

Multi-year Fall Applied Methiozolin for *Poa annua* Control on Golf Greens

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INTRODUCTION

Creeping bentgrass (*Agrostis stolonifera* L.) golf greens infested with annual bluegrass (*Poa annua* L.) can be hard to manage, unattractive, and have reduced playability. Methiozolin ('PoaCure') is a new isoxazolin herbicide that has shown selective *P. annua* control in golf greens (Han and Kaminski, 2012; Hart, 2012; Hoyle et al., 2012; Koo et al., 2013).

OBJECTIVE

Evaluate multi-year, single Fall applications of methiozolin to control low populations of *P. annua* in bentgrass greens.

MATERIALS & METHODS

Research was conducted on 'T-1' creeping bentgrass, sand-based greens (< 5% *P. annua*) at the Palouse Ridge Golf Club in Pullman, WA. A single application of methiozolin was applied at 3 L ha⁻¹ or 6 L ha⁻¹ in late September, mid October, or early November in 2010 and reapplied to the same plots in 2011. The study was repeated on a separate green in 2011-2013. Experimental design was a randomized complete block with four replications. Plant counts (two random 0.09 m² counts per plot) were made at initial application in September and subsequently monthly during the following two growing seasons during late Spring and Summer.

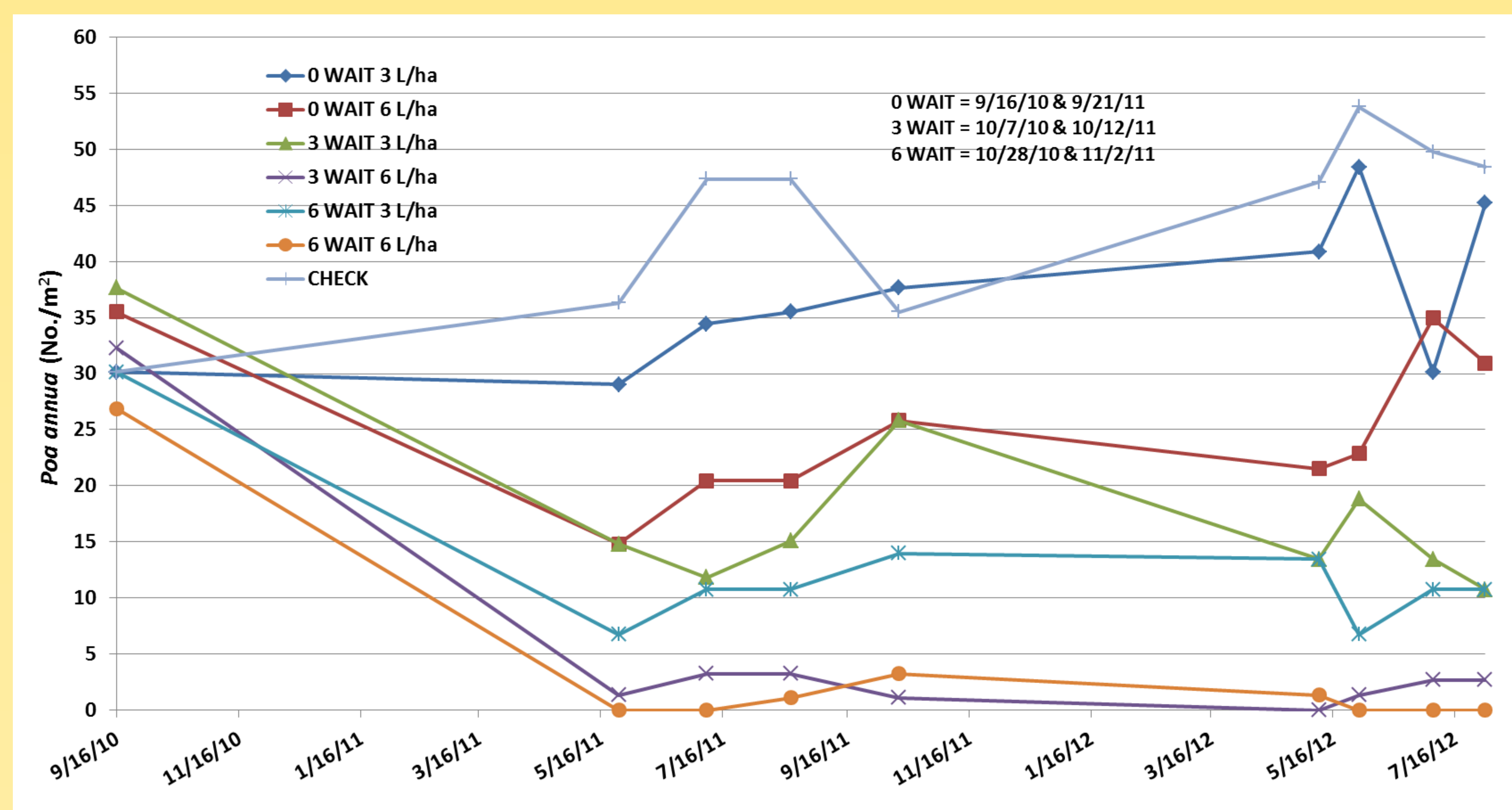


Fig. 1. *Poa annua* control with multi-year (2010 and 2011), single Fall applications of methiozolin at Pullman, WA.

