ASSESSMENT OF CADRE® CARRYOVER TO COTTON IN SOUTH GEORGIA Will Duffie Georgia Cooperative Extension Service University of Georgia Dawson, GA Eric Prostko Department of Crop and Soil Sciences University of Georgia Tifton, GA

Abstract

In 2000 and 2002, on-farm field trials were conducted to assess the influence of Cadre carryover injury on cotton growth and yield. Cotton plant populations were not affected by Cadre carryover. Cotton plant heights were reduced 30 to 40%. Cotton lint yields were reduced 46 to 50%. Cadre also caused a delay in maturity as indicated by an increase in the number of green, unopened cotton bolls at harvest.

Introduction

Since its introduction in 1996, Cadre has become one of the most popular peanut herbicides because of its broad weed control spectrum and low cost/A. Despite its many benefits, Cadre has an 18 month cotton rotation restriction which is a serious concern for Georgia producers because cotton and peanut are the major row crops grown in the state. Many growers are willing to accept the potential risk of planting cotton after Cadre while others are not based upon their previous rotation experiences. The cotton problems caused by Cadre carryover have been variable and have ranged from minimal to severe in a few cases. The degree of cotton injury appears to be most closely related to moisture conditions. A minimal amount of research has been conducted to address the actual effects of Cadre injury on cotton growth and yield in on-farm situations.

Materials & Methods

Tests were conducted in commercial, non-irrigated cotton fields in Brooks and Terrell County in 2000 and 2002, respectively. In areas of the field that exhibited obvious signs of Cadre injury from applications made to the previous peanut crop, cotton was monitored throughout the growing season and compared to unaffected areas in the same field. Three areas in 2000 and four areas in 2002 [1 row (38 in) x 15 feet] were selected that were exhibiting injury symptoms or not exhibiting injury symptoms. Data collected included plant population, cotton heights, lint yield, and unopened bolls at harvest. Yield data were obtained by handharvesting. All data were subjected to ANOVA and means separated by Duncan's Multiple Range Test (P = 0.05).

2000.						
	Plant Po (# plant	Plant PopulationCotton Height(# plants/15 ft)(cm)		Height m)	– I int Viold	Cotton Bolls
Treatment	39 DAP ¹	66 DAP	39 DAP	66 DAP	(lbs/A)	(#/15 feet)
Cadre Injury	$27 a^2$	26 a	25 b	65 b	738 b	108 a
No Injury	26 a	26 a	36 a	93 a	1369 a	44 b

Table 1. The influence of Cadre carryover on cotton growth and yield, Brooks County, GA 2000

Table 2. The influence of Cadre carryover on cotto	n growth and yield, Terrell County, GA 2002.
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	Plant Population (# plants/15 ft)		Cotton Height (cm)		I int Viold	Cotton Bolls
Treatment	61 DAP	146 DAP	61 DAP	146 DAP	(lbs/A)	(#/15 feet)
Cadre Injury	34 a ¹	29 a	37 b	135 a	826 b	121 a
No Injury	33 a	31 a	65 a	143 a	1643 a	92 a

 1 DAP = Days after planting.

²Means in the same column with the same letter are not significantly different according to Duncan's Multiple Range Test (P = 0.05).