

INSECT PEST MANAGEMENT IN VIRGINIA COTTON, PEANUT, AND SOYBEAN

2012

D. Ames Herbert, Jr., Extension Entomologist, Virginia Tech



Green stink bug nymphs on soybean pods (photo by D. Holshouser)

Technical Support:

Mike Arrington, Research Specialist, Virginia Tech
Austin Brown, Agricultural Technician, Virginia Tech
Tami Carlow, Agricultural Technician, Virginia Tech
Carson Daughtrey, Agricultural Technician, Virginia Tech
Kristin Dunn, Agricultural Technician, Virginia Tech
Jamie Hogue, Agricultural Technician, Virginia Tech
Rebecca McGrath, Agricultural Technician, Virginia Tech
David Owens, University of Florida
Jessica Samler, Nichino America, Inc.
Ed Seymore, Virginia Tech
Sean Malone, Research Specialist, Virginia Tech

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UNIVERSITY FACULTY AND STAFF

Virginia Polytechnic Institute and State University

Maria Balota, Crop Physiologist, Tidewater AREC, Suffolk, VA

Hunter Frame, Field Crops Agronomist, Tidewater AREC, Suffolk, VA

David Holshouser, Soybean Specialist, Tidewater AREC, Suffolk, VA

Patrick Phipps, Plant Pathologist, Tidewater AREC, Suffolk, VA

Thomas Kuhar, Entomologist, Eastern Shore AREC, Painter, VA

Robert Pitman, Director, Eastern Virginia AREC, Warsaw, VA

Mary Beahm, Agricultural Specialist, Eastern Virginia AREC, Warsaw, VA

Pete Schultz, Director/Entomologist, Hampton Roads AREC, Virginia Beach, VA

Hélène Doughty, Senior Research Specialist, Eastern Shore AREC, Painter, VA

North Carolina State University

Jack Bachelor, Entomologist, Dept. of Entomology, Raleigh, NC

Dan Mott, Research Specialist, Dept. of Entomology, Raleigh, NC

Dominic Reisig, Entomologist, Dept. of Entomology, Plymouth, NC

University of Delaware

Joanne Whalen, Entomologist, Newark, DE

University of Maryland

Galen Dively, Entomologist, College Park, MD

Virginia State University

Mark Kraemer, Entomologist, Dept. of Entomology, Petersburg, VA

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Watson Lawrence, Chesapeake
Mike Parrish, Dinwiddie Co.
Keith Balderson, Essex Co.
Rachel Grosse, Goochland Co.
Brittany Council, Greensville Co.
Jim Schroering, Hanover Co.
Janet Spencer, Isle of Wight Co.
Laura Maxey, King William Co.
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Haley McCann, Nottoway Co.
David Moore, Middlesex Co.

John Allison, New Kent Co.
William Shockley, Northampton Co.
Steve Hopkins, Orange Co.
Scott Reiter, Prince George Co.
Matt Yancey, Rockingham Co.
Robert Clark, Shenandoah Co.
Neil Clark, Southampton Co.
Chris Drake, Southampton Co.
Glenn Slade, Surry Co.
Kelvin Wells, Sussex Co.
Roy Flanagan, Virginia Beach
Keith Starke, Virginia Beach
Stephanie Romelczyk, Westmoreland Co.

UNITED STATES DEPARTMENT OF AGRICULTURE

Ryan Jackson, Research Entomologist, Stoneville, MS

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Insect Rating Scales Used in Efficacy Trials and Abbreviations Used in this Publication

Thrips injury rating scale for cotton:

- 0 = no injury
- 1 = 10% injured leaves, no bud injury
- 2 = 25% injured leaves, no bud injury
- 3 = 75% injured leaves, 0-25% buds injured
- 4 = 90% injured leaves, >25% buds injured
- 5 = dead plants

Thrips injury rating scale for peanut:

- 0 = no injury
- 1 = 10% leaves injured
- 2 = 20% leaves injured
- 3 = 30% leaves injured
- 4 = 40% leaves injured
- 5 = $\geq 50\%$ leaves injured + $\leq 5\%$ terminal buds injured
- 6 = $\geq 50\%$ leaves injured + 25% terminal buds injured
- 7 = $\geq 50\%$ leaves injured + 50% terminal buds injured
- 8 = $\geq 50\%$ leaves injured + 75% terminal buds injured
- 9 = $\geq 50\%$ leaves injured + 90% terminal buds injured
- 10 = dead plants

Abbreviations used in this publication:

- 1st tl: first true leaf
- ai: active ingredient
- BC: broadcast
- BMSB: brown marmorated stink bug
- cotyl: cotyledon
- cwt: hundred-weight
- GC: ground-cracking
- IF: in-furrow
- RCBD: randomized complete block design
- Tidewater AREC: Tidewater Agricultural Research and Extension Center

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Climatological Summary of the 2012 Growing Season—Tidewater AREC, Suffolk, VA

Table 1. Daily maximum and minimum temperatures (°F) for 2012.

Day of month	JAN		FEB		MAR		APR		MAY		JUN	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	65	28	69	43	70	49	77	44	74	58	89	61
2	68	38	73	50	80	41	67	47	88	60	86	58
3	48	19	62	32	65	50	65	34	89	56	78	52
4	38	13	58	27	65	40	75	51	85	59	80	56
5	42	25	64	32	50	26	87	51	90	61	85	54
6	53	29	45	22	52	22	57	45	86	59	71	48
7	69	33	52	32	55	26	60	32	74	51	75	48
8	69	37	59	26	72	41	66	30	74	51	82	53
9	57	36	52	31	77	53	74	38	80	62	84	54
10	47	37	49	23	56	31	76	41	74	52	89	73
11	56	30	55	36	52	25	74	40	73	50	91	60
12	50	41	47	21	64	32	56	35	73	45	86	67
13	46	21	39	13	75	52	63	35	79	53	82	66
14	45	24	53	28	78	50	67	35	80	59	85	60
15	42	25	60	35	84	50	77	55	80	64	78	53
16	41	28	61	30	87	57	91	58	86	62	77	52
17	60	32	58	41	82	55	88	55	82	58	78	52
18	66	35	56	36	75	50	86	50	78	57	76	49
19	52	25	62	39	73	51	70	50	74	48	79	61
20	48	32	43	30	81	51	68	42	77	51	91	63
21	57	36	48	20	81	57	78	51	73	52	95	69
22	60	31	57	40	76	58	83	56	83	59	98	70
23	42	32	70	42	62	55	61	45	82	59	96	66
24	61	35	76	51	90	55	57	34	84	57	90	64
25	63	31	81	32	72	55	65	34	84	62	90	62
26	55	32	52	22	68	52	72	52	87	62	91	58
27	66	44	53	22	69	57	77	55	84	65	80	53
28	68	29	59	40	69	35	71	46	86	67	86	58
29	61	29	62	35	80	53	67	52	90	67	93	68
30	55	24			79	45	67	51	90	68	101	66
31	58	30			80	39			74	58		
Avg.	55.1	30.4	57.8	32.1	71.6	45.6	71.4	44.8	81.1	57.8	85.4	59.1

Table 1, continued. Daily maximum and minimum temperatures (°F) for 2012.

Day of month	JUL		AUG		SEP		OCT		NOV		DEC	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	96	67	83	70	90	70	76	52	57	35	61	33
2	99	62	90	69	91	69	75	59	59	31	65	28
3	94	67	91	67	90	68	84	69	57	30	67	37
4	96	71	90	69	84	69	87	67	53	32	72	40
5	96	67	91	73	90	67	82	58	50	36	76	52
6	100	69	93	71	90	69	82	54	52	27	62	28
7	97	70	93	77	92	63	85	50	49	37	50	29
8	101	75	86	69	91	60	60	47	48	35	62	43
9	101	70	89	69	90	61	55	49	68	42	65	42
10	90	69	91	73	79	54	60	50	60	46	70	55
11	80	65	88	70	78	48	70	43	72	35	72	50
12	80	65	88	65	88	46	70	53	74	40	56	40
13	86	67	84	63	80	50	71	53	77	45	48	36
14	87	70	90	67	82	57	67	40	51	32	63	23
15	92	71	91	68	85	58	78	54	53	40	57	24
16	94	71	90	63	78	50	76	46	55	38	54	29
17	95	70	89	60	74	59	67	40	55	32	58	46
18	98	72	91	68	80	66	71	40	58	38	64	48
19	98	74	85	61	86	57	78	44	59	47	64	30
20	97	73	77	65	72	51	79	58	55	46	62	28
21	95	69	78	64	81	52	80	45	59	36	63	28
22	89	67	83	63	84	59	79	36	59	35	48	31
23	94	72	85	67	75	50	72	38	60	27	49	20
24	94	72	85	64	75	45	80	44	68	38	56	32
25	90	70	82	63	77	45	82	46	47	17	56	41
26	96	70	88	73	83	53	81	58	50	24	57	39
27	96	74	87	64	87	57	80	55	63	32	60	37
28	91	73	93	68	85	57	65	47	58	28	50	26
29	93	67	91	68	70	57	69	49	50	22	45	30
30	89	68	89	63	76	55	70	50	55	23	46	30
31	88	68	89	64			57	38			45	19
Avg.	93.3	69.5	87.7	67.0	82.8	57.4	73.8	49.4	57.7	34.2	58.8	34.6

Table 2. Daily precipitation (inches) for 2012—Tidewater AREC, Suffolk, VA.

Day of month	JAN	FEB	MAR	APR	MAY	JUN
1	0	0	0.25	0.39	0.08	0
2	0	0.21	0	0.01	0.1	2.55
3	0	0	0.91	0	0	0.02
4	0	0	0.65	0	0	0
5	0	0.69	0.03	0.35	0.21	0
6	0	0.01	0.03	0.03	1.64	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0.02	0	0.48	0	0.07	0
10	0.08	0	0.05	0	1.86	0
11	0	0	0	0	0	0
12	0.75	0	0	0	0	0.05
13	0.01	0	0.07	0	0	0.56
14	0	0.01	0	0	0.08	0
15	0	0	0	0	0.06	0
16	0	0	0.04	0	0.12	0
17	0	0.32	0.08	0	0.15	0
18	0.09	0	0	0	0	0
19	0	0.02	0	0.35	0	0.14
20	0	0.81	0	0.01	0	0
21	0.35	0	0.05	0	0.13	0
22	0.26	0	0.11	1.18	0	0
23	0.28	0.05	0	1.3	0.09	0.83
24	0.05	0	0	0.05	0.39	0.01
25	0	0.13	0.51	0	0.01	0
26	0	0	0.2	0.12	0	0.64
27	0.04	0	0	0.18	0	0
28	0	0	0	0.01	0	0
29	0	0	0	0.17	0	0
30	0		0	0	0.67	0
31	0		0.01		0.08	
Total	1.93	2.25	3.47	4.15	5.74	4.80

Table 2, continued. Daily precipitation (inches) for 2012—Tidewater AREC, Suffolk, VA.

Day of month	JUL	AUG	SEP	OCT	NOV	DEC
1	0.15	0.14	0	0	0	0
2	0	0.42	0	0.03	0	0
3	0	0.01	0.3	0.11	0	0
4	0	0	0.68	0.03	0	0
5	0	0	0	0	0.04	0
6	0	0.1	0	0	0	0.12
7	0	1.46	0.3	0.03	0.04	0
8	0	0.02	0	0.3	0	0.02
9	0.02	0	0.78	1.28	0	0.1
10	0.24	0	0	0.06	0	0
11	0.02	0.01	0	0	0	0
12	0.02	1.05	0	0	0	0
13	0	0.03	0	0	0.18	0
14	0	0	0	0	0.35	0
15	0.02	0	0	0	0	0
16	0	0	0	0.46	0.16	0.45
17	0	0	0	0	0	0.31
18	0	0	0.07	0	0	0.02
19	0	0.05	1.3	0.03	0	0
20	0	1.1	0	0	0	0
21	0.76	0.14	0	0	0	0.38
22	0.58	0.02	0	0	0	0
23	0	0	0	0	0	0
24	0	0	0	0	0	0
25	0	2.12	0	0	0	0
26	0	2	0	0	0	0.14
27	0.6	0.75	0	0	0	1.81
28	0.03	0.1	0	0	0.06	0
29	0	0.91	0.57	3.4	0	0.32
30	0.01	0	0.14	0	0	0.15
31	0.22	0		1.38		0
Total	2.67	10.43	4.14	7.11	0.83	3.82

Table 3. Soil types, nutrient analyses (ppm), and pH for tests conducted in 2012—Tidewater AREC, Suffolk, VA.

Field #	Crop	Soil type(s)	P	K	Ca	Mg	Zn	Mn	pH
4	Cotton	Eunola, Nansemond	21	71	404	32	0.6	2.7	6.05
13	Cotton & Soybean	Dragston, Rains	31	106	490	50	0.3	2.4	6.21
15	Peanut	Emporia, Nansemond	53	52	253	29	0.5	2.3	6.36
26	Cotton	Emporia	28	56	355	34	0.6	2.3	6.35
35	Soybean	Nansemond, Dragston	37	57	321	32	0.5	3.7	6.26
36	Cotton	Uchee, Nansemond	52	41	254	24	0.4	2.4	6.16
39	Cotton	Emporia, Eunola	20	95	480	36	0.5	2.3	6.13
42	Soybean	Eunola, Dragston	19	62	201	36	0.5	1.4	6.10
43	Soybean	Dragston, Eunola	30	55	210	42	0.5	1.8	6.36
51	Cotton	Nansemond, Pactolus	43	139	620	104	0.9	2.2	6.03
63B	Peanut	Emporia, Nansemond	25	102	385	48	0.4	2.4	6.06
64B	Cotton	Emporia, Nansemond	30	68	412	33	0.9	2.6	6.06
66	Peanut	Nansemond, Emporia, Eunola	37	86	331	33	0.7	2.7	6.38
67	Cotton	Eunola, Emporia, Nansemond	25	50	298	22	0.5	2.8	6.23

2012



Cotton Insect Pest Management Tests and Demonstrations

Test: CT12-THP-1, Foliar insecticides for thrips control in cotton

#	Material	Rate/A	Dates of foliar applications ¹
1	Brigadier 2SC	6.4 oz	May 14 and May 21
2	Orthene 97	4 oz	May 14 and May 21
3	Radiant SC	6 oz	May 14 and May 21
4	Athena	9 oz	May 14 and May 21
5	Athena	11 oz	May 14 and May 21
6	Untreated	---	---

¹All insecticides applied **twice** (broadcast at first true leaf stage and again in 7 days)

Test: CT12-THP-1
Year: 2012
Crop: Cotton
Variety: DP 1034 B2RF (insecticide untreated)
Field: 4
Location: Tidewater AREC

Experimental design: RCBD
Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: Apr. 30, 2012
Harvest date: Oct. 17
Row feet harvested: 70

Treatment application(s):

Broadcast using backpack	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 17	GPA: 14.3
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Field preparation: Rip-strip till on Apr. 27

Test name: **CT12-THP-1**

Herbicides

Date	Product	Rate/A
3/30	Roundup Weather Max	22 oz
5/02	Acumen	1.5 pt
5/02	Cotoran	1 qt
5/02	Roundup Weather Max	22 oz
6/01	Roundup Weather Max	22 oz
6/19	Roundup Weather Max	22 oz
7/06	Buccaneer	1 qt
7/18	MSMA	1 qt
7/18	Envoke	0.1 oz
7/18	Cotton Pro	1.5 pt

Additional insecticides

Date	Product	Rate/A
8/09	Baythroid XL	3 oz

Lime & fertilizer

Date	Product	Rate/A
3/30	6-18-39	330 lb
6/25	24-0-0-3	30 units
6/25	Boron	1 qt
7/12	24-0-0-3	30 units
7/12	Boron	1 qt

Growth regulators

Date	Product	Rate/A
7/17	Pentia	8 oz
7/31	Pix WSG	0.6 oz
8/09	Pix WSG	0.5 oz

Defoliation

Date	Product	Rate/A
9/27	Finish	1 qt
9/27	Def	10 oz
9/27	Dropp	3 oz
9/27	Super Boll	6 oz

Table 4. Thrips injury ratings and yield, CT12-THP-1. Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were broadcast on May 14 and again on May 21.

#	Material	Rate/A	Thrips injury rating ¹				Lint lb/acre ²
			May 23	May 31	Jun 4	Jun 11	
1	Brigadier 2SC	6.4 oz	3.75 a	4.38 b	4.06 b	4.19 b	1118
2	Orthene 97	4 oz	3.06 b	3.81 c	3.38 d	3.00 d	1177
3	Radiant SC	6 oz	3.00 b	3.81 c	3.75 c	3.06 d	1266
4	Athena	9 oz	3.75 a	4.38 b	3.94 bc	4.25 b	1135
5	Athena	11 oz	3.81 a	4.25 b	4.13 b	3.50 c	1249
6	Untreated	---	4.13 a	4.75 a	4.69 a	4.56 a	1008
	LSD		0.45	0.30	0.28	0.17	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹*Thrips injury based on a 0-5 scale, 0 = no injury and 5 = dead plants.*

²*Cotton was harvested on October 17. Gross yields were reduced by 56.4% to account for seed and trash.*

Test: CT12-THP-2, Orthene 97 + various adjuvants for thrips control in cotton

#	Material	Rate	Dates treated ¹
1	Orthene 97	4 oz/A	May 14 and May 21
2	Orthene 97 + Induce	4 oz/A 0.25% v/v	May 14 and May 21
3	Orthene 97 + Factor 80LR	4 oz/A 1 qt per 100 gal	May 14 and May 21
4	Orthene 97 + Response	4 oz/A 1 qt per 100 gal	May 14 and May 21
5	Orthene 97 + Agri-Dex	4 oz/A 1% v/v	May 14 and May 21
6	Orthene 97 + Dyne-Amic	4 oz/A 0.625% v/v	May 14 and May 21
7	Untreated	---	---

¹All insecticides applied **twice** (broadcast at first true leaf stage and again in 7 days)

Test: CT12-THP-2
Year: 2012
Crop: Cotton
Variety: DP 1034 B2RF (insecticide untreated)
Field: 4
Location: Tidewater AREC

Experimental design: RCBD
Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: Apr. 30, 2012
Harvest date: Oct. 17
Row feet harvested: 70

Treatment application(s):

Broadcast using backpack	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 17	GPA: 14.3
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Field preparation: Rip-strip till on Apr. 27

Test name: **CT12-THP-2**

Herbicides

Date	Product	Rate/A
3/30	Roundup Weather Max	22 oz
5/02	Acumen	1.5 pt
5/02	Cotoran	1 qt
5/02	Roundup Weather Max	22 oz
6/01	Roundup Weather Max	22 oz
6/19	Roundup Weather Max	22 oz
7/06	Buccaneer	1 qt
7/18	MSMA	1 qt
7/18	Envoke	0.1 oz
7/18	Cotton Pro	1.5 pt

Additional insecticides

Date	Product	Rate/A
8/09	Baythroid XL	3 oz

Lime & fertilizer

Date	Product	Rate/A
3/30	6-18-39	330 lb
6/25	24-0-0-3	30 units
6/25	Boron	1 qt
7/12	24-0-0-3	30 units
7/12	Boron	1 qt

Growth regulators

Date	Product	Rate/A
7/17	Pentia	8 oz
7/31	Pix WSG	0.6 oz
8/09	Pix WSG	0.5 oz

Defoliation

Date	Product	Rate/A
9/27	Finish	1 qt
9/27	Def	10 oz
9/27	Dropp	3 oz
9/27	Super Boll	6 oz

Table 5. Thrips injury ratings and yield, CT12-THP-2. Tidewater AREC, Suffolk, VA, 2012. Treatments were applied on May 14 and May 21.

#	Material	Rate/A	Thrips injury rating ¹				Lint lb/acre ²
			May 22	May 29	Jun 4	Jun 11	
1	Orthene 97	4 oz/A	1.75 b	2.75 b	3.44 b	2.94 b	1255
2	Orthene 97 + Induce	4 oz/A 0.25% v/v	1.75 b	2.50 b	3.25 b	2.94 b	1282
3	Orthene 97 + Factor 80LR	4 oz/A 1 qt per 100 gal	1.75 b	2.56 b	3.25 b	3.00 b	1239
4	Orthene 97 + Response	4 oz/A 1 qt per 100 gal	1.75 b	2.69 b	3.38 b	2.94 b	1291
5	Orthene 97 + Agri-Dex	4 oz/A 1% v/v	1.75 b	2.50 b	3.25 b	3.00 b	1032
6	Orthene 97 + Dyne-Amic	4 oz/A 0.625% v/v	1.94 b	2.44 b	3.19 b	3.00 b	1045
7	Untreated	---	4.50 a	4.56 a	4.50 a	4.56 a	1039
	LSD		0.21	0.36	0.28	0.25	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹*Thrips injury based on a 0-5 scale, 0 = no injury and 5 = dead plants.*

²*Cotton was harvested on October 17. Gross yields were reduced by 57.3% to account for seed and trash.*

Table 6. Mean number of thrips per 5 plants, CT12-THP-2. Tidewater AREC, Suffolk, VA, 2012. Treatments were applied on May 14 and May 21.

#	Material	Rate/A	May 14 (cotyledon stage)		May 18 (early 1 st true leaf)		May 22 (early 1 st true leaf)		May 29 (4 th true leaf)		Jun 7 (4 th true leaf)	
			Immat- ure	Adult	Immat- ure	Adult	Immat- ure	Adult	Immat- ure	Adult	Immat- ure	Adult
1	Orthene 97	4 oz/A	.	.	26.00 b	1.00 b	11.25 b	0.50 b	4.50 b	2.25	11.75	4.75
2	Orthene 97 + Induce	4 oz/A 0.25% v/v	.	.	20.25 b	1.00 b	19.75 b	0.75 b	3.00 b	2.25	14.00	3.75
3	Orthene 97 + Factor 80LR	4 oz/A 1 qt per 100 gal	.	.	23.50 b	2.00 b	18.25 b	0.50 b	3.25 b	2.00	13.50	3.75
4	Orthene 97 + Response	4 oz/A 1 qt per 100 gal	.	.	15.50 b	0.50 b	15.50 b	0.25 b	3.00 b	2.25	13.25	4.25
5	Orthene 97 + Agri-Dex	4 oz/A 1% v/v	.	.	21.00 b	1.00 b	24.25 b	0.50 b	2.25 b	2.50	12.00	3.50
6	Orthene 97 + Dyne-Amic	4 oz/A 0.625% v/v	.	.	19.00 b	0.75 b	15.50 b	0.00 b	3.75 b	1.75	6.75	2.00
7	Untreated	---	1.00	14.50	42.25 a	5.25 a	141.00 a	5.00 a	35.25 a	5.50	22.00	3.75
	LSD		---	---	13.37	2.29	26.76	1.42	7.96	NS	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

Test: CT12-THP-4, Regional cotton thrips trial, foliar insecticides

#	Material	Rate/A	Dates of foliar applications ¹
1	Untreated		---
2	Orthene 97	4.0 oz	May 14 and May 21
3	Benevia 100D	20.6 oz	May 14 and May 21
4	Vydate C-LV	17 oz	May 14 and May 21
5	Radiant SC	6 oz	May 14 and May 21
6	Karate Z	1.28 oz	May 14 and May 21
7	Dimethoate 4EC	8 oz	May 14 and May 21
8	Lannate 2.4LV	12 oz	May 14 and May 21

¹All insecticides applied **twice** (the first application when the first true leaf bud is evident on 90% of the stand and the second application 7 days later)

Test: CT12-THP-4
Year: 2012
Crop: Cotton
Variety: PHY 375 WRF (insecticide untreated)
Field: 4
Location: Tidewater AREC

Experimental design: RCBD
Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: Apr. 30, 2012
Harvest date: Oct. 17
Row feet harvested: 70

Treatment application(s):

Broadcast using backpack	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 17	GPA: 14.3
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Field preparation: Rip-strip till on Apr. 27

Comments: Cotton seed was treated with base fungicide.

