Abstract: Mycotoxins are secondary fungal metabolites which may affect animal health, reproduction, and performance. These naturally occurring toxic metabolites are found in a variety of feedstuffs worldwide. Classic signs of mycotoxicosis in livestock can include reduced feed intake, diarrhea, and vomiting. Consideration of clinical signs alone will underestimate the true impact of mycotoxins on animals as inflammation, decreased nutrient digestibility, impaired gut integrity, and altered immune responses have also been associated with mycotoxin exposure. The objective of this study was to compare mycotoxin contamination levels of the 2023 corn crop with previous year trends. Samples were analyzed utilizing the liquid chromatography with tandem mass spectrometry (LC-MS/MS) method for six major mycotoxin groups: aflatoxins (Afla), type A trichothecenes (A-Trich), type B trichothecenes (B-Trich), fumonisins (FUM), zearalenone (ZEN), and ochratoxin A (OTA). Statistical analyses were performed with JMP Pro 16 software using one-way ANOVA and means were separated using Tukey’s HSD with significance reported at P ≤ 0.05. A limited number of 2023 samples were screened by time of abstract submission (n = 37); therefore, the contamination profile of this crop year will likely change as the sample pool expands and includes more samples originating from the Midwest. Contamination levels in corn for the tested toxin groups have remained consistent over the survey period. To date, 100% of the samples evaluated contained at least one mycotoxin, compared with 91% that was observed in 2022. Aflatoxin occurrence was numerically greater in 2023 corn compared with previous harvest years (27 vs. 11, 7, 5, and 3%, 2022 through 2019, respectively) while Afla mean contamination levels were similar across the study period (P > 0.05). The occurrence of FUM in 2023 corn was also numerically the greatest (97 vs. 79, 64, 64, and 78%, 2022 through 2019, respectively) and mean FUM contamination levels did not differ across the study period (P > 0.05). Occurrence of A-Trich was numerically increased in 2023 vs. 2022 (22 vs. 3%) but mean contamination level of positive samples for A-Trich was significantly less (P < 0.05) in 2023 vs. 2019 (21 vs. 330 parts per billion) and did not differ from other years in the study. The occurrence of B-Trich was numerically less in 2023 vs.
2022 (35 vs. 68%) while B-Trich mean contamination levels were similar across the study period \( (P > 0.05) \). Preliminary results of the 2023 US corn grain survey indicate mycotoxin occurrence is numerically increased while mean contamination levels are similar for most mycotoxin groups other than A-Trich. Continued surveillance is advised to assess the risk to livestock as new crop corn is fed out over the coming months.

**Keywords:** corn, mycotoxins, United States