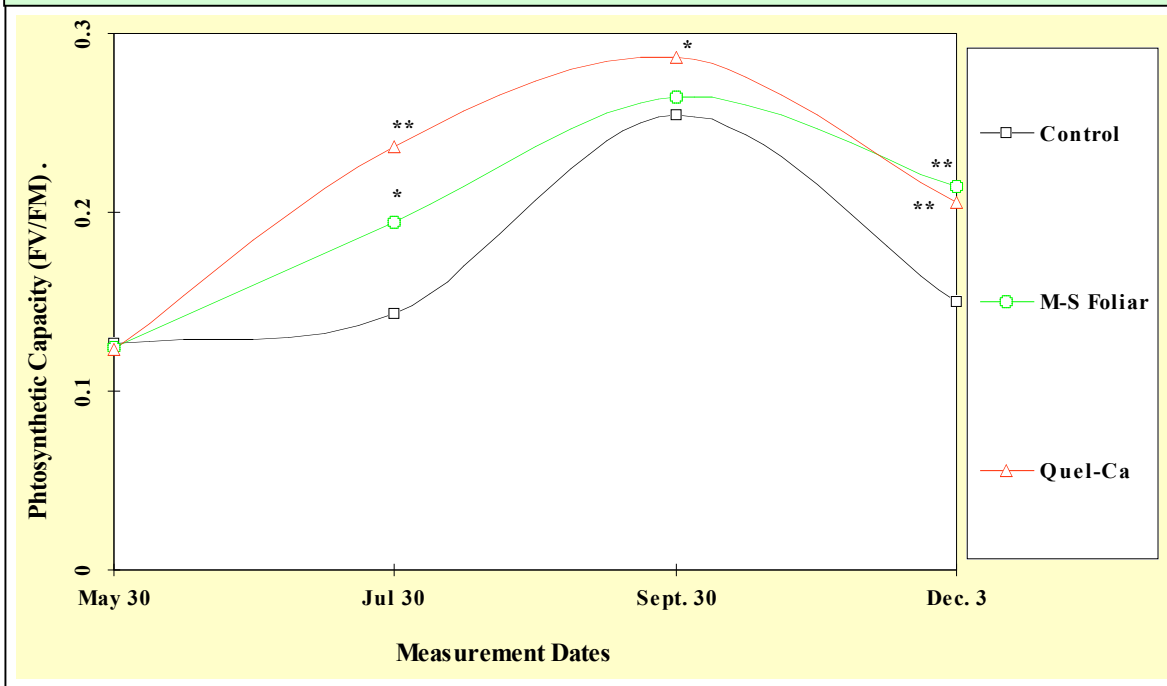


Effect of Amino Acid biofertilizers on Photosynthetic Capacity of Creeping Bentgrass
Dr. R. Schmidt, Virginia Tech, 1996



Conclusion

QUELANT[®]-Ca and MACRO-SORB[®] Foliar significantly enhance photosynthetic capacity of turfgrass especially during periods of high environmental stress.

