Efficacy of 'Tenacity' in Late Spring to Eliminate *Poa annua* in Kentucky Bluegrass Fairways

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INTRODUCTION

Kentucky bluegrass (*Poa pratensis* L.) golf course fairways infested with annual bluegrass (*Poa annua* L.) can be hard to manage, unattractive, and have reduced playability. The objective of the study was to determine the efficacy of Tenacity 4SC (mesotrione) combined with several herbicides to eliminate *P. annua* from Kentucky bluegrass fairways while maintaining acceptable turfgrass quality and playability.

MATERIALS & METHODS

Research was conducted on a Kentucky bluegrass fairway at the Palouse Ridge Golf Club in Pullman, WA. Treatments were: Tenacity 175 g ai/ha + Xonerate 99 g ai/ha, Tenacity 140 g ai/ha + Xonerate 49 g ai/ha, Tenacity 175 g ai/ha + Turflon 561 g ae/ha, 19660A 49 g ai/ha + Turflon 561 g ae/ha, Tenacity 175 g ai/ha + Trimmit 280 g ai/ha, and Tenacity 175 g ai/ha + Trimmit 280 g ai/ha + Turflon 561 g ae/ha. Treatments were applied 2 May, 23 May, and 13 June 2013.

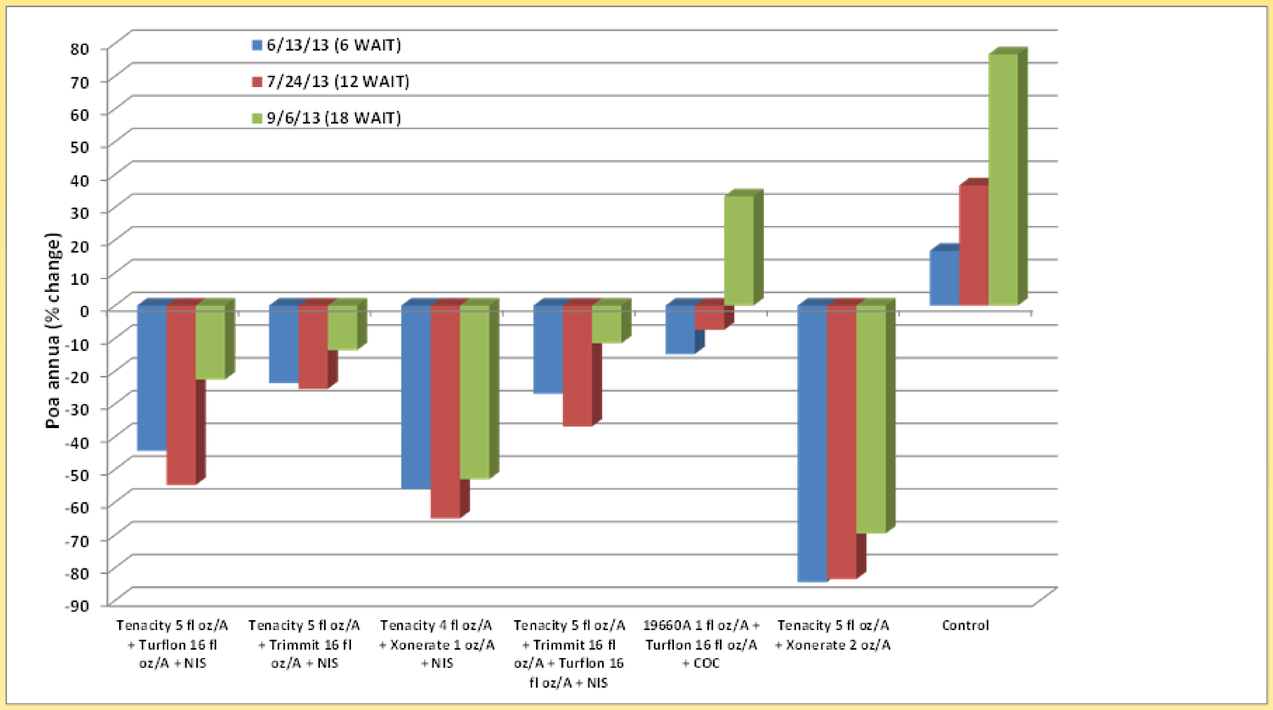

Fig. 1. Percentage of change in *Poa annua* in a Kentucky bluegrass fairway at Pullman, WA.

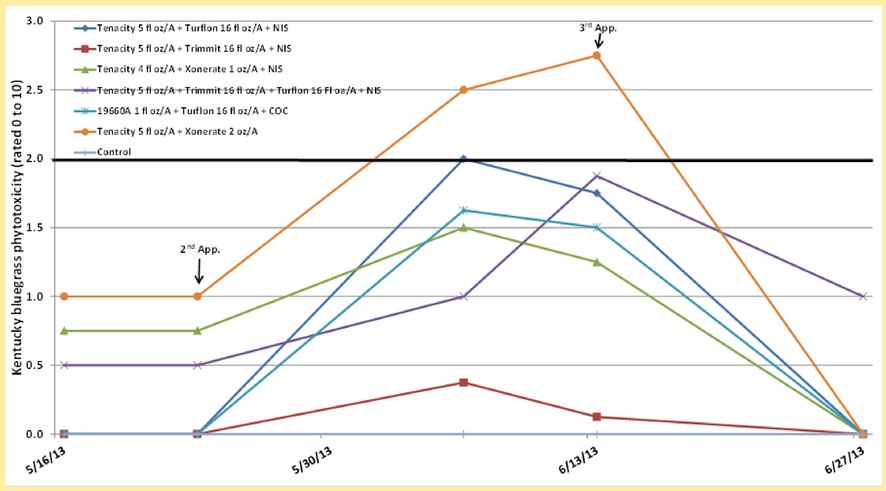

Fig. 2. Kentucky bluegrass phytotoxicity at Pullman, WA.

RESULTS

Tenacity 175 g ai/ha + Xonerate 99 g ai/ha and Tenacity 140 g ai/ha + Xonerate 49 g ai/ha resulted in the greatest reduction of *P. annua*, 86 and 82%, respectively, compared to the control (Fig. 1). However, associated with the Tenacity 175 g ai/ha + Xonerate 99 g ai/ha treatment was a high level of *P. annua* phytotoxicity and at times an unacceptable phytotoxicity on Kentucky bluegrass (Fig. 2). In addition, during the summer open depressed areas in the fairway where the *P. annua* had died would present undesirable playing conditions during peak summer play. By fall. the open depressions generally healed (Fig. 3 and 4). Tenacity 140 g ai/ha + Xonerate 49 g ai/ha also resulted in a high level of *P. annua* phytotoxicity for several weeks, but a low level of Kentucky bluegrass phytotoxicity and did not cause *P. annua* to quickly disappear creating open areas and depressions in the fairway and therefore better playability.

CONCLUSIONS

Tenacity 140 g ai/ha + Xonerate 49 g ai/ha may be a desirable *P. annua* control option to consider in terms of playability. Complete *P. annua* control was not achieved with any treatment; therefore, a multi-year program may be needed to achieve this goal.

Fig. 3. Kentucky bluegrass fairway, fall 2013 (18 WAIT), at Pullman, WA.

Fig. 4. Kentucky bluegrass fairway, fall 2013 (18 WAIT), at Pullman, WA.