

EFFICACY OF LEVERAGE ON A MIXED INSECT POPULATION IN MISSISSIPPI

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Abstract

Plots, (40 acres), non-replicated were treated with LEVERAGE™ and compared to plots treated with combinations of Baythroid and Orthene on a multi-pest complex on BT cotton in Rankin County, Mississippi. Good control of cotton bollworm (*Helicoverpa zea*), and tarnished plant bugs (*Lygus lineolaris*) was observed for both treatments. However, LEVERAGE resulted in better control of cotton aphid (*Aphis gossypii*) and bandedwinged whitefly (*Trialeurodes abutilonea*).

Introduction

Consultants seldom contend with single pest problems in today's cotton production. When several pests are present, at or below threshold levels, we must decide which materials to use in a tank mix to control all or most of the damaging pests. LEVERAGE, a pre-packaged formulation of cyfluthrin and imidacloprid, will meet many of our needs when dealing with multi-pest problems, and also will help reduce problems that come with the tank mixing of two or more products.

Materials and Methods

Fields on two different farms were treated with LEVERAGE and compared to Baythroid® and Orthene®.

Forty acres on Irby Farms in Sandhill, MS, were treated with LEVERAGE at 4 oz/acre (1 gallon / 32 acres). This treatment was compared to Baythroid at 1 gallon / 60 acres + Orthene 90 S at 0.5 lb. product/A. Each treatment was applied bby air in 3 gallons of water and 1% Soy-surf. Treatments were targeted at bollworm, plant bug, aphid and whitefly. Evaluations were made 72 hours post-treatment.

The second demonstration was conducted on Merchant Farms in Leesburg, MS. Forty acres were treated with LEVERAGE at 3.2 oz. / A (1 gallon / 40 acres). This treatment was compared to Baythroid at 1 gallon to 60 acres + Orthene 90 S at 0.5 lb. product/A. Each treatment was applied by air in 3 gallons of water and 1% Soy-surf. Pests targeted were bollworm, plant bug and whitefly. Evaluations were made 72 hours post-treatment.

Discussion

All treatments were applied to BT cotton. Control of cotton bollworm was excellent by both LEVERAGE and Baythroid + Orthene (Table 1).

When comparing treatments concerning tarnished plant bug control was excellent by both LEVERAGE and Baythroid + Orthene (Table 2).

When comparing treatments against cotton aphid, LEVERAGE provided excellent control, whereas, Baythroid + Orthene was not effective.

When comparing treatment against bandedwinged whitefly, LEVERAGE provided good to excellent control (Table 3). LEVERAGE at the higher rate resulted in slightly better control than the lower rate. However, both were better than Baythroid + Orthene.

Summary

In summary, bollworm and tarnished plant bug control with LEVERAGE was comparable to the standard, Baythroid + Orthene. Aphid and whitefly control was much better with LEVERAGE. LEVERAGE meets a need for a broad-spectrum insecticide for multiple pests. LEVERAGE also has an excellent fit on BT cotton to supplement bollworm control and provide control of several pests not affected by BT cotton. In addition, LEVERAGE has an excellent fit in boll weevil eradication by providing control of pests which may be induced by malathion sprays, and also affords the convenience of the elimination of problems associated with tank mixing.

Acknowledgements

The author gratefully acknowledges the cooperation of Irby Farms and Merchant Farms to conduct these demonstrations.

Table 1. Bollworm control.

Location		LEVERAGE	Baythroid + Orthene
		(% Live Larvae)	
Irby Farm	Pre-treatment	12	12
	Post-treatment	0	0
Merchant Farm	Pre-treatment	13	10
	Post-treatment	0	0

Table 2. Tarnished plant bug control.

Location		LEVERAGE	Baythroid + Orthene
		(Adult Plant Bugs / 100 Sweeps)	
Irby Farm	Pre-treatment	6	4
	Post-treatment	0	0
Merchant Farm	Pre-treatment	9	4
	Post-treatment	0	0

Table 3. Bandedwinged whitefly control.

Location		LEVERAGE	Baythroid + Orthene
		(Whiteflies / leaf)	
Irby Farm	Pre-treatment	150	150
	Post-treatment	10	100
Merchant Farm	Pre-treatment	150	150
	Post-treatment	45	100