

POST-HARVEST CONTROL OF BENGHAL DAYFLOWER - 2024

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INTRODUCTION

Benghal dayflower (*Commelina benghalensis*), formerly known as tropical spiderwort, is a noxious, exotic weed that is common in Grady County (Figure 1). One of the strategies for managing Benghal dayflower is to implement control measures after field corn harvest to reduce potential seed rain. Therefore, the objective of this field trial was to evaluate various herbicides for the post-harvest control of Benghal dayflower.

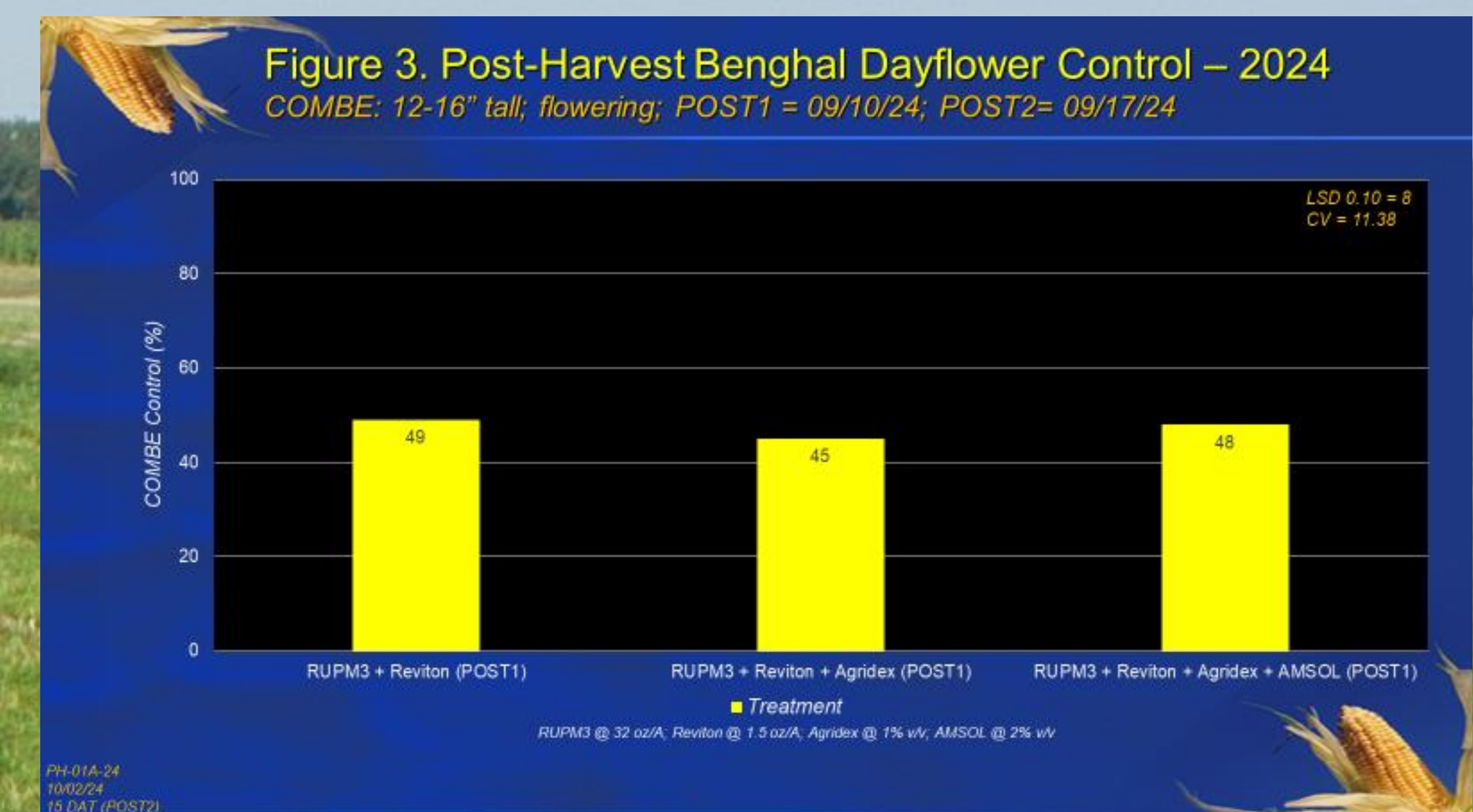
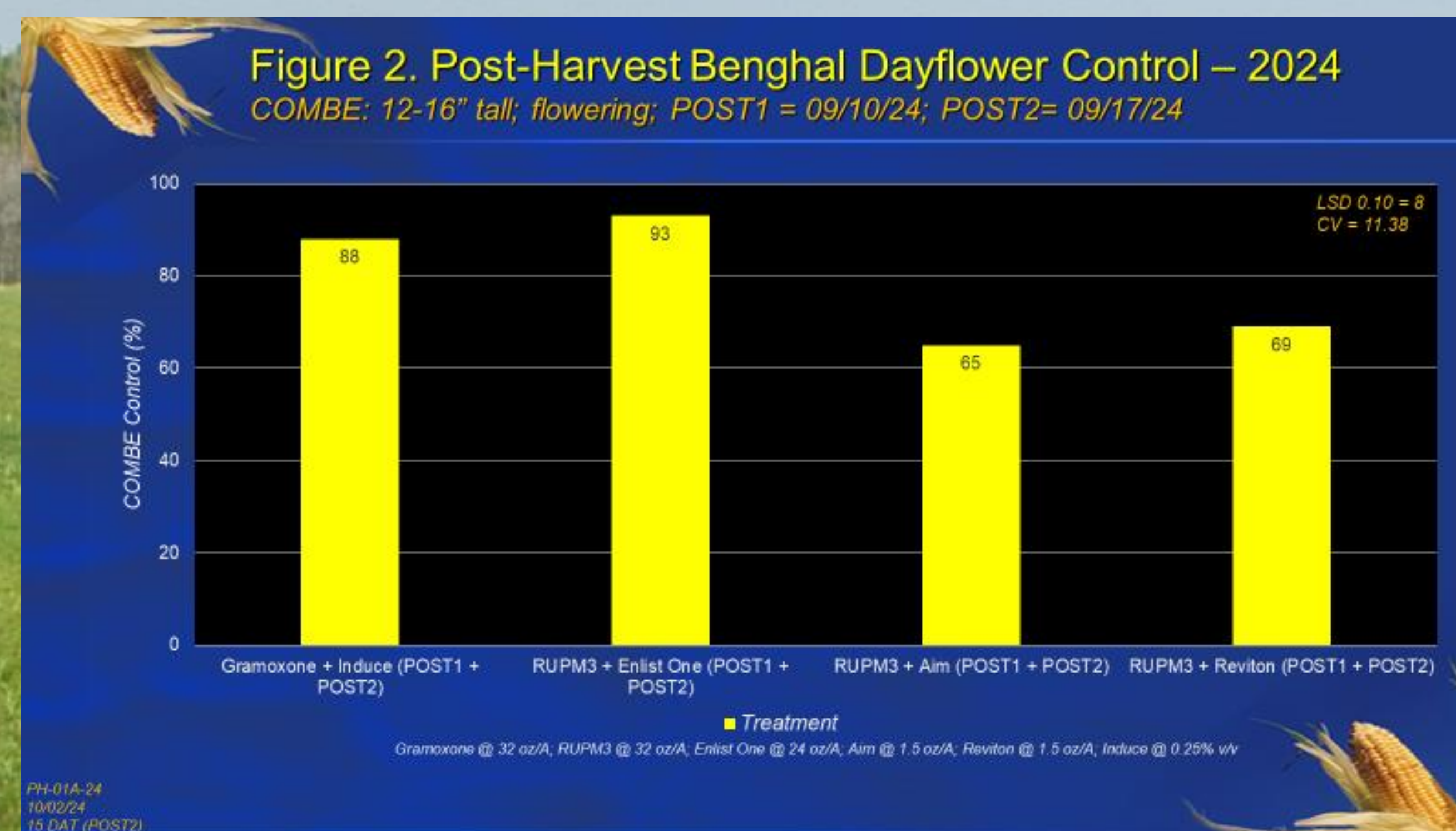
MATERIALS AND METHODS

