

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 | | | | 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 |
| Sample Size, Unit | | | | 25 Boll | 50 Fruit | 50 Fruit | 25 Square | 25 Flower | 25 Boll | 75 Fruit | 75 Fruit | 50 Boll | |
| Plant-Eval Interval | | | | 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

