

QUACKGRASS CONTROL IN KENTUCKY BLUEGRASS. Kirk A. Howatt and Deying Li, Assistant Professor and Assistant Professor, North Dakota State University, Fargo, ND 58105-5051.

Kentucky bluegrass turf often is invaded by quackgrass in cool climates because quackgrass rhizomes can push through the sod and establish new colonies. Some cultural practices can help prevent quackgrass invasion, but no herbicide currently is registered for selective removal of quackgrass from Kentucky bluegrass. An experiment was established to evaluate the response of quackgrass and Kentucky bluegrass to four herbicides. Studies were established in the fall at two locations in North Dakota. Treatments included fall or spring application of flucarbazone at 30 g ha⁻¹, primisulfuron at 40 g ha⁻¹, MKH 6561 at 35 g ha⁻¹, and sulfosulfuron at 35 g ha⁻¹. In addition, these four herbicides were applied in the spring as split-application treatments in two equal applications so that the total amount of each herbicide per area remained constant. Quackgrass showed injury with all herbicides applied in the fall. Sulfosulfuron or MKH 6561 resulted in more injury to quackgrass than flucarbazone or primisulfuron, but control was less than 60% 4 wk after application. Fall-applied herbicide treatments provided partial quackgrass control the following spring, but spring application of herbicides resulted in as much as 95% quackgrass control during the growing season compared with 79% control from fall application. Split application of herbicides in the spring provided similar or greater control than single application. Split application of MKH 6561 still provided 83% quackgrass control at the end of the season. Kentucky bluegrass injury primarily was manifested as stunting, although plots treated with primisulfuron also exhibited chlorosis following application and again at the end of the season when the summer drought was relieved and moisture became available. Turf color and quality did not differ among treatments.