

Approaches to *Poa annua* Management in Turfgrasses in the Southwest U.S. Desert Region

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ABSTRACT

Poa annua is among the most problematic weeds in turfgrasses during the winter season. Preemergence control can be initiated in the non-overseeded bermudagrass or overseeded winter turfgrass using dinitroaniline herbicides in the late summer or fall season. Sequential applications can provide season-long reduction of *P. annua*. When cool-season overseeded grasses are planted, few selective postemergence herbicides are available and they include ethofumesate, amicarbazone, and most recently introduced methiozolin.

More options are available for use in dormant bermudagrass that is not overseeded. Many non-selective postemergence herbicides such as glyphosate, diquat, glufosinate, simazine, indaziflam, flumioxazin, and the ALS enzyme-inhibiting herbicides can accomplish the goals of minimizing *P. annua* populations. The timing and sequence of a combination of applications of preemergence and postemergence herbicides can be effective and also present phytotoxic effects on the turfgrasses. There are several approaches of combining preemergence followed by postemergence herbicides or singular applications to manage *P. annua* populations in desert turf.

Table. Preemergence and postemergence herbicide timing of application for *Poa annua* control in turfgrasses.

		Seasonal Timing											
		Aug	Sep	Oct	Nov	Dec	Jan	Feb					
				P. annua germination and emergence									
Non-overseeded bermudagrass													
Preemergence herbicides	Rate (lb a.i./A)												
proflamiflor	0.65 – 1.5												
pendimethalin	1.5 – 2.0												
dithiopyr	0.38 – 0.5												
pronamide	0.5 – 1.5												
bensulide	12.5												
Preemergence plus early postemergence													
dithiopyr	0.38 – 0.5												
indaziflam	0.03 – 0.05												
flumioxazin	0.25 – 0.38												
simazine	1.0												
pronamide	0.5 – 1.5												
Postemergence herbicides													
glyphosate	0.21 – 2.0 (0.18 – 1.5 a.e.)												
diquat	0.47 – 0.93												
glufosinate	0.75 – 1.5												
ammonium nonanoate	6 – 15%												
pelargonic acid	5 – 10%												
foramsulfuron	0.013 – 0.026												
flazasulfuron	0.039 – 0.047												
Winter overseeded bermudagrass turf													
Preemergence herbicides	Rate (lb a.i./A)												
proflamiflor	0.75 – 2.0												
dithiopyr	0.38 – 0.5												
Postemergence herbicides													
foramsulfuron	0.013 – 0.026												
trifloxysulfuron	0.01 – 0.024												
metsulfuron-methyl + rimsulfuron	0.019 + 0.015												
ethofumesate	0.75 – 2.0												
amicarbazone	0.094 – 0.17												
methiozolin	0.5												



Figure 1. Rates of indaziflam applied in early November for winter-long *P. annua* control in dormant bermudagrass

Non-overseeded dormant bermudagrass

- Sequential preemergence applications in October followed by December
- Late fall application of late preemergence to very early postemergence to *P. annua* (Figure 1)
- Postemergence nonselective *P. annua* control



Figure 2. Experimental preemergence-applied proflamiflor controlled *P. annua* at 31 weeks after treatment in winter overseeded turf.

Overseeded bermudagrass

- Preemergence application of proflamiflor or dithiopyr 6-8 weeks before overseed (Figure 2)
- Very early postemergence of ALS-inhibitors prior to overseed



Figure 3. Experimental comparison of rates of postemergence applied amicarbazone controlled *P. annua* in winter overseeded turf.



Figure 4. Experimental applications of methiozolin controlling *P. annua* on a bentgrass golf green.

- Selective postemergence sequential applications of amicarbazone in February (Figure 3)
- Postemergence application(s) of ethofumesate in December-January when bermudagrass is dormant
- 4 postemergence applications of methiozolin in late fall on bentgrass greens (Figure 4)