Test name: **CT12-THP-4**

Herbicides

Date	Product	Rate/A
3/30	Roundup Weather Max	22 oz
5/02	Acumen	1.5 pt
5/02	Cotoran	1 qt
5/02	Roundup Weather Max	22 oz
6/01	Roundup Weather Max	22 oz
6/19	Roundup Weather Max	22 oz
7/06	Buccaneer	1 qt
7/18	MSMA	1 qt
7/18	Envoke	0.1 oz
7/18	Cotton Pro	1.5 pt

Additional insecticides

Date	Product	Rate/A
8/09	Baythroid XL	3 oz

Lime & fertilizer

Date	Product	Rate/A
3/30	6-18-39	330 lb
6/25	24-0-0-3	30 units
6/25	Boron	1 qt
7/12	24-0-0-3	30 units
7/12	Boron	1 qt

Growth regulators

Date	Product	Rate/A
7/17	Pentia	8 oz
7/31	Pix WSG	0.6 oz
8/09	Pix WSG	0.5 oz

Defoliation

Date	Product	Rate/A
9/27	Finish	1 qt
9/27	Def	10 oz
9/27	Dropp	3 oz
9/27	Super Boll	6 oz

Table 7. Thrips injury ratings¹, CT12-THP-4. Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were broadcast on May 14 and again on May 21.

#	Material	Rate/A	May 22	May 29	Jun 4	Jun 11
1	Untreated		4.50 a	4.50 a	4.56 a	4.50 a
2	Orthene 97	4.0 oz	3.81 b	2.56 d	3.38 c	3.00 e
3	Benevia 10OD	20.6 oz	2.81 c	2.31 d	3.00 d	2.56 f
4	Vydate C-LV	17 oz	3.69 b	3.06 c	3.63 bc	3.94 c
5	Radiant SC	6 oz	3.69 b	3.00 c	3.44 c	3.69 d
6	Karate Z	1.28 oz	3.75 b	4.31 a	4.38 a	4.25 b
7	Dimethoate 4EC	8 oz	3.63 b	3.19 c	3.38 c	3.94 c
8	Lannate 2.4LV	12 oz	3.69 b	3.69 b	3.88 b	4.31 b
	LSD		0.33	0.31	0.30	0.13

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹*Thrips injury based on a 0-5 scale, 0 = no injury and 5 = dead plants.*

Table 8. Mean number of thrips per 5 plants, CT12-THP-4. Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were broadcast on May 14 and again on May 21.

#	Material	Rate/A	May 15 ¹		May 22 ²		May 29 ³		Jun 5 ⁴	
			Immat- ure	Adult	Immat- ure	Adult	Immat- ure	Adult	Immat- ure	Adult
1	Untreated		11.00	8.50 ab	148.25 a	3.50 bc	36.75 b	2.50 c	31.00 bc	6.25
2	Orthene 97	4.0 oz	2.25	1.50 c	19.50 b	0.50 c	7.25 cd	2.25 c	18.00 bc	6.00
3	Benevia 100D	20.6 oz	5.50	4.50 bc	22.75 b	7.00 ab	1.25 d	5.25 bc	12.75 c	7.75
4	Vydate C-LV	17 oz	2.75	2.00 c	19.50 b	1.00 c	7.75 cd	7.25 ab	32.50 ab	7.75
5	Radiant SC	6 oz	0.25	3.25 c	49.25 b	7.25 ab	8.50 cd	10.00 a	51.00 a	5.50
6	Karate Z	1.28 oz	3.00	9.25 a	179.50 a	8.25 a	64.25 a	2.75 c	24.75 bc	6.50
7	Dimethoate 4EC	8 oz	0.50	2.75 c	23.00 b	1.50 c	8.75 cd	5.00 bc	18.00 bc	6.00
8	Lannate 2.4LV	12 oz	1.00	1.75 c	28.50 b	0.75 c	17.25 c	6.50 a-c	50.50 a	4.50
	LSD		NS	4.32	51.87	4.16	14.56	4.26	19.26	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹May 15 species composition (based on treatment 1): tobacco thrips—47.1%; western flower thrips—2.9%; eastern flower thrips—2.9%; onion thrips—47.1%; soybean thrips—0%.

²May 22 species composition (based on treatment 1): tobacco thrips—50%; western flower thrips—0%; eastern flower thrips—0%; onion thrips—50%; soybean thrips—0%.

³May 29 species composition (based on treatment 1): tobacco thrips—70%; western flower thrips—10%; eastern flower thrips—0%; onion thrips—20%; soybean thrips—0%.

⁴June 5 species composition (based on treatment 1): tobacco thrips—24%; western flower thrips—28%; eastern flower thrips—4%; onion thrips—40%; soybean thrips—4%.

Table 9. Plant height¹, number of true leaves¹, number of nodes per plant¹, and aboveground biomass², CT12-THP-4. Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were broadcast on May 14 and again on May 21.

#	Material	Rate/A	May 15		May 22		May 29		Jun 5		Jun 11		
			Height (cm)	True leaves	Height (cm)	True leaves	Height (cm)	True leaves	Height (cm)	True leaves	Height (cm)	Nodes	Biomass (g)
1	Untreated		2.90 a-c	0.0	3.98	0.0	6.40	0.60 c	6.43 c	1.85 c	10.28	5.80 ab	2.86 cd
2	Orthene 97	4.0 oz	2.63 cd	0.0	4.18	0.0	7.23	0.80 a-c	8.05 a	3.20 b	10.33	5.00 c	3.34 a-c
3	Benevia 100D	20.6 oz	2.98 ab	0.0	4.45	0.1	6.93	1.25 a	7.58 ab	3.35 ab	10.83	5.10 c	3.43 a-c
4	Vydate C-LV	17 oz	2.68 cd	0.0	3.80	0.05	6.95	0.55 c	7.88 a	3.85 a	11.05	5.45 bc	4.19 a
5	Radiant SC	6 oz	3.00 a	0.0	4.20	0.0	7.15	1.15 ab	7.43 ab	3.95 a	10.20	5.30 c	3.63 a-c
6	Karate Z	1.28 oz	2.70 b-d	0.0	4.00	0.0	6.53	0.45 c	7.48 ab	2.25 c	13.70	5.30 c	2.23 d
7	Dimethoate 4EC	8 oz	2.55 d	0.0	3.68	0.0	6.53	0.75 bc	7.63 ab	3.90 a	10.03	5.95 a	3.76 ab
8	Lannate 2.4LV	12 oz	2.68 cd	0.0	4.13	0.0	6.65	0.60 c	6.98 bc	3.45 ab	9.53	5.35 bc	3.11 b-d
	LSD		0.29	NS	NS	NS	NS	0.47	0.77	0.64	NS	0.46	0.88

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Based on sampling five plants per plot.

²Aboveground biomass based on cutting 5 plants/plot at soil level, pooling those samples into labeled paper bags, and drying at 60°C for 48 hours.

Table 10. Stand counts and yield, CT12-THP-4. Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were broadcast on May 14 and again on May 21.

#	Material	Rate/A	Plants/35 row ft ¹	Lint lb/acre ²
			Jun 11	
1	Untreated		91.4	1258
2	Orthene 97	4.0 oz	93.8	1451
3	Benevia 100D	20.6 oz	94.3	1414
4	Vydate C-LV	17 oz	91.4	1448
5	Radiant SC	6 oz	95.1	1321
6	Karate Z	1.28 oz	97.0	1339
7	Dimethoate 4EC	8 oz	87.1	1473
8	Lannate 2.4LV	12 oz	88.6	1457
	LSD		NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹*Based on sampling all plants in rows 1 and 2 of each plot.*

²*Cotton was harvested on October 17. Gross yields were reduced by 58.8 % to account for seed and trash.*

Test: CT12-THP-5, Insecticide seed treatments for thrips control in cotton

#	Material ¹	Rate/A
1	Untreated	---
2	Gaucho 600FS	9.49 oz/CWT
3	Gaucho 600FS + Poncho Votivo	9.49 oz/CWT 10.76 oz/CWT
4	Aeris Seed Applied System + Poncho Votivo	18.98 oz/CWT 10.76 oz/CWT
5	Aeris Seed Applied System + Poncho Votivo	12.66 oz/CWT 10.76 oz/CWT
6	Aeris Seed Applied System + Poncho Votivo +USF0738	12.66 oz/CWT 10.76 oz/CWT 6.074 oz/CWT
7	Avicta Complete Pak—Avicta Avicta Complete Pak—Cruiser	0.15 mg ai/seed 0.375 mg ai/seed
8	Temik 15G (IF)	5 lb/A
9	Aeris Seed Applied System	18.98 oz/CWT
10	Gaucho 600FS + Poncho Votivo + USF0738	9.49 oz/CWT 10.76 oz/CWT 6.074 oz/CWT

¹All treatments contain Vortex FL @ 0.08555 oz/CWT, Baytan 30 @ 0.4823 oz/CWT, Allegiance FL @ 0.7524 oz/CWT, Pro-ized Blue Colorant @ 1.04 oz/CWT, Calcium Carbonate @ 6 oz/CWT, Color Coat White @ 1 oz/CWT, Secure Plus Seed Gloss 661 @ 10 oz/CWT, and Suspending Agent @ 0.4 oz/CWT.

Test: CT12-THP-5
Year: 2012
Crop: Cotton
Variety: FM 1740 B2F
Field: 4
Location: Tidewater AREC

Experimental design: RCBD
Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: Apr. 30, 2012
Harvest date: Oct. 17
Row feet harvested: 70

Treatment application(s):

Granular in-furrow	Tractor-mounted inverted jars
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Field preparation: Rip-strip till on Apr. 27

Test name: **CT12-THP-5**

Herbicides

Date	Product	Rate/A
3/30	Roundup Weather Max	22 oz
5/02	Acumen	1.5 pt
5/02	Cotoran	1 qt
5/02	Roundup Weather Max	22 oz
6/01	Roundup Weather Max	22 oz
6/19	Roundup Weather Max	22 oz
7/06	Buccaneer	1 qt
7/18	MSMA	1 qt
7/18	Envoke	0.1 oz
7/18	Cotton Pro	1.5 pt

Additional insecticides

Date	Product	Rate/A
8/09	Baythroid XL	3 oz

Lime & fertilizer

Date	Product	Rate/A
3/30	6-18-39	330 lb
6/25	24-0-0-3	30 units
6/25	Boron	1 qt
7/12	24-0-0-3	30 units
7/12	Boron	1 qt

Growth regulators

Date	Product	Rate/A
7/17	Pentia	8 oz
7/31	Pix WSG	0.6 oz
8/09	Pix WSG	0.5 oz

Defoliation

Date	Product	Rate/A
9/27	Finish	1 qt
9/27	Def	10 oz
9/27	Dropp	3 oz
9/27	Super Boll	6 oz

Table 11. Stand counts, thrips injury ratings, and yield, CT12-THP-5. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate/A	Plants/35 row ft ¹			Thrips injury rating ²				Lint lb/acre ³
			May 8	May 15	May 22	May 22	May 29	Jun 4	Jun 12	
1	Untreated	---	107.6	113.8	113.3	4.50 a	4.56 a	4.63 a	4.75 a	1433
2	Gaucho 600FS	9.49 oz/CWT	104.1	110.1	111.1	3.69 b	3.50 b	3.63 b	3.25 b	1643
3	Gaucho 600FS + Poncho Votivo	9.49 oz/CWT 10.76 oz/CWT	105.1	109.4	109.3	3.69 b	3.38 bc	3.69 b	3.06 bc	1574
4	Aeris Seed Applied System + Poncho Votivo	18.98 oz/CWT 10.76 oz/CWT	108.9	114.0	115.5	3.69 b	3.00 c	3.56 b	3.00 bc	1460
5	Aeris Seed Applied System + Poncho Votivo	12.66 oz/CWT 10.76 oz/CWT	111.4	116.4	112.9	3.56 bc	3.50 b	3.69 b	3.00 bc	1629
6	Aeris Seed Applied System + Poncho Votivo +USF0738	12.66 oz/CWT 10.76 oz/CWT 6.074 oz/CWT	111.9	118.6	116.9	3.25 cd	3.31 bc	3.75 b	2.88 c	1541
7	Avicta Complete Pak—Avicta Avicta Complete Pak—Cruiser	0.15 mg ai/seed 0.375 mg ai/seed	106.4	115.8	116.1	2.75 ef	3.31 bc	3.69 b	3.19 b	1558
8	Temik 15G	5 lb/A (IF)	96.1	110.6	113.3	2.69 f	1.88 d	1.69 c	2.25 d	1679
9	Aeris Seed Applied System	18.98 oz/CWT	104.6	110.8	113.1	3.06 de	3.44 bc	3.75 b	2.88 c	1599
10	Gaucho 600FS + Poncho Votivo + USF0738	9.49 oz/CWT 10.76 oz/CWT 6.074 oz/CWT	108.4	114.4	114.0	3.38 b-d	3.63 b	3.63 b	3.19 b	1599
	LSD		NS	NS	NS	0.36	0.44	0.24	0.28	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Stand counts based on sampling all plants in rows 1 and 2 of each plot.

²Thrips injury based on a 0-5 scale, 0 = no injury and 5 = dead plants.

³Cotton was harvested on October 17. Gross yields were reduced by 58.5% to account for seed and trash.

Table 12. Mean number of thrips per 5 plants, CT12-THP-5. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate/A	May 14 (cotyledon stage) ¹		May 21 (cotyledon stage) ²		May 29 (4 th true leaf) ³		Jun 7 (5-6 true leaf) ⁴	
			Immat- ure	Adult	Immat- ure	Adult	Immat- ure	Adult	Immat- ure	Adult
1	Untreated	---	1.25	16.00 a	73.75 a	5.75 cd	44.50 b-d	2.00	27.75 cd	4.00
2	Gaucho 600FS	9.49 oz/CWT	0.25	6.50 b	20.50 bc	5.75 cd	57.75 a-c	5.00	63.75 a	7.00
3	Gaucho 600FS + Poncho Votivo	9.49 oz/CWT 10.76 oz/CWT	0.75	4.00 bc	15.50 c-e	5.75 cd	67.00 a-c	3.50	41.25 a-c	6.25
4	Aeris Seed Applied System + Poncho Votivo	18.98 oz/CWT 10.76 oz/CWT	0.00	9.00 b	8.75 ef	7.00 b-d	51.25 a-c	5.00	39.25 bc	6.25
5	Aeris Seed Applied System + Poncho Votivo	12.66 oz/CWT 10.76 oz/CWT	0.25	5.00 bc	12.25 c-f	10.50 bc	50.25 a-c	5.00	38.00 bc	4.25
6	Aeris Seed Applied System + Poncho Votivo +USF0738	12.66 oz/CWT 10.76 oz/CWT 6.074 oz/CWT	1.25	6.50 b	19.00 b-d	11.25 b	85.00 a	6.50	39.50 bc	7.25
7	Avicta Complete Pak—Avicta Avicta Complete Pak—Cruiser	0.15 mg ai/seed 0.375 mg ai/seed	0.75	4.50 bc	10.50 d-f	6.00 cd	29.50 cd	5.25	50.75 ab	6.50
8	Temik 15G	5 lb/A (IF)	0.25	0.50 c	4.00 f	2.50 d	8.00 d	1.50	13.00 d	4.75
9	Aeris Seed Applied System	18.98 oz/CWT	0.25	6.50 b	17.75 b-e	8.75 bc	41.50 cd	4.25	33.75 b-d	5.50
10	Gaucho 600FS + Poncho Votivo + USF0738	9.49 oz/CWT 10.76 oz/CWT 6.074 oz/CWT	0.00	6.75 b	25.33 b	17.67 a	82.00 ab	5.00	43.75 a-c	7.25
	LSD		NS	5.93	9.13	5.05	39.81	NS	22.95	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹May 14 species composition (based on treatment 1): tobacco thrips—43.8%; western flower thrips—0%; eastern flower thrips—1.6%; onion thrips—54.7%; soybean thrips—0%.

²May 21 species composition (based on treatment 1): tobacco thrips—17.4%; western flower thrips—0%; eastern flower thrips—0%; onion thrips—82.6%; soybean thrips—0%.

³May 29 species composition (based on treatment 1): tobacco thrips—75%; western flower thrips—0%; eastern flower thrips—0%; onion thrips—25%; soybean thrips—0%.

⁴June 7 species composition (based on treatment 1): tobacco thrips—43.8%; western flower thrips—0%; eastern flower thrips—0%; onion thrips—56.2%; soybean thrips—0%.

Table 13. Nematode counts on May 8, 2012, CT12-THP-5. Tidewater AREC, Suffolk, VA, 2012.

Sample #	<i>Meloidogyne</i> (Root-knot) juveniles	<i>Tylenchorhyncus</i> (Stunt)	<i>Mesocriconema</i> (Ring)
1	20	40	140
2	0	60	260
3	40	120	180
4	100	20	80

Test: CT12-THP-6, In-furrow applied insecticides for thrips control in cotton

#	Material	Rate/A
1	Counter 20G (IF)	2.6 lb
2	Counter 20G (IF)	5 lb
3	Thimet 20G (IF)	3.5 lb
4	Thimet 20G (IF)	5 lb
5	Temik 15G (IF)	5 lb
6	Admire Pro (IF)	7.5 oz
7	Admire Pro (IF)	8.5 oz
8	Admire Pro (IF)	9.2 oz
9	Orthene 97 (IF)	8 oz
10	Orthene 97 (IF)	12 oz
11	Orthene 97 (IF)	16 oz
12	Untreated	---

Test: CT12-THP-6
Year: 2012
Crop: Cotton
Variety: DP 1034 B2RF (insecticide untreated)
Field: 4
Location: Tidewater AREC

Experimental design: RCBD
Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: Apr. 30, 2012
Harvest date: Oct. 17
Row feet harvested: 70

Treatment application(s):

Granular in-furrow	Tractor-mounted inverted jars			
Liquid in-furrow	Nozzle type: microtube	Nozzle spacing: 36"	PSI: 49.5	GPA: 5.0

Field preparation: Rip-strip till on Apr. 27

Test name: **CT12-THP-6**

Herbicides

Date	Product	Rate/A
3/30	Roundup Weather Max	22 oz
5/02	Acumen	1.5 pt
5/02	Cotoran	1 qt
5/02	Roundup Weather Max	22 oz
6/01	Roundup Weather Max	22 oz
6/19	Roundup Weather Max	22 oz
7/06	Buccaneer	1 qt
7/18	MSMA	1 qt
7/18	Envoke	0.1 oz
7/18	Cotton Pro	1.5 pt

Additional insecticides

Date	Product	Rate/A
8/09	Baythroid XL	3 oz

Lime & fertilizer

Date	Product	Rate/A
3/30	6-18-39	330 lb
6/25	24-0-0-3	30 units
6/25	Boron	1 qt
7/12	24-0-0-3	30 units
7/12	Boron	1 qt

Growth regulators

Date	Product	Rate/A
7/17	Pentia	8 oz
7/31	Pix WSG	0.6 oz
8/09	Pix WSG	0.5 oz

Defoliation

Date	Product	Rate/A
9/27	Finish	1 qt
9/27	Def	10 oz
9/27	Dropp	3 oz
9/27	Super Boll	6 oz

Table 14. Thrips injury ratings and yield, CT12-THP-6. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate/A	Thrips injury rating ¹				Lint lb/acre ²
			May 23	May 31	Jun 4	Jun 12	
1	Counter 20G (IF)	2.6 lb	3.13 bc	3.81 bc	3.69 b	3.50 b	1770
2	Counter 20G (IF)	5 lb	3.13 bc	3.81 bc	3.44 b-d	3.00 c-e	1634
3	Thimet 20G (IF)	3.5 lb	2.94 c	3.75 bc	3.69 b	3.25 bc	1861
4	Thimet 20G (IF)	5 lb	3.19 bc	3.81 bc	3.06 c-e	3.13 c	1711
5	Temik 15G (IF)	5 lb	2.31 d	3.38 de	2.88 de	2.44 fg	1637
6	Admire Pro (IF)	7.5 oz	3.44 b	3.94 b	3.56 bc	3.06 cd	1717
7	Admire Pro (IF)	8.5 oz	2.06 d	3.25 e	2.94 de	2.69 ef	1655
8	Admire Pro (IF)	9.2 oz	2.38 d	3.38 de	2.63 e	2.63 fg	1654
9	Orthene 97 (IF)	8 oz	3.13 bc	3.75 bc	3.63 bc	3.50 b	1609
10	Orthene 97 (IF)	12 oz	2.31 d	3.56 cd	2.56 e	2.75 d-f	1547
11	Orthene 97 (IF)	16 oz	2.13 d	3.38 de	2.88 de	2.31 g	1677
12	Untreated	---	4.06 a	4.75 a	4.69 a	5.00 a	1402
	LSD		0.48	0.28	0.61	0.32	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹Thrips injury based on a 0-5 scale, 0 = no injury and 5 = dead plants.

²Cotton was harvested on October 17. Gross yields were reduced by 56.7% to account for seed and trash.

