

Evaluation of fungicides for control of Pythium foliar blight in tall fescue, 2007.

Fungicides were evaluated for control Pythium foliar blight caused by *Pythium aphanidermatum*. This trial was conducted at the Lake Wheeler Turfgrass Field Lab in Raleigh, NC on a 'Southern Gold' tall fescue blend that was seeded on 14 May (20 lb seed/1000 sq ft) and maintained under home lawn conditions. The turf was mowed once weekly at a height of 3.5 in. with clippings returned, and the site was irrigated to prevent drought stress. Fertilizer was applied as 25-6-12 on 14 Jul (0.75 lb N/1000 sq ft). ProStar (2.2 oz/1000 sq ft) was applied on 8 and 29 Jun and 13 Jul for control of brown patch. 3336 Plus (6.0 fl oz/1000 sq ft) was applied on 22 Jun and 13 Jul for control of gray leaf spot. Daconil Ultrex (3.2 oz/1000 sq ft) was applied on 30 Jul and 17 Aug for control brown patch and gray leaf spot. Drive 75DF + methylated seed oil (1 lb /a + 1 qt/a) was applied on 16 and 30 Jul for post emergent control of crabgrass. Plots were 5 ft x 5 ft and were arranged in a randomized complete block with three replications. Fungicides were applied in water equivalent to 2 gal per 1000 sq ft with a CO₂ powered sprayer at 40 psi using TeeJet 8004 nozzles. All treatments were initiated on 21 Jun due to early symptom development. Fungicides were reapplied on 17 Jul and on 14-day intervals thereafter. The experimental area was inoculated on 9 Jul using rye grain infested with *P. aphanidermatum* isolates PyAp1, PyAp2, PyAp3, PyAp4, and PyAp5 to encourage uniform disease development. After inoculation, the study was irrigated with 0.13 in. water daily at 800 h and 2000 h to produce environmental conditions conducive to disease development. Percent turf area exhibiting foliar blight symptoms was assessed on 23 Jul, and 1, 14, and 28 Aug. Data were subjected to analysis of variance and means separation by Waller-Duncan k-ratio t-test (k=100).

Weather conditions were hot and abnormally dry throughout the trial. Only 0.2 in. of rain fell between 13 Jun and 10 Jul. Between 10 Jul and 21 Aug, 3.8 in. of precipitation was recorded, with 3.0 in. falling on 17 Jul. Pythium blight incidence was low in the trial until mid-August, and disease incidence varied across the experiment. On 14 Aug, the tank-mixture of ARY 0534003 + Disarm and the 9.14 oz rate of Autograph were the only treatments to provide significant disease suppression. On 28 Aug, disease incidence was approaching 50% in untreated control plots, and 17 treatments were controlling Pythium foliar blight. ARY 0534003 + Disarm, Insignia, and Subdue MAXX provided the best control on this date. No phytotoxic effects were detected at any time during the study.

Treatment, formulation, and rate per 1000 sq ft	Appl. interval (days)	Pythium foliar blight incidence (%)			
		23 Jul	1 Aug	14 Aug	28 Aug
Stellar 5.73SC 1.2 fl oz.....	14*	0.0 g**	0.0 b	13.1 b-g	51.2 b
Banol 6SL 2.0 fl oz.....	14	0.3 efg	0.7 b	27.4 abc	54.0 b
Signature 80WG 4.0 oz.....	14	1.2 b-f	0.2 b	15.8 a-g	27.2 e-h
Subdue MAXX 2ME 1.0 fl oz.....	14	0.3 efg	0.0 b	7.0 fg	11.4 jkl
QRD-288 L 5.0 fl oz.....	14	2.4 a	3.2 ab	25.5 a-d	43.8 bcd
QRD-288 L 8.0 fl oz.....	14	1.7 abc	2.2 ab	9.5 d-g	28.1 e-h
QRD-288 L 5.0 fl oz + Subdue MAXX 2ME 0.5 fl oz.....	14	0.3 efg	0.0 b	5.1 fg	19.3 g-k
Disarm 4SC 0.18 fl oz.....	14	1.5 a-d	7.0 a	10.5 c-g	29.8 efg
Disarm 4SC 0.36 fl oz.....	14	1.4 a-e	0.9 b	5.1 fg	16.0 ijk
ARY 0534003 SC 3.5 fl oz + Disarm 4SC 0.1 fl oz.....	14	0.2 fg	0.0 b	1.0 g	0.5 l
Segway 3.34SC 0.45 fl oz.....	14	1.9 ab	1.9 b	24.8 a-e	37.4 cde
Segway 3.34SC 0.6 fl oz.....	14	1.2 b-f	0.9 b	12.9 b-g	34.3 def
Segway 3.34SC 0.75 fl oz.....	14	1.2 b-f	0.5 b	16.0 a-g	52.5 b
Segway 3.34SC 0.9 fl oz.....	14	1.2 b-f	0.5 b	31.6 a	83.9 a
Insignia 20WG 0.9 oz.....	14	0.7 c-g	4.3 ab	4.9 fg	9.9 kl
Autograph 70WG 4.0 oz.....	14	0.9 b-g	0.2 b	8.0 efg	18.3 h-k
Autograph 70WG 4.57 oz.....	14	0.5 d-g	0.2 b	12.2 b-g	45.1 bcd
Autograph 70WG 8.0 oz.....	14	0.5 d-g	0.0 b	4.9 fg	19.9 g-k
Autograph 70WG 9.14 oz.....	14	0.7 c-g	0.0 b	3.4 g	12.4 ijk
Signature 80WG 8.0 oz.....	14	0.2 fg	0.0 b	11.1 c-g	27.4 e-h
Alude L 5.5 fl oz.....	14	0.2 fg	0.3 b	9.5 d-g	37.7 cde
Alude L 5.5 fl oz + Protect DF 75DF 4.0 oz.....	14	0.7 c-g	0.2 b	4.9 fg	22.4 g-j
CLEXP-1 L 4.0 fl oz.....	14	1.2 b-f	3.4 ab	14.8 a-g	15.7 ijk
CLEXP-1 L 8.0 fl oz.....	14	1.0 b-g	1.2 b	15.5 a-g	23.4 f-i
CLEXP-1 L 16.0 fl oz.....	14	1.4 a-e	3.6 ab	28.2 ab	35.4 de
Untreated Control.....		1.2 b-f	1.2 b	21.8 a-f	47.8 bc

* Fungicides were applied on 21 Jun, 17 and 31 Jul, and 14 Aug.

** Values are means of three replications. Means within columns followed by the same letter are not significantly different according to the Waller-Duncan k-ratio t-test (k=100).