

Stop 1. Winterkill Reestablishment

Dr. Kevin W. Frank and Aaron Hathaway

The winter of 2013-2014 caused widespread winterkill of *Poa annua* putting greens. The *Poa annua* putting greens at the Hancock Turfgrass Research Center also suffered significant damage. We initiated several different reestablishment studies in the spring of 2014. One study evaluated the reestablishment rate of different nutritional programs that were commonly being used in Michigan (Table 1). The study was designed as a split block experiment with $\frac{1}{2}$ of each plot seeded with Pure Distinction creeping bentgrass at 2 lbs./1000 ft.² on May 2 using the Turfco TriWave 40 Overseeder. The other $\frac{1}{2}$ of the plot was not seeded to evaluate *Poa annua* survival/reestablishment. Nutritional programs were initiated the day of seeding. Some programs had weekly applications while others were treated monthly. Complete program details are presented in Table 1.

Table 1. Winterkill reestablishment programs

Trt #	Treatment	Rate	Rate Unit	Application Frequency	Rep		
					1	2	3
1	Harrell's Program				101	308	608
	Micro Granular	5	lb/1000 ft2	At Seeding			
	Earthmax Humic	6	fl oz/1000 ft2	At Seeding			
	Phos Plus	4	fl oz/1000 ft2	Weekly			
	Bio Max	2	fl oz/1000 ft2	Weekly			
	N30 Plus	5	fl oz/1000 ft2	Weekly			
	Title Phite	2	fl oz/1000 ft2	Weekly			
	PAR	0.4	fl oz/1000 ft2	1 WAS			
	PAR	0.2	fl oz/1000 ft2	Weekly 2WAS			
2	Residex Program				102	305	605
	Starter 14-28-8	1	lb ai/1000 ft2	At Seeding			
	Carbon 21	3	fl oz/1000 ft2	Weekly			
	Photo Fuel	3	fl oz/1000 ft2	Weekly			
	Quick Green	6	fl oz/1000 ft2	Weekly			
3	Floratine Program				103	307	603
	Starter 14-28-8	1	lb ai/1000 ft2	At Seeding			
	EON 75 Bio	5	lb/1000 ft2	At Seeding			
	Bent Special 28-8-18	0.55	lb/1000 ft2	Weekly			
	Glycosyn	3	fl oz/1000 ft2	Weekly			
	Maxiplex	3	fl oz/1000 ft2	Weekly			
	5.0 Cal	6	fl oz/1000 ft2	Weekly			
	Knife Plus	1	fl oz/1000 ft2	Weekly			
	Per 4 Max	1	fl oz/1000 ft2	Every two weeks			
	Power 12-6-0	10	fl oz/1000 ft2	Weekly			
	ProteSyn	4	fl oz/1000 ft2	Weekly			
	Astron	1	fl oz/1000 ft2	Every three weeks			
4	Starter Only				104	302	602
	Starter 14-28-8	1	lb ai/1000 ft2	At Seeding			
	Starter 14-28-8	0.3	lb ai/1000 ft2	Monthly			
5	Starter and Urea				105	304	606
	Starter 14-28-8	1	lb ai/1000 ft2	At Seeding			
	Urea	0.1	lb ai/1000 ft2	Weekly			
6	Urea Only				106	306	604
	Urea	0.1	lb ai/1000 ft2	Weekly			
7	Crystal Green & Urea				107	301	601
	Starter 5-27-0	1	lb ai/1000 ft2	At Seeding			
	Urea	0.1	lb ai/1000 ft2	Weekly			
8	Seed & Nothing More				108	303	607