Agronomic Practices that Enhance Barley Competitiveness will Influence the Weed Economic Threshold. (C03-odonovan203127-Oral)

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Abstract:

Barley is one of the most competitive crops grown in western Canada. Implementing the weed economic threshold (ET) concept may thus be more feasible in barley than in less competitive crops. Barley competitiveness with wild oat was influenced by a number of factors including variety selection. Tall varieties yielded higher than semidwarf varieties, and less wild oat seed was produced. A regression model was developed to estimate yield loss due to wild oat in barley. When evaluated in barley fields, it provided reasonably accurate estimates of barley yield loss and the economics of wild oat control with herbicides. Model estimates indicated that barley plant density, and relative time of emergence had a considerable influence on the wild oat ET. The results suggest that agronomic practices can be manipulated to minimize barley yield loss and seed production by wild oat. A competitive (tall) barley variety should be seeded shallowly and at a high seeding rate as soon as possible after a tillage operation or pre-seeding herbicide application. This will likely ensure early barley emergence resulting in a high wild oat ET density, and thus minimize the need for herbicide application.

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