

WEED MANAGEMENT IN CONVENTIONAL AND ROUNDUP-READY CORN

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INTRODUCTION

- In recent years, corn has become an important part of cropping systems in Louisiana that were traditionally cotton monocultures.
- Historically, many of these fields were relatively free of annual grasses and early postemergence applications of atrazine provided acceptable weed control.
- Annual grass and johnsongrass populations are increasing and have forced many producers to utilize preemergence herbicides and/or herbicides such as nicosulfuron.

INTRODUCTION

- Many producers favor postemergence programs over preemergence programs because:
 - Concerned about being able to replant cotton if corn fails to emerge
 - Lack of johnsongrass control
 - Poor performance of preemergence programs
- High populations of signalgrass, foxtail and crabgrass often overwhelm nicosulfuron applications.
- Producers approve of the weed control observed in Roundup Ready corn, but are not satisfied with Roundup Ready hybrids.

OBJECTIVE

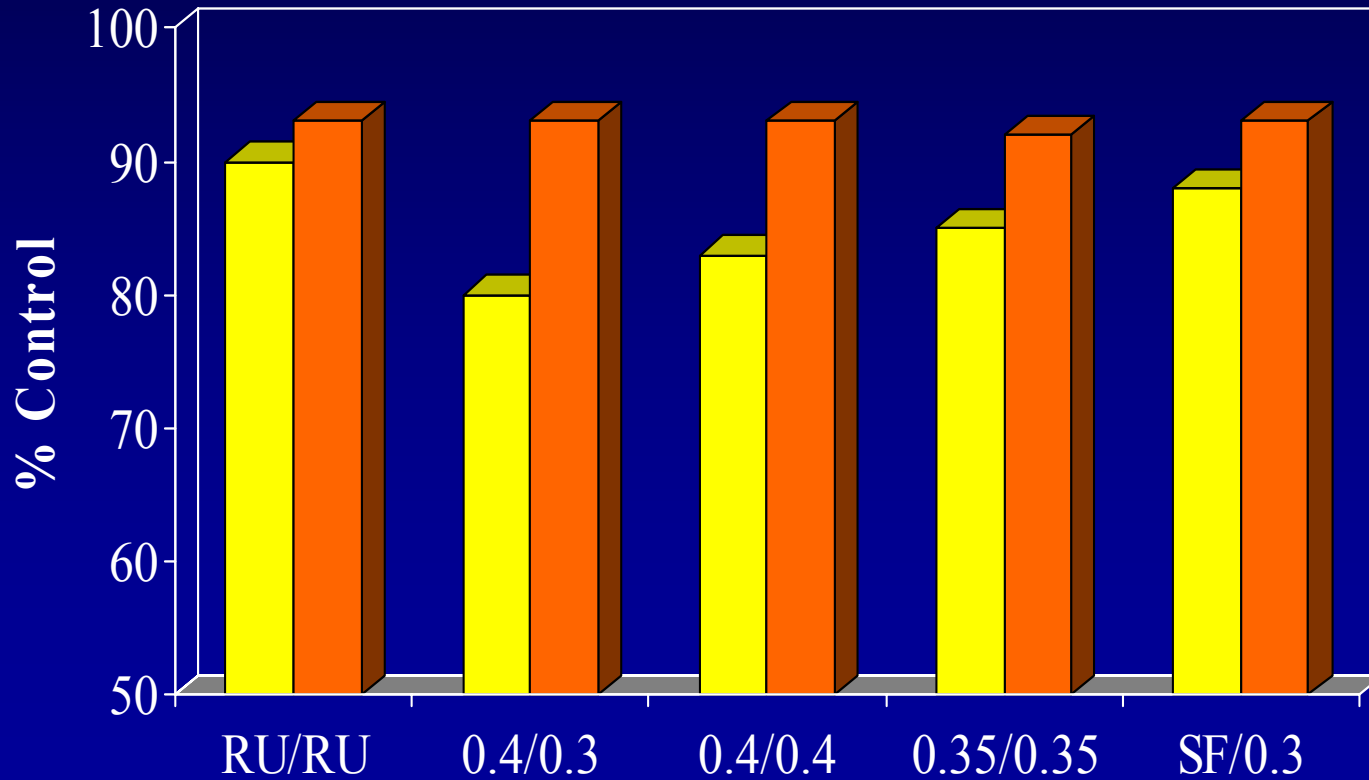
- Many of the weed control failures in conventional corn are likely due to application timing.
- This research was conducted to determine if conventional herbicides could control weeds in corn as well as glyphosate.

