Soft Red Winter Wheat Germplasm Evaluation
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Research Question
Evaluate the agronomic performance of a limited number of winter wheat varieties from the eastern USA and Europe.

Results
All but the hard red winter wheat varieties Roughrider and Jerry, included as checks, suffered 80 to 100% winterkill this past winter. The cold snap immediately prior to Easter is largely debit to the demise of the trials. No useful yield data was collected in 2007. Agronomical observations indicated that the European germplasm tended to have a very late maturity, making their adaptation to Minnesota questionable.

Based on this past season’s results, different germplasm was requested of the cooperating breeders. For 2008, the entries include new material from the Crop Development Centre winter wheat breeding program at the University of Saskatchewan and Russian winter wheat accessions.

Application/Use
HRSW producers operate on tight economic margins. This research will determine if growers should consider using liquid P sources to enhance HRSW grain yields instead of dry P sources, especially when applied with air seeders using broad band or ribbon seeding patterns. Optimizing and potentially reducing the annual P fertilizer gift can improve the profit margins for HRSW by reducing input cost and/or increasing grain yields.

This research also has broader environmental implications; as public opinion and political pressure mount to reduce production agriculture’s impact on the environment, research as described in this proposal can lay the foundation on which sound, science based, policy recommendations can be made.

Materials and Methods
One winter triticale, three winter barley, four soft red winter wheat, and four German winter wheat cultivars were planted in Crookston, St. Paul, and Lamberton on October 2nd, 2006, using a randomized complete block design with 3 replicates.

Economic Benefit to a Typical 500 Acre Wheat Enterprise
None to date