

Planting Date Effects on Winter Triticale Dry Matter and Nitrogen Accumulation

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ABSTRACT Addition of triticale (*×Triticosecale* Wittmack) into more diversified cropping systems could provide valuable economic and environmental benefits to producers in the U.S. Corn and Soybean Belt. To maximize triticale value, research was conducted to identify planting dates that allowed maximum dry matter production and N capture. Winter triticale was planted at 10-d intervals from 15 September to 15 October at three Iowa locations: central, northeast, and southwest for two growing seasons: 2002–2003 and 2003–2004. Aboveground dry matter production, N concentration, and N removal were greater at southwest Iowa than central and northeast Iowa. Dry matter production decreased as planting was delayed from late September to late October. Nitrogen accumulation at any time during the spring and summer was greater for September- than October-planted triticale in 2002–2003. At the end of the 2002–2003 season, mid-September planted triticale had accumulated 37% more N than mid-October planted triticale. In 2003–2004, total N capture occurring by early May was less for late-October-planted triticale than the other three planting dates, but there were no differences in N capture among the four planting dates from late May until maturity. Dry matter production was greatest when at least 300 growing degree days (GDDs) (base 4°C) accumulated between planting and 31 December. These results suggest that triticale should be planted in September to maximize spring forage yield and N accumulation although later planting dates would provide a higher quality forage if harvest was not delayed into late spring and summer.