Test: CT12-THP-7, Region cotton thrips trial, seed + foliar insecticides

#	Material ¹	Rate/A	Date of foliar application ²
1	Base fungicide only	---	---
2	Cruiser 5FS only	---	---
3	Orthene 97	4 oz	May 14
4	Benevia 10OD	20.6 oz	May 14
5	Benevia 10OD	17.0 oz	May 14
6	Benevia 10OD	13.5 oz	May 14
7	Radiant SC	6 oz	May 14
8	Radiant SC + Dyne-Amic	6 oz 0.625% v/v	May 14
9	Radiant SC	4.5 oz	May 14
10	Radiant SC + Dyne-Amic	4.5 oz 0.625% v/v	May 14
11	Radiant SC	3 oz	May 14
12	Radiant SC + Dyne-Amic	3 oz 0.625% v/v	May 14
13	Radiant SC	1.5 oz	May 14
14	Radiant SC + Dyne-Amic	1.5 oz 0.625% v/v	May 14

¹Treatments 2-14 contain base fungicide and Cruiser 5FS

²All insecticides applied **once** (when the first true leaf bud is evident on 90% of the stand)

Test: CT12-THP-7
Year: 2012
Crop: Cotton
Variety: PHY 375 WRF
Field: 36
Location: Tidewater AREC

Experimental design: RCBD
Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: May 1, 2012
Harvest date: Oct. 5
Row feet harvested: 70

Treatment application(s):

Broadcast using backpack	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 17	GPA: 14.3
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Field preparation: Rip-strip till on Apr. 27

Test name: **CT12-THP-7**

Herbicides

Date	Product	Rate/A
3/30	Roundup Weather Max	22 oz
4/28	Roundup Weather Max	22 oz
5/02	Acumen	1.5 pt
5/02	Cotoran	1 qt
5/08	Roundup Weather Max	22 oz
6/19	Roundup Weather Max	22 oz
7/19	Buccaneer	1 qt
7/19	MSMA	1 qt
7/19	Envoke	0.1 oz
7/19	Cotton Pro	1.5 pt

Additional insecticides

Date	Product	Rate/A
8/09	Baythroid XL	3 oz

Lime & fertilizer

Date	Product	Rate/A
3/30	6-18-39	330 lb
6/25	24-0-0-3	30 units
6/25	Boron	1 qt
7/12	24-0-0-3	30 units
7/12	Boron	1 qt

Growth regulators

Date	Product	Rate/A
7/17	Pentia	8 oz
8/01	Pix WSG	0.6 oz
8/09	Pix WSG	0.5 oz

Defoliation

Date	Product	Rate/A
9/21	Finish	1 qt
9/21	Def	10 oz
9/21	Dropp	3 oz
9/21	Super Boll	6 oz

Table 15. Thrips injury ratings¹, CT12-THP-7. Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were broadcast on May 14.

#	Material	Rate/A	May 22	May 29	Jun 4	Jun 12
1	Base fungicide only		4.50 a	4.13 a	4.44 a	4.00 a
2	Cruiser 5FS only		2.81 b	3.63 b	3.75 b	3.31 b
3	Orthene 97	4 oz	2.63 bc	2.88 c	2.75 cd	2.63 de
4	Benevia 10OD	20.6 oz	2.13 de	1.56 g	1.63 f	1.00 h
5	Benevia 10OD	17.0 oz	2.63 bc	1.75 g	1.69 f	1.06 gh
6	Benevia 10OD	13.5 oz	2.19 c-e	1.58 g	1.88 ef	1.25 g
7	Radiant SC	6 oz	2.19 c-e	2.19 ef	2.13 ef	2.44 ef
8	Radiant SC + Dyne-Amic	6 oz 0.625%	2.00 e	1.88 fg	1.63 f	2.38 f
9	Radiant SC	4.5 oz	2.56 b-d	2.25 e	2.75 cd	2.88 c
10	Radiant SC + Dyne-Amic	4.5 oz 0.625%	2.38 b-e	2.33 e	2.19 d-f	2.56 ef
11	Radiant SC	3 oz	2.44 b-e	2.75 cd	2.94 c	2.81 cd
12	Radiant SC + Dyne-Amic	3 oz 0.625%	2.44 b-e	2.38 e	1.81 ef	2.56 ef
13	Radiant SC	1.5 oz	2.13 de	3.06 c	3.56 b	2.56 ef
14	Radiant SC + Dyne-Amic	1.5 oz 0.625%	2.31 c-e	2.44 de	2.31 de	2.81 cd
	LSD		0.45	0.37	0.59	0.25

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Thrips injury based on a 0-5 scale, 0 = no injury and 5 = dead plants.

Table 16. Mean number of thrips per 5 plants, CT12-THP-7. Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were broadcast on May 14.

#	Material	Rate/A	May 15 ¹		May 22 ²		May 29 ³		Jun 5 ⁴	
			Immature	Adult	Immature	Adult	Immature	Adult	Immature	Adult
1	Base fungicide only		8.00 a	7.00 a	85.25 a	2.75	20.75 ab	6.00	36.00 a-c	5.25
2	Cruiser 5FS only		1.50 bc	5.00 ab	24.00 b	4.75	24.75 a	5.00	27.25 bc	6.75
3	Orthene 97	4 oz	0.75 bc	1.50 cd	7.25 c	1.75	6.00 cd	5.50	21.50 c	4.75
4	Benevia 100D	20.6 oz	2.25 b	1.75 cd	1.25 c	5.00	3.50 cd	5.25	27.25 bc	6.50
5	Benevia 100D	17.0 oz	1.00 bc	1.50 cd	4.50 c	4.00	2.00 cd	4.75	20.50 c	4.75
6	Benevia 100D	13.5 oz	0.75 bc	3.25 bc	2.25 c	4.75	4.25 cd	5.00	23.75 c	4.00
7	Radiant SC	6 oz	0.00 c	1.00 cd	7.50 bc	3.50	6.00 cd	5.00	32.50 bc	4.75
8	Radiant SC + Dyne-Amic	6 oz 0.625%	0.25 bc	1.50 cd	4.00 c	3.75	0.75 d	7.25	19.50 c	8.75
9	Radiant SC	4.5 oz	0.50 bc	0.75 d	7.50 bc	2.75	7.50 c	6.00	36.75 a-c	7.25
10	Radiant SC + Dyne-Amic	4.5 oz 0.625%	0.50 bc	1.00 cd	4.00 c	2.00	1.75 cd	5.50	23.00 c	4.75
11	Radiant SC	3 oz	0.25 bc	1.75 cd	16.75 bc	3.50	5.75 cd	5.50	53.75 a	6.75
12	Radiant SC + Dyne-Amic	3 oz 0.625%	0.50 bc	1.50 cd	3.50 c	2.00	4.50 cd	10.75	17.75 c	5.50
13	Radiant SC	1.5 oz	1.00 bc	3.00 b-d	9.25 bc	3.50	15.50 b	6.75	45.00 ab	6.75
14	Radiant SC + Dyne-Amic	1.5 oz 0.625%	0.00 c	1.00 cd	4.25 c	2.25	2.25 cd	4.00	17.75 c	4.00
	LSD		2.11	2.30	16.59	NS	6.56	NS	19.05	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹May 15 species composition (based on treatment 1): tobacco thrips—46.4%; western flower thrips—17.9%; eastern flower thrips—3.6%; onion thrips—32.1%; soybean thrips—0%.

²May 22 species composition (based on treatment 1): tobacco thrips 54.5%; western flower thrips—9.1%; eastern flower thrips—0%; onion thrips—36.4%; soybean thrips—0%.

³May 29 species composition (based on treatment 1): tobacco thrips—43.5%; western flower thrips—13%; eastern flower thrips—0%; onion thrips—43.5%; soybean thrips—0%.

⁴June 5 species composition (based on treatment 1): tobacco thrips—33.3%; western flower thrips—42.9%; eastern flower thrips—0%; onion thrips—19.0%; soybean thrips—4.8%.

Table 17. Plant height¹, number of true leaves¹, number of nodes per plant¹, and aboveground biomass², CT12-THP-7. Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were broadcast on May 14.

#	Material	Rate/A	May 15		May 22		May 29		Jun 5		Jun 11		
			Height (cm)	True leaves	Height (cm)	True leaves	Height (cm)	True leaves	Height (cm)	True leaves	Height (cm)	Nodes	Biomass (g)
1	Base fungicide only		2.50 f	0.0	4.10 d	0.0	6.88 f	1.25 e	8.95 e	3.55 d	10.25 d	5.10	2.97
2	Cruiser 5FS only		3.35 a	0.0	4.30 cd	0.05	7.83 a-d	1.40 de	10.28 ab	4.00 bc	11.90 bc	5.05	3.77
3	Orthene 97	4 oz	2.78 c-f	0.0	4.45 b-d	0.1	7.48 b-f	2.05 ab	10.63 ab	4.20 ab	12.53 a-c	4.95	5.11
4	Benevia 100D	20.6 oz	2.58 ef	0.0	4.33 cd	0.2	7.35 c-f	1.95 a-c	10.18 a-c	4.00 bc	12.53 a-c	4.85	4.97
5	Benevia 100D	17.0 oz	2.88 b-e	0.0	4.55 a-d	0.05	7.65 a-e	2.00 ab	9.90 b-d	3.95 b-d	11.45 cd	4.65	3.96
6	Benevia 100D	13.5 oz	3.03 a-d	0.0	4.83 ab	0.1	8.10 a-c	1.95 a-c	9.15 de	4.05 bc	12.48 a-c	5.15	4.98
7	Radiant SC	6 oz	2.93 b-d	0.0	4.55 a-d	0.1	7.13 d-f	1.95 a-c	9.18 de	3.75 cd	12.03 bc	5.10	4.56
8	Radiant SC + Dyne-Amic	6 oz 0.625%	2.98 b-d	0.0	4.93 a	0.1	8.25 a	2.25 a	10.55 ab	4.50 a	13.20 ab	4.90	4.75
9	Radiant SC	4.5 oz	3.00 b-d	0.0	4.45 b-d	0.0	7.45 b-f	1.60 c-e	10.18 a-c	4.25 ab	11.68 c	4.80	4.10
10	Radiant SC + Dyne-Amic	4.5 oz 0.625%	2.83 b-f	0.0	4.53 a-d	0.05	7.55 a-f	2.15 a	10.15 a-c	3.90 b-d	11.90 bc	4.75	4.57
11	Radiant SC	3 oz	2.73 d-f	0.0	4.60 a-c	0.05	7.85 a-d	1.75 b-d	10.05 a-c	4.05 bc	13.45 a	5.25	5.49
12	Radiant SC + Dyne-Amic	3 oz 0.625%	3.08 a-c	0.0	4.70 a-c	0.1	8.15 ab	2.15 a	10.80 a	3.95 b-d	13.10 ab	5.05	4.98
13	Radiant SC	1.5 oz	3.13 ab	0.0	4.93 a	0.2	8.00 a-c	2.00 ab	10.40 ab	3.95 b-d	12.25 a-c	5.15	4.68
14	Radiant SC + Dyne-Amic	1.5 oz 0.625%	2.73 d-f	0.0	4.35 cd	0.1	7.03 ef	1.90 a-c	9.33 c-e	4.10 a-c	12.33 a-c	4.85	4.92
	LSD		0.33	NS	0.46	NS	0.75	0.38	0.86	0.40	1.41	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Based on sampling five plants per plot.

²Aboveground biomass based on cutting 5 plants/plot at soil level, pooling those samples into labeled paper bags, and drying at 60°C for 48 hours.

Table 18. Stand counts and yield, CT12-THP-7. Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were broadcast on May 14.

#	Material	Rate/A	Plants/35 row ft ¹	Lint lb/acre ²
			Jun 11	
1	Base fungicide only		78.1 c	1517
2	Cruiser 5FS only		89.9 b	1528
3	Orthene 97	4 oz	91.8 ab	1630
4	Benevia 100D	20.6 oz	97.3 ab	1533
5	Benevia 100D	17.0 oz	90.6 ab	1545
6	Benevia 100D	13.5 oz	99.4 a	1451
7	Radiant SC	6 oz	94.5 ab	1541
8	Radiant SC + Dyne-Amic	6 oz 0.625%	98.8 a	1640
9	Radiant SC	4.5 oz	91.9 ab	1498
10	Radiant SC + Dyne-Amic	4.5 oz 0.625%	93.1 ab	1598
11	Radiant SC	3 oz	89.5 b	1551
12	Radiant SC + Dyne-Amic	3 oz 0.625%	93.8 ab	1589
13	Radiant SC	1.5 oz	96.4 ab	1670
14	Radiant SC + Dyne-Amic	1.5 oz 0.625%	96.3 ab	1561
	LSD		8.80	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹*Based on sampling all plants in rows 1 and 2 of each plot.*

²*Cotton was harvested on October 5. Gross yields were reduced by 57.12% to account for seed and trash.*

Test: CT12-THP-8, Regional cotton thrips trial, starter + seed + foliar insecticides, irrigated

#	Fertilization ¹	Seed treatment	Foliar timing of acephate ²	Date of foliar application
1	Base only	Fungicide only	None	---
2	Base only	Fungicide only	First true leaf bud on 90%	May 14
3	Base only	Fungicide only	Second true leaf on 50%	May 21
4	Base only	Cruiser 5FS+ Fungicide	None	---
5	Base only	Cruiser 5FS+ Fungicide	First true leaf bud on 90%	May 14
6	Base only	Cruiser 5FS+ Fungicide	Second true leaf on 50%	May 21
7	Starter + base	Fungicide only	None	---
8	Starter + base	Fungicide only	First true leaf bud on 90%	May 14
9	Starter + base	Fungicide only	Second true leaf on 50%	May 21
10	Starter + base	Cruiser 5FS + Fungicide	None	---
11	Starter + base	Cruiser 5FS + Fungicide	First true leaf bud on 90%	May 14
12	Starter + base	Cruiser 5FS + Fungicide	Second true leaf on 50%	May 21

¹Starter plots (treatments 7-12) received 10 gpa of 10-34-0 liquid fertilizer applied 2 inches below and 2 inches beside the seed at planting (2x2 placement). N (24-0-0-3) was applied at 30 units/acre to the entire test on June 25 and again on July 12.

²Foliar broadcast application of Orthene 97 @ 4 oz/A.

Test: CT12-THP-8
Year: 2012
Crop: Cotton
Variety: PHY 375 WRF
Field: 67
Location: Tidewater AREC

Experimental design: Split-plot
Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: May 1, 2012
Harvest date: Oct. 12
Row feet harvested: 70

Treatment application(s):

Broadcast using backpack	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 17	GPA: 14.3
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Field preparation: Rip-strip till on Apr. 27

Comments: Variety behind test is 'DP 1137 B2RF'; nematode sample collected on Sep 25.

Test name: **CT12-THP-8**

Herbicides

Date	Product	Rate/A
3/30	Roundup Weather Max	22 oz
4/28	Roundup Weather Max	22 oz
5/01	Acumen	1.5 pt
5/01	Cotoran	1 qt
5/08	Roundup Weather Max	22 oz
6/19	Roundup Weather Max	22 oz
7/06	Buccaneer	1 qt
7/19	MSMA	1 qt
7/19	Envoke	0.1 oz
7/19	Cotton Pro	1.5 pt

Additional insecticides

Date	Product	Rate/A
8/09	Baythroid XL	3 oz

Lime & fertilizer

Date	Product	Rate/A
3/30	6-18-39	330 lb
5/01	10-34-0	10 gal*
6/25	24-0-0-3	30 units
6/25	Boron	1 qt
7/12	24-0-0-3	30 units
7/12	Boron	1 qt
*Applied to treatments 7-12 only		

Growth regulators

Date	Product	Rate/A
7/12	Pentia	8 oz
8/01	Pix WSG	0.6 oz
8/09	Pix WSG	0.5 oz

Defoliation

Date	Product	Rate/A
9/21	Finish	1 qt
9/21	Def	10 oz
9/21	Dropp	3 oz
9/21	Super Boll	6 oz

Table 19. Thrips injury ratings¹, CT12-THP-8. Tidewater AREC, Suffolk, VA, 2012. Broadcast at 1st true leaf bud and 2nd true leaf applications were made on May 14 and May 21, respectively.

#	Fertilization	Seed trt ²	Foliar timing of acephate	May 23	May 31	Jun 6	Jun 12
1	Base only	F	None	4.00 a	4.50 a	4.25 a	4.00 a
2	Base only	F	1 st tl bud on 90%	3.75 b	3.88 b-d	3.19 d	2.94 de
3	Base only	F	2 nd tl on 50%	3.75 b	4.31 ab	3.31 cd	2.94 de
4	Base only	C/F	None	3.31 c	4.06 a-c	3.69 b	3.75 b
5	Base only	C/F	1 st tl bud on 90%	1.81 g	2.13 f	3.38 cd	2.94 de
6	Base only	C/F	2 nd tl on 50%	2.06 f	3.06 e	3.25 cd	2.94 de
7	Starter + base	F	None	4.00 a	4.44 a	4.06 a	4.00 a
8	Starter + base	F	1 st tl bud on 90%	3.75 b	4.19 a-c	3.44 b-d	3.00 d
9	Starter + base	F	2 nd tl on 50%	3.75 b	4.38 ab	3.50 bc	3.19 c
10	Starter + base	C/F	None	3.25 c	4.19 a-c	3.69 b	3.75 b
11	Starter + base	C/F	1 st tl bud on 90%	2.50 e	3.50 de	3.25 cd	3.00 d
12	Starter + base	C/F	2 nd tl on 50%	3.06 d	3.69 cd	3.38 cd	2.81 e
	LSD			0.16	0.52	0.25	0.18

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Thrips injury based on a 0-5 scale, 0 = no injury and 5 = dead plants.

²F=Fungicide only; C/F=Cruiser 5FS + fungicide.

Table 20. Mean number of thrips per 5 plants, CT12-THP-8. Tidewater AREC, Suffolk, VA, 2012. Broadcast at 1st true leaf bud and 2nd true leaf applications were made on May 14 and May 21, respectively.

#	Fertilization	Seed trt ¹	Foliar timing of acephate	May 16 ²		May 23 ³		May 29 ⁴		Jun 6 ⁵	
				Immature	Adult	Immature	Adult	Immature	Adult	Immature	Adult
1	Base only	F	None	9.00 ab	12.75 a	29.25 ab	1.50 c-e	29.75 a	4.75	24.75 a-c	4.50
2	Base only	F	1 st tl bud on 90%	12.25 a	2.00 d	17.75 b-d	3.50 bc	12.75 bc	7.50	30.50 a	2.75
3	Base only	F	2 nd tl on 50%	11.00 ab	10.00 ab	22.75 bc	1.50 c-e	16.50 bc	4.25	14.50 cd	3.00
4	Base only	C/F	None	1.25 cd	2.75 d	11.25 cd	4.00 b	23.00 ab	3.50	17.75 a-d	3.25
5	Base only	C/F	1 st tl bud on 90%	2.00 cd	2.50 d	6.25 d	1.25 de	12.25 bc	3.00	14.25 cd	2.00
6	Base only	C/F	2 nd tl on 50%	2.00 cd	3.75 d	11.50 cd	1.25 de	12.50 bc	2.25	16.50 b-d	3.25
7	Starter + base	F	None	7.25 ab	11.75 ab	44.25 a	3.75 b	33.25 a	8.00	21.00 a-d	2.00
8	Starter + base	F	1 st tl bud on 90%	8.75 ab	3.75 d	20.50 b-d	3.00 b-d	10.75 bc	4.50	12.25 cd	3.50
9	Starter + base	F	2 nd tl on 50%	6.25 bc	8.00 bc	31.25 ab	0.75 e	8.25 c	4.00	13.58 cd	3.00
10	Starter + base	C/F	None	1.75 cd	5.50 cd	19.25 b-d	6.75 a	34.75 a	8.25	29.75 ab	3.25
11	Starter + base	C/F	1 st tl bud on 90%	0.75 d	3.00 d	13.00 cd	3.25 b-d	11.50 bc	4.50	10.75 d	1.75
12	Starter + base	C/F	2 nd tl on 50%	0.50 d	3.50 d	9.50 cd	4.00 b	15.00 bc	5.75	10.00 d	6.25
	LSD			5.03	4.13	16.10	2.09	12.54	NS	13.84	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹F=Fungicide only; C/F=Cruiser 5FS + fungicide.

²May 16 species composition (based on treatments 1 and 7): tobacco thrips—29.9%; western flower thrips—18.6%; eastern flower thrips—1.0%; onion thrips—49.5%; soybean thrips—1.0%.

³May 23 species composition (based on treatments 1 and 7): tobacco thrips—23.8%; western flower thrips—47.6%; eastern flower thrips—0%; onion thrips—28.6%; soybean thrips—0%.

⁴May 29 species composition (based on treatments 1 and 7): tobacco thrips—33.3%; western flower thrips—17.6%; eastern flower thrips—0%; onion thrips—49%; soybean thrips—0%.

⁵June 6 species composition (based on treatments 1 and 7): tobacco thrips—19.2%; western flower thrips—19.2%; eastern flower thrips—0%; onion thrips—61.5%; soybean thrips—0%.

Table 21. Plant height¹, number of true leaves¹, number of nodes per plant¹, and aboveground biomass², CT12-THP-8. Tidewater AREC, Suffolk, VA, 2012. Broadcast at 1st true leaf bud and 2nd true leaf applications were made on May 14 and May 21, respectively.

#	Fertilization	Seed trt ³	Foliar timing of acephate	May 16		May 23		May 29		Jun 6		Jun 12		
				Height (cm)	True leaves	Height (cm)	True leaves	Height (cm)	True leaves	Height (cm)	True leaves	Height (cm)	Nodes	Biomass (g)
1	Base only	F	None	3.33 e	0.0	5.08 de	0.10 d	6.55 c	1.45 b-d	8.35 g	3.55 c	12.68 de	5.25 d-f	4.06 d
2	Base only	F	1 st tl bud on 90%	3.33 e	0.0	5.23 c-e	0.20 cd	6.78 bc	1.25 b-e	10.13 c-f	4.10 b	13.48 cd	5.65 cd	5.72 a-d
3	Base only	F	2 nd tl on 50%	3.60 c-e	0.0	4.93 e	0.15 d	6.58 c	1.15 de	9.60 ef	3.95 bc	11.48 e	5.55 c-e	4.18 d
4	Base only	C/F	None	3.55 de	0.0	5.13 de	0.35 b-d	6.55 c	1.25 b-e	9.28 f	3.85 bc	12.50 de	5.15 ef	4.26 d
5	Base only	C/F	1 st tl bud on 90%	3.68 b-e	0.0	5.25 c-e	0.35 b-d	6.55 c	1.65 ab	9.25 fg	3.60 c	12.88 cd	4.95 f	4.96 cd
6	Base only	C/F	2 nd tl on 50%	3.93 a-c	0.0	5.18 c-e	0.30 b-d	6.58 c	1.30 b-e	9.83 d-f	3.85 bc	13.10 cd	5.20 ef	5.39 b-d
7	Starter + base	F	None	3.60 c-e	0.0	5.30 c-e	0.15 d	7.33 ab	0.95 e	10.65 a-d	4.20 b	14.10 bc	6.35 a	5.42 b-d
8	Starter + base	F	1 st tl bud on 90%	3.85 a-d	0.0	5.30 c-e	0.45 a-c	7.43 a	1.55 a-d	11.18 ab	4.85 a	15.48 a	6.20 ab	7.84 a
9	Starter + base	F	2 nd tl on 50%	3.65 b-e	0.0	5.43 b-d	0.25 b-d	7.60 a	1.20 c-e	11.03 a-c	4.30 b	15.73 a	6.55 a	7.37 ab
10	Starter + base	C/F	None	4.00 ab	0.0	5.93 a	0.35 b-d	7.53 a	1.30 b-e	11.28 ab	4.10 b	15.70 a	6.15 ab	7.42 ab
11	Starter + base	C/F	1 st tl bud on 90%	4.13 a	0.0	5.63 a-c	0.50 ab	7.28 ab	1.90 a	11.53 a	4.90 a	14.80 ab	5.70 c	7.13 a-c
12	Starter + base	C/F	2 nd tl on 50%	3.93 a-c	0.0	5.88 ab	0.65 a	7.10 a-c	1.60 a-c	10.40 b-e	3.95 bc	14.85 ab	5.85 bc	7.82 a
	LSD			0.37	NS	0.47	0.28	0.60	0.42	0.92	0.50	1.31	0.43	2.20

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹Based on sampling five plants per plot.

