

POST-HARVEST CONTROL OF BENGHAL DAYFLOWER WITH LEADOFF

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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 (rimsulfuron + 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 CO₂-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).

Figure 1. Post-Harvest Control of Benghal Dayflower with Leadoff.

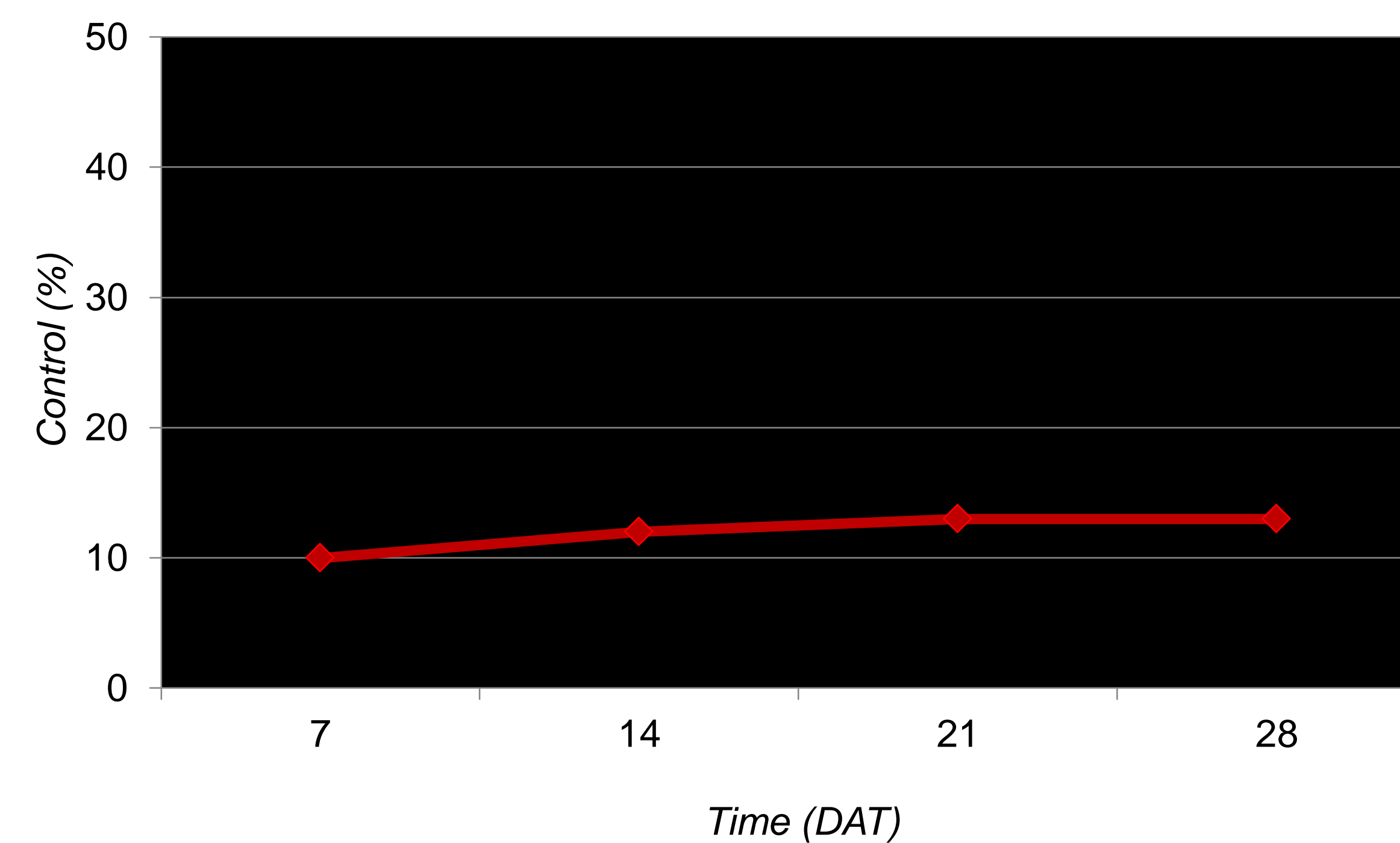


Figure 2. Post-Harvest Control of Benghal Dayflower with Leadoff – 21 DAT.



