		Iregszemcse		Törökszentmiklós		Mean	Variance
	2021	2022	2021	2022	2021	2022		
1	0.31	0.00*	0.09	0.00	0.00	0.00	0.07	0.02
8	0.31	0.00	0.33	0.00	0.00	0.00	0.08	0.03
2	0.31	0.00	0.33	0.00	0.00	0.00	0.11	0.03
3	0.31	0.00	0.33	0.00	0.00	0.00	0.11	0.03
4	0.31	0.00	0.33	0.00	0.00	0.00	0.11	0.03
5	0.31	0.00	0.80	0.00	0.00	0.00	0.11	0.11
15	1.27	0.00	0.17	0.00	0.78	0.00	0.14	0.28
16	0.30	0.00	0.17	0.00	0.00	0.00	0.14	0.02
17	0.30	0.00	0.88	0.00	0.83	0.00	0.14	0.18
18	0.30	0.00	0.25	0.00	0.35	0.00	0.14	0.03
10	0.30	0.00	0.77	0.00	0.25	0.00	0.15	0.09
6	0.30	0.00	0.11	0.00	0.93	0.00	0.19	0.13
13	0.30	0.00	0.11	0.00	0.79	0.00	0.20	0.10
11	0.30	0.00	0.11	0.00	0.92	0.00	0.22	0.13
14	0.30	0.00	0.11	0.00	0.42	0.00	0.22	0.03
12	0.30	0.00	0.11	0.00	0.42	0.00	0.22	0.03
9	0.30	0.00	0.11	0.00	0.42	0.00	0.33	0.03
7	0.30	0.00	0.11	0.00	0.42	0.00	0.37	0.03
Mean	0.36	0.00	0.29	0.00	0.36	0.00	0.17	
ANOVA								
Source	SS	df	MS	F	p-value	F crit.	LSD 5%	
Variety A	2.06	17	0.12	6.43	5.21E-12	1.67	0.09	
Columns B	9.34	5	1.87	99.36	1.43E-53	2.26	0.05	
Replicates	0.07	2	0.04	1.97		3.04	ns	
AxB	10.52	85	0.13	6.69	6.97E-29	1.33	0.09	
Within	4.04	214	0.02					
Total	26.03	323						

*0.00 = mycotoxin contamination below detection limit.

Table S16. Multitoxin wheat contamination test, natural infection, STC data mg/kg, 2021/2022

Variety	Szeged		Iregszemcse		Törökszentmiklós		Mean	Variance
	2021	2022	2021	2022	2021	2022		
16	0.180	0.000	0.279	0.000	0.271	0.000	0.122	0.02
1	0.326	0.000	0.335	0.134	0.000	0.000	0.133	0.03
9	0.352	0.025	0.301	0.000	0.221	0.000	0.150	0.03
2	0.395	0.000	0.309	0.000	0.213	0.000	0.153	0.03
8	0.266	0.000	0.348	0.000	0.344	0.000	0.160	0.03
3	0.369	0.000	0.295	0.092	0.216	0.000	0.162	0.02
13	0.382	0.077	0.273	0.000	0.259	0.000	0.165	0.03
11	0.388	0.000	0.108	0.000	0.348	0.166	0.168	0.03
12	0.337	0.000	0.488	0.000	0.276	0.000	0.184	0.05
6	0.218	0.132	0.390	0.000	0.373	0.000	0.186	0.03
7	0.386	0.000	0.400	0.000	0.245	0.093	0.187	0.03
4	0.420	0.069	0.343	0.000	0.197	0.113	0.190	0.03
18	0.383	0.000	0.424	0.000	0.351	0.000	0.193	0.05
14	0.340	0.058	0.306	0.167	0.293	0.000	0.194	0.02
10	0.115	0.066	0.474	0.097	0.462	0.000	0.202	0.04
15	0.226	0.068	0.365	0.099	0.471	0.000	0.205	0.03
17	0.291	0.056	0.287	0.087	0.315	0.220	0.209	0.01
5	0.338	0.000	0.439	0.088	0.334	0.122	0.220	0.03
	0.317	0.031	0.343	0.042	0.288	0.040	0.177	

ANOVA

Source	SS	df	MS	F	p-value	F crit.	LSD 5%
Variety A	0.22	17	0.01	0.98	0.48	1.67	ns
Columns B	6.36	5	1.27	95.36	1.07E-52	2.26	ns
Replicates	0.06	2	0.03	2.23		3.04	ns
AxB	1.63	85	0.02	1.43	0.019	1.33	0.18
Within	2.82	214	0.0133				
Total	11.10	323					

*0.00 = mycotoxin contamination below detection limit.