PI: Dave Garvin
PI's E-mail: garvi007@umn.edu
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PROJECT 1 ABSTRACT
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Extensive efforts have been directed at identifying wheat germplasm with resistance to scab that can be used as parents for the development of new commercially acceptable cultivars with enhanced scab resistance. For two decades, a Uniform Regional Nursery to screen spring wheat for scab resistance has sought to address this issue by evaluating scab resistance in advanced spring wheat germplasm at different locations throughout the Midwestern United States. The goal of this project will be to coordinate this multisite scab resistance evaluation of wheat germplasm for spring wheat region breeding programs in 2018 and 2019. Project objectives of the coordination of this nursery are 1) to oversee the logistics of organizing the nursery in the early spring; 2) to obtain, collate and analyze data associated with scab resistance that is gathered at each nursery location; and 3) to produce an annual nursery report that is freely distributed to participants and other interested parties. The timeline for completing the nursery program's components involving the coordinator, breeders, and pathologists (entry selection, seed distribution, field planting, disease inoculation and evaluation, harvest, data summary, and report completion) follows a well-established time table which permits the final report to be released in time for breeders to make selections in offseason nurseries. By providing spring wheat breeders an opportunity to evaluate the nursery entries at their own locations and to compare the results to those obtained on the same germplasm set tested at other locations, this nursery program has proven to be valuable both for identifying new scab resistant spring wheat germplasm and for facilitating subsequent exchange of materials among participants for use in scab resistance breeding efforts.