

Coated potassium fertilizer study

Two studies were established on sandy soils in western Michigan to evaluate the benefits of the use of coated potassium carriers. The studies were located on Kentucky bluegrass roughs at the Spring Lake Country Club in Spring Lake and the Grand Haven Golf Club at Grand Haven. Applications were made at Spring Lake as outlined in Table 6 on May 11, June 15 and September 5. The fertilizers were provided by the Sierra Chemical Co. The potash carrier was potassium sulfate with 0-0-45, 0-0-46 and 0-0-47 being coated products and 0-0-50 is uncoated. A similar study was established at Grand Haven but no further applications were made beyond the May 11 treatments. There was no visually observed turf response to these treatments at either location.

Soil samples were collected to a 3 inch depth on June 28, September 5 and December 8. Available potassium was extracted with neutral normal ammonium acetate. Soil potassium tests (Table 6) were relatively low on the June 28 sampling date while all tests increased for the September sampling date. This increase remains unexplained. The variability in the data reduce any significance in the data although the untreated plot was consistently lower for the June and September samplings. The data from the December sampling were quite variable and are not included. Although we expected to find more K in the plots which had been treated with the coated product, that was not apparent in this study. On sandy soils it would be desirable to have a slow release potassium carrier since the cation exchange capacity is so low the potassium can be leached readily from sands.

Mowing height study

A study was initiated March 31, 1989 on a sodded Kentucky bluegrass alley at the Hancock Turfgrass Research Center. The turf was still dormant with no green shoots and a high density of brown plants. A bagging rotary mower was used to mow at 1, 1.5 or 2.0 inches along with an unmowed treatment. Clippings were removed from the plot area. Nitrogen applications were made across the mowing treatments at 0, 1 or 2 pounds per 1000 sq ft subsequent to the mowing treatment. After the treatment date all plots were mowed at the normal height of 2 inches.

Upon mowing it was apparent that green tissue was exposed with the shorter mowing heights (Table 7). Turf quality ratings revealed that the short mowing resulted in improved turf color for about 3 weeks when no nitrogen was applied. After that time there were few meaningful differences due to initial mowing height.

When nitrogen was applied at the time of mowing turf quality ratings were better for closer mowing for about a month. Few differences occurred through May. But in June the plots which were mowed shorter again had higher quality ratings.

While more research is needed to evaluate these responses more fully, it appears that if the turf has a high density of dead leaf tissue in the spring there would be benefit in mowing the grass short to remove some of this debris. It is thought this would permit more rapid warming of the crown tissue and the soil resulting in quicker growth. There could be physiological

Table 6 . 1989 Coated potassium study. Spring Lake Country Club, Spring Lake, Michigan. Treatments applied May 11, June 15 and September 5, 1989.

	Treatments (lbs K ₂ O/M)			Soil Tests, lbs/A	
	5/11	6/15	9/5	6/28	9/5
0-0-45	3.5	0	0	103.7 bc*	176.0abc
0-0-45	5.0	0	0	115.7abc	213.0ab
0-0-46	3.5	0	0	91.7 c	179.0abc
0-0-46	5.0	0	0	118.7abc	177.0abc
0-0-47	3.5	0	0	115.3abc	193.3abc
0-0-47	5.0	0	0	139.0ab	266.7a
0-0-50	3.5	0	0	153.7a	188.0abc
0-0-50	1.17	1.17	1.17	124.3abc	169.7 bc
Check	0.0	0.0	0.0	86.0 c	106.7 c

* - Means followed by the same letter are not significantly different at the 5% level using Duncan's Multiple Range Test.