Effect of Amino Acid Biofertilizers on Drought Stress of Turfgrass

Dr. T. L. Watschke & J. A. Borger, Penn State, 1997

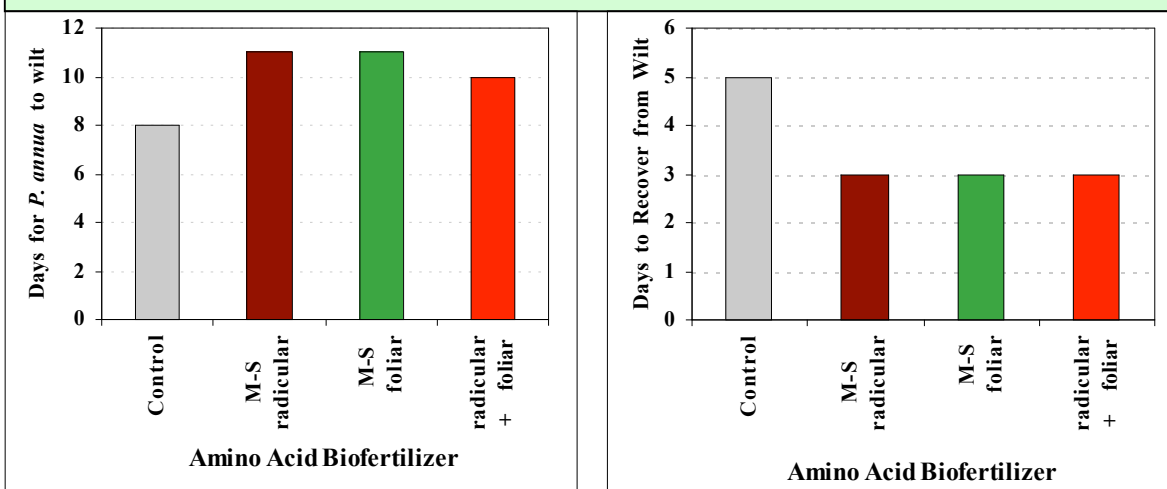


Fig. 1. Wilting of *P. annua* after irrigation removal

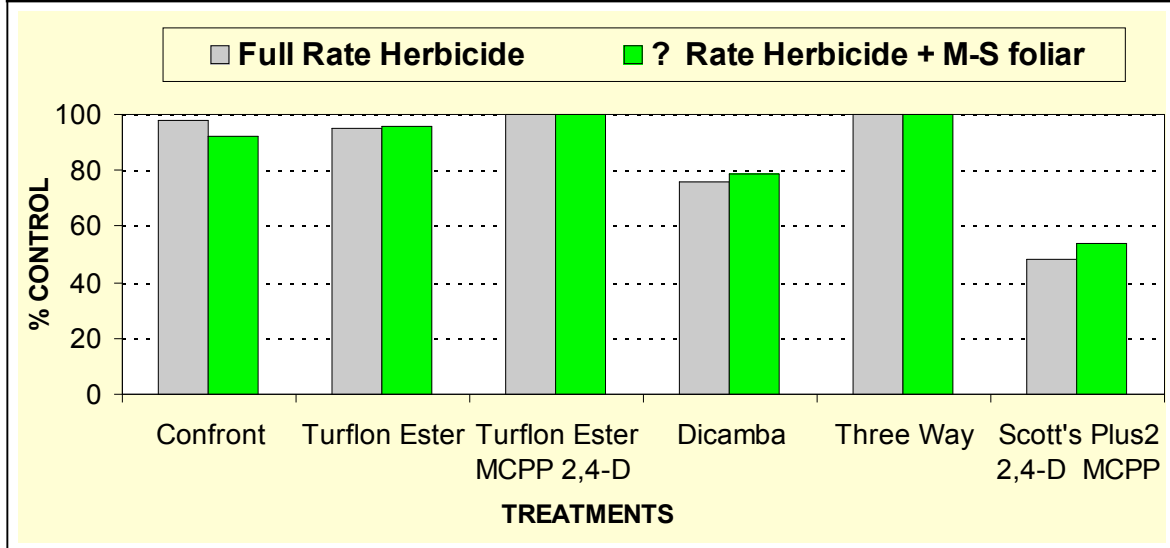
Fig. 2. Recovery of *Poa annua* from wilt

Results and Conclusion

Turfgrass treated with amino acid biofertilizers took longer to wilt (Fig. 1) and recovered quicker from wilting (Fig. 2) than non-treated turf. L-amino acids in MACRO-SORB increase the tolerance of turfgrass to drought stress.

Effect of Broadleaf Weed Herbicides in Combination with MACRO-SORB[♦] foliar for the Control of Dandelion