MATERIALS and METHODS

- Field experiments were conducted in 2004 and 2005 at the Northeast Research Station near St. Joseph, La.
- Corn was planted on stale seed beds at 30,000 seed/A in late March.
- The experimental designs were RCBs with four replications.
- Herbicide treatments were applied, using a tractor (compressed air) calibrated to deliver 140 L/ha, to plots measuring 4 by 9 meters.

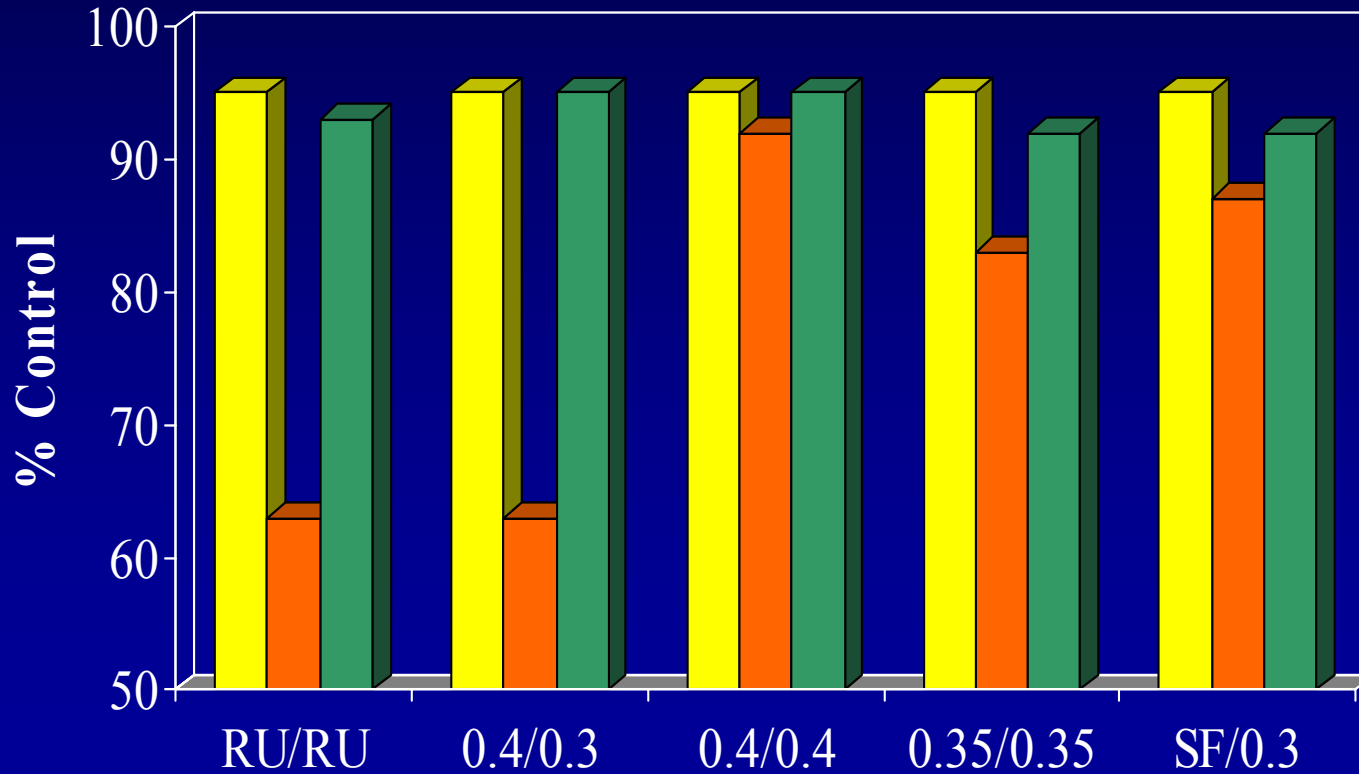
Glyphosate Verses Nicosulfuron 78 DAP

■ Signalgrass ■ Johnsongrass

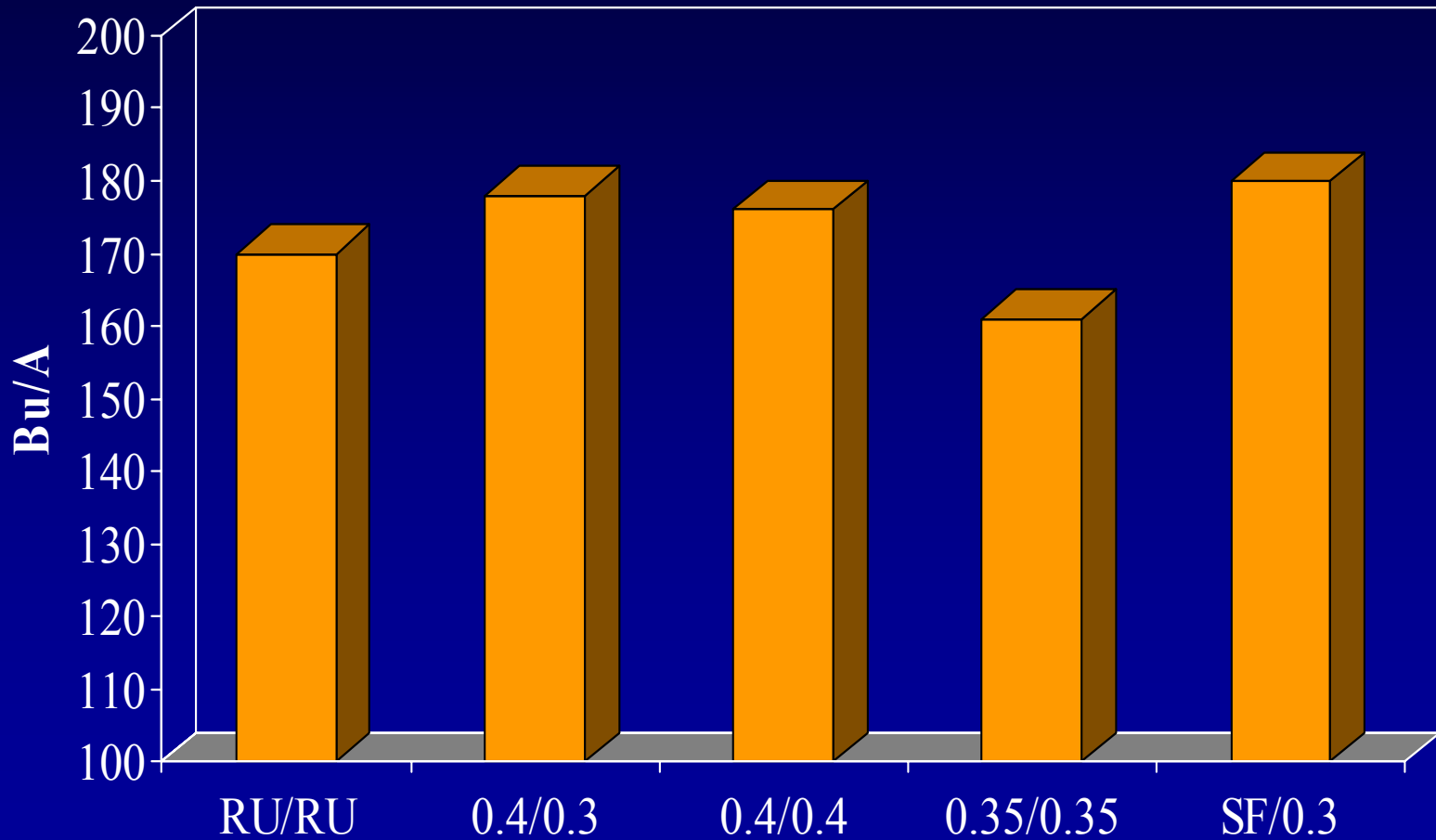


Glyphosate Verses Nicosulfuron 78 DAP

