MINNESOTA-Dual Use of Intermediate Wheatgrass for Grain and Forage

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Intermediate wheatgrass (Thinopyrum intermedium; IWG) is a perennial, cool-season forage grass being developed into a perennial grain crop. The Land Institute, in Salinas, KS, and the University of Minnesota have worked together to develop new lines of IWG having greater grain yields and grain size than those of original populations. IWG has deep, dense root systems providing ecosystem services such as enhanced soil conservation, reduced nutrient leaching, and carbon sequestration. Rapid advancements have been made to develop IWG grain from breeding and genomics to end-use processing and product development. Consequently, commercial interest in IWG products - called Kernza - has swelled, leading to significant demand for this new crop.

As with any new crop, eliminating economic and agronomic risks is a priority. Ongoing agronomic trials are determining best management practices for ensuring maximum grain yield. However, an added-value product of the IWG system remains largely untapped and unknown: the capacity to manage IWG as an integrated crop/livestock system to produce livestock forage as well as grain for human consumption. Utilizing IWG systems for forage would provide another revenue stream for farmers (an economic safety net as the grain market matures). Because IWG grain is harvested in mid-summer, there is potential to harvest and/or graze its forage in the spring and fall. In some preliminary studies, we found IWG forage yields were 0.75 tons/acre when harvested in May before stem elongation. After grain harvest, yields of fall forage were 2.0 tons/acre. Research on livestock grazing effects on IWG forage and grain yields will begin in 2016.