

MILLER, STEPHEN D. and K. JAMES FORNSTROM, Departments of Plant, Soil, Insect Sciences and Civil Engineering, University of Wyoming, Laramie, WY 82701. Postemergence grass control in sugarbeets.

Sethoxydim was the only postemergence grass herbicide registered for use in sugarbeets for over ten years. However, clethodim, quizalofop and a new formulation of sethoxydim were all recently labeled in sugarbeets for similar purposes. Experiments were conducted at Torrington and Powell, WY in 1995 and 1996 to compare the effectiveness of these herbicides for grass control in sugarbeets when applied alone or in combination with desmedipham plus phenmedipham. Plots were 10 by 30 ft. with three to four replications arranged in a randomized complete block design. Herbicide treatments were typically applied when the grasses were 2 to 4 inches tall with a CO₂ pressurized knapsack sprayer delivering 10 gpa at 40 psi. Weed control was based on visual evaluations made 2 to 4 weeks following treatment. Clethodim and quizalofop have provided more effective small grain control than either sethoxydim formulation. Further, foxtail control with sethoxydim and clethodim has generally been better than with quizalofop. Control of other grass species has generally been similar at labeled rates. Clethodim was antagonized less by desmedipham plus phenmedipham than sethoxydim or quizalofop. Oil additives generally reduced the antagonism between desmedipham plus phenmedipham and the grass herbicides but also increased the risk of sugarbeet injury.