

University of Tennessee

Regional Bt Cotton Traits - Preventative Spray, Threshold Spray, Unsprayed - Madison Co.

Location: West TN Research and Education Center (Jackson)

Variety: (planted: 5-31-16)

Application: Appl A 8-3-16; Appl B 8-9-16; Appl C 8-16-16; High clearance sprayer (9.1 GPA, 40 PSI, 8001FF)

Threshold applications made at 6% damaged fruit

Plots: 4 Rows x 35 ft (RCBD, 4 Reps)

Investigators: Stewart, S.Steckel, Williams

Dam. Sq.= Damaged Squares; Dam. Bolls = Damaged bolls; CEW = bollworm larvae; Dam. Flo. = Damaged Flowers; FAW larvae= fall armyworm

Description				Dam. Sq.	Dam. Flo.	Dam. Bolls	CEW	FAW	Dam. Sq.	Dam. Bolls	CEW	FAW	Dam. Sq.
Rating Date				Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
Sample Size, Unit				8/9/2016	8/9/2016	8/9/2016	8/9/2016	8/9/2016	8/15/2016	8/15/2016	8/15/2016	8/15/2016	8/19/2016
Plant-Eval Interval				25 Square	25 Flower	25 Boll	75 Fruit	75 Fruit	25 Square	25 Boll	50 Fruit	50 Fruit	25 Square
				70 DP-1	70 DP-1	70 DP-1	70 DP-1	70 DP-1	76 DP-1	76 DP-1	76 DP-1	76 DP-1	80 DP-1
Treatment	Formulation	Rate	Appl										
1 DP 1441 RF Untreated Check				3.0 a	3.8 a	1.3 a	1.8 a	1.0 a	5.8 a	6.3 a	3.3 a	0.8 a	9.5 a
2 DP 1441 RF Prevathon at threshold	0.43 lba/gal	19 fl oz/a	BC	1.3 b	1.8 ab	0.3 a	0.8 a	0.0 a	1.8 b	1.0 b	0.3 bc	0.0 a	0.3 cd
3 DP 1441 RF Prevathon preventively	0.43 lba/gal	19 fl oz/a	AC	0.0 c	0.3 b	0.0 a	0.0 a	0.0 a	1.0 b	0.5 b	0.3 bc	0.0 a	0.3 cd
4 PHY 499 WRF Untreated Check				0.0 c	0.0 b	0.0 a	0.0 a	0.0 a	1.5 b	0.3 b	0.8 b	0.0 a	1.3 b
5 PHY 499 WRF Prevathon at threshold	0.43 lba/gal	19 fl oz/a	C	0.0 c	0.0 b	0.0 a	0.0 a	0.0 a	1.5 b	0.5 b	0.5 bc	0.0 a	0.5 bcd
6 PHY 499 WRF Prevathon preventively	0.43 lba/gal	19 fl oz/a	A	0.3 c	0.3 b	0.0 a	0.0 a	0.0 a	0.0 b	0.0 b	0.0 c	0.0 a	0.0 d
7 ST 4946 B2RF Untreated Check				0.3 c	0.3 b	0.0 a	0.3 a	0.0 a	0.5 b	0.0 b	0.0 c	0.0 a	1.3 bc
8 ST 4946 B2RF Prevathon at threshold	0.43 lba/gal	19 fl oz/a		0.0 c	0.0 b	0.3 a	0.0 a	0.0 a	0.5 b	0.0 b	0.0 c	0.3 a	0.5 bcd
9 ST 4946 B2RF Prevathon preventively	0.43 lba/gal	19 fl oz/a	A	0.3 c	0.0 b	0.0 a	0.0 a	0.0 a	0.0 b	0.0 b	0.0 c	0.0 a	0.0 d

Continued Below

Dam. Sq.= Damaged Squares; Dam. Bolls = Damaged bolls; CEW = bollworm larvae; Dam. Flo. = Damaged Flowers; FAW larvae= fall armyworm

Description				Dam. Bolls	CEW	FAW	Dam. Sq.	Dam. Flo.	Dam. Bolls	CEW	FAW	Dam. Bolls	Seed Cotton
Rating Date				Total	Total	Total	Total	Total	Total	Total	Total	Total	lbs/acre
Sample Size, Unit				8/19/2016	8/19/2016	8/19/2016	8/25/2016	8/25/2016	8/25/2016	8/25/2016	8/25/2016	8/29/2016	10/12/2016
Plant-Eval Interval				25 Boll	50 Fruit	50 Fruit	25 Square	25 Flower	25 Boll	75 Fruit	75 Fruit	50 Boll	
				80 DP-1	80 DP-1	80 DP-1	86 DP-1	86 DP-1	86 DP-1	86 DP-1	86 DP-1	90 DP-1	
Treatment	Formulation	Rate	Appl										
1 DP 1441 RF Untreated Check				9.0 a	5.0 a	1.5 a	5.0 a	3.3 a	8.8 a	4.3 a	2.3 a	11.5 a	3400.0 c
2 DP 1441 RF Prevathon at threshold	0.43 lba/gal	19 fl oz/a	BC	0.5 b	0.0 b	0.0 b	0.0 c	0.0 b	0.0 c	0.0 b	0.0 b	0.0 c	4244.4 a
3 DP 1441 RF Prevathon preventively	0.43 lba/gal	19 fl oz/a	AC	0.0 b	0.0 b	0.0 b	0.0 c	0.0 b	0.0 c	0.0 b	0.0 b	0.3 c	3894.0 ab
4 PHY 499 WRF Untreated Check				1.3 b	0.5 b	0.0 b	1.0 b	0.5 b	0.8 bc	0.8 b	0.0 b	3.3 b	3385.2 c
5 PHY 499 WRF Prevathon at threshold	0.43 lba/gal	19 fl oz/a	C	0.3 b	0.0 b	0.0 b	0.0 c	0.0 b	0.0 c	0.0 b	0.0 b	0.5 c	3902.3 ab
6 PHY 499 WRF Prevathon preventively	0.43 lba/gal	19 fl oz/a	A	0.0 b	0.0 b	0.0 b	0.0 c	0.0 b	0.0 c	0.0 b	0.0 b	0.0 c	3983.4 ab
7 ST 4946 B2RF Untreated Check				0.3 b	0.0 b	0.0 b	0.8 b	0.3 b	1.3 b	0.5 b	0.0 b	1.0 c	3822.2 b
8 ST 4946 B2RF Prevathon at threshold	0.43 lba/gal	19 fl oz/a		0.3 b	0.0 b	0.0 b	0.5 bc	0.0 b	0.5 bc	0.0 b	0.5 b	0.3 c	3950.0 ab
9 ST 4946 B2RF Prevathon preventively	0.43 lba/gal	19 fl oz/a	A	0.0 b	0.0 b	0.0 b	0.0 c	0.0 b	0.0 c	0.0 b	0.3 b	0.0 c	3878.7 b

Means followed by same letter or symbol do not significantly differ (P=.05, LSD)

Seed Cotton Yield