■ Pigweed ■ Sida ■ Sicklepod

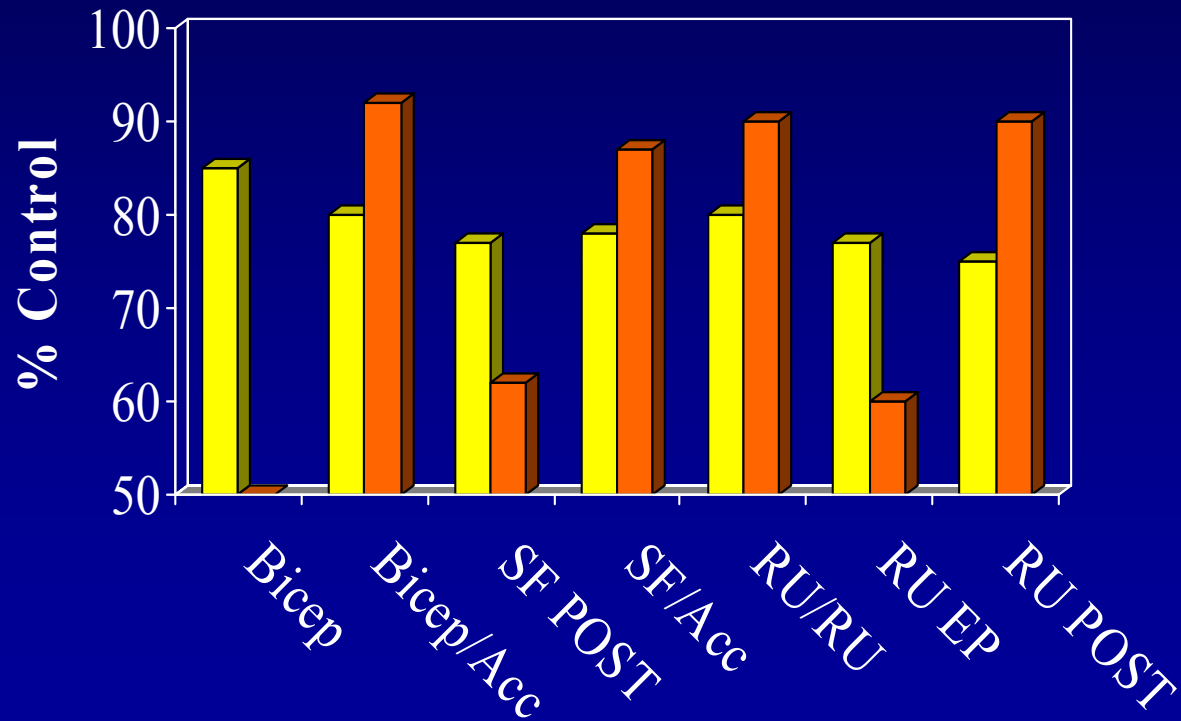


Glyphosate Verses Nicosulfuron



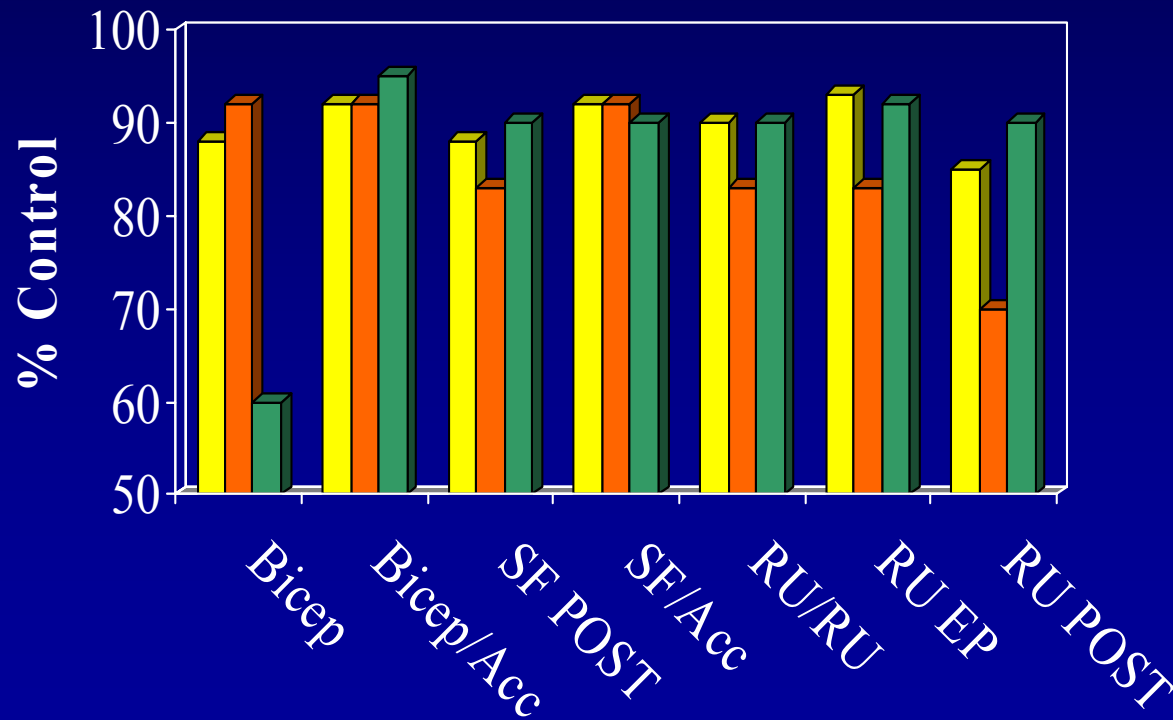
Weed Management in Conventional and Roundup Ready Corn 78 DAP