²Aboveground biomass based on cutting 5 plants/plot at soil level, pooling those samples into labeled paper bags, and drying at 60°C for 48 hours.

³F=Fungicide only; C/F=Cruiser 5FS + fungicide.

Table 22. Stand counts and yield, CT12-THP-8. Tidewater AREC, Suffolk, VA, 2012. Broadcast at 1st true leaf bud and 2nd true leaf applications were made on May 14 and May 21, respectively.

#	Fertilization	Seed trt ¹	Foliar timing of acephate	Plants/35 row ft ²	Lint lb/acre ³
				Jun 12	
1	Base only	F	None	81.1 a-c	1500
2	Base only	F	1 st tl bud on 90%	84.5 a	1602
3	Base only	F	2 nd tl on 50%	83.0 ab	1585
4	Base only	C/F	None	70.9 de	1635
5	Base only	C/F	1 st tl bud on 90%	71.1 de	1474
6	Base only	C/F	2 nd tl on 50%	63.8 f	1647
7	Starter + base	F	None	76.8 b-d	1652
8	Starter + base	F	1 st tl bud on 90%	76.0 cd	1700
9	Starter + base	F	2 nd tl on 50%	80.8 a-c	1536
10	Starter + base	C/F	None	66.1 ef	1652
11	Starter + base	C/F	1 st tl bud on 90%	64.8 ef	1646
12	Starter + base	C/F	2 nd tl on 50%	61.8 f	1675
	LSD			6.77	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹F=Fungicide only; C/F=Cruiser 5FS + fungicide.

²Based on sampling all plants in rows 3 and 4 of each plot.

³Cotton was harvested on October 12. Gross yields were reduced by 59.2% to account for seed and trash.

Test: CT12-THP-9, Regional cotton thrips trial, starter + seed + foliar insecticides, non-irrigated

#	Fertilization ¹	Seed treatment	Foliar timing of acephate ²	Date of foliar application
1	Base only	Fungicide only	None	---
2	Base only	Fungicide only	First true leaf bud on 90%	May 14
3	Base only	Fungicide only	Second true leaf on 50%	May 21
4	Base only	Cruiser 5FS+ Fungicide	None	---
5	Base only	Cruiser 5FS+ Fungicide	First true leaf bud on 90%	May 14
6	Base only	Cruiser 5FS+ Fungicide	Second true leaf on 50%	May 21
7	Starter + base	Fungicide only	None	---
8	Starter + base	Fungicide only	First true leaf bud on 90%	May 14
9	Starter + base	Fungicide only	Second true leaf on 50%	May 21
10	Starter + base	Cruiser 5FS + Fungicide	None	---
11	Starter + base	Cruiser 5FS + Fungicide	First true leaf bud on 90%	May 14
12	Starter + base	Cruiser 5FS + Fungicide	Second true leaf on 50%	May 21

¹Starter plots (treatments 7-12) received 10 gpa of 10-34-0 liquid fertilizer applied 2 inches below and 2 inches beside the seed at planting (2x2 placement). N (24-0-0-3) was applied at 30 units/acre to the entire test on June 25 and again on July 12.

²Foliar broadcast application of Orthene 97 @ 4 oz/A.

Test: CT12-THP-9
Year: 2012
Crop: Cotton
Variety: PHY 375 WRF
Field: 4
Location: Tidewater AREC

Experimental design: RCBD
Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: May 1, 2012
Harvest date: Oct. 17
Row feet harvested: 70

Treatment application(s):

Broadcast using backpack	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 17	GPA: 14.3
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Field preparation: Rip-strip till on Apr. 27

Comments: Nematode sampled collected on Sep 25.

Test name: **CT12-THP-9**

Herbicides

Date	Product	Rate/A
3/30	Roundup Weather Max	22 oz
5/02	Acumen	1.5 pt
5/02	Cotoran	1 qt
5/02	Roundup Weather Max	22 oz
6/01	Roundup Weather Max	22 oz
6/19	Roundup Weather Max	22 oz
7/06	Buccaneer	1 qt
7/18	MSMA	1 qt
7/18	Envoke	0.1 oz
7/18	Cotton Pro	1.5 pt

Additional insecticides

Date	Product	Rate/A
8/09	Baythroid XL	3 oz

Growth regulators

Date	Product	Rate/A
7/17	Pentia	8 oz
7/31	Pix WSG	0.6 oz
8/09	Pix WSG	0.5 oz

Lime & fertilizer

Date	Product	Rate/A
3/30	6-18-39	330 lb
5/01	10-34-0	10 gal*
6/25	24-0-0-3	30 units
6/25	Boron	1 qt
7/12	24-0-0-3	30 units
7/12	Boron	1 qt
*Applied to treatments 7-12 only		

Defoliation

Date	Product	Rate/A
9/27	Finish	1 qt
9/27	Def	10 oz
9/27	Dropp	3 oz
9/27	Super Boll	6 oz

Table 23. Thrips injury ratings¹, CT12-THP-9. Tidewater AREC, Suffolk, VA, 2012. Broadcast at 1st true leaf bud and 2nd true leaf applications were made on May 14 and May 21, respectively.

#	Fertilization	Seed trt ²	Foliar timing of acephate	May 23	May 31	Jun 6	Jun 12
1	Base only	F	None	4.00 a	4.50 a	4.50 a	4.19 a
2	Base only	F	1 st tl bud on 90%	3.38 c-e	2.69 d	3.25 e	2.69 ef
3	Base only	F	2 nd tl on 50%	3.44 c-e	4.06 b	3.31 e	3.00 c
4	Base only	C/F	None	3.25 de	3.81 bc	3.75 bc	3.75 b
5	Base only	C/F	1 st tl bud on 90%	2.31 g	1.63 e	3.38 de	2.81 d
6	Base only	C/F	2 nd tl on 50%	2.50 g	2.63 d	3.56 cd	3.00 c
7	Starter + base	F	None	3.88 ab	4.50 a	4.50 a	4.25 a
8	Starter + base	F	1 st tl bud on 90%	3.50 cd	3.50 c	3.25 e	2.75 de
9	Starter + base	F	2 nd tl on 50%	3.63 bc	3.69 bc	3.44 de	3.00 c
10	Starter + base	C/F	None	3.13 ef	3.69 bc	3.81 b	3.75 b
11	Starter + base	C/F	1 st tl bud on 90%	2.25 g	1.69 e	3.25 e	2.63 f
12	Starter + base	C/F	2 nd tl on 50%	2.88 f	2.56 d	3.44 de	3.00 c
	LSD			0.34	0.41	0.19	0.11

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹Thrips injury based on a 0-5 scale, 0 = no injury and 5 = dead plants.

²F=Fungicide only; C/F=Cruiser 5FS + fungicide.

Table 24. Mean number of thrips per 5 plants, CT12-THP-9. Tidewater AREC, Suffolk, VA, 2012. Broadcast at 1st true leaf bud and 2nd true leaf applications were made on May 14 and May 21, respectively.

#	Fertilization	Seed trt ¹	Foliar timing of acephate	May 16 ²		May 23 ³		May 29 ⁴		Jun 6 ⁵	
				Immature	Adult	Immature	Adult	Immature	Adult	Immature	Adult
1	Base only	F	None	10.00 a	12.00 ab	19.50 ab	1.25	42.25 b	3.25	17.00 a-c	5.00
2	Base only	F	1 st tl bud on 90%	0.75 c-e	1.75 d	3.00 c	1.25	5.75 c	1.50	12.75 b-d	5.50
3	Base only	F	2 nd tl on 50%	5.25 bc	2.75 d	3.25 c	0.75	6.81 c	1.44	7.00 cd	4.25
4	Base only	C/F	None	0.25 e	1.50 d	10.75 bc	1.75	25.75 bc	4.00	23.25 ab	4.00
5	Base only	C/F	1 st tl bud on 90%	1.00 c-e	0.25 d	5.25 c	0.75	6.50 c	3.25	10.75 cd	4.75
6	Base only	C/F	2 nd tl on 50%	1.00 c-e	2.25 d	2.50 c	0.25	14.00 c	2.25	5.50 d	5.00
7	Starter + base	F	None	9.75 ab	8.25 bc	31.00 a	2.25	68.00 a	3.25	13.50 b-d	5.25
8	Starter + base	F	1 st tl bud on 90%	2.75 c-e	0.75 d	5.50 c	1.25	12.25 c	2.50	13.25 b-d	5.00
9	Starter + base	F	2 nd tl on 50%	5.00 cd	14.25 a	4.75 c	0.25	9.50 c	1.75	7.00 cd	6.00
10	Starter + base	C/F	None	0.25 e	2.50 d	11.25 bc	4.50	22.00 bc	4.75	24.75 a	7.50
11	Starter + base	C/F	1 st tl bud on 90%	1.00 c-e	2.00 d	5.25 c	2.25	6.00 c	4.25	14.00 b-d	3.25
12	Starter + base	C/F	2 nd tl on 50%	0.50 de	3.75 cd	3.50 c	1.00	18.25 c	1.25	10.00 cd	8.00
	LSD			4.53	4.59	12.58	NS	21.18	NS	10.68	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹F=Fungicide only; C/F=Cruiser 5FS + fungicide.

²May 16 species composition (based on treatments 1 and 7): tobacco thrips—31.6%; western flower thrips—21.5%; eastern flower thrips 0%; onion thrips—46.8%; soybean thrips—0%.

³May 23 species composition (based on treatments 1 and 7): tobacco thrips—28.6%; western flower thrips—21.4%; eastern flower thrips 0%; onion thrips—50.0%; soybean thrips—0%.

⁴May 29 species composition (based on treatments 1 and 7): tobacco thrips—7.7%; western flower thrips—23.1%; eastern flower thrips 0%; onion thrips—69.2%; soybean thrips—0%.

⁵June 6 species composition (based on treatments 1 and 7): tobacco thrips—26.8%; western flower thrips—26.8%; eastern flower thrips 0%; onion thrips—43.9%; soybean thrips—2.4%.

Table 25. Plant height¹, number of true leaves¹, number of nodes per plant¹, and aboveground biomass², CT12-THP-9. Tidewater AREC, Suffolk, VA, 2012. Broadcast at 1st true leaf bud and 2nd true leaf applications were made on May 14 and May 21, respectively.

#	Fertilization	Seed trt ³	Foliar timing of acephate	May 16		May 23		May 29		Jun 6		Jun 12		
				Height (cm)	True leaves	Height (cm)	True leaves	Height (cm)	True leaves	Height (cm)	True leaves	Height (cm)	Nodes	Biomass (g)
1	Base only	F	None	4.10 d	0.0	5.28 cd	0.25 d	6.63 bc	1.10 d-f	8.78 e	3.10 c	11.20 f	6.00 b-d	3.45 e
2	Base only	F	1 st tl bud on 90%	4.70 a	0.0	5.35 cd	0.70 ab	7.13 bc	1.55 b-d	10.43 cd	3.70 b	12.95 de	5.25 e	4.96 b-e
3	Base only	F	2 nd tl on 50%	4.20 cd	0.0	5.10 d	0.50 b-d	6.58 c	1.11 d-f	9.03 e	4.05 ab	12.50 e	6.05 bc	4.68 de
4	Base only	C/F	None	4.30 b-d	0.0	5.58 a-d	0.40 cd	6.93 bc	1.50 b-d	10.25 cd	3.85 b	12.45 ef	5.80 b-d	4.42 de
5	Base only	C/F	1 st tl bud on 90%	4.78 a	0.0	5.75 a-c	0.65 a-c	6.98 bc	1.55 b-d	10.38 cd	4.05 ab	13.33 c-e	5.50 de	5.17 b-e
6	Base only	C/F	2 nd tl on 50%	4.40 a-d	0.0	5.53 b-d	0.30 d	6.80 bc	1.45 c-e	10.05 d	4.00 ab	12.83 de	5.55 c-e	4.98 b-e
7	Starter + base	F	None	4.50 a-c	0.0	5.55 a-d	0.45 b-d	7.20 bc	0.65 f	9.03 e	3.70 b	13.93 b-d	6.60 a	4.91 c-e
8	Starter + base	F	1 st tl bud on 90%	4.60 ab	0.0	6.05 a	0.80 a	7.95 a	1.90 a-c	11.45 ab	4.55 a	15.63 a	6.05 bc	6.73 ab
9	Starter + base	F	2 nd tl on 50%	4.50 a-c	0.0	5.65 a-c	0.50 b-d	7.25 b	1.00 ef	10.55 b-d	4.50 a	13.08 de	6.20 ab	5.16 b-e
10	Starter + base	C/F	None	4.48 a-d	0.0	5.60 a-d	0.60 a-c	8.15 a	1.25 de	11.15 bc	4.00 ab	14.60 ab	6.30 ab	6.01 a-d
11	Starter + base	C/F	1 st tl bud on 90%	4.70 a	0.0	5.95 ab	0.70 ab	7.98 a	2.10 a	12.18 a	4.25 ab	15.18 ab	6.05 bc	7.01 a
12	Starter + base	C/F	2 nd tl on 50%	4.50 a-c	0.0	5.90 ab	0.40 cd	7.95 a	1.95 ab	11.13 bc	4.45 a	14.58 a-c	5.90 b-d	6.49 a-c
	LSD			0.39	NS	0.51	0.30	0.66	0.46	0.92	0.55	1.26	0.53	1.78

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Based on sampling five plants per plot.

²Aboveground biomass based on cutting 5 plants/plot at soil level, pooling those samples into labeled paper bags, and drying at 60°C for 48 hours.

³F=Fungicide only; C/F=Cruiser 5FS + fungicide.

Table 26. Stand counts and yield, CT12-THP-9. Tidewater AREC, Suffolk, VA, 2012. Broadcast at 1st true leaf bud and 2nd true leaf applications were made on May 14 and May 21, respectively.

#	Fertilization	Seed trt ¹	Foliar timing of acephate	Plants/35 row ft ²	Lint lb/acre ³
				Jun 12	
1	Base only	F	None	90.4 a-c	1554 d
2	Base only	F	1 st tl bud on 90%	97.6 a	1630 cd
3	Base only	F	2 nd tl on 50%	91.4 a-c	1576 d
4	Base only	C/F	None	77.0 d	1710 bc
5	Base only	C/F	1 st tl bud on 90%	81.5 d	1615 cd
6	Base only	C/F	2 nd tl on 50%	80.5 d	1698 bc
7	Starter + base	F	None	84.0 b-d	1521 d
8	Starter + base	F	1 st tl bud on 90%	84.4 b-d	1867 a
9	Starter + base	F	2 nd tl on 50%	92.4 ab	1557 d
10	Starter + base	C/F	None	78.8 d	1796 ab
11	Starter + base	C/F	1 st tl bud on 90%	83.1 cd	1708 bc
12	Starter + base	C/F	2 nd tl on 50%	77.6 d	1729 bc
	LSD			8.80	119.2

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹F=Fungicide only; C/F=Cruiser 5FS + fungicide.

²Based on sampling all plants in rows 1 and 2 of each plot.

³Cotton was harvested on October 17. Gross yields were reduced by 58.7% to account for seed and trash.

Test: CT12-BW-1-Variety, Value of bollworm sprays on double-gene insect-resistant cotton varieties

#	Variety	Date(s) treated for “Bollworm Protected” plots
1	PHY 499 WRF	Aug 8
2	PHY 375 WRF	Aug 8
3	PHY 367 WRF	Aug 8
4	PHY 565 WRF	Aug 8
5	DP 1219 B2RF	Aug 8
6	DP 1034 B2RF	Aug 8
7	DP 1137 B2RF	Aug 8
8	DP 1133 B2RF	Aug 8
9	DG 2570 B2RF	Aug 8
10	FM 1740 B2F	Aug 8
11	ST 5288 B2F	Aug 8
12	AM 1550 B2RF	Aug 8
13	AM UA48	Aug 1 (egg threshold) and Aug 8
14	DP 121 RF	Aug 1 (egg threshold) and Aug 8
15	SSG HQ 210 CT	Aug 1 (egg threshold) and Aug 8

Each variety was treated with insecticides targeting bollworm (“Protected” plots), or received no bollworm sprays (“Untreated” plots). In the protected plots, double-gene insect resistant varieties (Trts 1-12) received one spray (Baythroid XL @ 2.6 oz/A on August 8) and conventional varieties (Trts 13-15) received two sprays for bollworm (Baythroid XL @ 1.6 oz/A on August 1 and Baythroid XL @ 2.6 oz/A on August 8).

Test: CT12-BW-1-Variety
Year: 2012
Crop: Cotton
Varieties: See treatment list
Field: 64b
Location: Tidewater AREC

Experimental design: Split-plot
Plot size: 4 rows x 35’
Row spacing: 36”
Planting date: May 17, 2012
Harvest date: Nov. 5
Row feet harvested: 70

Treatment application(s):

Broadcast using spider rig	Nozzle type: 8002VS	Nozzle spacing: 18”	PSI: 30	GPA: 16.5
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Field preparation: Rip-strip till on May 8

Test name: **CT12-BW-1-Variety**

Herbicides

Date	Product	Rate/A
3/30	Roundup Weather Max	22 oz
5/19	Acumen	1.5 pt
5/19	Cotoran	1 qt
5/19	Roundup Weather Max	22 oz
6/27	Select Max	1 pt
6/27	Induce (surfactant)	1 qt*
7/16	MSMA	1 qt
7/16	Envoke	0.1 oz
7/16	Cotton Pro	1.5 pt
*per 100 gal water		

Additional insecticides

Date	Product	Rate/A
6/01	Orthene 97	8 oz

Growth regulators

Date	Product	Rate/A
7/17	Pentia	8 oz
7/31	Pix WSG	0.6 oz
8/10	Pix WSG	0.5 oz

Lime & fertilizer

Date	Product	Rate/A
3/30	6-16-39	330 lb
6/25	24-0-0-3	30 units
6/25	Boron	1 qt
7/12	24-0-0-3	30 units
7/12	Boron	1 qt

Defoliation

Date	Product	Rate/A
10/12	Finish	1 qt
10/12	Folex	10 oz
10/12	Dropp	3 oz
10/12	Super Boll	10 oz

Table 27. Percent external bollworm damage¹ and yield, CT12-BW1. Tidewater AREC, Suffolk, VA, 2012.

#	Variety	Aug 16		Aug 24		Lint lb/acre ²	
		Protected	Not protected	Protected	Not protected	Protected	Not protected
1	PHY 499 WRF	0.00	0.00 c	0.00 b	10.00 c-e	1584 a-c	1538 ab
2	PHY 375 WRF	0.00	2.50 c	2.50 b	10.00 c-e	1440 c-e	1397 b-d
3	PHY 367 WRF	0.00	2.50 c	0.00 b	2.50 de	1515 a-d	1507 ab
4	PHY 565 WRF	0.00	0.00 c	2.50 b	17.50 bc	1464 b-e	1324 c-e
5	DP 1219 B2RF	0.00	0.00 c	0.00 b	10.00 c-e	1379 de	1215 ef
6	DP 1034 B2RF	0.00	0.00 c	2.50 b	10.00 c-e	1564 a-c	1488 a-c
7	DP 1137 B2RF	0.00	0.00 c	0.00 b	5.00 de	1556 a-d	1566 a
8	DP 1133 B2RF	0.00	0.00 c	0.00 b	0.00 e	1632 ab	1601 a
9	DG 2570 B2RF	2.50	2.50 c	2.50 b	12.50 cd	1654 a	1492 ab
10	FM 1740 B2F	0.00	2.50 c	0.00 b	7.50 c-e	1577 a-c	1585 a
11	ST 5288 B2F	0.00	2.50 c	0.00 b	12.50 cd	1477 a-e	1455 a-c
12	AM 1550 B2RF	0.00	5.00 bc	0.00 b	12.50 cd	1557 a-d	1466 a-c
13	AM UA48	5.00	12.50 b	2.50 b	27.50 b	1485 a-e	1381 b-d
14	DP 121 RF	2.50	25.00 a	10.00 a	45.00 a	1488 a-e	1274 de
15	SSG HQ 210 CT	5.00	30.00 a	12.50 a	42.50 a	1316 e	1086 f
	LSD	NS	9.99	4.64	10.59	182.8	164.5

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹External bollworm damage based on a sample of 10 bolls per plot.

²Cotton was harvested on November 5. Gross yields were reduced for each plot (58.7-66.2%) to account for seed and trash.

Treatment means (% bollworm damage, yield)	Aug 16	Aug 24	Yield
1. With insecticide	1.00	2.33	1513
2. Without insecticide	5.67	15.00	1425
LSD	---	---	NS

Variety mean (% bollworm damage, yield)	Aug 16	Aug 24	Yield
1. PHY 499 WRF.....	0.00	5.00.....	1561 ab
2. PHY 375 WRF.....	1.25	6.25.....	1419 ab
3. PHY 367 WRF.....	1.25	1.25.....	1511 ab
4. PHY 565 WRF.....	0.00	10.00.....	1394 ab
5. DP 1219 B2RF.....	0.00	5.00.....	1297 ab
6. DP 1034 B2RF.....	0.00	6.25.....	1526 ab
7. DP 1137 B2RF.....	0.00	2.50.....	1561 ab
8. DP 1133 B2RF.....	0.00	0.00.....	1616 a
9. DG 2570 B2RF.....	2.50	7.50.....	1573 ab
10. FM 1740 B2F.....	1.25	3.75.....	1581 ab
11. ST 5288 B2F.....	1.25	6.25.....	1466 ab
12. AM 1550 B2RF.....	2.50	6.25.....	1512 ab
13. AM UA48.....	8.75	15.00.....	1433 ab
14. DP 121 RF.....	13.75	27.50.....	1381 ab
15. SSG HQ 210 CT.....	17.50	27.50.....	1201 b
LSD	---	---	401.7

Split plot analysis (% bollworm damage, yield)	Aug 16	Aug 24	Yield
Treatment.....	0.0273.....	0.0002.....	0.1531
Variety.....	<0.0001.....	<0.0001.....	<0.0001
Treatment x variety.....	<0.0001.....	<0.0001.....	0.6259

Test: CT12-BW-2-Conventional-TAREC, Research to evaluate conventional cotton varieties and insecticide management of the bollworm/budworm complex

#	Conventional variety	Date(s) treated for “Bollworm Protected” plots
1	SSG HQ 110 CT ¹	Aug 1 (egg threshold) and Aug 8
2	SSG HQ 210 CT ¹	Aug 1 (egg threshold) and Aug 8
3	AM UA 48 ²	Aug 1 (egg threshold) and Aug 8
4	UA 222 ¹	Aug 1 (egg threshold) and Aug 8

Each variety was treated twice with insecticides targeting bollworm (“Protected” plots), or received no bollworm sprays (“Untreated” plots). In the protected plots, Baythroid XL @ 1.6 oz/A was applied at bollworm egg threshold on August 1, and Baythroid XL @ 2.6 oz/A was applied on August 8.

¹Seed treatments consisted of: Aeris, Trilex Advanced, and Poncho Votivo (applied by Berry Lewis).