RESULTS

In the non-treated control, *P. annua* increased by 80% during the 2010-2012 study (Fig. 1) and by 120% in the 2011-2013 study (Fig. 2). In general, *P. annua* control increased with methiozolin application rate and late applications in the Fall. There was no bentgrass phytotoxicity observed at any time during either study. All treatments (except for the late September methiozolin application at 3 L ha⁻¹ during 2010-2012) reduced *P. annua* compared to the non-treated control. A single application of 6 L ha⁻¹ in early November of 2010 and 2011 completely eliminate *P. annua* by Summer 2012. In the repeat study (2011-2013), a single application of 6 L ha⁻¹ on 2 Nov. 2011 reduced the *P. annua* population by 66% the first year and by 83% after two years.

CONCLUSIONS

Multi-year (2 yr), single Fall applications of methiozolin provided excellent control of *P. annua* in bentgrass greens having an initial low *P. annua* population. In general control increased with methiozolin rate and late timing of applications. Methiozolin has the potential to become a management tool to mitigate the infestation of newly established bentgrass greens with *P. annua* or for *P. annua* control in bentgrass greens where a low population currently exists.

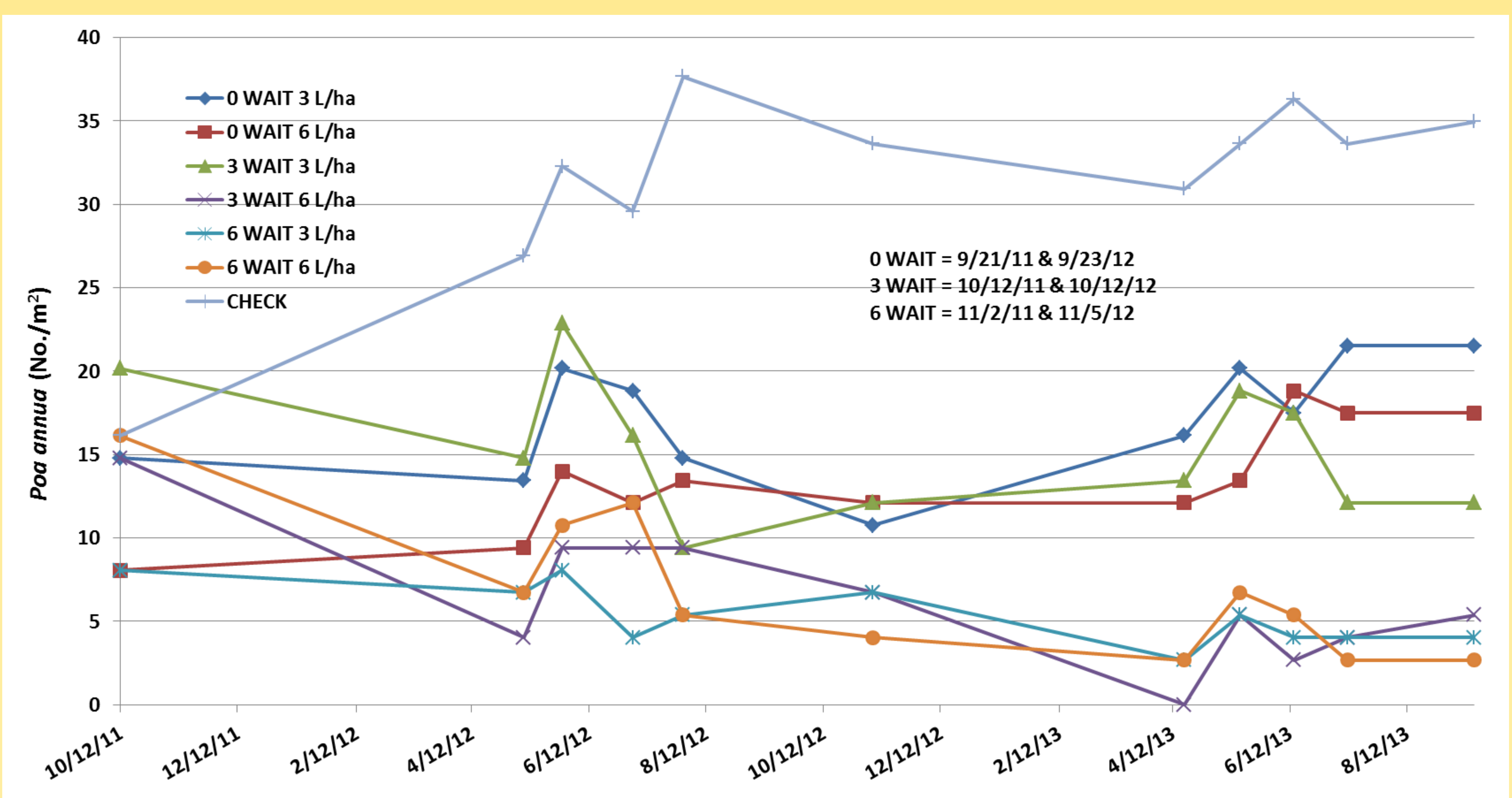


Fig. 2. *Poa annua* control with multi-year (2011 and 2012), single Fall applications of methiozolin at Pullman, WA.

LITERATURE CITED

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- Hoyle, J.A., C. Straw, G. Henry, T. Cooper, L. Beck, J. Brosnan, and G. Breeden. 2012. Fall applications of methiozolin for the control of annual bluegrass in sand-based and push-up greens. ASA-CSSA-SSSA abstracts. Cincinnati, OH.
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