■ Signalgrass ■ Johnsongrass



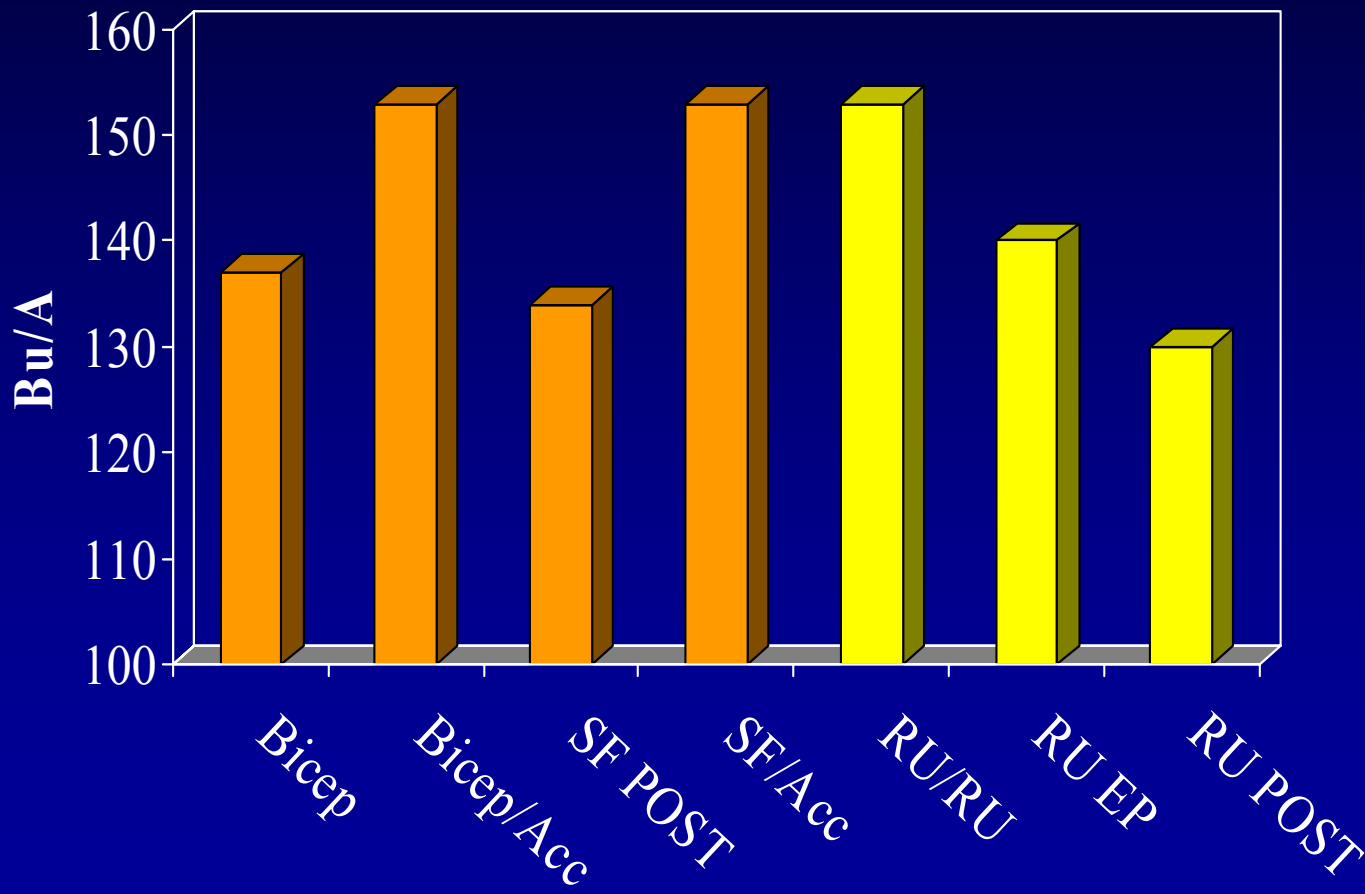
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■ Sicklepod ■ Sida ■ Horseweed



Weed Management in Conventional and Roundup Ready Corn

Conventional = 31G68 & Roundup Ready = DKC 6971



SUMMARY

- Early in the season, sequential applications of Roundup or Steadfast followed by Accent resulted in slightly (< 10%) signalgrass control compared to sequential applications of Accent.
- Accent at 0.4 oz/A followed by 0.3 oz/A Accent generally resulted in superior weed control than two applications of Accent at 0.35 oz/A.
- Tank mixing both Roundup and Accent with atrazine improved overall weed control. The highest corn yields (180 bu/A) were observed in plots treated with Steadfast and followed by Accent.
- Sequential applications of Accent resulted in corn yield equal to or greater than sequential applications of Roundup.

SUMMARY

- Overall, the best conventional program was Bicep II Magnum followed by Accent plus atrazine and the best Roundup Ready program was two applications of Roundup plus atrazine.
- Few differences in weed control were observed between the best conventional program and the best Roundup Ready program.
- Yields were similar for both conventional and Roundup Ready hybrids and programs.
- The best conventional program resulted in corn yields equal to the best Roundup program, even when applied to DKC- 69-71.

CONCLUSIONS

- Similar levels of weed control can be achieved in conventional corn as in Roundup Ready corn.
- Two applications are required when johnsongrass is present or a total postemergence program is used.
- When choosing between conventional corn or Roundup Ready corn the ability to control weeds should only be considered with respect to cost.

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