Figure 3. Post-Harvest Control of Benghal Dayflower – 28 DAT.

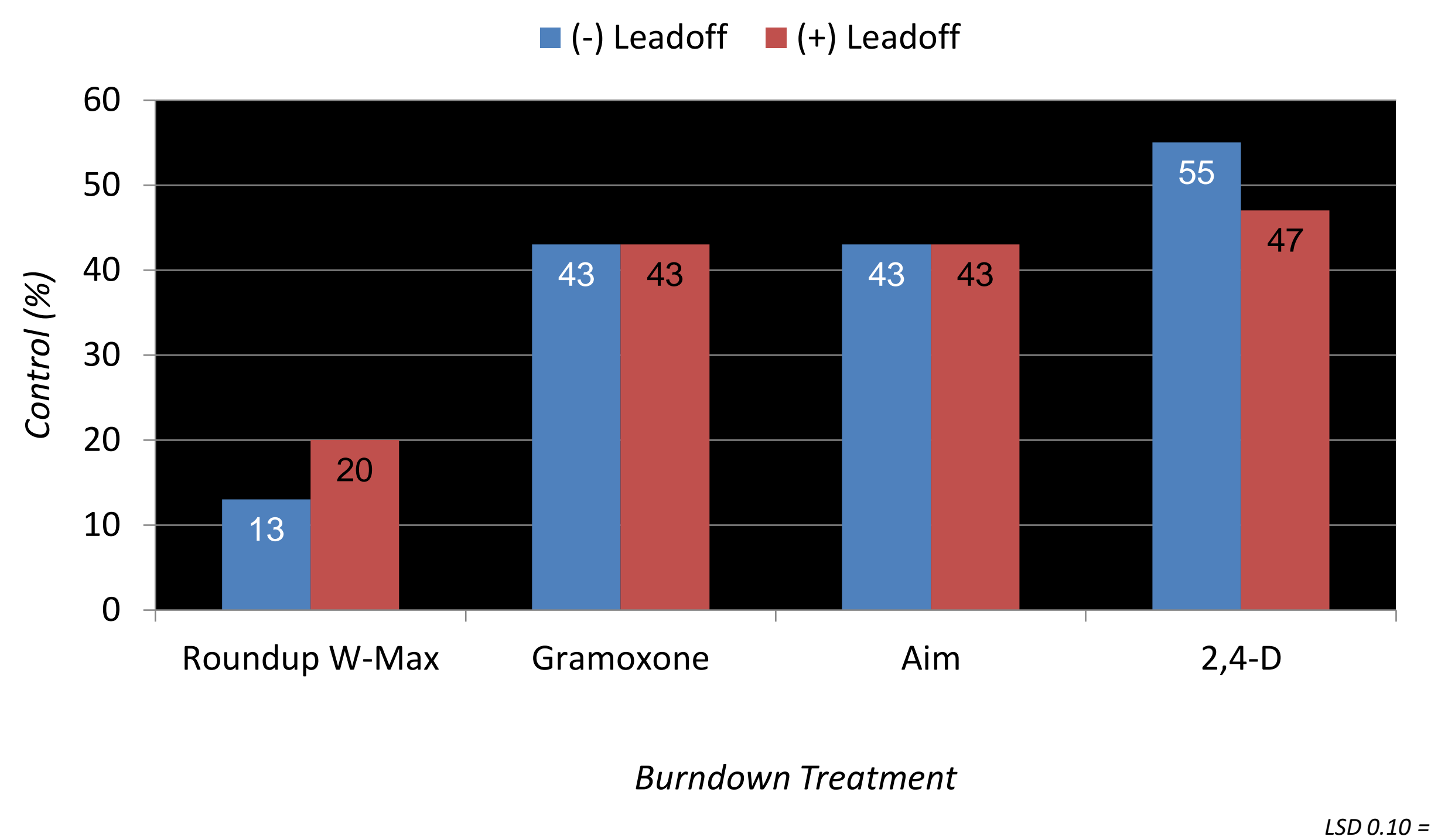
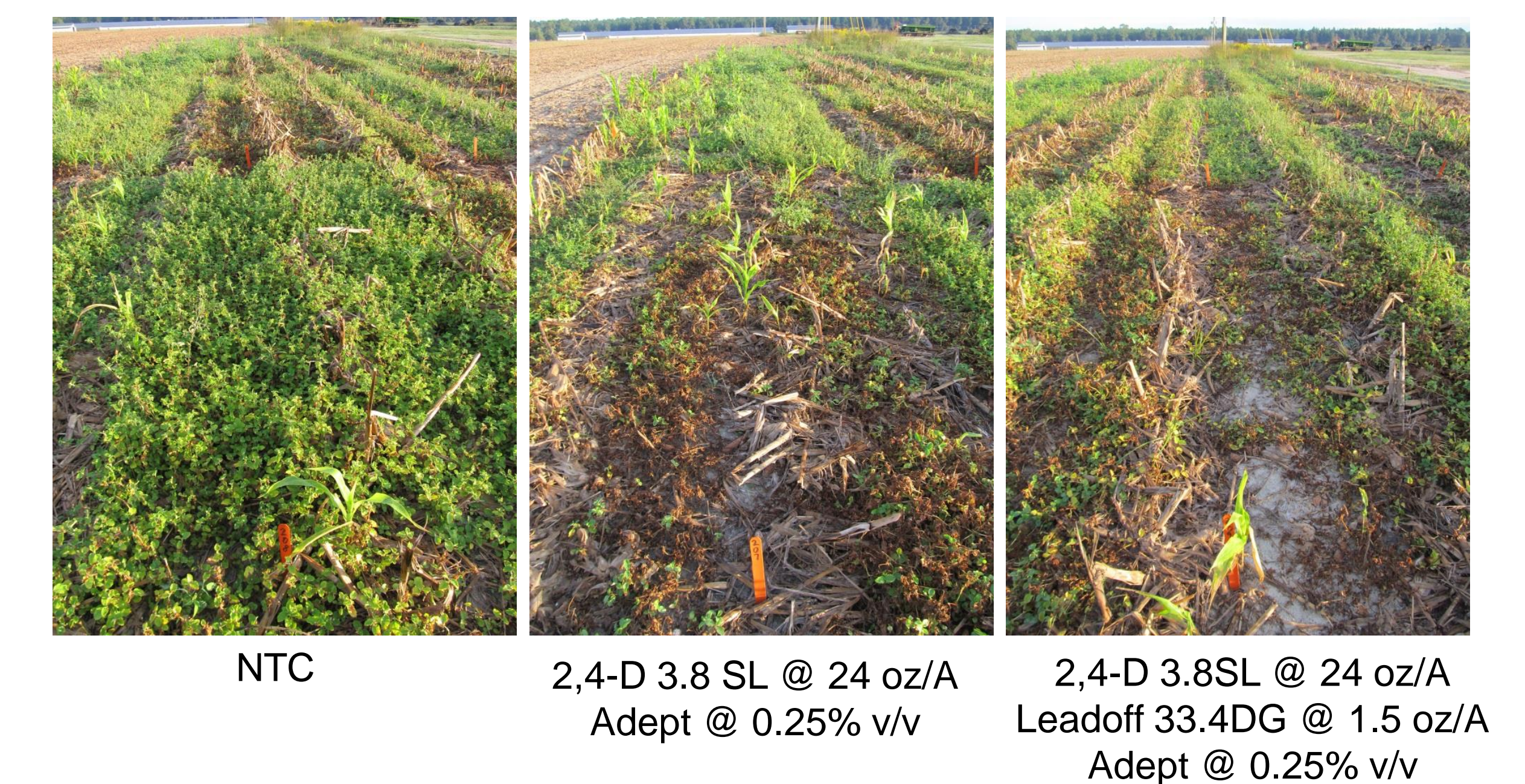


Figure 4. Post-Harvest Control of Benghal Dayflower with 2,4-D – 28 DAT.



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.