²Seed treatments consisted of: Maxim, Apron XL, Systhane 40WP, Nusan 30EC, Imidacloprid, and Avicta Complete Cotton (from Tom Brooks).

Test: CT12-BW-2-Conventional-TAREC
Year: 2012
Crop: Cotton
Varieties: See treatment list
Field: 64b
Location: Tidewater AREC

Experimental design: Split-plot
Plot size: 4 rows x 35’
Row spacing: 36”
Planting date: May 17, 2012
Harvest date: Nov. 5
Row feet harvested: 70

Treatment application(s):

Broadcast using spider rig	Nozzle type: 8002VS	Nozzle spacing: 18”	PSI: 30	GPA: 16.5
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Field preparation: Rip-strip till on May 8

Test name: **CT12-BW-2-Conventional-TAREC**

Herbicides

Date	Product	Rate/A
3/30	Roundup Weather Max	22 oz
5/19	Acumen	1.5 pt
5/19	Cotoran	1 qt
5/19	Roundup Weather Max	22 oz
6/27	Select Max	1 pt
6/27	Induce (surfactant)	1 qt*
7/16	MSMA	1 qt
7/16	Envoke	0.1 oz
7/16	Cotton Pro	1.5 pt
*per 100 gal water		

Additional insecticides

Date	Product	Rate/A
6/01	Orthene 97	8 oz

Growth regulators

Date	Product	Rate/A
7/17	Pentia	8 oz
7/31	Pix WSG	0.6 oz
8/10	Pix WSG	0.5 oz

Lime & fertilizer

Date	Product	Rate/A
3/30	6-16-39	330 lb
6/25	24-0-0-3	30 units
6/25	Boron	1 qt
7/12	24-0-0-3	30 units
7/12	Boron	1 qt

Defoliation

Date	Product	Rate/A
10/12	Finish	1 qt
10/12	Folex	10 oz
10/12	Dropp	3 oz
10/12	Super Boll	10 oz

Table 28. Percent external bollworm damage¹ and yield, CT12-BW2. Tidewater AREC, Suffolk, VA, 2012.

#	Variety	Aug 15		Aug 24		Lint lb/acre ²	
		Protected	Not protected	Protected	Not protected	Protected	Not protected
1	SSG HQ 110 CT	2.50	32.50	2.50 b	37.50	1380	1284 b
2	SSG HQ 210 CT	2.50	37.50	12.50 a	40.00	1237	1092 c
3	AM UA 48	5.00	27.50	0.00 b	25.00	1425	1459 a
4	UA 222	2.50	40.00	2.50 b	37.50	1403	1078 c
	LSD	NS	NS	7.66	NS	NS	167.2

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹External bollworm damage based on a sample of 10 bolls per plot.

²Cotton was harvested on November 5. Gross yields were reduced for each plot (62.7-67.6%) to account for seed and trash.

Treatment means (% bollworm damage, yield)	Aug 15	Aug 24	Yield
1. With insecticide	3.13 b	4.38 b	1361 a
2. Without insecticide	34.38 a	35.00 a	1228 b
LSD	10.53	10.46	123.9

Variety mean (% bollworm damage, yield)	Aug 15	Aug 24	Yield
1. SSG HQ 110 CT	17.50	20.00	1332 ab
2. SSG HQ 210 CT	20.00	26.25	1165 b
3. AM UA 48	16.25	12.50	1442 a
4. UA 222	21.25	20.00	1240 b
LSD	NS	NS	175.3

Split plot analysis (% bollworm damage, yield)	Aug 15	Aug 24	Yield
Treatment	0.0025	0.0026	0.0421
Variety	0.6410	0.1996	0.0023
Treatment x variety	0.3381	0.7826	0.0719

Test: CT12-BW-4-Foliar, Evaluation of foliar broadcasts for bollworm management in cotton

#	Material ¹	Rate/A	Date(s) treated
1	Belt SC	4 oz/A (BC @ ET)	Aug 2
2	Besiege	10 oz/A (BC @ ET)	Aug 2
3	Prevathon 50SC	13.3 oz/A (BC @ ET)	Aug 2
4	Radiant SC	6 oz/A (BC @ ET)	Aug 2
5	Baythroid XL	1.6 oz/A (BC @ ET) 2.6 oz/A (BC @ 5-7 d after ET)	Aug 2 Aug 8
6	Karate Z	1.6 oz/A (BC @ ET) 2.56 oz/A (BC @ 5-7 d after ET)	Aug 2 Aug 8
7	Brigade 2EC	2.6 oz/A (BC @ ET) 4 oz (BC @ 5-7 d after ET)	Aug 2 Aug 8
8	Untreated		---

Test: CT12-BW-4-Foliar
Year: 2012
Crop: Cotton
Variety: DP 121 RF
Field: 51
Location: Tidewater AREC

Experimental design: RCBD
Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: May 12
Harvest date: Nov. 5
Row feet harvested: 70

Treatment application(s):

Broadcast using spider rig	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 30	GPA: 16.5
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Test name: **CT12-BW-4-Foliar**

Herbicides

Date	Product	Rate/A
4/04	Durango	1 qt
5/12	Acumen	1.5 pt
5/12	Cotoran	1 qt
5/12	Ignite	1 qt
5/29	Roundup Weather Max	22 oz
6/13	Roundup Weather Max	22 oz
7/19	MSMA	1 qt
7/19	Envoke	0.1 oz
7/19	Cotton Pro	1.5 pt
8/13	Helosate Plus	22 oz

Additional insecticides

Date	Product	Rate/A
5/29	Orthene 97	8 oz

Lime & fertilizer

Date	Product	Rate/A
4/02	6-16-39	330 lb
6/22	24-0-0-3	30 units
6/22	Boron	1 qt
7/12	24-0-0-3	30 units
7/12	Boron	1 qt

Growth regulators

Date	Product	Rate/A
7/17	Pentia	8 oz
8/01	Pix WSG	0.6 oz
8/13	Pix WSG	0.5 oz

Defoliation

Date	Product	Rate/A
10/16	Finish	1 qt
10/16	Dropp	3 oz
10/16	Folex	10 oz
10/16	Super Boll	10 oz

Table 29. Percent external bollworm damage¹ and yield, CT12-BW4-Foliar. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate/A	Percent external bollworm damage		Lint lb/acre ²
			Aug 15	Aug 24	
1	Belt SC	4 oz/A (BC @ ET)	15.00 b	12.50 b	1473
2	Besiege	10 oz/A (BC @ ET)	0.00 c	0.00 c	1580
3	Prevathon 50SC	13.3 oz/A (BC @ ET)	0.00 c	0.00 c	1482
4	Radiant SC	6 oz/A (BC @ ET)	0.00 c	2.50 c	1560
5	Baythroid XL	1.6 oz/A (BC @ ET) 2.6 oz/A (BC @ 6 d after ET)	0.00 c	0.00 c	1407
6	Karate Z	1.6 oz/A (BC @ ET) 2.56 oz/A (BC @ 6 d after ET)	0.00 c	0.00 c	1471
7	Brigade 2EC	2.6 oz/A (BC @ ET) 4 oz (BC @ 6 d after ET)	0.00 c	2.50 c	1504
8	Untreated		47.50 a	32.50 a	1405
	LSD		5.70	9.49	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹External bollworm damage based on a sample of 10 bolls per plot.

²Cotton was harvested on November 5. Gross yields were reduced by 60.7% to account for seed and trash.

Test: CT12-BW-Conventional-Everett, On-farm research to evaluate conventional cotton varieties and insecticide management of the bollworm/budworm complex

#	Conventional variety
1	SSG HQ 110 CT ¹
2	SSG HQ 210 CT ¹
3	AM UA 48 ²

Each variety was treated with insecticides targeting bollworm, with insecticide treatments timed on egg threshold and live worms/fresh boll damage. These bollworm treatments consisted of Baythroid XL @ 3.2 oz/A applied on August 3 and 10.

¹Seed treatments consisted of: Aeris, Trilex Advanced, and Poncho Votivo (applied by Berry Lewis).

²Seed treatments consisted of: Maxim, Apron XL, Systhane 40WP, Nusan 30EC, Imidacloprid, and Avicta Complete Cotton (from Tom Brooks).

Test: CT12-BW-Conventional-Everett
Year: 2012
Crop: Cotton
Varieties: See treatment list
Field: n/a
Location: Everett Farms, Southampton Co., VA

Experimental design: Replicated strip
Plot size: 8 rows x 1500-1815'
Row spacing: 36" (hilldrop)
Planting date: May 1
Harvest date: Oct. 22
Row feet harvested: 15,248-17,056

Comments: Chris Drake is acknowledged for his assistance with this test. Soil type is Emporia Fine Sandy Loam.

Table 30. Percent external bollworm damage and yield, CT12-BW-Conventional-Everett (Everett farm, Southampton Co., VA). Tidewater AREC, Suffolk, VA, 2012.

#	Variety	Percent external bollworm damage ¹		Lint lb/acre ²
		Aug 16	Aug 21	
1	SSG HQ 110 CT	0.25	0.00	618
2	SSG HQ 210 CT	0.25	0.50	573
3	AM UA 48	0.25	0.25	623
4	DP 1137 B2RF	0.00	0.00	721 ³
	LSD	NS	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹External bollworm damage based on a sample of 100 bolls per plot.

²Cotton was harvested on October 22. Gross yields were reduced by 57.7-62.7% to account for seed and trash.

³Yield from treatment 4 was not replicated and was therefore not included in the statistical analysis.

Test: CT12-BW-Conventional-Grizzard, On-farm research to evaluate conventional cotton varieties and insecticide management of the bollworm/budworm complex

#	Conventional variety
1	SSG HQ 110 CT ¹
2	SSG HQ 210 CT ¹
3	AM UA 48 ²

Each variety was treated with insecticides targeting bollworm, with insecticide treatments timed on egg threshold and live worms/fresh boll damage. These bollworm treatments consisted of Baythroid XL @ 3 oz/A applied on July 28 and August 3.

¹Seed treatments consisted of: Aeris, Trilex Advanced, and Poncho Votivo (applied by Berry Lewis).

²Seed treatments consisted of: Maxim, Apron XL, Systhane 40WP, Nusan 30EC, Imidacloprid, and Avicta Complete Cotton (from Tom Brooks).

Test: CT12-BW-Conventional-Grizzard
Year: 2012
Crop: Cotton
Varieties: See treatment list
Field: n/a
Location: Mike Grizzard farm, Southampton Co., VA

Experimental design: Replicated strip
Plot size: 8 rows x 1396 ft
Row spacing: 36"
Planting date: May 11, 2012
Harvest date: Oct. 22
Row feet harvested: 11,168

Table 31. Percent external bollworm damage and yield, CT12-BW-Conventional-Grizzard (Mike Grizzard farm, Southampton Co., VA). Tidewater AREC, Suffolk, VA, 2012.

#	Conventional variety	Percent external bollworm damage ¹		Lint lb/acre ²
		Aug 13	Aug 21	
1	SSG HQ 110 CT	0.00 b	0.67	1136
2	SSG HQ 210 CT	3.33 a	0.67	1209
3	AM UA 48	0.67 b	0.33	1027
	LSD	2.07	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹External bollworm damage based on a sample of 100 bolls per plot.

²Cotton was harvested on October 22. Gross yields were reduced by 59.3-61.7% to account for seed and trash.

Test: CT12-BW-Conventional-Clarke, On-farm research to evaluate conventional cotton varieties and insecticide management of the bollworm/budworm complex

#	Conventional variety
1	SSG HQ 110 CT ¹
2	SSG HQ 210 CT ¹
3	AM UA 48 ²

Each variety was treated with insecticides targeting bollworm, with insecticide treatments timed on egg threshold and live worms/fresh boll damage. These bollworm treatments consisted of Karate Z @ 2.5 oz/A applied on July 24, August 6, and August 15.

¹Seed treatments consisted of: Aeris, Trilex Advanced, and Poncho Votivo (applied by Berry Lewis).

²Seed treatments consisted of: Maxim, Apron XL, Systhane 40WP, Nusan 30EC, Imidacloprid, and Avicta Complete Cotton (from Tom Brooks).

Test: CT12-BW-Conventional-Clarke
Year: 2012
Crop: Cotton
Varieties: See treatment list
Field: n/a
Location: Ray and Carl Clarke farm, Dinwiddie Co., VA

Experimental design: Replicated strip
Plot size: 8 rows x 1552 ft
Row spacing: 36"
Planting date: Apr. 29
Harvest date: Oct. 18
Row feet harvested: 12,416

Table 32. Percent external bollworm damage and yield, CT12-BW-Conventional-Clarke (Clarke farm, Dinwiddie Co., VA). Tidewater AREC, Suffolk, VA, 2012.

#	Variety	Percent external bollworm damage ¹		Lint lb/acre ²
		Aug 16	Aug 27	
1	SSG HQ 110 CT	0.00 b	0.67	1139
2	SSG HQ 210 CT	1.00 a	0.33	1186
3	AM UA 48	0.33 ab	0.33	1198
4	DG 2725	0.00 b	---	1161 ³
	LSD	0.69	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹External bollworm damage based on a sample of 100 bolls per plot.

²Cotton was harvested on October 18. Gross yields were reduced by 59.8-64.1% to account for seed and trash.

³Yield from treatment 4 was not replicated and was therefore not included in the statistical analysis.

Test: CT12-BW-Conventional-Lowe, On-farm research to evaluate conventional cotton varieties and insecticide management of the bollworm/budworm complex

#	Conventional variety
1	SSG HQ 110 CT ¹
2	SSG HQ 210 CT ¹
3	AM UA 48 ²

Each variety was treated with insecticides targeting bollworm, with insecticide treatments timed on egg threshold and live worms/fresh boll damage. These bollworm treatments consisted of Belt @ 2 oz/A plus Baythroid XL @ 3.2 oz/A applied on July 26, and Baythroid XL @ 3.2 oz/A plus Acephate 97 @ 12 oz/A on August 6.

¹Seed treatments consisted of: Aeris, Trilex Advanced, and Poncho Votivo (applied by Berry Lewis).

²Seed treatments consisted of: Maxim, Apron XL, Systhane 40WP, Nusan 30EC, Imidacloprid, and Avicta Complete Cotton (from Tom Brooks).

Test: CT12-BW-Conventional-Lowe
Year: 2012
Crop: Cotton
Varieties: See treatment list
Field: n/a
Location: Lowe farm, Surry Co., VA

Experimental design: Replicated strip
Plot size: 4 or 8 rows x 875-1050 ft
Row spacing: 36"
Planting date: May 16, 2012
Harvest date: Oct. 23
Row feet harvested: 3500-8400

Comments: Check variety was DG 2450 B2RF

Table 33. Percent external bollworm damage and yield, CT12-BW-Conventional-Lowe (Lowe farm, Surry Co., VA). Tidewater AREC, Suffolk, VA, 2012.

#	Variety	Percent external bollworm damage ¹		Lint lb/acre ²
		Aug 13	Aug 21	
1	SSG HQ 110 CT	0.50	0.50	1542
2	SSG HQ 210 CT	1.50	0.50	1538
3	AM UA 48	0.50	0.50	1416
4	DG 2450 B2RF	1.00	---	1482
	LSD	NS	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹External bollworm damage based on a sample of 100 bolls per plot.

²Cotton was harvested on October 23. Gross yields were reduced by 59.1-63.1% to account for seed and trash.

Test: CT12-SBUG-1, Evaluation of foliar broadcasts for stink bug management in cotton

#	Material ¹	Rate/A	Dates treated
1	Untreated	---	---
2	Belay 2.13SC + Induce	4 oz/A 0.25% v/v	Jul 25, Aug 1, Aug 8
3	Belay 2.13SC + Brigade 2EC + Induce	2 oz/A 2.6 oz/A 0.25% v/v	Jul 25, Aug 1, Aug 8
4	Belay 2.13SC + Brigade 2EC + Induce	3 oz/A 2.6 oz/A 0.25% v/v	Jul 25, Aug 1, Aug 8
5	Brigade 2EC	5.12 oz	Jul 25, Aug 1, Aug 8
6	Endigo ZC 2.06SC + Induce	5 oz/A 0.25% v/v	Jul 25, Aug 1, Aug 8
7	CMT 4586 + Methylated seed oil + UAN 28%	8 oz/A 0.25% v/v 2.5% v/v	Jul 25, Aug 1, Aug 8
8	Bidrin XP II	8 oz/A	Jul 25, Aug 1, Aug 8
9	Baythroid XL	2.6 oz/A	Jul 25, Aug 1, Aug 8
10	Admire Pro	1.7 oz/A	Jul 25, Aug 1, Aug 8

Test: CT12-SBUG-1
Year: 2012
Crop: Cotton
Variety: DP 1137 B2RF
Field: 26
Location: Tidewater AREC

Experimental design: RCBD
Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: May 1, 2012
Harvest date: Oct. 12
Row feet harvested: 70

Treatment application(s):

Broadcast using spider rig	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 30	GPA: 16.5
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Field preparation: Rip-strip till on Apr. 25

Comments: Pre-treatment internal boll damage = 12% on July 23 (n=50).

Test name: **CT12-SBUG-1**

Herbicides

Date	Product	Rate/A
3/30	Roundup Weather Max	22 oz
5/01	Acumen	1.5 pt
5/01	Cotoran	1 qt
5/02	Roundup Weather Max	22 oz
5/22	Roundup Weather Max	22 oz
6/01	Roundup Weather Max	22 oz
7/20	MSMA	1 qt
7/20	Envoke	0.1 oz
7/20	Cotton Pro	1.5 pt
8/13	Helosate Plus	22 oz

Additional insecticides

Date	Product	Rate/A
5/22	Orthene 97	8 oz
6/01	Orthene 97	8 oz

Lime & fertilizer

Date	Product	Rate/A
3/30	6-16-39	330 lb
6/22	24-0-0-3	30 units
6/22	Boron	1 qt
7/12	24-0-0-3	30 units
7/12	Boron	1 qt

Growth regulators

Date	Product	Rate/A
6/28	Pentia	6 oz
7/17	Pentia	8 oz
8/13	Pix WSG	0.5 oz

Defoliation

Date	Product	Rate/A
9/21	Finish	1 qt
9/21	Dropp	3 oz
9/21	Def	10 oz
9/21	Super Boll	6 oz

Table 34. Percent internal boll damage and yield, CT12-SBUG-1. Tidewater AREC, Suffolk, VA, 2012. Treatments were applied on July 25, August 1, and August 8.

#	Material	Rate/A	Percent internal boll damage ¹			Lint lb/acre ²
			Aug 1	Aug 8	Aug 14	
1	Untreated	---	7.50	12.50	12.50	1505
2	Belay 2.13SC + Induce	4 oz/A 0.25% v/v	7.50	12.50	10.00	1498
3	Belay 2.13SC + Brigade 2EC + Induce	2 oz/A 2.6 oz/A 0.25% v/v	2.50	7.50	10.00	1598
4	Belay 2.13SC + Brigade 2EC + Induce	3 oz/A 2.6 oz/A 0.25% v/v	10.00	2.50	0.00	1602
5	Brigade 2EC	5.12 oz	0.00	7.50	5.00	1589
6	Endigo ZC 2.06SC + Induce	5 oz/A 0.25% v/v	7.50	0.00	10.00	1600
7	CMT 4586 + Methylated seed oil + UAN 28%	8 oz/A 0.25% v/v 2.5% v/v	2.50	2.50	5.00	1619
8	Bidrin XP II	8 oz/A	2.50	2.50	5.00	1464
9	Baythroid XL	2.6 oz/A	5.00	2.50	2.50	1602
10	Admire Pro	1.7 oz/A	17.50	5.00	15.00	1616
	LSD		NS	NS	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Based on sampling ten 0.9-1.1-inch-diameter bolls per plot.

²Cotton was harvested on Oct. 12. Gross yields were reduced by 56.6% to account for seed and trash.

2012



Peanut Insect Pest Management Tests and Demonstrations

Test: PT12-THP-1, Cyazypyr treatments for thrips control in peanut

#	Material ¹	Rate	Date treated
1	Benevia 100D	13.5 oz/A (late GC & again in 6 days)	May 18 and May 24
2	Benevia 100D	16.87 oz/A (late GC & again in 6 days)	May 18 and May 24
3	Benevia 100D	20.5 oz/A (late GC & again in 6 days)	May 18 and May 24
4	Thimet 20G + Benevia 100D	5 lb/A (IF) 13.5 oz/A (late GC & again in 6 days)	May 18 and May 24
5	Thimet 20G	5 lb/A (IF)	
6	Verimark 20SC	13.5 oz/A (liquid IF)	
7	Verimark 20SC + Proline 480SC	13.5 oz/A (liquid IF) 5.7 oz/A (liquid IF)	
8	Verimark 20SC + Optimize Lift	13.5 oz/A (liquid IF) 15 oz/A (liquid IF)	
9	Verimark 20SC + Proline 480SC + Optimize Lift	13.5 oz/A (liquid IF) 5.7 oz/A (liquid IF) 15 oz/A (liquid IF)	
10	Untreated	---	

¹For foliar broadcast treatments 1-4, 1 mL of Buffer Xtra Strength was added per 2000 mL of water to adjust the water pH from 7.8 to 6.5

Test: PT12-THP-1
Year: 2012
Crop: Peanut
Variety: CHAMPS
Field: 15
Location: Tidewater AREC
Experimental design: RCBD

Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: May 2, 2012
Dig date: Sep 27
Harvest date: Oct 11
Row feet harvested: 70

Treatment application(s):

Granular in-furrow	Tractor-mounted inverted jars			
Liquid in-furrow	Nozzle type: microtube	Nozzle spacing: 36"	PSI: 51	GPA: 5.0
Broadcast using backpack	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 17	GPA: 14.3

Field preparation: Rip strip till on Mar 27

Comments: Treated rows = 1 & 2. Guard rows and plantout = CHAMPS.

Test name: **PT12-THP-1**

Herbicides

Date	Product	Rate/A
4/17	Dual Magnum	1 pt
4/17	Acumen	1.5 pt
5/09	Intrro	1 qt
5/09	Gramoxone Inteon	13 oz
6/19	Select Max	1 pt
6/19	Induce (adjuvant)	1 qt*
6/21	Basagran	1 pt
6/21	Storm	1.5 pt
6/21	Coverall (adjuvant)	1 pt*
6/27	Intrro	1 qt
*per 100 gal H ₂ O		

Additional insecticides

Date	Product	Rate/A
6/20	Danitol 2.4EC	3 oz
8/04	Baythroid XL	2 oz

Fungicides

Date	Product	Rate/A
7/18	Provost	8 oz
8/04	Provost	8 oz
8/04	Omega	1 pt
8/23	Provost	8 oz
8/23	Omega	1.5 pt
9/11	Bravo	1.5 pt

Lime, fertilizer, & landplaster

Date	Product	Rate/A
6/16	U.S. Gypsum 420	1200 lb
6/20	Boron	1 qt
6/20	Mn	1 qt
7/18	Boron	1 qt
7/18	Mn	1 qt
8/04	Mn	1 qt

Fumigants

Date	Product	Rate/A
4/14	Metam 42%	8 gal

Table 35. Thrips injury ratings¹, PT12-THP-1. Tidewater AREC, Suffolk, VA, 2012. Broadcast at late ground cracking applications were made on May 18 and May 24.

