

Weed Control During Establishment of Tall Fescue

Jim Baird, Brent Barnes, Ryan Nichols, Alea Miehl, and Tyler Mock
Department of Botany & Plant Sciences
University of California, Riverside

Weed management in turf is often challenging, especially during establishment from seed as very few herbicides are safe or labeled on seeded or seedling turfgrasses. The objective of this study was to evaluate two new herbicides, Tenacity (Mesotrione) from Syngenta and amicarbazone from Arysta LifeScience, that can be applied at tall fescue seeding for control of many grass and broadleaf weeds. They are soon to be registered for use on turf in California. We compared these herbicides to other new, newly formulated, or existing herbicides that must be applied postemergence of turf and weeds.

Location: UCR Turf Facility

Soil: Hanford fine sandy loam

Experimental Design: Randomized complete block; four replications

Plot Size: 7 ft x 10 ft; 3-ft alleys

Species/Cultivars: Tall fescue (*Festuca arundinacea* Schreb.) 'Millennium'

Mowing Height: 2 inches; first cut on 11 September 2011

Irrigation: Six times daily during grow-in; 80% ETo/DU thereafter

Fertility: 0.5 lb N/1000 ft² on 23 August 2011 (seeding)
0.5 lb N/1000 ft² on 3 September 2011
1 lb N/1000 ft² on 10 September 2011

Sprayer: CO₂-powered bicycle
TeeJet 8002VS nozzles
20-inch spacing
22.5-inch boom height
Speed: 1.5 mph
Output: 40 GPA
Pressure: 44 psi @ tank

Data Collected: Tall fescue cover and injury (0-100%); Weed cover and control (0-100%)

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Table 1. Tall fescue and weed cover (0-100%) 19 days after seeding and application of “A” herbicides, and prior to application of “B” herbicides. Riverside, CA.

Trt	Product	Rate/A	Timing	Tall Fescue Cover	Purslane Cover	Purple? Nutsedge Cover
1	Untreated	--	--	68.8	20.0 ab	1.5 ab
2	Tenacity	5 oz	A	72.5	3.8 cd	0.3 b
3	Tenacity	8 oz	A	57.5	1.8 d	0.0 b
4	Amicarbazone	4 oz	A	63.8	13.8 bc	3.5 ab
5	Amicarbazone	8 oz	A	62.5	7.0 cd	2.0 ab
6	Onetime	64 oz	B			
6	MSO	0.25% v/v	B	76.3	18.8 ab	1.3 b
7	Drive XLR8	64 oz	B		26.3 a	
7	MSO	0.25% v/v	B	70.0		3.5 ab
8	Turflon Ester	16 oz	B	67.5	26.3 a	5.5 a
9	Turflon Ester	32 oz	B	60.0	18.8 ab	1.3 b
10	Turflon Ester Ultra	16 oz	B	57.5	18.8 ab	1.3 b
11	Turflon Ester Ultra	32 oz	B	72.5	21.3 ab	1.8 ab
12	Imprelis	4.5 oz	B	63.8	28.8 a	3.8 ab
	LSD ($\alpha = 0.05$)	--	--	NS	11.5	NS

Treatment means followed by the same letter are not significantly different ($\alpha = 0.05$). NS = Not significant.

Application Dates: A = 23 August 2011

B = 11 September 2011 (approximate 2-3 leaf stage of tall fescue and after one mowing)

Preliminary Results:

- ✓ Daytime air temperatures were near or above 100F during most of the period of turf establishment.
- ✓ Both Tenacity and amicarbazone were safe on tall fescue applied at seeding.
- ✓ Tenacity and the 8 oz/A rate of amicarbazone significantly reduced purslane infestation 19 days after seeding.
- ✓ Although (purple?) nutsedge pressure was relatively light and sporadic early in the study, it appeared that Tenacity prevented emergence of this sedge species.

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 Plot 12E-2; Plot size: 7 ft x 10 ft; 3-foot alleys

NORTH

11	3	6	9	2	5	7	10
3	5	7	10	4	1	8	12
8	6	1	4	12	9	11	2

VALVE BOXES

6	11	1	5	10	9	2	7
9	10	11	12	4	8	12	3
1	2	3	4	5	6	7	8

Table 2. Herbicides tested in the tall fescue establishment study.

Product	Manufacturer	Common Name(s)	Notes
Tenacity	Syngenta	Mesotrione	Pre and post weed control in mainly cool-season turf except bentgrass; based on a naturally occurring compound secreted by the Callistemon (bottlebrush) plant; inhibits carotenoid biosynthesis, causing bleaching; CA registration pending in 2012.
Amicarbazone	Arysta LifeScience	Amicarbazone	New triazolinone herbicide with pre and post grass and broadleaf activity in warm- and cool-season turf; U.S. turf registration pending in 2012
Onetime	BASF	Quinclorac + Mecoprop + Dicamba	
Drive XLR8	BASF	Quinclorac	Water-based formulation for uptake, efficacy, rainfastness
Turflon Ester	Dow AgroSciences	Triclopyr	
Turflon Ester Ultra	Dow AgroSciences	Triclopyr	New non-petroleum methylated seed oil solvent
Imprelis	DuPont	aminocyclopyrachlor	Broad spectrum broadleaf activity; CA registration pending