

Pre- and postemergence weed management in cotton with Reflex

J.W. Keeling, J.D. Reed, and D.M. Petty
Texas AgriLife Research, Lubbock



Introduction

Reflex (fomesafen) was registered in cotton in 2006. Due to rotational crop concerns, Reflex was not registered for pre- or postemergence use in West Texas cotton. Reflex is registered as a fall or spring applied spot treatment for suppression of woollyleaf bursage. Field trials were conducted in 2007 and 2008 near Lubbock, Texas to evaluate Palmer amaranth (*Amaranthus palmeri*) and woollyleaf bursage (*Ambrosia grayi*) control with Reflex applied preemergence (PRE) or postemergence directed (PDIR) in Roundup Ready Flex cotton.

Objectives

- Compare Reflex PRE alone or in combination with Caparol for Palmer amaranth control
- Evaluate Reflex and Prefix (Reflex + Dual) applied alone or tank-mixed with glyphosate for Palmer amaranth control
- Determine woollyleaf bursage (lakedweed) control with spring and fall applications of Reflex

Materials and Methods

Design: Randomized Complete Block with three replications

Plot size: 4 Rows x 30 ft

Spray volume: 10 gallons/acre

Dates: Planting
May 7, 2007
May 21, 2008

Soil Type: Acuff Loam

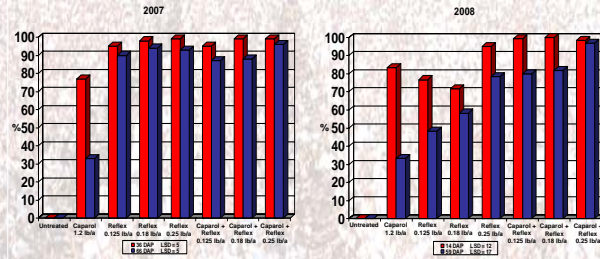
Treatments

Preemergence	(lb ai/a)	Post-directed*	(lb ai/a)
Caparol	1.2	Reflex	0.25
Reflex	0.125	Reflex	0.38
Reflex	0.18	Prefix	1.32
Reflex	0.25	Prefix	1.76
Caparol + Reflex	1.2 + 0.125	*with or without	
Caparol + Reflex	1.2 + 0.18	Touchdown (0.75 lb ae/a)	
Caparol + Reflex	1.2 + 0.25		

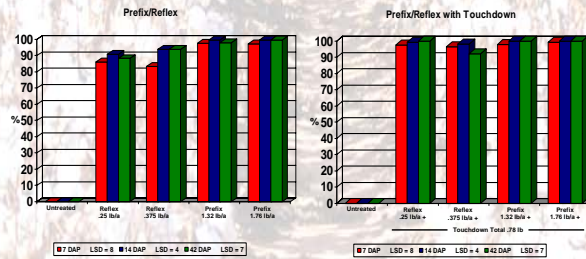
Woollyleaf bursage	(lb ai/a)
Reflex	0.38
Reflex	0.75
Reflex + Touchdown	0.38 + 0.75
Reflex	0.38 followed by
Reflex + Touchdown	0.38 + 0.75

Results

Caparol/Reflex - Palmer amaranth control



Prefix/Reflex - Post-directed



Reflex - Woollyleaf bursage control

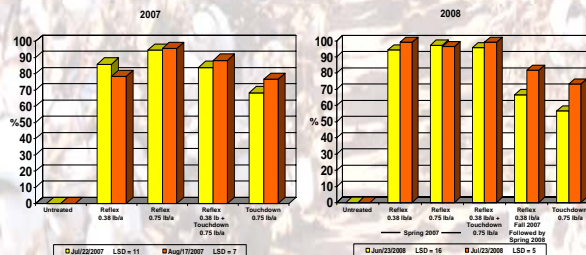


Figure 1. Untreated and Reflex treated woollyleaf bursage plots.



Figure 2. Untreated and Reflex PDIR - treated plots - Palmer amaranth.

Summary

• Reflex alone or tank-mixed with Caparol PRE improved Palmer amaranth control compared to Caparol alone in 2007. In 2008 Caparol + Reflex was more effective than either herbicide alone.

• When tank-mixed with Touchdown, similar Palmer amaranth control was achieved with Reflex or Prefix applied PDIR. When applied alone, more effective control was achieved with Prefix.

• Reflex controlled woollyleaf bursage greater than 85% when applied PRE in 2007, with improved control at the 0.75 lb ai/a rate. When these treatments were evaluated in 2008, woollyleaf bursage control exceeded 90% compared to 50-70% with Touchdown alone.

• No crop injury was observed with Reflex PRE or PDIR at rates up to 0.25 lb/a. Higher rates (0.38 - 0.75 lb/a) applied for woollyleaf bursage control did cause slight (5-10%) cotton injury, but did not affect yields.