

Building a Cereal Rye Breeding Program for Cover Crop Use

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Cereal rye is becoming a major crop in the United States. Although cereal rye acreage may rival that of spring wheat (USDA 2022), rye has received little attention from public breeding programs. Many cover crop growers are still planting variety not stated seed. The Cover Crop Breeding Network has begun to select cereal rye for the needs of cover crop and forage producers. Primary traits of interest include emergence and survival in cold and dry conditions, early vigor, allelopathy, high biomass, forage quality, maturity timing, and seed yield. Our nationwide breeding program is divergently selecting cereal rye for high and low allelopathy and early and late maturity to meet different cropping system niches. We are collecting data to understand the influence of genotype by environment interactions and regions of adaptation for biomass, vigor, forage quality, and seed yield.