#	Material	Rate	May 24	May 30	Jun 4	Jun 14
1	Benevia 100D	13.5 oz/A (late GC & again in 6 days)	1.13 c	0.69 d	1.13 c	0.75 d
2	Benevia 100D	16.87 oz/A (late GC & again in 6 days)	1.00 d	0.94 d	0.69 d	0.50 e
3	Benevia 100D	20.5 oz/A (late GC & again in 6 days)	1.50 b	0.63 d	0.69 d	0.50 e
4	Thimet 20G + Benevia 100D	5 lb/A (IF) 13.5 oz/A (late GC & again in 6 days)	0.75 f*	0.63 d*	0.69 d*	0.75 d*
5	Thimet 20G	5 lb/A (IF)	0.94 de*	0.94 d*	0.75 d*	0.81 d*
6	Verimark 20SC	13.5 oz/A (liquid IF)	0.88 e	1.81 b	1.38 bc	1.25 c
7	Verimark 20SC + Proline 480SC	13.5 oz/A (liquid IF) 5.7 oz/A (liquid IF)	1.00 d	1.38 c	1.38 bc	1.38 bc
8	Verimark 20SC + Optimize Lift	13.5 oz/A (liquid IF) 15 oz/A (liquid IF)	1.00 d	1.88 b	1.19 c	1.50 b
9	Verimark 20SC + Proline 480SC + Optimize Lift	13.5 oz/A (liquid IF) 5.7 oz/A (liquid IF) 15 oz/A (liquid IF)	1.00 d	1.75 bc	1.56 b	1.38 bc
10	Untreated	---	2.75 a	4.63 a	4.69 a	4.25 a
	LSD		0.11	0.40	0.32	0.16

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Thrips injury rated on a 0-10 scale, 0 = no injury and 10 = dead plants. Peanut was planted on May 2.

*Phytotoxicity was observed in this treatment.

Table 36. Mean number of thrips per 10 terminal leaflets, PT12-THP-1. Tidewater AREC, Suffolk, VA, 2012. Broadcast at late ground cracking applications were made on May 18 and May 24.

#	Material	Rate	May 17 ¹		May 24 ²		May 30 ³		Jun 8 ³	
			Immat-ure	Adult	Immat-ure	Adult	Immat-ure	Adult	Immat-ure	Adult
1	Benevia 100D	13.5 oz/A (late GC & again in 6 d)	0.50	8.75	1.25 b-d	4.50	1.67 bc	5.33 a	1.25 b-d	1.00
2	Benevia 100D	16.87 oz/A (late GC & again in 6 d)	0.25	4.75	3.00 b	6.25	0.33 c	2.00 b-d	0.00 d	0.50
3	Benevia 100D	20.5 oz/A (late GC & again in 6 d)	0.00	10.50	1.00 b-d	5.00	1.67 bc	1.33 cd	0.50 cd	0.00
4	Thimet 20G + Benevia 100D	5 lb/A (IF) 13.5 oz/A (late GC & again in 6 d)	0.00	5.00	0.00 d	4.00	0.33 c	2.33 b-d	0.25 d	0.50
5	Thimet 20G	5 lb/A (IF)	0.00	5.00	0.50 cd	6.00	3.00 bc	2.67 a-d	2.25 b	0.00
6	Verimark 20SC	13.5 oz/A (liquid IF)	0.00	1.75	0.50 cd	7.50	5.33 ab	4.33 ab	0.75 cd	0.75
7	Verimark 20SC + Proline 480SC	13.5 oz/A (liquid IF) 5.7 oz/A (liquid IF)	0.00	5.00	2.25 bc	9.75	3.33 bc	3.00 a-d	1.75 bc	1.00
8	Verimark 20SC + Optimize Lift	13.5 oz/A (liquid IF) 15 oz/A (liquid IF)	0.00	4.75	0.75 cd	12.50	3.00 bc	4.00 a-c	0.75 cd	0.25
9	Verimark 20SC + Proline 480SC + Optimize Lift	13.5 oz/A (liquid IF) 5.7 oz/A (liquid IF) 15 oz/A (liquid IF)	0.00	3.25	1.25 b-d	4.75	3.00 bc	1.00 d	0.50 cd	0.25
10	Untreated	---	0.00	5.75	7.25 a	7.25	9.33 a	0.33 d	5.50 a	0.50
	LSD		NS	NS	2.19	NS	4.23	2.73	1.40	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹May 17 species composition (based on treatment 10): tobacco thrips—72.7%; western flower thrips—4.5%; eastern flower thrips—0%; onion thrips—22.7%; soybean thrips—0%.

²May 24 species composition (based on treatment 10): tobacco thrips—82.1%; western flower thrips—10.7%; eastern flower thrips—0%; onion thrips—7.1%; soybean thrips—0%.

³May 30 and June 8 species composition (based on treatment 10): tobacco thrips—100%.

Table 37. Tomato spotted wilt virus (TSWV) hits and yield, PT12-THP-1. Tidewater AREC, Suffolk, VA, 2012. Broadcast at late ground cracking applications were made on May 18 and May 24.

#	Material	Rate	TSWV hits/70 row ft ¹			Yield ² (lb/A)
			Jun 14	Aug 3	Sep 10	
1	Benevia 10OD	13.5 oz/A (late GC & again in 6 days)	1.25	8.25 b	4.75 bc	5788
2	Benevia 10OD	16.87 oz/A (late GC & again in 6 days)	1.75	9.25 b	7.50 b	5832
3	Benevia 10OD	20.5 oz/A (late GC & again in 6 days)	2.00	7.00 b	7.25 b	6087
4	Thimet 20G + Benevia 10OD	5 lb/A (IF) 13.5 oz/A (late GC & again in 6 days)	0.00	7.25 b	4.00 bc	6162
5	Thimet 20G	5 lb/A (IF)	0.00	5.75 b	2.75 c	6247
6	Verimark 20SC	13.5 oz/A (liquid IF)	0.00	7.50 b	5.75 bc	6226
7	Verimark 20SC + Proline 480SC	13.5 oz/A (liquid IF) 5.7 oz/A (liquid IF)	1.00	8.75 b	5.50 bc	6240
8	Verimark 20SC + Optimize Lift	13.5 oz/A (liquid IF) 15 oz/A (liquid IF)	1.25	5.50 b	5.25 bc	6066
9	Verimark 20SC + Proline 480SC + Optimize Lift	13.5 oz/A (liquid IF) 5.7 oz/A (liquid IF) 15 oz/A (liquid IF)	1.25	6.00 b	4.00 bc	6096
10	Untreated	---	1.00	14.00 a	11.75 a	6059
	LSD		NS	4.61	3.93	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Based on visual inspection of all plants in two rows from each plot.

²Yield based on weight of peanut with moisture content of 7%. Dig date = September 27 and harvest date = October 11.

Test: PT12-THP-2, Insecticide seed treatments for thrips control in ‘Bailey’ peanut

#	Material ¹	Rate
1	Untreated	---
2	Dynasty PD	0.089 mg ai/seed
3	Cruiser 70WS	0.25 mg ai/seed
4	Dynasty PD + Cruiser 70WS	0.089 mg ai/seed 0.25 mg ai/seed
5	A17461	0.318 mg ai/seed
6	A17461 + Avicta 500FS	0.318 mg ai/seed 0.25 mg ai/seed
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A (IF)
8	Dynasty PD + Temik 15G	0.089 mg ai/seed 7 lb/A (IF)

Test: PT12-THP-2
Year: 2012
Crop: Peanut
Variety: Bailey
Field: 63-b
Location: Tidewater AREC
Experimental design: RCBD

Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: May 3, 2012
Dig date: Sep 24
Harvest date: Sep 27
Row feet harvested: 70

Treatment application(s):

Granular in-furrow	Tractor-mounted inverted jars
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Field preparation: Rip strip till on Mar 27

Comments: Treated rows = 1 & 2. Guard rows = CHAMPS.

Test name: **PT12-THP-2**

Herbicides

Date	Product	Rate/A
4/17	Dual Magnum	1 pt
4/17	Acumen	1.5 pt
5/09	Intrro	1 qt
5/09	Grammoxone Inteon	13 oz
6/19	Select Max	1 pt
6/19	Induce (adjuvant)	1 qt*
6/21	Basagran	1 pt
6/21	Storm	1.5 pt
6/21	Coverall (adjuvant)	1 pt*
6/27	Intrro	1 qt
8/31	Ultra Blazer	1.5 pt
8/31	Induce (adjuvant)	1 qt*
*per 100 gal water		

Additional insecticides

Date	Product	Rate/A
6/20	Danitol 2.4EC	3 oz
8/04	Baythroid XL	2 oz

Fungicides

Date	Product	Rate/A
7/18	Provost	8 oz
8/04	Provost	8 oz
8/04	Omega	1 pt
8/23	Provost	8 oz
8/23	Omega	1.5 pt
9/11	Bravo	1.5 pt

Lime, fertilizer, & landplaster

Date	Product	Rate/A
6/18	Landplaster Gypsum 420	1200 lb
6/20	Boron	1 qt
6/20	Mn	1 qt
7/18	Boron	1 qt
7/18	Mn	1 qt
8/04	Mn	1 qt

Fumigants

Date	Product	Rate/A
4/14	Metam 42%	8 gal

Table 38. Stand counts, PT12-THP-2. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	Plants/35 row ft ¹	
			May 16	May 23
1	Untreated	---	71.8 c	94.8 d
2	Dynasty PD	0.089 mg ai/seed	82.9 ab	103.4 bc
3	Cruiser 70WS	0.25 mg ai/seed	73.5 c	94.6 d
4	Dynasty PD + Cruiser 70WS	0.089 mg ai/seed 0.25 mg ai/seed	77.1 bc	99.1 cd
5	A17461	0.318 mg ai/seed	85.4 a	116.4 a
6	A17461 + Avicta 500FS	0.318 mg ai/seed 0.25 mg ai/seed	85.0 a	106.6 b
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A (IF)	83.5 a	105.4 b
8	Dynasty PD + Temik 15G	0.089 mg ai/seed 7 lb/A (IF)	80.1 ab	105.8 b
	LSD		5.76	5.89

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Based on sampling all plants in rows 1 and 2 of each plot.

Table 39. Thrips injury ratings¹, PT12-THP-2. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	May 24	May 31	Jun 4	Jun 13
1	Untreated	---	3.38 a	5.44 a	5.75 a	5.63 a
2	Dynasty PD	0.089 mg ai/seed	2.56 b	5.63 a	5.50 a	5.31 ab
3	Cruiser 70WS	0.25 mg ai/seed	2.00 c	3.31 bc	3.94 b	4.94 c
4	Dynasty PD + Cruiser 70WS	0.089 mg ai/seed 0.25 mg ai/seed	1.88 c	3.13 bc	3.19 d	4.81 c
5	A17461	0.318 mg ai/seed	1.00 e	2.94 c	3.88 b	5.00 bc
6	A17461 + Avicta 500FS	0.318 mg ai/seed 0.25 mg ai/seed	1.31 d	3.38 b	3.56 c	5.00 bc
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A (IF)	0.75 ef*	1.69 d*	0.94 e*	0.88 d*
8	Dynasty PD + Temik 15G	0.089 mg ai/seed 7 lb/A (IF)	0.50 f	1.44 d	0.75 e	0.75 d
	LSD		0.28	0.38	0.28	0.32

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Thrips injury rated on a 0-10 scale, 0 = no injury and 10 = dead plants. Peanut was planted on May 3.

*Phytotoxicity was observed in this treatment.

Table 40. Mean number of thrips per 10 terminal leaflets at 14 days after planting, PT12-THP-2. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	May 17						
			Immature	Total adult	Tobacco thrips	Western flower thrips	Eastern flower thrips	Onion thrips	Soybean thrips
1	Untreated	---	0.25	13.75 a	6.50 a	0.75	0.50 a	5.50 a	0.00
2	Dynasty PD	0.089 mg ai/seed	0.25	12.75 a	5.50 ab	1.25	0.0 b	6.00 a	0.00
3	Cruiser 70WS	0.25 mg ai/seed	0.0	3.50 b	2.75 bc	0.50	0.0 b	0.00 b	0.25
4	Dynasty PD + Cruiser 70WS	0.089 mg ai/seed 0.25 mg ai/seed	0.0	3.00 b	2.00 c	0.75	0.0 b	0.25 b	0.00
5	A17461	0.318 mg ai/seed	0.0	3.25 b	2.50 bc	0.25	0.0 b	0.50 b	0.00
6	A17461 + Avicta 500FS	0.318 mg ai/seed 0.25 mg ai/seed	0.0	2.50 b	1.75 c	0.25	0.0 b	0.50 b	0.00
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A (IF)	0.0	2.75 b	1.00 c	0.50	0.0 b	1.25 b	0.00
8	Dynasty PD + Temik 15G	0.089 mg ai/seed 7 lb/A (IF)	0.0	2.25 b	1.25 c	0.75	0.0 b	0.25 b	0.00
	LSD		NS	6.23	3.34	NS	0.30	3.29	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

Table 41. Mean number of thrips per 10 terminal leaflets at 28 days after planting, PT12-THP-2. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	May 31						
			Immature	Total adult	Tobacco thrips	Western flower thrips	Eastern flower thrips	Onion thrips	Soybean thrips
1	Untreated	---	9.25	1.75	1.50	0.00	0.00	0.25	0.00
2	Dynasty PD	0.089 mg ai/seed	13.25	0.75	0.75	0.00	0.00	0.00	0.00
3	Cruiser 70WS	0.25 mg ai/seed	5.50	1.00	0.50	0.00	0.00	0.50	0.00
4	Dynasty PD + Cruiser 70WS	0.089 mg ai/seed 0.25 mg ai/seed	7.50	1.25	0.75	0.25	0.00	0.25	0.00
5	A17461	0.318 mg ai/seed	8.75	2.00	1.25	0.25	0.25	0.25	0.00
6	A17461 + Avicta 500FS	0.318 mg ai/seed 0.25 mg ai/seed	5.25	1.25	0.50	0.25	0.00	0.50	0.00
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A (IF)	6.25	1.00	1.00	0.00	0.00	0.00	0.00
8	Dynasty PD + Temik 15G	0.089 mg ai/seed 7 lb/A (IF)	2.50	2.25	1.50	0.75	0.00	0.00	0.00
	LSD		NS	NS	NS	NS	NS	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

Table 42. Mean number of arthropods per 15-sweep sample (based on one sample per plot), PT12-THP-2. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	Jun 11					
			Leafhopper adults	Leafhopper nymphs	Click beetles	Minute pirate bugs	Spiders	Three-cornered alfalfa hoppers
1	Untreated	---	2.75	0.00	0.00	0.25	0.25	0.00
2	Dynasty PD	0.089 mg ai/seed	2.50	0.50	0.00	0.00	0.00	0.25
3	Cruiser 70WS	0.25 mg ai/seed	2.00	0.00	0.25	0.00	0.00	0.25
4	Dynasty PD + Cruiser 70WS	0.089 mg ai/seed 0.25 mg ai/seed	3.25	0.00	0.50	0.25	0.25	0.25
5	A17461	0.318 mg ai/seed	4.00	0.00	0.75	0.25	0.00	1.00
6	A17461 + Avicta 500FS	0.318 mg ai/seed 0.25 mg ai/seed	1.75	0.00	0.00	0.00	0.00	1.00
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A (IF)	3.25	0.00	0.25	0.00	0.25	1.00
8	Dynasty PD + Temik 15G	0.089 mg ai/seed 7 lb/A (IF)	1.25	0.00	0.75	0.00	0.00	1.00
	LSD		NS	NS	NS	NS	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

Table 43. Tomato spotted wilt virus (TSWV) hits and yield, PT12-THP-2. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	TSWV hits/70 row ft ¹			Yield ² (lb/A)
			Jun 13	Aug 3	Sep 10	
1	Untreated	---	0.25	7.25	13.75 a	5553
2	Dynasty PD	0.089 mg ai/seed	1.00	5.75	5.00 b	5818
3	Cruiser 70WS	0.25 mg ai/seed	0.25	6.00	5.00 b	5799
4	Dynasty PD + Cruiser 70WS	0.089 mg ai/seed 0.25 mg ai/seed	1.00	5.50	6.25 b	5864
5	A17461	0.318 mg ai/seed	0.50	4.00	6.75 b	5348
6	A17461 + Avicta 500FS	0.318 mg ai/seed 0.25 mg ai/seed	0.75	4.75	4.50 b	5695
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A (IF)	0.50	2.75	3.75 b	5970
8	Dynasty PD + Temik 15G	0.089 mg ai/seed 7 lb/A (IF)	0.50	2.75	3.75 b	5985
	LSD		NS	NS	3.24	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹Based on visual inspection of all plants in two rows from each plot.

²Yield based on weight of peanut with moisture content of 7%. Dig date = September 24 and harvest date = September 27.

Test: PT12-THP-3, In-furrow liquid insecticides for thrips control in peanut

#	Material	Rate
1	Thimet 20G (IF)	3.5 lb
2	Thimet 20G (IF)	5 lb
3	Temik 15G (IF)	7 lb
4	Admire Pro (IF)	7 oz
5	Admire Pro (IF)	8.5 oz
6	Admire Pro (IF)	10.5 oz
7	Orthene 97 (IF)	8 oz
8	Orthene 97 (IF)	12 oz
9	Orthene 97 (IF)	16 oz
10	Untreated	---

Test: PT12-THP-3
Year: 2012
Crop: Peanut
Varieties: CHAMPS
Field: 63-b
Location: Tidewater AREC
Experimental design: RCBD

Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: May 3, 2012
Dig date: Sep 24
Harvest date: Sep 27
Row feet harvested: 70

Treatment application(s):

Granular in-furrow	Tractor-mounted inverted jars		
Liquid in-furrow	Nozzle type: microtube	Nozzle spacing: 36"	PSI: 51 GPA: 5.0

Field preparation: Rip-strip till on Mar. 27

Comments: Treated rows = 1 & 2. Guard rows = CHAMPS.

Test name: **PT12-THP-3**

Herbicides

Date	Product	Rate/A
4/17	Dual Magnum	1 pt
4/17	Acumen	1.5 pt
5/09	Intrro	1 qt
5/09	Grammoxone Inteon	13 oz
6/19	Select Max	1 pt
6/19	Induce (adjuvant)	1 qt*
6/21	Basagran	1 pt
6/21	Storm	1.5 pt
6/21	Coverall (adjuvant)	1 pt*
6/27	Intrro	1 qt
8/31	Ultra Blazer	1.5 pt
8/31	Induce (adjuvant)	1 qt*
*per 100 gal water		

Additional insecticides

Date	Product	Rate/A
6/20	Danitol 2.4EC	3 oz
8/04	Baythroid XL	2 oz

Fungicides

Date	Product	Rate/A
7/18	Provost	8 oz
8/04	Provost	8 oz
8/04	Omega	1 pt
8/23	Provost	8 oz
8/23	Omega	1.5 pt
9/11	Bravo	1.5 pt

Lime, fertilizer, & landplaster

Date	Product	Rate/A
6/18	Landplaster Gypsum 420	1200 lb
6/20	Boron	1 qt
6/20	Mn	1 qt
7/18	Boron	1 qt
7/18	Mn	1 qt
8/04	Mn	1 qt

Fumigants

Date	Product	Rate/A
4/14	Metam 42%	8 gal

Table 44. Stand counts, PT12-THP-3. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	Plants/35 row ft ¹		
			May 21	May 31	Jun 6
1	Thimet 20G (IF)	3.5 lb	114.1 ab	113.3 ab	109.1 b-d
2	Thimet 20G (IF)	5 lb	113.8 ab	109.8 bc	113.6 a-c
3	Temik 15G (IF)	7 lb	116.0 ab	110.3 bc	111.9 a-d
4	Admire Pro (IF)	7 oz	119.3 a	114.5 ab	113.3 a-d
5	Admire Pro (IF)	8.5 oz	116.9 ab	119.8 a	115.4 ab
6	Admire Pro (IF)	10.5 oz	115.6 ab	105.5 c	107.1 cd
7	Orthene 97 (IF)	8 oz	111.3 bc	108.4 bc	106.4 d
8	Orthene 97 (IF)	12 oz	105.8 cd	109.1 bc	107.3 cd
9	Orthene 97 (IF)	16 oz	102.3 d	104.3 c	106.8 cd
10	Untreated	---	119.4 a	117.0 a	117.3 a
	LSD		7.23	6.73	7.10

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Based on sampling all plants in rows 1 and 2 of each plot.

Table 45. Thrips injury ratings¹, PT12-THP-3. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	May 24	May 31	Jun 4	Jun 13
1	Thimet 20G (IF)	3.5 lb	1.63 b*	1.94 c*	1.25 cd*	1.25 cd*
2	Thimet 20G (IF)	5 lb	1.50 bc*	1.81 c*	1.25 cd*	0.88 ef*
3	Temik 15G (IF)	7 lb	0.69 d	1.88 c	1.31 cd	0.88 ef
4	Admire Pro (IF)	7 oz	0.69 d	1.69 c	0.94 de	1.06 de
5	Admire Pro (IF)	8.5 oz	0.69 d	1.50 c	1.06 de	0.88 ef
6	Admire Pro (IF)	10.5 oz	0.50 e	0.94 d	0.69 e	0.69 f
7	Orthene 97 (IF)	8 oz	1.38 c	2.63 b	2.44 b	1.81 b
8	Orthene 97 (IF)	12 oz	0.75 d	1.94 c	1.75 c	1.31 c
9	Orthene 97 (IF)	16 oz	0.50 e	1.56 c	1.06 de	1.13 cd
10	Untreated	---	3.50 a	5.25 a	5.50 a	5.56 a
	LSD		0.16	0.51	0.52	0.24

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Thrips injury rated on a 0-10 scale, 0 = no injury and 10 = dead plants. Peanut was planted on May 3.

*Phytotoxicity was observed in this treatment.

Table 46. Tomato spotted wilt virus (TSWV) hits and yield, PT12-THP-3. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	TSWV hits/70 row ft ¹			Yield ² (lb/A)
			Jun 13	Aug 3	Sep 10	
1	Thimet 20G (IF)	3.5 lb	0.50	12.75 b-d	8.50 b	4627
2	Thimet 20G (IF)	5 lb	0.25	13.00 b-d	8.50 b	4011
3	Temik 15G (IF)	7 lb	0.50	11.75 cd	8.00 b	4784
4	Admire Pro (IF)	7 oz	0.25	9.75 d	7.50 b	5017
5	Admire Pro (IF)	8.5 oz	1.25	16.75 a-c	9.75 b	3830
6	Admire Pro (IF)	10.5 oz	0.00	21.25 a	10.25 b	4795
7	Orthene 97 (IF)	8 oz	2.00	18.75 ab	10.25 b	4242
8	Orthene 97 (IF)	12 oz	0.50	13.00 b-d	7.75 b	4835
9	Orthene 97 (IF)	16 oz	1.25	7.75 d	6.25 b	5154
10	Untreated	---	0.00	19.50 ab	19.75 a	4352
	LSD		NS	6.85	5.52	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Based on visual inspection of all plants in two rows from each plot.

