

MON 44951 Rate and Timing for Control of Tall Fescue in Kentucky Bluegrass

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Background/Objective: Previous work has shown that Certainty at 1.5 to 2.0 oz/A of product (0.07 to 0.09 lbs ai/A) controlled tall fescue in bermudagrass turf. However, cool-season grasses such as Kentucky bluegrass are not as tolerant of Certainty, so lower rates are needed. The objective of this study is to determine the most effective rate and time of application of Certainty to control tall fescue in Kentucky bluegrass.

Site Information

Location:	William H. Daniel Research and Diagnostic Center
Turf Condition:	good
Turf Management:	Mowing Height in: 2.5
	Irrigation: To prevent moisture stress
Target Pest:	Tall fescue
Growth Stage:	seeded fall 2004

Application Information

Application Dates: in 2005	1 June	1 July	11 July
Spray Volume gal 1000 ft⁻²:	2		
Spray Equipment:	CO ₂ backpack		
Experimental Design:	Randomized complete block		
Replications:	3		
Plot Size ft:	5 X 5		

Results:

- Separate stands of turf-type tall fescue or Kentucky bluegrass were used in this study to determine effectiveness on tall fescue and safety on bluegrass.
- Three applications of Certainty at 0.0234 lbs ai/A gave the most effective control (33% cover) of tall fescue (Table 1) while being very safe on Kentucky bluegrass (Table 2).
- Since two applications of Certainty at 0.035 lbs ai/A caused no phytotoxicity to Kentucky bluegrass, perhaps three applications at this rate will improve control of tall fescue.
- Certainty at 0.047 lbs ai/A caused noticeable phytotoxicity on bluegrass, but damage was within acceptable limits and multiple applications at this rate should be investigated.

Table 1. Percent cover and phytotoxicity of tall fescue after Certainty applications.

Treatment ^c	Rate of application	Cover ^a			Phyto ^b
		10 June	2 July	28 July	20 June
	lbs ai/A	-----%-----			
Certainty 75DF ^d	0.0234	83.3	53.3	33.3	7.7
Certainty 75DF	0.0234				
Certainty 75DF	0.0234				
Certainty 75DF ^d	0.035	83.3	55.0	66.7	7.0
Certainty 75DF	0.035				
Certainty 75DF ^d	0.047	86.7	35.0	65.0	5.7
Certainty 75DF	0.0234				
Certainty 75DF	0.047	88.3	40.0	93.3	5.3
Check		81.7	76.7	90.0	9.0
LSD (0.05)		NS	19.7	13.8	1.4

^a Percent of the plot area covered by green tall fescue.

^b Phytotoxicity was rated on a scale of 1 to 9 with 1 = completely brown turf, 7 = acceptable damage, and 9 = no phytotoxicity.

^c Treatments were applied with a non ionic surfactant at the rate of 0.25 percent volume per volume.

^d Treatments applied with a three week split with the first split on 1 July and the second split on 11 July.

Table 2. Phytotoxicity^a on Kentucky bluegrass after Certainty applications.

Treatment ^b	Rate of application	10 June	20 June	2 July	28 July
	lb ai/A				
Certainty 75DF ^c	0.0234	9.0	9.0	9.0	9.0
Certainty 75DF	0.0234				
Certainty 75DF	0.0234				
Certainty 75DF ^c	0.035	9.0	9.0	9.0	9.0
Certainty 75DF	0.035				
Certainty 75DF ^c	0.047	8.0	8.0	9.0	9.0
Certainty 75DF	0.0234				
Certainty 75DF	0.047	8.3	8.0	9.0	9.0
Check		9.0	9.0	9.0	9.0
LSD (0.05)		0.5	0.0	NS	NS

^a Phytotoxicity was rated on a scale of 1 to 9 with 1 = completely brown turf, 7 = acceptable damage, and 9 = no phytotoxicity.

^b Treatments were applied with a non ionic surfactant at the rate of 0.25 percent volume per volume.

^c Treatments applied with a three week split with the first split on 1 July and the second split on 11 July.