**ABSTRACT**

An on-farm research trial was conducted in 2013 to investigate the effects of Leadoff on the control of Benghal dayflower. Leadoff provided poor control of Benghal dayflower (< 15%). Leadoff did not improve Benghal dayflower control when tank-mixed with Roundup, Gramoxone, or Aim. Leadoff reduced Benghal dayflower control when tank-mixed with 2,4-D. These results suggest that Leadoff will not be useful in post-harvest Benghal dayflower management programs.

**INTRODUCTION**

Benghal dayflower (*Commelina benghalensis*), formerly known as tropical spiderwort, is a noxious, exotic weed that is common in Berrien County. Because this weed is troublesome, there is a need to evaluate new herbicides for their potential to provide control. Leadoff (rim sulfuron + thifensulfuron) is a new burndown/residual herbicide that is being aggressively promoted in Georgia. The efficacy of Leadoff on Benghal dayflower is unknown. Therefore, a small-plot field trial was conducted after corn harvest to determine its effectiveness.

**MATERIALS AND METHODS**

The experimental design was a five by two factorial arrangement of treatments in a randomized complete block with three replications. Factor A consisted of five burndown treatments including the following: None; Roundup WeatherMax 5.5SL (glyphosate) @ 33 oz/A; Gramoxone 2SL (paraquat) @ 48 oz/A; Aim 2EC (carfentrazone) @ 2 oz/A, and 2,4-D Amine 3.8SL @ 24 oz/A. Factor B included the following: Leadoff 33.4DG @ 1.5 oz/A; or No Leadoff. All treatments included a NIS (Adept) @ 0.25% v/v. Treatments were applied with a CO$_2$-powered backpack sprayer calibrated to deliver 15 GPA using 11002DG nozzles. At the time of application, Benghal dayflower plants were 8-10” tall and flowering. All data were subjected to ANOVA and means separated using Fisher’s Protected LSD Test (P = 0.10).

**RESULTS AND DISCUSSION**

1) Leadoff provided poor control (< 15%) of Benghal dayflower (Figures 1 and 2).

2) At 28 DAT, Leadoff did not improve Benghal dayflower control when tank-mixed with Roundup, Gramoxone, or Aim. Leadoff reduced control when tank-mixed with 2,4-D (Figures 3 and 4).

3) Leadoff will not be useful in post-harvest Benghal dayflower management programs.

4) Previous research has shown that sequential herbicide applications and/or tillage are needed for optimum post-harvest control of Benghal dayflower.