Study documents the challenges of herbicide-resistant annual bluegrass in turf

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Multiple herbicide-resistant Poa annua from Australia. Credit: Dr Peter Boutsalis and Dr Rajesh Barua

Greenskeepers and landscape managers consider annual bluegrass to be a significant pest. It has an unsightly appearance, competes with desirable grasses, and produces an uneven surface that affects golf and other sports. In addition, the weed has now developed resistance to multiple herbicides.

In an study featured in the journal *Weed Science*, researchers in Australia examined 31 populations of annual bluegrass suspected to be herbicide resistant. All 31 were found to be resistant to multiple turf herbicides. Three populations had evolved resistance to herbicides with five different mechanisms of action.

The team confirmed instances of resistance to propyzamide, simazine, rimsulfuron, foramsulfuron, endothall and pinoxaden. Levels of resistance ranged from two-fold for propyzamide and simazine to 56-fold for rimsulfuron.

It is clear the options for effective control of annual bluegrass are narrowing. "The extensive amount of herbicide resistance and the limited nonchemical methods available will make it challenging to manage multiple resistant annual bluegrass in turf," says Rajesh Barua of the University of Adelaide.

To learn more, read the article "Incidence of multiple herbicide resistance in annual bluegrass (Poa annua) across southeastern Australia," available online, free for a month.

More information: Rajesh Barua et al, Incidence of multiple herbicide resistance in annual bluegrass (Poa annua) across southeastern Australia, *Weed Science* (2020). DOI: 10.1017/wsc.2020.35

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