Dr. T. L. Watschke & J. A. Borger, Penn State, 1997

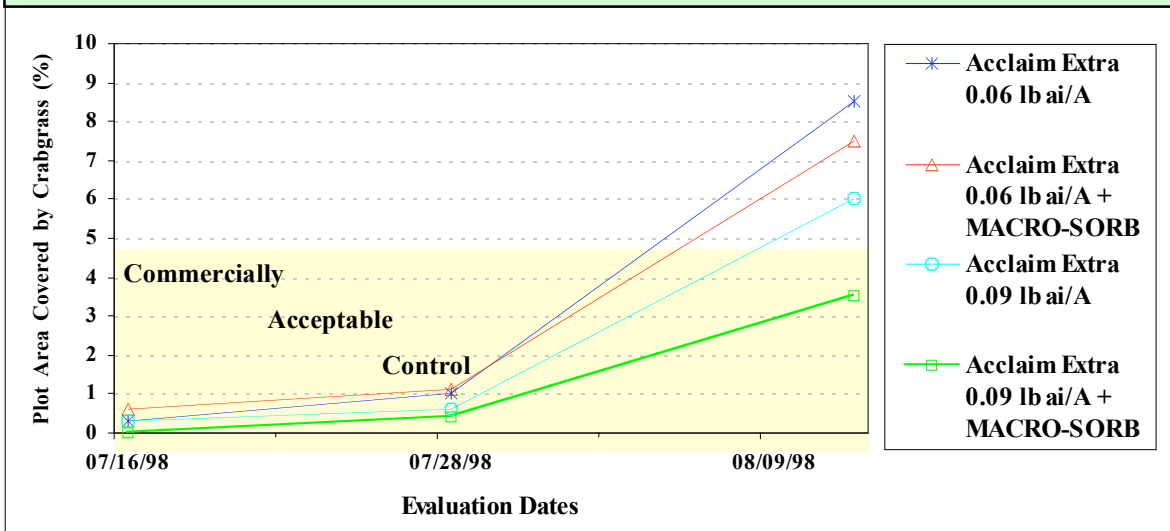


Conclusion

Half rates of commercially available herbicides combined with MACRO-SORB *foliar* control dandelion on turfgrass as well or better than **full-recommended rates**.

Post Emergence Control of Smooth Crabgrass with Acclaim Extra alone or in combination with MACRO-SORB[♦] foliar

Dr. P. H. Dernoeden, University of Maryland, 1998



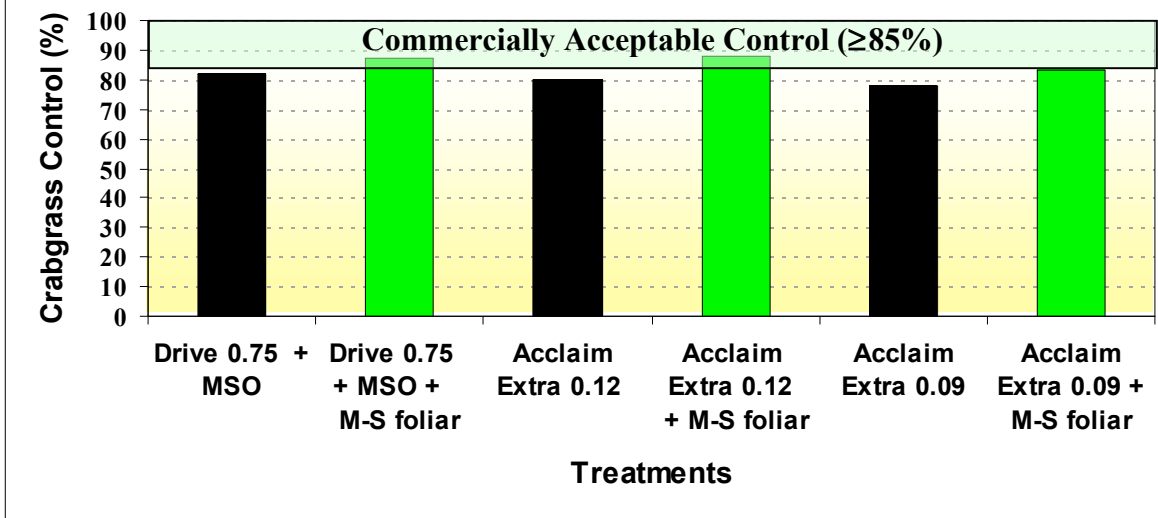
Results and Conclusion

Acclaim Extra alone or in combination with MACRO-SORB *foliar* provided good crabgrass knock-down. By August 12, although no significant differences were observed among treatments, only Acclaim Extra 0.09 lb ai/A + MACRO-SORB *foliar* 2.0 fl. oz./1000 ft² provided a **commercially acceptable control** (5% or less of the plot area was covered with crabgrass).

MACRO-SORB *foliar* enhances effectiveness of Acclaim Extra to control crabgrass

Post Emergence Control of Crabgrass at the Two and Three Tiller Growth Stage with Herbicides in Combination with MACRO-SORB® foliar

