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Tenacity Turf Safety for Postemergence Applications

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Abstract
The objectives of this study were to determine turf safety with Tenacity using a boom application versus a handheld application gun. Turf safety was to be determined on both perennial ryegrass and tall fescue at one, two, and three times the labeled rate for each species, respectively, applied two times (21 days apart) during the growing season.

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Tenacity Turf Safety for Postemergence Applications

RFR-A9055

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Introduction

The objectives of this study were to determine turf safety with Tenacity using a boom application versus a handheld application gun. Turf safety was to be determined on both perennial ryegrass and tall fescue at one, two, and three times the labeled rate for each species, respectively, applied two times (21 days apart) during the growing season.

Materials

The area used was a disturbed Nicollet clay soil, with a monoculture of Millennium II tall fescue. The perennial ryegrass used was a blend of 38% Divine, 34% Majesty, and 25% Secretariat perennial ryegrass. The study areas were designed as randomized complete block designs with three replications each.

The first treatment (Tables 1 and 2) was applied May 21 and the sequential application was made June 11. Treatments applied using a boom were applied using a CO_2 backpack sprayer at 40 psi, and a spray volume equivalency rate of two gallon/1000 ft^2, using TeeJet® 8002VS nozzles. Treatments using the handheld gun were applied using a Lesco Chemlawn gun with a 1.5 gallon/minute nozzle that was modified to allow full coverage of the plot area (25 ft^2).

Data collected included overall grass quality, percentage damage, and crabgrass ratings at the end of the season for both the ryegrass (Tables 3 and 4) and the tall fescue (Tables 5 and 6). Additional data were taken for percentage damage on the tall fescue because of the severe damage observed. Photographs also were taken each date that data were recorded.

Results and Discussion

Quality data for the perennial ryegrass plots are in Table 3, and quality data for the tall fescue plots are in Table 5. Percentage damage data for the ryegrass plots are in Table 4, and percentage damage data for the tall fescue plots are in Table 6. Because of the amount of data in these studies, and the comparisons that could be made, we will not compare each treatment at all dates.

In general, perennial ryegrass plots treated with the Chemlawn gun were either no different or had slightly lower quality ratings than the plots treated with the boom (Table 3). The same basic trend was observed on the tall fescue plots. Fescue plots treated with the Chemlawn gun were either no different than fescue plots treated with the spray boom, or had slightly lower quality ratings (Table 5).

The reason for the lower quality ratings on plots treated with the Chemlawn gun could be attributed to the fact that sections of the plots may have received uneven concentrations of Tenacity, whereas the plots treated with the boom sprayer had a more uniform application.

Looking at the percentage damage, there are similar trends to the quality data for both the ryegrass and tall fescue. The plots treated with the Chemlawn gun had a higher percentage damage than the plots treated with spray boom, or there was no difference (Tables 4 and 6). There may be one exception to that trend in the tall fescue for the rating date six weeks after the second application for the highest rate. In this case, there remained more damage to the boom-treated plots than to the Chemlawn-treated plots (Table 6).

The tall fescue trial appeared to be hit especially hard from the second application of Tenacity. One hypothesis is that the exceptionally hot and humid weather may have intensified the effect of the Tenacity. The photographs illustrate the point. Because of the severe damage, there are higher crabgrass populations in the plots treated with the higher rates. However, there was no difference between treated plots for crabgrass populations.