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DPX-MAT28 Formulations (2 SL, 50 SG, 0.05 GF) and Combination Formulations for Dandelion and Clover Control

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Abstract

The objectives of this study were to evaluate various application rates and formulations of DPX-MAT28 for control of dandelion and clover in cool-season turfgrass and to assess any phytotoxicity observed to the turfgrass and broadleaf weeds.

Keywords

RFR A9050, Horticulture

Disciplines

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DPX-MAT28 Formulations (2 SL, 50 SG, 0.05 GF) and Combination Formulations for Dandelion and Clover Control

RFR-A9050

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Introduction

The objectives of this study were to evaluate various application rates and formulations of DPX-MAT28 for control of dandelion and clover in cool-season turfgrass and to assess any phytotoxicity observed to the turfgrass and broadleaf weeds.

Materials and Methods

The study was conducted at the Iowa State University Horticulture Research Station on a stand of South Dakota Kentucky bluegrass. Plots were arranged in a randomized complete block design, with five replications. Plot size measured 3 ft × 3 ft (9 ft²).

Treatments (Table 1) were applied May 11. Liquid applications were made using a backpack CO₂ sprayer at 40 psi and at a spray volume equivalent to three gallons per 1000 ft². Granular products were applied using “shaker” containers for uniform coverage.

Data were collected for percentage coverage of dandelion and clover. Initial data were collected prior to any treatment application. Following treatment application, data were collected at 7, 14, 30, 42, and 60 days after treatment (DAT). Data were not taken 90 DAT because all of the plots were highly populated with crabgrass, which made it difficult to confidently determine broadleaf coverage.

Phytotoxicity data for both broadleaf weeds and Kentucky bluegrass also were collected. Phytotoxicity data were collected at 7, 14, and 30 DAT.

Results and Discussion

At the end of the season, all treatments reduced dandelion populations to less than the untreated control (Table 2). Treatment 5 (DPX-MAT28 2SL, 0.0938 lb ai/A) provided the best dandelion control, with no dandelion coverage in the plots. Treatments 2, 3, 4, and 5 (DPX-MAT28 SL and G formulations) were no different than each other for dandelion control. Treatments 7, 8, and 9 (DPX-MAT28-070), and treatments 10, 11, and 12 (DPX-MAT28-071) were no different when compared with each other at various rates. All experimental treatments provided control that was no different, or better than, Trimec Classic, and Momentum.

At the end of the season, all treatments reduced clover populations to less than the untreated control (Table 3). All DPX-MAT28 treatments (2, 3, 4, and 5) were no different than each other for clover control. All DPX-MAT28-070 treatments (7, 8, and 9), and all DPX-MAT28-071 treatments (10, 11, and 12) were no different than each other. All experimental treatments provided control that was comparable to Trimec Classic, and was comparable, or better than, Momentum.

There was no phytotoxicity observed on the Kentucky bluegrass at any time throughout the duration of the study. All similar experimental treatments provided comparable phytotoxicity to broadleaf weeds at the end of the season (Table 4).