Dr. T. L. Watschke and J. A. Borger, Penn State, 1999

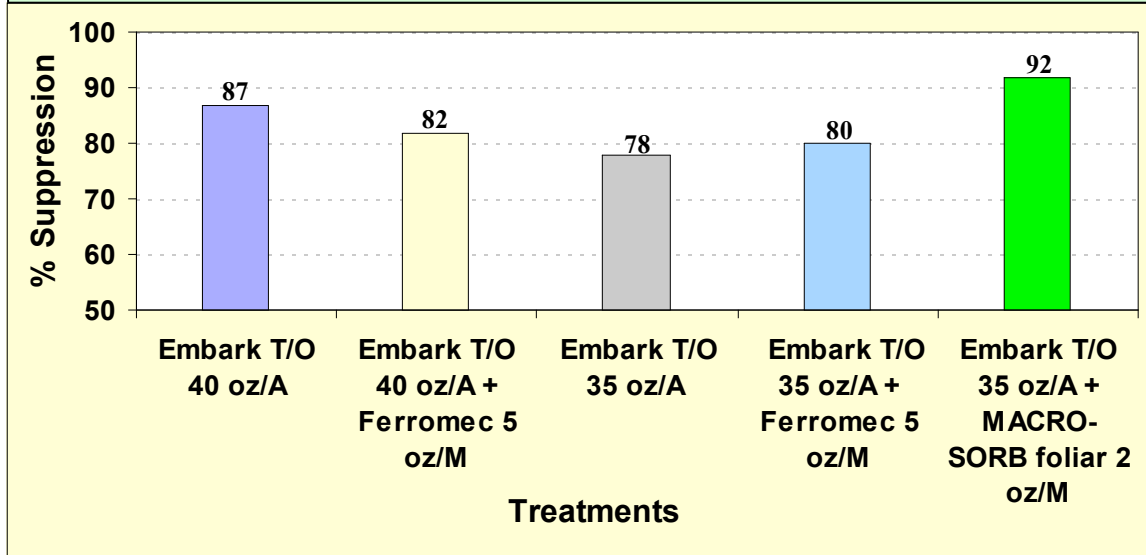


Results and Conclusions

Commercially acceptable post emergence control ($\geq 85\%$) of smooth crabgrass was obtained only when MACRO-SORB foliar was added to Acclaim Extra at 0.12 lbs ai/A and to the treatment consisting of Drive at 0.75 lbs ai/A plus MSO at 1% v/v. MACRO-SORB® foliar enhances the effect of Acclaim Extra and Drive to control crabgrass

Seedhead Suppression of *Poa annua* on a Putting Green

Dr. Pg. 2 T L Watschke and J A Borger Penn State 2000

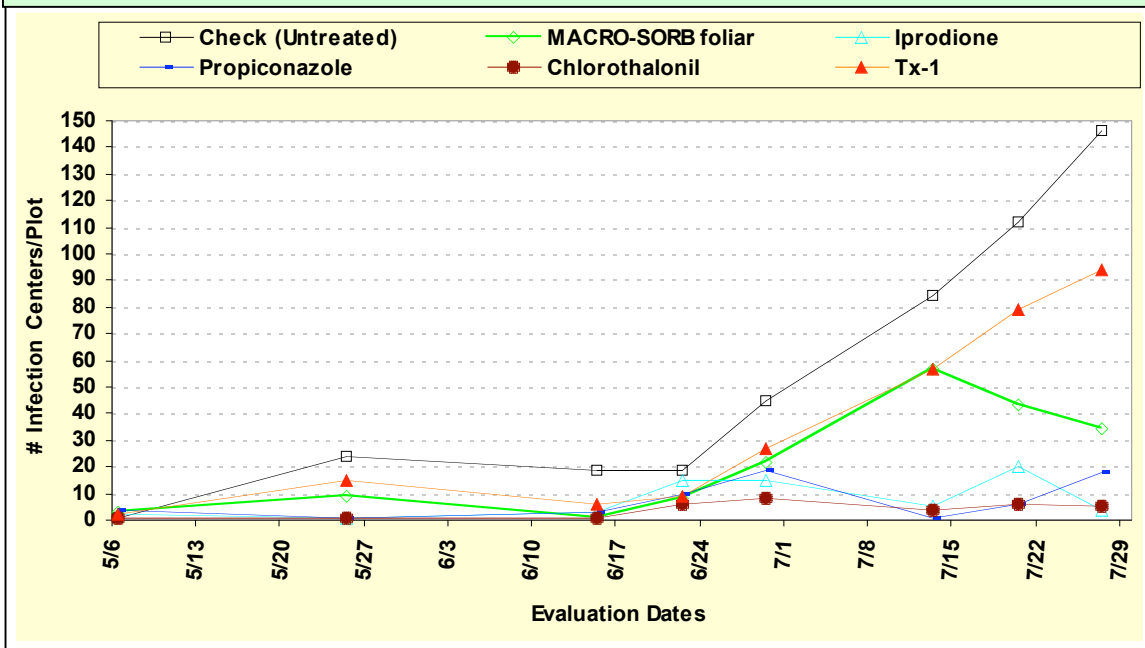


Results and Conclusion

By adding MACRO-SORB foliar at 2 oz/1000 ft² to Embark T&O at the rate of 35 oz/A, seedhead suppression was increased from 78% to 92%. The addition of MACRO-SORB foliar to Embark T&O improves seedhead suppression without increasing phytotoxicity.