²Yield based on weight of peanut with moisture content of 7%. Dig date = September 24 and harvest date = September 27.

Test: PT12-THP-4, Orthene 97 + various adjuvants for thrips control in peanut

#	Material	Rate	Date treated
1	Orthene 97	6 oz/A	May 18 and May 24
2	Orthene 97 + Induce	6 oz/A 0.25% v/v	May 18 and May 24
3	Orthene 97 + Factor 80LR	6 oz/A 1 qt per 100 gal	May 18 and May 24
4	Orthene 97 + Response	6 oz/A 1 qt per 100 gal	May 18 and May 24
5	Orthene 97 + Agri-Dex	6 oz/A 1% v/v	May 18 and May 24
6	Orthene 97 + Dyne-Amic	6 oz/A 0.625% v/v	May 18 and May 24
7	Untreated	---	---

All treatments were broadcast at late ground cracking and again in 6 days.

Test: PT12-THP-4
Year: 2012
Crop: Peanut
Variety: CHAMPS
Field: 63-b
Location: Tidewater AREC
Experimental design: RCBD

Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: May 3, 2012
Dig date: Sep 24
Harvest date: Sep 27
Row feet harvested: 70

Treatment application(s):

Broadcast using backpack	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 17	GPA: 14.3
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Field preparation: Rip-strip till on Mar. 27

Comments: Treated rows = 1 & 2. Guard rows = CHAMPS.

Test name: **PT12-THP-4**

Herbicides

Date	Product	Rate/A
4/17	Dual Magnum	1 pt
4/17	Acumen	1.5 pt
5/09	Intrro	1 qt
5/09	Grammoxone Inteon	13 oz
6/19	Select Max	1 pt
6/19	Induce (adjuvant)	1 qt*
6/21	Basagran	1 pt
6/21	Storm	1.5 pt
6/21	Coverall (adjuvant)	1 pt*
6/27	Intrro	1 qt
8/31	Ultra Blazer	1.5 pt
8/31	Induce (adjuvant)	1 qt*
*per 100 gal water		

Additional insecticides

Date	Product	Rate/A
6/20	Danitol 2.4EC	3 oz
8/04	Baythroid XL	2 oz

Fungicides

Date	Product	Rate/A
7/18	Provost	8 oz
8/04	Provost	8 oz
8/04	Omega	1 pt
8/23	Provost	8 oz
8/23	Omega	1.5 pt
9/11	Bravo	1.5 pt

Lime, fertilizer, & landplaster

Date	Product	Rate/A
6/18	Landplaster Gypsum 420	1200 lb
6/20	Boron	1 qt
6/20	Mn	1 qt
7/18	Boron	1 qt
7/18	Mn	1 qt
8/04	Mn	1 qt

Fumigants

Date	Product	Rate/A
4/14	Metam 42%	8 gal

Table 47. Thrips injury ratings¹, PT12-THP-4. Tidewater AREC, Suffolk, VA, 2012. All treatments were broadcast at late ground cracking on May 18 and again on May 24.

#	Material	Rate	May 24	May 30	Jun 6	Jun 13
1	Orthene 97	6 oz/A	1.88 b	1.38 b	2.94 bc	1.88 b
2	Orthene 97 + Induce	6 oz/A 0.25% v/v	1.81 b	1.25 bc	2.56 d	2.00 b
3	Orthene 97 + Factor 80LR	6 oz/A 1 qt per 100 gal	1.75 b	0.94 d	2.63 cd	2.00 b
4	Orthene 97 + Response	6 oz/A 1 qt per 100 gal	1.63 b	0.94 d	2.44 d	1.81 b
5	Orthene 97 + Agri-Dex	6 oz/A 1% v/v	1.63 b	1.06 cd	3.00 b	1.88 b
6	Orthene 97 + Dyne-Amic	6 oz/A 0.625% v/v	1.63 b	0.94 d	2.38 d	2.00 b
7	Untreated	---	3.50 a	5.31 a	5.56 a	4.75 a
	LSD		0.34	0.23	0.32	0.19

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹*Thrips injury rated on a 0-10 scale, 0 = no injury and 10 = dead plants. Peanut was planted on May 3.*

Table 48. Mean number of thrips per 10 terminal leaflets, PT12-THP-4. Tidewater AREC, Suffolk, VA, 2012. All treatments were broadcast at late ground cracking on May 18 and again on May 24.

#	Material	Rate	May 17		May 24		May 30		Jun 8	
			Immat- ure	Adult	Immat- ure	Adult	Immat- ure	Adult	Immat- ure	Adult
1	Orthene 97	6 oz/A	0.0	16.75	8.00	7.75	4.00 bc	1.00	1.50	0.25
2	Orthene 97 + Induce	6 oz/A 0.25% v/v	0.5	13.25	10.00	15.75	7.25 b	3.25	1.00	0.25
3	Orthene 97 + Factor 80LR	6 oz/A 1 qt per 100 gal	0.0	14.25	6.50	16.75	6.00 bc	1.25	2.75	1.00
4	Orthene 97 + Response	6 oz/A 1 qt per 100 gal	0.0	17.25	3.50	8.75	4.75 bc	3.50	2.00	0.50
5	Orthene 97 + Agri-Dex	6 oz/A 1% v/v	0.0	15.00	4.75	12.75	5.00 bc	2.50	1.25	0.50
6	Orthene 97 + Dyne-Amic	6 oz/A 0.625% v/v	0.0	14.50	6.50	12.25	1.75 c	1.75	2.50	0.75
7	Untreated	---	0.0	13.25	7.25	14.75	18.25 a	1.00	3.25	0.50
	LSD		NS	NS	NS	NS	4.81	NS	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

Table 49. Tomato spotted wilt virus (TSWV) hits and yield, PT12-THP-4. Tidewater AREC, Suffolk, VA, 2012. All treatments were broadcast at late ground cracking on May 18 and again on May 24.

#	Material	Rate	TSWV hits/70 row ft ¹			Yield ² (lb/A)
			Jun 13	Aug 3	Sep 10	
1	Orthene 97	6 oz/A	2.50	13.75	16.75 b	4642
2	Orthene 97 + Induce	6 oz/A 0.25% v/v	3.00	14.00	20.50 ab	4766
3	Orthene 97 + Factor 80LR	6 oz/A 1 qt per 100 gal	2.50	11.00	14.00 b	5039
4	Orthene 97 + Response	6 oz/A 1 qt per 100 gal	1.50	13.25	16.00 b	4708
5	Orthene 97 + Agri-Dex	6 oz/A 1% v/v	1.25	12.25	16.75 b	4622
6	Orthene 97 + Dyne-Amic	6 oz/A 0.625% v/v	1.50	8.50	16.50 b	5291
7	Untreated	---	1.50	16.75	27.75 a	5133
	LSD		NS	NS	8.31	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹Based on visual inspection of all plants in two rows from each plot.

²Yield based on weight of peanut with moisture content of 7%. Dig date = September 24 and harvest date = September 27.

Test: PT12-THP-5, Different acephate sources for thrips control in peanut

#	Material	Rate	Date treated
1	Orthene 97 (2008 product)	12 oz/A (IF)	
2	Orthene 97 (2008 product)	16 oz/A (IF)	
3	Orthene 97 (2011 product)	12 oz/A (IF)	
4	Orthene 97 (2011 product)	16 oz/A (IF)	
5	Orthene 97 (2012 product)	12 oz/A (IF)	
6	Orthene 97 (2012 product)	16 oz/A (IF)	
7	Acephate 97	12 oz/A (IF)	
8	Acephate 97	16 oz/A (IF)	
9	Orthene 97 (2012 product)	6 oz/A (BC @ late GC)	May 21

Test: PT12-THP-5
Year: 2012
Crop: Peanut
Varieties: Bailey
Field: 66
Location: Tidewater AREC
Experimental design: RCBD

Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: May 4, 2012
Dig date: Sep 27
Harvest date: Oct 11
Row feet harvested: 70

Treatment application(s):

Liquid in-furrow	Nozzle type: microtube	Nozzle spacing: 36"	PSI: 51	GPA: 5.0
Broadcast using backpack	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 17	GPA: 14.3

Field preparation: Rip-strip till on Mar. 27

Comments: Treated rows = 1 & 2 (Bailey). Plot rows 3 & 4 = Bailey. Border rows 1-4, last 6 border rows, and plantout behind test = CHAMPS.

Test name: **PT12-THP-5**

Herbicides

Date	Product	Rate/A
4/17	Dual Magnum	1 pt
4/17	Acumen	1.5 pt
5/09	Intrro	1 qt
5/09	Gramoxone Inteon	13 oz
6/19	Select Max	1 pt
6/19	Induce (adjuvant)	1 qt*
6/21	Basagran	1 pt
6/21	Storm	1.5 pt
6/21	Coverall (adjuvant)	1 pt*
6/27	Intrro	1 qt
*per 100 gal H ₂ O		

Additional insecticides

Date	Product	Rate/A
6/20	Danitol 2.4EC	3 oz
8/04	Baythroid XL	2 oz

Fungicides

Date	Product	Rate/A
7/18	Provost	8 oz
8/04	Provost	8 oz
8/04	Omega	1 pt
8/23	Provost	8 oz
8/23	Omega	1.5 pt
9/11	Bravo	1.5 pt

Lime, fertilizer, & landplaster

Date	Product	Rate/A
6/16	U.S. Gypsum 420	1200 lb
6/20	Boron	1 qt
6/20	Mn	1 qt
7/18	Boron	1 qt
7/18	Mn	1 qt
8/04	Mn	1 qt

Fumigants

Date	Product	Rate/A
4/14	Metam 42%	8 gal

Table 50. Stand counts, PT12-THP-5. Tidewater AREC, Suffolk, VA, 2012. Treatment 9 was broadcast on May 21.

#	Material	Rate	Plants/35 row ft ¹			
			May 18	May 25	May 31	Jun 6
1	Orthene 97 (2008 product)	12 oz/A (IF)	74.9 b-d	98.0 bc	107.3	106.8 a-c
2	Orthene 97 (2008 product)	16 oz/A (IF)	75.6 b-d	98.4 bc	111.4	109.3 ab
3	Orthene 97 (2011 product)	12 oz/A (IF)	76.8 b-d	100.0 ab	112.8	111.4 a
4	Orthene 97 (2011 product)	16 oz/A (IF)	73.3 cd	95.3 bc	107.4	103.6 c
5	Orthene 97 (2012 product)	12 oz/A (IF)	80.9 b	96.5 bc	111.9	108.4 ab
6	Orthene 97 (2012 product)	16 oz/A (IF)	69.9 d	94.5 c	109.4	104.9 bc
7	Acephate 97	12 oz/A (IF)	79.6 bc	96.8 bc	108.1	107.9 a-c
8	Acephate 97	16 oz/A (IF)	73.8 b-d	99.6 a-c	110.3	109.6 a
9	Orthene 97 (2012 product)	6 oz/A (BC @ late GC)	89.1 a	104.3 a	113.6	111.4 a
	LSD		7.3	5.31	NS	4.65

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹Based on sampling all plants in rows 1 and 2 of each plot.

Table 51. Thrips injury ratings¹, PT12-THP-5. Tidewater AREC, Suffolk, VA, 2012. Treatment 9 was broadcast on May 21.

#	Material	Rate	May 24	May 30	Jun 6	Jun 14
1	Orthene 97 (2008 product)	12 oz/A (IF)	0.75 b	0.75 cd	1.25 cd	1.63 bc
2	Orthene 97 (2008 product)	16 oz/A (IF)	0.56 c	0.69 c-e	1.00 d-f	1.44 cd
3	Orthene 97 (2011 product)	12 oz/A (IF)	0.56 c	0.75 cd	1.19 cd	1.69 bc
4	Orthene 97 (2011 product)	16 oz/A (IF)	0.50 c	0.50 e	0.88 ef	1.31 d
5	Orthene 97 (2012 product)	12 oz/A (IF)	0.56 c	0.75 cd	1.38 bc	1.75 b
6	Orthene 97 (2012 product)	16 oz/A (IF)	0.56 c	0.56 de	1.13 c-e	1.44 cd
7	Acephate 97	12 oz/A (IF)	0.63 bc	1.00 b	1.56 b	1.81 b
8	Acephate 97	16 oz/A (IF)	0.50 c	0.81 bc	0.81 f	1.44 cd
9	Orthene 97 (2012 product)	6 oz/A (BC @ late GC)	2.19 a	1.56 a	3.38 a	2.63 a
	LSD		0.16	0.19	0.30	0.26

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Thrips injury rated on a 0-10 scale, 0 = no injury and 10 = dead plants. Peanut was planted on May 4.

Table 52. Mean number of thrips per 10 terminal leaflets, PT12-THP-5. Tidewater AREC, Suffolk, VA, 2012. Treatment 9 was broadcast on May 21.

#	Material	Rate	May 18		May 24		May 30	
			Immat- ure	Adult	Immat- ure	Adult	Immat- ure	Adult
1	Orthene 97 (2008 product)	12 oz/A (IF)	0.0	0.25 b	0.00	6.00	1.00	2.25
2	Orthene 97 (2008 product)	16 oz/A (IF)	0.0	0.25 b	0.00	6.25	3.25	1.25
3	Orthene 97 (2011 product)	12 oz/A (IF)	0.0	0.75 b	0.00	7.00	1.00	1.50
4	Orthene 97 (2011 product)	16 oz/A (IF)	0.0	0.50 b	0.00	2.50	2.00	2.75
5	Orthene 97 (2012 product)	12 oz/A (IF)	0.0	1.00 b	0.25	5.25	1.25	4.00
6	Orthene 97 (2012 product)	16 oz/A (IF)	0.0	0.25 b	0.00	5.50	1.75	3.00
7	Acephate 97	12 oz/A (IF)	0.0	0.75 b	0.25	5.50	3.00	3.00
8	Acephate 97	16 oz/A (IF)	0.0	0.50 b	0.00	4.25	3.00	3.00
9	Orthene 97 (2012 product)	6 oz/A (BC @ late GC)	0.0	4.25 a	0.50	5.00	2.75	1.25
	LSD		NS	1.45	NS	NS	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

Table 53. Tomato spotted wilt virus (TSWV) hits and yield, PT12-THP-5. Tidewater AREC, Suffolk, VA, 2012. Treatment 9 was broadcast on May 21.

#	Material	Rate	TSWV hits/70 row ft ¹		Yield ² (lb/A)
			Jun 14	Sep 10	
1	Orthene 97 (2008 product)	12 oz/A (IF)	0.00	2.50 b	5170
2	Orthene 97 (2008 product)	16 oz/A (IF)	0.00	2.50 b	5427
3	Orthene 97 (2011 product)	12 oz/A (IF)	0.25	1.50 b	5249
4	Orthene 97 (2011 product)	16 oz/A (IF)	0.00	1.50 b	5482
5	Orthene 97 (2012 product)	12 oz/A (IF)	0.25	1.75 b	5427
6	Orthene 97 (2012 product)	16 oz/A (IF)	0.25	1.50 b	5238
7	Acephate 97	12 oz/A (IF)	0.25	1.75 b	5333
8	Acephate 97	16 oz/A (IF)	0.50	1.75 b	5567
9	Orthene 97 (2012 product)	6 oz/A (BC @ late GC)	0.25	5.50 a	5223
	LSD		NS	1.87	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Based on visual inspection of all plants in two rows from each plot.

²Yield based on weight of peanut with moisture content of 7%. Dig date =September 27 and harvest date = October 11.

Test: PT12-THP-6, Insecticide seed treatments for thrips control in ‘Phillips’ peanut

#	Material ¹	Rate
1	Untreated	---
2	Dynasty PD	0.089 mg ai/seed
3	Cruiser 70WS	0.25 mg ai/seed
4	Dynasty PD + Cruiser 70WS	0.089 mg ai/seed 0.25 mg ai/seed
5	A17461	0.318 mg ai/seed
6	A17461 + Avicta 500FS	0.318 mg ai/seed 0.25 mg ai/seed
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A (IF)
8	Dynasty PD + Temik 15G	0.089 mg ai/seed 7 lb/A (IF)

Test: PT12-THP-6
Year: 2012
Crop: Peanut
Variety: Phillips
Field: 63-b
Location: Tidewater AREC
Experimental design: RCBD

Plot size: 4 rows x 35'
Row spacing: 36"
Planting date: May 4, 2012
Dig date: Sep 24
Harvest date: Sep 27
Row feet harvested: 70

Treatment application(s):

Granular in-furrow	Tractor-mounted inverted jars
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Field preparation: Rip strip till on Mar. 27

Comments: Treated rows = 1 & 2 (Phillips). Guard rows 3 & 4 and borders = CHAMPS.

Test name: **PT12-THP-6**

Herbicides

Date	Product	Rate/A
4/17	Dual Magnum	1 pt
4/17	Acumen	1.5 pt
5/09	Intrro	1 qt
5/09	Grammoxone Inteon	13 oz
6/19	Select Max	1 pt
6/19	Induce (adjuvant)	1 qt*
6/21	Basagran	1 pt
6/21	Storm	1.5 pt
6/21	Coverall (adjuvant)	1 pt*
6/27	Intrro	1 qt
8/31	Ultra Blazer	1.5 pt
8/31	Induce (adjuvant)	1 qt*
*per 100 gal water		

Additional insecticides

Date	Product	Rate/A
6/20	Danitol 2.4EC	3 oz
8/04	Baythroid XL	2 oz

Fungicides

Date	Product	Rate/A
7/18	Provost	8 oz
8/04	Provost	8 oz
8/04	Omega	1 pt
8/23	Provost	8 oz
8/23	Omega	1.5 pt
9/11	Bravo	1.5 pt

Lime, fertilizer, & landplaster

Date	Product	Rate/A
6/18	Landplaster Gypsum 420	1200 lb
6/20	Boron	1 qt
6/20	Mn	1 qt
7/18	Boron	1 qt
7/18	Mn	1 qt
8/04	Mn	1 qt

Fumigants

Date	Product	Rate/A
4/14	Metam 42%	8 gal

Table 54. Stand counts, PT12-THP-6. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	Plants/35 row ft ¹	
			May 16	May 23
1	Untreated	---	103.1	115.5
2	Dynasty PD	0.089 mg ai/seed	104.9	116.4
3	Cruiser 70WS	0.25 mg ai/seed	100.0	113.9
4	Dynasty PD + Cruiser 70WS	0.089 mg ai/seed 0.25 mg ai/seed	102.8	115.9
5	A17461	0.318 mg ai/seed	105.0	119.9
6	A17461 + Avicta 500FS	0.318 mg ai/seed 0.25 mg ai/seed	103.6	121.1
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A	102.4	115.9
8	Dynasty PD + Temik 15G	0.089 mg ai/seed 7 lb/A	106.6	118.1
	LSD		NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹*Based on sampling all plants in rows 1 and 2 of each plot.*

Table 55. Thrips injury ratings¹, PT12-THP-6. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	May 24	May 31	Jun 6	Jun 14
1	Untreated	---	3.56 a	5.44 a	5.75 a	5.13 a
2	Dynasty PD	0.089 mg ai/seed	3.38 a	5.06 a	5.50 b	4.56 b
3	Cruiser 70WS	0.25 mg ai/seed	1.56 bc	3.63 b	4.63 cd	3.75 d
4	Dynasty PD + Cruiser 70WS	0.089 mg ai/seed 0.25 mg ai/seed	1.69 bc	3.63 b	4.44 d	3.81 cd
5	A17461	0.318 mg ai/seed	1.69 bc	3.75 b	4.75 c	4.13 c
6	A17461 + Avicta 500FS	0.318 mg ai/seed 0.25 mg ai/seed	1.75 b	4.00 b	4.69 c	3.88 cd
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A (IF)	1.38 c*	1.81 c*	1.56 e*	1.50 e*
8	Dynasty PD + Temik 15G	0.089 mg ai/seed 7 lb/A (IF)	0.94 d	1.75 c	1.31 f	1.25 e
	LSD		0.36	0.53	0.24	0.36

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Thrips injury rated on a 0-10 scale, 0 = no injury and 10 = dead plants. Peanut was planted on May 4.

*Phytotoxicity was observed in this treatment.

