

Curing Gray Leaf Spot with Karma



KARMA perennial ryegrass seed can “cure” Gray Leaf Spot in your perennial ryegrass stand even during a severe outbreak. Use superior genetics, not fungicides, to prevent or cure turf diseases.

Gray Leaf Spot is a serious disease of perennial ryegrass that can rapidly destroy turf stands under conditions of warm temperatures and high humidity. Turfgrass breeders have developed new cultivars, including Karma, with resistance to this serious disease. Recent research at the University of Connecticut has demonstrated that using superior cultivars, such as Karma, can cure your disease to reduce the need for chemical fungicides. Seedling stands of ryegrass tend to be the most susceptible to this disease although it can strike mature stands as well.

The turfgrass researchers at UConn seeded individual cultivars and blends on July 15, 2013 at 8 lbs./1,000 sq. ft. Overseeding during the epidemic was at 4 lbs./1,000 sq. ft. on both Sept. 5 and 11 for a total of 8 lbs. of seed. Fungicides were used to control other diseases such as Pythium Blight and Brown Patch. The trial was irrigated 3 times per day to maintain leaf wetness and encourage disease. After inoculation with three strains of the disease on August 7 the trial was covered with a tarp to increase the humidity and temperatures to promote infection. The disease symptoms first appeared on Aug. 15, progressed slowly until Aug. 26 and reached a peak on Sept. 5.

All single varieties, except Karma, contained obvious disease by Aug. 26 and at the peak of the epidemic all but Karma had unacceptable levels. Express II by itself recovered to an acceptable level of damage by Oct. 8.

BLENDS:

Adding Karma in a blend with moderately susceptible varieties improved the stand tolerance to Gray Leaf Spot. As little as 1/3 Karma improved the stand to the acceptable level, but better results were achieved with at least 50% Karma in the blend.

OVERSEEDING:

The susceptible blend had dropped to a severity of 2.8 by Sept. 5 when overseeding with Karma began. Seedlings of ryegrass are the most susceptible to Gray Leaf Spot and even tolerant varieties can suffer, however the overseeding with Karma cured the blend to an acceptable rating of 5.3 by Oct. 8, when most susceptible varieties were still rating below 3.8.

Gray Leaf Spot Severity for 2 Dates Select Varieties and Blends

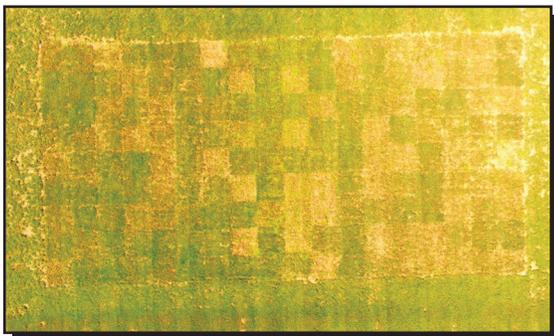
Entry	September 5	October 8
Karma	8.8 a	7.8 abc
Barbeta	1.0 l	2.3 o
Pinnacle II	2.8 fg	4.0 jk
Double Time	2.8 fg	3.8 kl
Cutter II	2.0 hij	3.8 kl
Express II	3.3 f	6.0 fg
Express II/Karma 3:1	5.8 d	6.5 ef
Express II/Karma 1:1	7.0 c	7.0 de
Express II/Karma 1:3	7.8 b	7.5 bcd
Susceptible Blend (DT: C II: EII)*	2.8 fg	5.3 h

*Overseeded with Karma

Inguagiato, J., K. Miele, X. Chen, E. Brown and S. Vose. 2014.

Tolerance of perennial ryegrass varieties and blends to Gray Leaf Spot in Connecticut, 2014 Field Day.

Gray Leaf Spot Images



Drone photo showing plots with and without Gray Leaf Spot.
- Research Farm, Berry, KY



Turfgrass trials photo with and without Gray Leaf Spot.
- Rutgers University