Dollar Spot (*Sclerotinia homoeocarpa*) Infection Centers in Creeping Bentgrass as Influenced by Tx-1, Fungicides, and Nutrient Supplements.

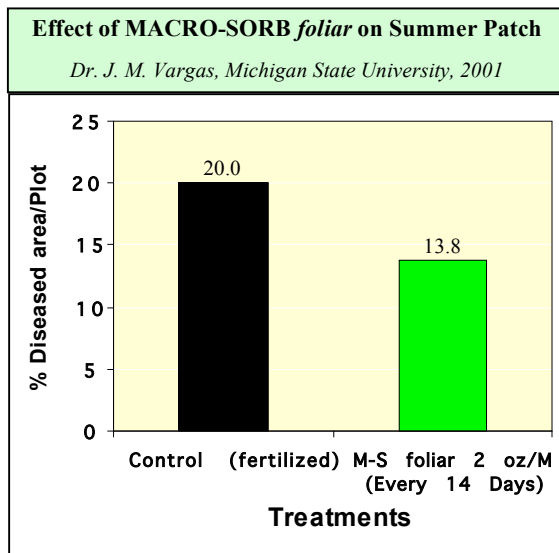
J. Graham Davis & Dr. P. Dernoeden, University of Maryland, 1998



Iprodione (3 Kg ai/Ha) & Chlorothalonil (10 Kg ai/Ha) were applied on May 6 and June 29, 1998. Propiconazole (0.38 kg ai/Ha) was applied on May 6 & July 2, 1998. MACRO-SORB[®] foliar (6.4 L product/Ha) was applied every two weeks from May 6 to July 21, 1998. The Tx-1 was applied daily from April 18 to July 29, 1998.

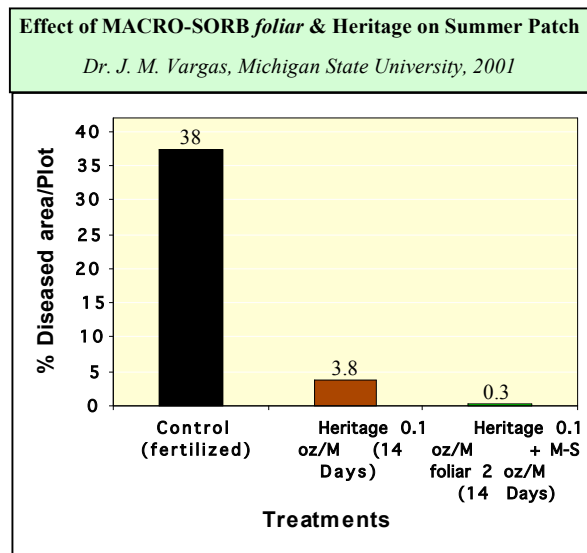
Conclusion

MACRO-SORB foliar reduces the incidence of Dollar Spot on creeping bentgrass



Conclusion

MACRO-SORB foliar reduces the incidence of summer patch on annual bluegrass.



Conclusion

MACRO-SORB foliar enhances the efficacy of Heritage fungicide to control summer patch on annual bluegrass.

Promoting the Establishment of 'L-93' Creeping Bentgrass Seedlings with MACRO-SORB radicular and QUELANT-Ca

Dr. P. Dernoeden and J. Kaminski, University of Maryland, 2003

Fig. 1. Effect of MACRO-SORB radicular and QUELANT-Ca on Turfgrass Cover.

