

Foxtail Barley (*Hordeum jubatum*) Control in Wheat and Flax

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Foxtail barley (*Hordeum jubatum*) is a perennial grass native to western North America. Previous studies have shown that fall applications of glyphosate resulted in the best control of foxtail barley. However, if glyphosate is not applied in the fall, the question becomes, “is early or late spring application of glyphosate the best alternative?” Trials were conducted at the near Saskatoon to evaluate glyphosate application and seeding dates and in-crop herbicides for control of foxtail barley in wheat (2005) and flax (2006).

In 2005 early glyphosate treatments were applied May 9th, wheat was seeded on May 11th and sulfosulfuron was applied June 9th. The late glyphosate treatments were applied May 30th, wheat was seeded on June 3rd and sulfosulfuron was applied June 21st. In 2006 early glyphosate treatments were applied May 5th, flax was seeded on May 11th and quizalofop was applied June 13th. The late glyphosate treatments were applied May 31st, flax was seeded on June 2nd and quizalofop was applied June 22nd. In 2005, late application of glyphosate at 450 g ai ha⁻¹ provided excellent foxtail barley control at all growth stages and was superior to 1800 g ai ha⁻¹ applied in early spring. In 2006, 450 g ai ha⁻¹ glyphosate applied late again provided excellent control and was slightly better than 900 g ai ha⁻¹ applied early. In 2006, post-emergent quizalofop improved seedling foxtail barley control in plots receiving early glyphosate application but did not improve seedling control in plots receiving late glyphosate treatment. Quizalofop did not improve the control of established foxtail barley at either glyphosate application time. Late May glyphosate applications appear to be the best time to control foxtail barley in the spring but crop yield reduction will likely occur in some years. Early May glyphosate applications should be followed with a post-emergent application of quizalofop in flax to improve seedling foxtail barley control.