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PROJECT 4 ABSTRACT
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The selection of moderately resistant varieties is critically important for managing Fusarium head blight (FHB) and deoxynivalenol (DON), as the integration of genetic resistance with a timely fungicide application is the most effective strategy for minimizing losses caused by this disease-toxin complex. In most soft red winter wheat (SRWW) regions, the selection of FHB resistant varieties is based solely on visual symptoms (FHB incidence, field severity, and head severity), but most pathologists and breeders would agree that DON data are just as important as or even more important than visual symptoms when choosing varieties for planting. However, since the turnaround time between harvest and planting is extremely short in SRWW production regions, DON results are almost never available to help guide decision-making regarding variety selection. In addition, since the turnover of SRWW varieties is very high, DON data from previous years may be of little value for selecting varieties in any given season. The objective of this pilot study is to use a GC-MS unit (Agilent 5977B MSD – 7820 GC) housed in the Paul lab. to expedite the generation of timely DON results for commercial SRWW varieties from regional performance (or similar) trails. PIs will harvest and clean grain samples and send them to the Paul lab for testing. The Paul lab will grind and test samples for DON and report results to individual PIs for subsequent publication in annual variety performance trial reports.