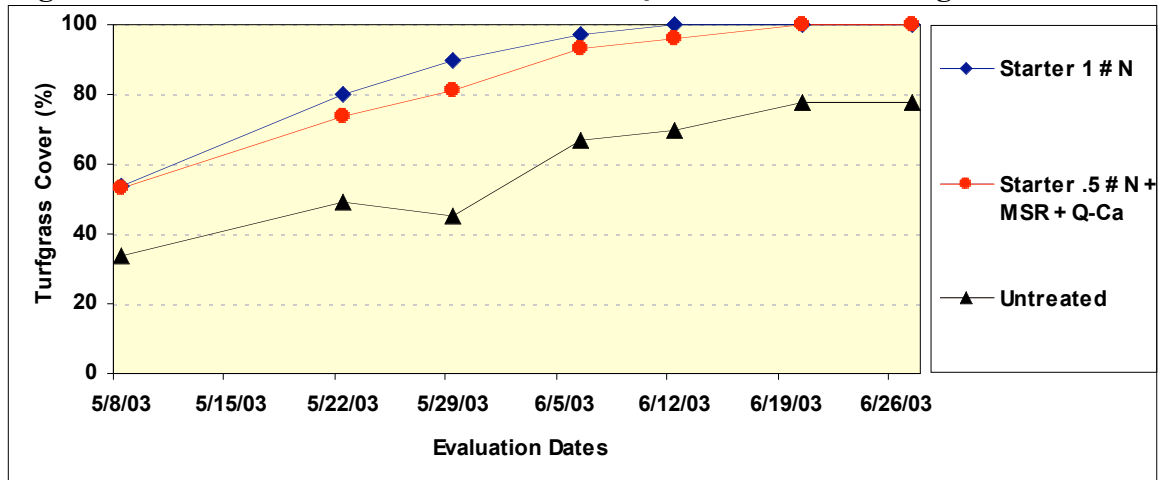
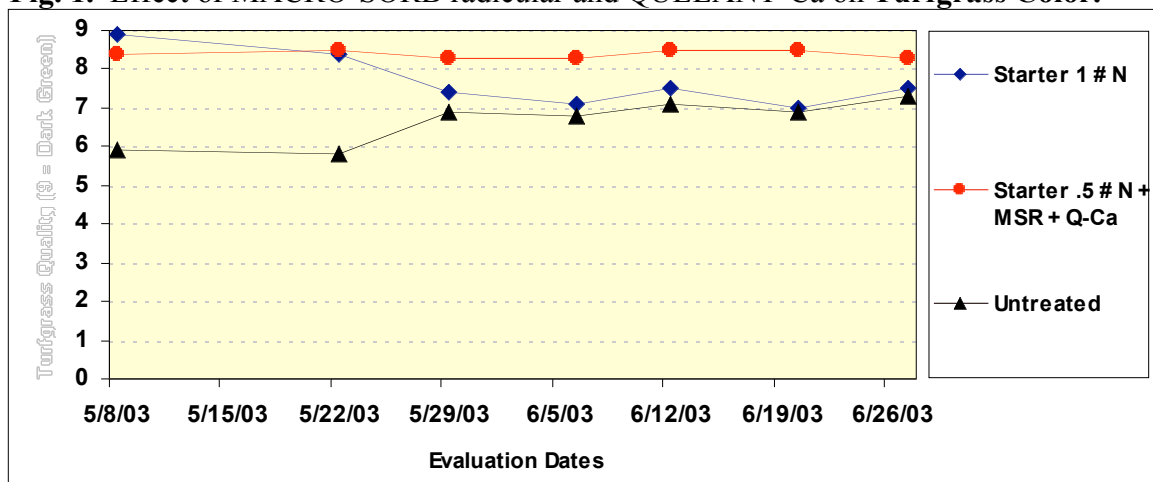


Fig. 1. Effect of MACRO-SORB radicular and QUELANT-Ca on Turfgrass Color.



Creeping bentgrass cover at treatment initiation = 30%.

Treatments were applied May 1, 15, 29 and June 12. The experimental area (including the untreated plots) received 1.0 lb. N/1000 ft² from starter fertilizer 19-25-5 and an additional 0.5 lb. N/1000 ft² from a 20-20-20 starter fertilizer.

Results and Conclusions

MACRO-SORB *radicular* (4 oz/100 ft²) in combination with QUELANT-Ca (2 oz/100 ft²) and starter fertilizer 20-20-20 at the rate of 0.5 lbs. N/1000 ft² significantly enhanced turfgrass establishment as much as the treatment consisting of starter fertilizer 20-20-20 at the rate of 1 lb. N/1000 ft² (Fig. 1). Unlike the chlorosis in bentgrass observed in the plots treated with 1 lb. N/1000 ft², plots treated with 0.5 lb. N/1000 ft² tank-mixed with QUELANT-Ca and MACRO-SORB *radicular* resulted in excellent color (Fig 2).

MACRO-SORB *radicular* and QUELANT-Ca increase the efficiency of the starter fertilizer to promote the establishment of bentgrass seedlings without adversely affecting turfgrass color.