

Control of Volunteer Roundup Ready Flex Cotton with Postemergence Herbicides

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Introduction

Roundup Ready and Roundup Ready Flex cultivars were planted on more than 70% of the cotton acres in the Texas Southern High Plains in 2008. In no-till or minimum-till systems, glyphosate-tolerant volunteer cotton can become a significant “weed” problem, competing with the crop for water and nutrients. Field studies were conducted in 2007 and 2008 near Lubbock, TX to evaluate selected postemergence herbicides for volunteer Roundup Ready Flex (RRF) cotton control as affected by growth stage. This study was designed to compare herbicide efficacy and treatments were not selectively applied in cotton.



Objectives

- Evaluate postemergence (POST) herbicides for control of glyphosate-tolerant cotton.
- Compare effects of POST application timings on control of volunteer glyphosate-tolerant cotton.

Materials and Methods

Treatments:*

Dirax (26 oz/A)	Gramoxone (16 oz/A)
Layby Pro (32 oz/A)	Buctril (8 oz/A)
Caparol (32 oz/A)	Ignite (28 oz/A)
Reflex (16 oz/A)	ET (1.5 oz/A)
Valor (2 oz/A)	Aim (1 oz/A)

*Appropriate adjuvants were included

Design: RCB with three replications

Plot size: 4 rows by 30 feet

Spray Volume: 10 gal/A

Cotton Variety: FiberMax 9058F

App. Timings: 5-8 Leaf Stage
10-12 Leaf Stage

Results

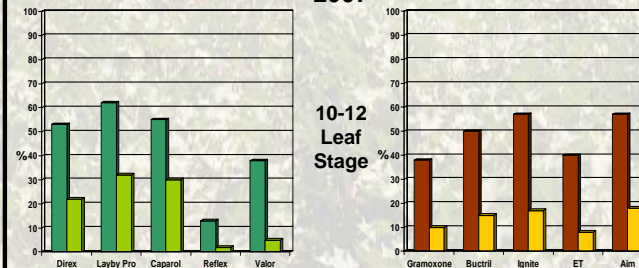
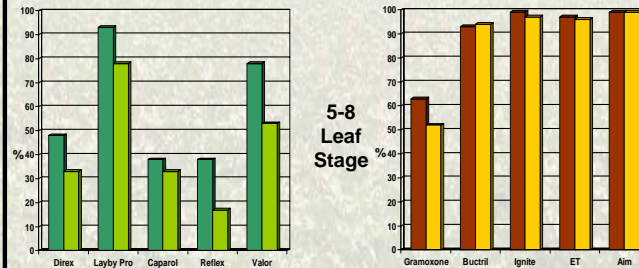


Fig 1: Visual ratings for postemergence herbicides at the 5-8 leaf stage and 10-12 leaf stage in 2007.

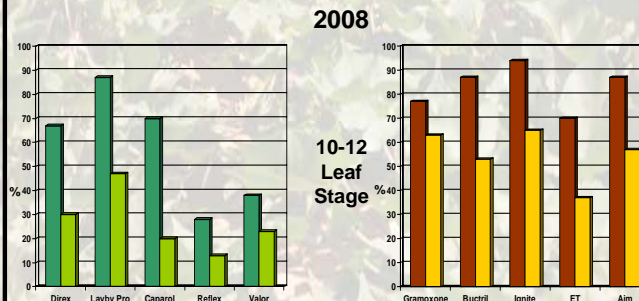
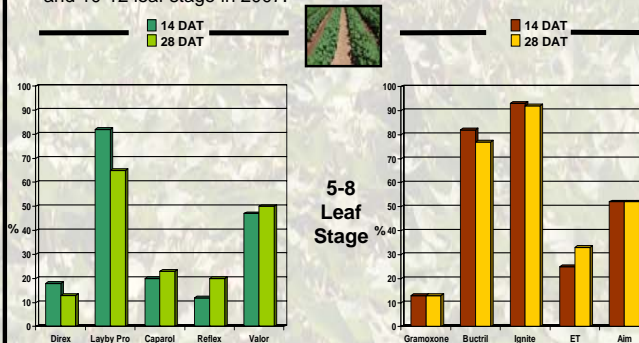


Fig 2: Visual ratings for postemergence herbicides at the 5-8 leaf stage and 10-12 leaf stage in 2008.



Fig 3: A – Ignite (28 oz/A) and B – Gramoxone Inteon (16 oz/A) applied 5-8 leaf stage.



Fig 4: A – Buctril (8 oz/A) and B – Dirax (26 oz/A) applied 5-8 leaf stage.



Fig 5: A – Layby Pro (32 oz/A) applied 5-8 leaf 14 DAT and B – Layby Pro (32 oz/A) applied 10-12 leaf 14 DAT.

Summary

- Buctril, Ignite, ET and Aim controlled RRF cotton >90% in 2007. Layby Pro controlled cotton >75%. All treatments were less effective (<60%) when applied at 10-12 leaf stage.
- Under drier conditions in 2008, Buctril, Ignite, and Layby Pro were the only herbicides that controlled cotton >65%. After rainfall was received prior to 10-12 leaf applications, initial control >80% was achieved with Layby Pro, Buctril, ET and Aim. Control declined to <65% at 28 days after treatment.
- Tillage may be the best option to control volunteer RRF cotton.