A small-plot, replicated field trial was conducted in September 2024 in Grady County (Connell Farm) after field corn harvest. Treatments evaluated included single (POST1) and sequential (POST2) applications of Gramoxone 3SL @ 32 oz/A + Induce @ 0.25% v/v; Roundup P-MAX3 @ 32 oz/A + Enlist One 3.8SL @ 24 oz/A; Roundup P-MAX3 5.88SL @ 32 oz/A + Aim 2EC @ 1.5 oz/A; and Roundup P-MAX3 @ 32 oz/A + Reviton 2.83SC @ 1.5 oz/A. Additionally, the effects of crop oil concentrate (Agridex @ 1% v/v) and ammonium sulfate (AMSOL 34% @ 2% v/v) were investigated. POST1 treatments were applied on September 10 and POST2 treatments applied on September 17. At the time of the POST1 application, Benghal dayflower plants were 12-16" tall and flowering.

All treatments were applied using a CO₂-powered, backpack sprayer calibrated to deliver 15 GPA @ 37 PSI and 3.5 MPH using 11002AIXR nozzles. Data collected included visual estimates of Benghal dayflower control (0-100%) ~ 15 days after the POST2 treatments were applied. Data were subjected to ANOVA and means separated using Fisher's Protected LSD (P=0.10).



Figure 1. Benghal dayflower seedling and flower.



RESULTS AND DISCUSSION

- 1) The only treatments that provided >85% control of Benghal dayflower were a) Gramoxone + Induce (POST1 + POST 2) = 88% control; and b) Roundup P-MAX3 + Enlist One (POST1 + POST2) = 93% control (Figures 2 + 4).
- 2) Sequential applications (POST1 + POST2) of Roundup P-MAX3 + Aim or Reviton only provided 65-69% control (Figures 2 + 5).
- 3) With single applications (POST1), the addition of Agridex to Roundup P-MAX3 + Aim significantly improved control by 10% (44% vs 54%). Data not reported.
- 4) With single applications (POST1), Agridex or Agridex + AMSOL did not significantly improve control with Roundup P-MAX3 + Reviton (45-49% control) (Figure 3).

CONCLUSION

- 1) Sequential applications of either Gramoxone (paraquat) or Enlist One (2,4-D choline) were the most effective treatments for the control of large Benghal dayflower plants after field corn harvest. These results are consistent with previous results from field trials conducted in Grady County.