



Postemergence goosegrass control with herbicides in bermudagrass turf

By B.J. Johnson¹

Goosegrass is one of the worst problem summer weeds that grows in bermudagrass throughout the Southeast. It readily competes with all turfgrasses since most commonly used preemergence herbicides fail to provide adequate control. Weed control is an important factor in maintaining a good quality turf. It is just as important to select a herbicide that will not injure the turf as it is to select one that will kill weeds.

Until recently only organic arsenical herbicides such as MSMA, DSMA, etc. were available for

postemergence goosegrass control in bermudagrass turf. MSMA did not control goosegrass satisfactorily as reported by many golf course superintendents.

Studies recently completed at the University of Georgia, Georgia Station at Experiment have shown that Sencor² applied alone or in combination with MSMA controlled mature goosegrass effectively in bermudagrass turf without causing any permanent turf injury.

Goosegrass Control

Sencor applied alone in July or

August at 0.5 lb ai/A (active ingredient/acre) in each of two applications controlled goosegrass effectively. The control was similar in some years from two applications at the 0.25 lb ai/A rate, but the control was not consistent. Two applications of MSMA (2.0 lb ai/A) + Sencor (1/8 lb ai/A) controlled goosegrass just as effectively as did Sencor applied alone at higher rate. Figure 1 shows goosegrass control around the edge of a bermudagrass green from two MSMA + Sencor treatments. It should be noted that the control will usually not occur unless the second application is applied within 7 to 10 days after the initial treatment.

The 2.0 + 1/8 lb ai/A rates of MSMA + Sencor appears to be the optimum rate for each chemical used in this combination. Goosegrass control was reduced when either MSMA or Sencor rate was reduced below the 2.0

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²Trade names are included for the benefit of the reader and do not imply any endorsement or preferential treatment. Trade names for metribuzin are Sencor and Lexone. Since Sencor was the chemical used in these studies, it will be used for the purpose of chemical identification.

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and 1/8 lb ai/A, respectively. On a scale of 0 = no control and 100 = complete control, there was no additional benefit from higher combination rates for goosegrass control since 97 to 100% control was obtained with the 2.0 + 1/8 lb ai/A rate.

Goosegrass control from combinations of MSMA + Sencor has been very dependable regardless of whether treatments were applied to goosegrass in the seedling or mature development state. There has been only a couple of known instances where two applications at the 2.0 + 1/8 lb ai/A did not provide acceptable mature goosegrass control.

Turfgrass Tolerance

Common bermudagrass. Sencor applied in two applications at 0.5 lb ai/A injured common bermudagrass from moderate to severe within a few days after treatment. The turf fully recovered by 5 weeks and Sencor treatment did not cause any permanent injury.

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Figure 1. Mature goosegrass was controlled around the bermudagrass green with two applications of MSMA + Sencor treatments.



Figure 3. MSMA + Sencor injured newly planted Tifgreen bermudagrass planted as green. Bermudagrass was planted June 20 and herbicides applied July 18. Picture was made 4 weeks after treatments.



Figure 2. MSMA + Sencor treatments on bermudagrass. Upper: Tifgreen injured only slightly in the treated plot on the right. Lower: Tifway injured severely with the same treatment. Pictures were made 3 weeks after treatment.

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MSMA + Sencor applied in two applications (2.0 + 1/8 lb ai/A) also injured the turf initially, but the injury was not as severe as when Sencor was applied alone at higher rates. These results show that MSMA + Sencor treatments will indeed injure bermudagrass turf immediately after treatments, but the turf will recover rapidly, usually within 3 to 4 weeks.

Tifway, Tifgreen and Tifdwarf

bermudagrass. Sencor applied alone or in combination with MSMA injured Tifway bermudagrass more than Tifgreen or Tifdwarf. Tifway was initially injured from 53 to 59% while the injury ranged from 42 to 46% for Tifgreen and 33 to 39% for Tifdwarf. Injury ratings were based on a scale of 0 to 100 where 0 represents no injury, 1 to 15 slight injury, 16 to 30 moderate injury, and above 30 as severe and not

acceptable. All bermudagrass fully recovered without affecting turf stand within 4 to 5 weeks. The difference in response of Tifway and Tifgreen from MSMA + Sencor treatments is shown in Figure 2.

These results indicate that Sencor applied alone or in combination with MSMA was more injurious to Tifway than other bermudagrasses. Even though the initial injury was higher for Tifway, the treatments did not permanently affect the quality and stand of bermudagrass turf.

Bermudagrass putting green. Sencor applied alone at 0.5 lb ai/A in each of two applications injured Tifdwarf bermudagrass maintained as putting green approximately 50% at 2 weeks after treatment. The treatment also reduced turf stand to 86% when ratings were made at 4 weeks after treatment. Two applications of MSMA + Sencor (2.0 + 1/8 lb ai/A) injured the putting green turf only moderately (23%) at 2 weeks after treatment and did not affect turf stand anytime during the recovery period.

These results show that combinations of MSMA + Sencor can be applied for goosegrass control in bermudagrass putting greens without severely injuring the turf. Goosegrass was not consistently controlled in bermudagrass maintained at regular mowing height or as a putting green from MSMA treatments. Therefore, the combination of MSMA + Sencor offers an improvement in weed control for turf managers and golf course superintendents throughout the Southeast where bermudagrasses are grown.

A word of caution, Sencor applied alone or in combination with MSMA should not be applied to bermudagrass not fully established. Severe injury may occur to newly planted bermudagrass turf as shown in Figure 3. Sencor should never be applied to any cool-season grass because of severe injury and plant kill.

Summary

Two applications of MSMA + Sencor (2.0 + 1/8 lb ai/A) applied as postemergence treatments at 7 to 10-day intervals controlled mature goosegrass without permanently injuring bermudagrass whether maintained as regular mowed turf or as putting-green turf. This chemical combination will cause an initial leaf yellowing of all bermudagrass, but the turf recovers rapidly from the treatments, usually within 3 to 4 weeks. **GB**



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