Planting Date Effects on Winter Triticale Grain Yield and Yield Components

Aaron J. Schwarte, Lance R. Gibson,* Douglas L. Karlen, Philip M. Dixon, Matt Liebman, and Jean-Luc Jannink

ABSTRACT

Winter triticale (xTriticosecale Wittmack) has the potential to introduce valuable economic and environmental benefits to U.S. grain production systems. To maximize triticale's value, research was conducted to identify planting dates that allow maximum productivity after soybean [Glycine max (L.) Merr.].Winter triticale was planted at 10-d intervals from 15 September to 15 October at three Iowa locations: central, NE, and SW, during three growing seasons: 2001–2002, 2002–2003, and 2003–2004. Grain yield decreased with planting dates after late September at the NE and SW locations in 2002–2003, and the central, NE, and SW locations in 2003–2004. Yield reductions from planting in mid October rather than late September ranged from 13 to 29%. At the NE location in 2001–2002 and the central location in 2002–2003, grain yield was 15% less for mid September than late September planting, similar for late September and early October plantings, and 13 to 15% less for mid October. Grain yield did not change with planting date at central Iowa in 2001–2002. The greatest yields occurred for planting dates where between 533 and 955 growing degree days (GDD, 0 C° base temperature) accumulated between planting and 31 December. Winter triticale would most likely be placed after soybean in Iowa, suggesting that a 2-wk period would be available for planting winter triticale without diminished yield caused by late planting.

Published in Crop Sci. 46:1218–1224 (2006).
Crop Ecology, Management & Quality
doi:10.2135/cropsci2005.06-0130

677 S. Segoe Rd., Madison, WI 53711 USA