Response of Imidazolinone Resistant Hard Red Spring Wheat for Agronomic and Quality Characters. (C01-anderson170449-Poster)

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Abstract:

In 1993 American Cyanamid and North Dakota State University began commercial development of imazamox tolerant hard red spring wheat. Several genotypes with imazamox tolerance were developed. The requirement of a high level of crop tolerance to the herbicide for both agronomic and quality characters has prompted evaluation of several hard red spring wheat genotypes. Sixteen imazamox tolerant spring wheat genotypes were selected for this research. The spring wheat genotypes were evaluated in four environments. Two experiments were conducted, one which received the imazamox herbicide, and a control which received no herbicide. The field evaluation of selected genotypes indicated the presence of a significant genotype by herbicide interaction. The selected genotypes that received the herbicide treatment expressed a decrease in test weight and grain yield. However, the level of herbicide injury was highly dependant on genotypic background. The genotypes in this experiment also were evaluated for various bread baking quality characters. The imazamox herbicide had no negative affect on bread baking quality. The genotypic background and the imazamox herbicide both played a key role in the level of imazamox tolerance present in selected hard red spring wheat genotypes.

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