Table 56. Mean number of thrips per 10 terminal leaflets at 13 days after planting, PT12-THP-6. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	May 17						
			Immature	Total adult	Tobacco thrips	Western flower thrips	Eastern flower thrips	Onion thrips	Soybean thrips
1	Untreated	---	0.0	9.00 b	6.25 b	0.75	0.0	2.00 ab	0.0
2	Dynasty PD	0.089 mg ai/seed	0.0	17.50 a	11.25 a	2.75	0.0	3.50 a	0.0
3	Cruiser 70WS	0.25 mg ai/seed	0.0	3.00 cd	1.50 cd	1.50	0.0	0.00 b	0.0
4	Dynasty PD + Cruiser 70WS	0.089 mg ai/seed 0.25 mg ai/seed	0.0	4.75 b-d	4.00 b-d	0.75	0.0	0.00 b	0.0
5	A17461	0.318 mg ai/seed	0.0	4.00 cd	2.50 cd	1.25	0.0	0.25 b	0.0
6	A17461 + Avicta 500FS	0.318 mg ai/seed 0.25 mg ai/seed	0.0	4.50 b-d	3.25 b-d	1.25	0.0	0.00 b	0.0
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A (IF)	0.0	7.25 bc	4.50 bc	0.50	0.0	2.25 ab	0.0
8	Dynasty PD + Temik 15G	0.089 mg ai/seed 7 lb/A (IF)	0.0	1.50 d	1.25 d	0.25	0.0	0.00 b	0.0
	LSD		NS	4.59	3.21	NS	NS	2.36	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

Table 57. Mean number of thrips per 10 terminal leaflets at 27 days after planting, PT12-THP-6. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	May 31						
			Immature	Total adult	Tobacco thrips	Western flower thrips	Eastern flower thrips	Onion thrips	Soybean thrips
1	Untreated	---	16.50 ab	0.75	0.25	0.00	0.25	0.25	0.00
2	Dynasty PD	0.089 mg ai/seed	24.25 a	2.25	2.25	0.00	0.00	0.00	0.00
3	Cruiser 70WS	0.25 mg ai/seed	11.25 bc	1.50	1.25	0.00	0.00	0.25	0.00
4	Dynasty PD + Cruiser 70WS	0.089 mg ai/seed 0.25 mg ai/seed	22.75 a	3.50	2.50	0.50	0.00	0.50	0.00
5	A17461	0.318 mg ai/seed	16.00 ab	2.50	2.00	0.25	0.00	0.25	0.00
6	A17461 + Avicta 500FS	0.318 mg ai/seed 0.25 mg ai/seed	12.50 bc	2.25	2.00	0.25	0.00	0.00	0.00
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A (IF)	7.75 bc	2.50	2.00	0.25	0.00	0.25	0.00
8	Dynasty PD + Temik 15G	0.089 mg ai/seed 7 lb/A (IF)	6.00 c	3.75	3.00	0.75	0.00	0.00	0.00
	LSD		9.51	NS	NS	NS	NS	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

Table 58. Mean number of arthropods per 15-sweep sample (based on one sample per plot), PT12-THP-6. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	Jun 11									
			Leaf-hopper adults	Leaf-hopper nymphs	Click beetles	Minute pirate bugs	Spiders	Three-cornered alfalfa hoppers	Tarnished plant bugs	Grasshoppers	Lady beetles	Cucumber beetles
1	Untreated	---	3.25	0.00	0.00	0.00 c	0.75	0.25	0.00	0.25	0.25	0.00
2	Dynasty PD	0.089 mg ai/seed	7.75	0.75	0.25	0.00 c	0.75	0.75	0.00	0.00	0.25	0.00
3	Cruiser 70WS	0.25 mg ai/seed	5.75	0.00	0.00	0.50 b	0.00	1.75	0.00	0.00	0.00	0.25
4	Dynasty PD + Cruiser 70WS	0.089 mg ai/seed 0.25 mg ai/seed	2.50	0.00	0.25	0.00 c	0.50	0.75	0.00	0.00	0.00	0.00
5	A17461	0.318 mg ai/seed	7.00	0.00	0.25	0.00 c	0.25	1.25	0.00	0.00	0.25	0.00
6	A17461 + Avicta 500FS	0.318 mg ai/seed 0.25 mg ai/seed	4.75	0.00	0.00	0.00 c	0.50	1.25	0.00	0.00	0.00	0.00
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A (IF)	1.50	0.00	0.00	0.00 c	0.25	1.25	0.00	0.00	0.00	0.00
8	Dynasty PD + Temik 15G	0.089 mg ai/seed 7 lb/A (IF)	2.75	0.00	0.00	1.00 a	0.50	0.75	0.25	0.00	0.00	0.00
	LSD		NS	NS	NS	0.49	NS	NS	NS	NS	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

Table 59. Tomato spotted wilt virus (TSWV) hits and yield, PT12-THP-6. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	TSWV hits/70 row ft ¹			Yield ² (lb/A)
			Jun 14	Aug 3	Sep 10	
1	Untreated	---	1.25	26.75 a	36.50 a	4996
2	Dynasty PD	0.089 mg ai/seed	0.75	11.75 b	20.50 b	5027
3	Cruiser 70WS	0.25 mg ai/seed	1.00	10.50 b	21.25 b	5142
4	Dynasty PD + Cruiser 70WS	0.089 mg ai/seed 0.25 mg ai/seed	2.25	12.75 b	18.50 b	5205
5	A17461	0.318 mg ai/seed	1.50	9.50 b	22.75 b	5228
6	A17461 + Avicta 500FS	0.318 mg ai/seed 0.25 mg ai/seed	0.50	9.50 b	16.50 b	5306
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A (IF)	0.00	11.25 b	16.75 b	5067
8	Dynasty PD + Temik 15G	0.089 mg ai/seed 7 lb/A (IF)	0.50	9.75 b	19.00 b	5394
	LSD		NS	7.31	7.54	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹Based on visual inspection of all plants in two rows from each plot.

²Yield based on weight of peanut with moisture content of 7%. Dig date = September 24 and harvest date = September 27.

Test: PT12-THP-8, On-farm evaluation of CruiserMaxx seed treatments for thrips management in peanut

#	Material ¹	Rate
1	Trilex Optimum + Pittmans' normal thrips management program (Thimet 20G @ 5 lb/A)	
2	CruiserMaxx Peanut Custom Blend (KP)—Powder	4 oz/cwt

¹Treatments applied by Crocker Brothers, Windsor, VA. Both treatments include Optimize Lift @ 14.5 oz/A + Proline @ 5.7 oz/A applied as liquid in-furrows at planting.

Test: PT12-THP-8
Year: 2012
Crop: Peanut
Variety: Bailey
Field: n/a
Location: Steven and Michael Pittman farm, Surry Co., VA
Experimental design: Replicated strip

Plot size: 16 rows x 945 ft
Row spacing: 34"
Planting date: May 11
Dig date: Sep 24
Harvest date: Oct 13
Row feet harvested: 1890

Table 60. Thrips injury ratings and yield, PT12-THP-8 (Pittman farm, Surry Co., VA). Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	Thrips injury rating ¹		Yield ² (lb/A)
			May 29	Jun 5	
1	Trilex Optimum + Pittmans' normal thrips management program (Thimet 20G @ 5 lb/A)		0.25 b	0.50 b	5682 a
2	CruiserMaxx Peanut Custom Blend (KP)—Powder	4 oz/cwt	0.92 a	3.42 a	5555 b
	LSD		0.36	0.36	109.1

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹Thrips injury rated on a 0-10 scale, 0 = no injury and 10 = dead plants. Peanut was planted on May 11.

²Yield based on weight of peanut with moisture content of 7%. Dig date = September 24 and harvest date = October 13.

Test: PT12-THP-9, On-farm evaluation of granular in-furrow and CruiserMaxx seed treatments for thrips management in peanut

#	Material ¹	Rate	Variety
1	Dynasty PD	0.089 mg ai/seed	Bailey
2	A17461	0.318 mg ai/seed	Bailey
3	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A	Bailey
4	Trilex		Bailey
5	Dynasty PD	0.089 mg ai/seed	Phillips
6	A17461	0.318 mg ai/seed	Phillips
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A	Phillips
8	Trilex		Phillips

Test: PT12-THP-9
Year: 2012
Crop: Peanut
Varieties: Phillips & Bailey
Field: n/a
Location: Steven and Michael Pittman farm, Surry Co., VA
Experimental design: Replicated strip

Plot size: 1 row
Row spacing: 34"
Planting date: May 11
Dig date: Sep 24
Harvest date: Oct 13
Row feet harvested: n/a

Table 61. Thrips injury ratings¹, PT12-THP-9 (Pittman farm, Surry Co., VA). Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	Variety	May 29	Jun 5
1	Dynasty PD	0.089 mg ai/seed	Bailey	1.00 a	3.63 a
2	A17461	0.318 mg ai/seed	Bailey	0.25 b	0.50 c
3	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A	Bailey	0.25 b	0.50 c
4	Trilex		Bailey	1.00 a	3.50 ab
5	Dynasty PD	0.089 mg ai/seed	Phillips	1.13 a	3.38 b
6	A17461	0.318 mg ai/seed	Phillips	0.25 b	0.50 c
7	Dynasty PD + Thimet 20G	0.089 mg ai/seed 5 lb/A	Phillips	0.25 b	0.50 c
8	Trilex		Phillips	1.00 a	3.63 a
	LSD			0.47	0.22

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹*Thrips injury rated on a 0-10 scale, 0 = no injury and 10 = dead plants. Peanut was planted on May 11.*

Test: PT12-SCR-1, Belay for rootworm management in peanut

#	Material	Rate	Date treated
1	Untreated	---	
2	Belay 2.13SC	12 oz/A (=4.67 oz/A applied in a 14-inch band, pre-plant incorporated)	Apr 14
3	Belay 2.13SC	12 oz/A (IF)	May 4
4	Belay 2.13SC	12 oz/A (broadcast at pegging)	Jul 2
5	Lorsban 15G	13 lb/A (at pegging)	Jul 2

Test: PT12-SCR-1
Year: 2012
Crop: Peanut
Variety: CHAMPS
Field: 63-b
Location: Tidewater AREC
Experimental design: RCBD

Plot size: 4 rows x 40'
Row spacing: 36"
Planting date: May 4, 2012
Dig date: Sep 24
Harvest date: Sep 27
Row feet harvested: 80

Treatment application(s):

Band with backpack (trt 2)	Nozzle type: 8004E	Nozzle spacing: 36"	PSI: 23	GPA: 16.8
Liquid in-furrow (trt 3)	Nozzle type: microtube	Nozzle spacing: 36"	PSI: 51	GPA: 5
Broadcast with backpack (trt 4)	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 16.8	GPA: 14.3
Band using bike rig (trt 5): applied in a 12-14" band over the row with a field cycle-mounted Noble applicator, setting = 12				

Field preparation: Rip-strip till on Mar. 27

Comments: Started test on row 5 (when facing Hare Road); treated rows = 1 and 2. Rows 3 & 4 and borders = CHAMPS.

Test name: **PT12-SCR-1**

Herbicides

Date	Product	Rate/A
4/17	Dual Magnum	1 pt
4/17	Acumen	1.5 pt
5/09	Intrro	1 qt
5/09	Grammoxone Inteon	13 oz
6/19	Select Max	1 pt
6/19	Induce (adjuvant)	1 qt*
6/21	Basagran	1 pt
6/21	Storm	1.5 pt
6/21	Coverall (adjuvant)	1 pt*
6/27	Intrro	1 qt
8/31	Ultra Blazer	1.5 pt
8/31	Induce (adjuvant)	1 qt*
*per 100 gal water		

Additional insecticides

Date	Product	Rate/A
6/04	Orthene 97	8 oz
6/20	Danitol 2.4EC	3 oz
8/04	Baythroid XL	2 oz

Fungicides

Date	Product	Rate/A
7/18	Provost	8 oz
8/04	Provost	8 oz
8/04	Omega	1 pt
8/23	Provost	8 oz
8/23	Omega	1.5 pt
9/11	Bravo	1.5 pt

Lime, fertilizer, & landplaster

Date	Product	Rate/A
6/18	Landplaster Gypsum 420	1200 lb
6/20	Boron	1 qt
6/20	Mn	1 qt
7/18	Boron	1 qt
7/18	Mn	1 qt
8/04	Mn	1 qt

Fumigants

Date	Product	Rate/A
4/14	Metam 42%	8 gal

Table 62. Southern corn rootworm mean percent damaged pods¹ and yield, PT12-SCR1. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate and timing	Mean percent scarified pods	Mean percent penetrated pods	Yield ² (lb/A)
1	Untreated	---	33.25 a	3.00	3779
2	Belay 2.13SC	12 oz/A (=4.67 oz/A applied in a 14-inch band, pre-plant incorporated)	20.75 b	1.50	4153
3	Belay 2.13SC	12 oz/A (IF)	16.75 bc	0.00	3574
4	Belay 2.13SC	12 oz/A (broadcast at pegging)	16.75 bc	0.50	3703
5	Lorsban 15G	13 lb/A (at pegging)	12.25 c	0.25	4048
	LSD		7.75	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹*A pre-harvest sample of 100 full-sized pods were randomly selected per plot after digging. Samples were taken on September 25.*

²*Yield based on weight of peanut with moisture content of 7%. Dig date = September 24 and harvest date = September 27.*

Test: PT12-SCR-2, On-farm evaluation of insecticides for southern corn rootworm management in peanut

#	Material	Rate
1	Untreated	---
2	Belay 2.13SC	12 oz/A (pre-plant incorporated)
3	Belay 2.13SC	12 oz/A (broadcast at pegging)
4	Lorsban 15G	13 lb/A (at pegging)

Test: PT12-SCR-2
Year: 2012
Crop: Peanut
Variety: Bailey
Field: n/a
Location: Pittman farm
Experimental design: Replicated strip

Plot size: 4 rows wide
Row spacing: 34"
Planting date: May 11
Dig date: Sep 24
Harvest date: Oct 13
Row feet harvested: n/a

Comments: Yields not available.

Table 63. Southern corn rootworm mean percent damaged pods¹, PT12-SCR2 (Steven and Michael Pittman farm, Surry Co., VA). Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate and timing	Mean percent scarified pods	Mean percent penetrated pods
1	Untreated	---	10.33 a	0.67
2	Belay 2.13SC	12 oz/A (pre-plant incorporated)	4.17 b	0.17
3	Belay 2.13SC	12 oz/A (broadcast at pegging)	4.00 b	0.17
4	Lorsban 15G	13 lb/A (at pegging)	3.50 b	0.17
	LSD		2.41	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹*A pre-harvest sample of 200 full-sized pods were randomly selected per plot after digging. Samples were taken on September 27.*

Test: PT12-CEW-1, Evaluation of foliar insecticides for corn earworm management in peanut

#	Material	Rate	Date treated
1	Prevathon 50SC	8 oz/A	Aug 7
2	Prevathon 50SC	10 oz/A	Aug 7
3	Prevathon 50SC	14 oz/A	Aug 7
4	Prevathon 50SC + Asana XL	10 oz/A 5.8 oz/A	Aug 7
5	Belt 4SC	2 oz/A	Aug 7
6	Besiege 1.25ZC	7 oz/A	Aug 7
7	Steward 1.25EC	9 oz/A	Aug 7
8	Untreated	---	---

Test: PT12-CEW-1
Year: 2012
Crop: Peanut
Variety: Bailey
Field: n/a
Location: Pittman farm, Surry Co., VA
Experimental design: RCBD

Plot size: 4 rows x 30'
Row spacing: 34"
Planting date: May 11
Dig date: n/a
Harvest date: n/a
Row feet harvested: n/a

Treatment application(s):

Broadcast using backpack	Nozzle type: D2-13	Nozzle spacing: 3 per row (full coverage boom)	PSI: 42	GPA: 14.7
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Table 64. Mean number of larvae per 3-ft beat cloth sample¹, PT12-CEW-1 (Pittman farm, Surry Co., VA). Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were applied on August 7.

#	Material	Rate	Aug 9				Aug 13			
			Small larvae	Medium larvae	Large larvae	Total larvae	Small larvae	Medium larvae	Large larvae	Total larvae
1	Prevathon 50SC	8 oz/A	0.75 ab	1.75 ab	0.50 b	3.00 a-c	0.13	0.25	0.00 b	0.38 bc
2	Prevathon 50SC	10 oz/A	0.00 c	1.50 a-c	1.00 b	2.50 b-d	0.00	0.13	0.00 b	0.13 bc
3	Prevathon 50SC	14 oz/A	0.25 bc	1.88 a	1.13 ab	3.25 ab	0.00	0.25	0.00 b	0.25 bc
4	Prevathon 50SC + Asana XL	10 oz/A 5.8 oz/A	0.13 c	0.75 bc	0.13 b	1.00 e	0.00	0.00	0.00 b	0.00 c
5	Belt 4SC	2 oz/A	0.50 a-c	1.50 a-c	2.13 a	4.13 a	0.00	0.13	0.38 a	0.50 b
6	Besiege 1.25ZC	7 oz/A	0.00 c	1.13 a-c	0.63 b	1.75 c-e	0.00	0.13	0.00 b	0.13 bc
7	Steward 1.25EC	9 oz/A	0.13 c	0.63 c	0.63 b	1.38 de	0.00	0.13	0.00 b	0.13 bc
8	Untreated	---	0.88 a	2.13 a	1.00 b	4.00 a	0.13	0.50	0.50 a	1.13 a
	LSD		0.52	1.00	1.06	1.31	NS	NS	0.27	0.50

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Based on two beat cloth samples per plot (rows 2 and 3).

Test: PT12-CEW-2, Evaluation of foliar insecticides for corn earworm management in peanut

#	Material	Rate	Date treated
1	Besiege 1.25ZC	9 oz/A	Aug 7
2	Lannate LV	1.75 pt/A	Aug 7
3	Steward 1.25EC	9 oz/A	Aug 7
4	Belt SC	3 oz/A	Aug 7
5	Baythroid XL	2.4 oz/A	Aug 7
6	Blackhawk	3 oz/A	Aug 7
7	Danitol	12 oz/A	Aug 7
8	Untreated	---	---

Test: PT12-CEW-2
Year: 2012
Crop: Peanut
Variety: Bailey
Field: n/a
Location: Pittman farm, Surry Co., VA
Experimental design: RCBD

Plot size: 4 rows x 30'
Row spacing: 34"
Planting date: May 11
Dig date: n/a
Harvest date: n/a
Row feet harvested: n/a

Treatment application(s):

Broadcast using backpack	Nozzle type: D2-13	Nozzle spacing: 3 per row (full coverage boom)	PSI: 42	GPA: 14.7
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Table 65. Mean number of larvae per 3-ft beat cloth sample¹, PT12-CEW-2 (Pittman farm, Surry Co., VA). Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were applied on August 7.

#	Material	Rate	Aug 9				Aug 13			
			Small larvae	Medium larvae	Large larvae	Total larvae	Small larvae	Medium larvae	Large larvae	Total larvae
1	Besiege 1.25ZC	9 oz/A	0.13	1.63 ab	0.75	2.50 b	0.13	0.25	0.00	0.38
2	Lannate LV	1.75 pt/A	0.00	0.50 cd	1.00	1.50 b	0.13	0.75	0.25	1.13
3	Steward 1.25EC	9 oz/A	0.13	1.38 a-c	0.88	2.38 b	0.25	0.13	0.13	0.50
4	Belt SC	3 oz/A	0.25	1.88 a	0.50	2.63 ab	0.00	0.38	0.00	0.38
5	Baythroid XL	2.4 oz/A	0.63	1.38 a-c	0.88	2.88 ab	0.13	0.63	0.00	0.75
6	Blackhawk	3 oz/A	0.25	0.88 b-d	1.38	2.50 b	0.00	0.25	0.38	0.63
7	Danitol	12 oz/A	0.25	0.13 d	1.13	1.50 b	0.13	0.25	0.38	0.75
8	Untreated	---	0.50	2.00 a	1.50	4.00 a	0.63	0.50	0.13	1.25
	LSD		NS	0.98	NS	1.46	NS	NS	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹*Based on two beat cloth samples per plot (rows 2 and 3).*

2012



Soybean Insect Pest Management Tests and Demonstrations

Test: SB12-THP-1, Evaluation of seed treatments on four soybean varieties

#	Variety	Material ¹	Rate
1	HBK RY4620	Untreated	---
2		Gaicho 600FS	62.5 g ai/100 kg
3		Poncho Votivo	0.13 mg ai/seed
4		Gaicho 600FS + Poncho Votivo	78.1 g ai/100 kg 0.13 mg ai/seed
5	HBK R4924	Untreated	---
6		Gaicho 600FS	62.5 g ai/100 kg
7		Poncho Votivo	0.13 mg ai/seed
8		Gaicho 600FS + Poncho Votivo	78.1 g ai/100 kg 0.13 mg ai/seed
9	HBK RY5221	Untreated	---
10		Gaicho 600FS	62.5 g ai/100 kg
11		Poncho Votivo	0.13 mg ai/seed
12		Gaicho 600FS + Poncho Votivo	78.1 g ai/100 kg 0.13 mg ai/seed
13	HBK RY5521	Untreated	---
14		Gaicho 600FS	62.5 g ai/100 kg
15		Poncho Votivo	0.13 mg ai/seed
16		Gaicho 600FS + Poncho Votivo	78.1 g ai/100 kg 0.13 mg ai/seed

¹All treatments contain Pentri @ 0.015 mg ai/seed, Allegiance FL @ 0.027 mg ai/seed, Pro-ized red colorant @ 19.6-32.6 ml/100 kg, and Precise S Finisher 1010 @ 65 ml/100 kg.

Test: SB12-THP-1
Year: 2012
Crop: Soybean
Varieties: HBK RY4620, HBK R4924, HBK RY5221, HBK RY5521
Field: 43
Location: Tidewater AREC

Experimental design: RCBD
Plot size: 5 rows x 24'
Row spacing: 15"
Planting date: May 8, 2012
Harvest date: Oct. 23
Row feet harvested: 51

Field preparation: Disk/field condition on May 1; field condition on May 8.

Comments: Harvested 3 center rows (3 rows x 17'). 24-ft big alley behind test planted with eight plots of 'fill' soybean. There was no noticeable bean leaf beetle injury on June 14.

Test name: **SB12-THP-1**

Herbicides

Date	Product	Rate/A
5/08	Dual	20 oz
5/08	Prowl	24 oz
6/11	Roundup Weather Max	22 oz
6/11	First Rate	0.3 oz
7/26	Buccaneer	1 qt

Additional insecticides

Date	Product	Rate/A
8/13	Baythroid XL	3 oz

Fertilizer

Date	Product	Rate/A
4/20	3-9-30	250 lb
6/11	Mn	1 qt

Fungicides

Date	Product	Rate/A

Other

Date	Product	Rate/A

Table 66. Date of first emergence, stand counts, thrips injury ratings¹, and yield², SB12-THP-1. Tidewater AREC, Suffolk, VA, 2012. Planting date was May 8, 2012.

#	Variety	Material	Rate	Date of first emergence	Plants/10 row ft	Thrips injury rating			Yield (bu/acre)
					May 22	May 29	Jun 8	Jun 14	
1	HBK RY4620	Untreated	---	May 16-17	29.5	0.94 a	1.75 a	1.88 a	73.1 c-e
2		Gaucho 600FS	62.5 g ai/100 kg	May 15-17	30.8	0.31 d	0.81 b	1.06 bc	68.8 e
3		Poncho Votivo	0.13 mg ai/seed	May 16-17	29.9	0.44 cd	0.75 b	1.06 bc	77.3 a-e
4		Gaucho 600FS + Poncho Votivo	78.1 g ai/100 kg 0.13 mg ai/seed	May 15-16	30.4	0.25 d	0.50 c	0.75 d	80.9 a-e
5	HBK R4924	Untreated	---	May 15-17	32.9	0.81 a	1.75 a	1.94 a	80.3 a-e
6		Gaucho 600FS	62.5 g ai/100 kg	May 15	36.5	0.31 d	0.81 b	1.25 b	74.1 b-e
7		Poncho Votivo	0.13 mg ai/seed	May 15-16	39.1	0.56 bc	0.81 b	1.19 b	70.3 de
8		Gaucho 600FS + Poncho Votivo	78.1 g ai/100 kg 0.13 mg ai/seed	May 15-17	36.1	0.25 d	0.69 b	0.88 cd	68.0 e
9	HBK RY5221	Untreated	---	May 16-17	32.6	0.75 ab	1.75 a	2.06 a	85.3 a-d
10		Gaucho 600FS	62.5 g ai/100 kg	May 15-16	35.0	0.25 d	0.81 b	1.06 bc	80.1 a-e
11		Poncho Votivo	0.13 mg ai/seed	May 15-17	33.4	0.38 cd	0.75 b	1.19 b	92.3 a
12		Gaucho 600FS + Poncho Votivo	78.1 g ai/100 kg 0.13 mg ai/seed	May 16-17	33.3	0.31 d	0.50 c	0.88 cd	79.5 a-e
13	HBK RY5521	Untreated	---	May 16-17	33.9	0.75 ab	1.75 a	1.88 a	87.5 a-c
14		Gaucho 600FS	62.5 g ai/100 kg	May 15-17	30.1	0.25 d	0.81 b	1.13 b	92.1 a
15		Poncho Votivo	0.13 mg ai/seed	May 16-17	36.9	0.44 cd	0.81 b	1.06 bc	87.7 a-c
16		Gaucho 600FS + Poncho Votivo	78.1 g ai/100 kg 0.13 mg ai/seed	May 16-17	25.5	0.25 d	0.50 c	0.88 cd	90.3 ab
	LSD			---	NS	0.24	0.14	0.21	16.30

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Thrips injury based on a 0-5 scale, 0 = no injury and 5 = 100% damaged plants.

²Yield based on weight of soybean with moisture content of 13%.

Test: SB12-THP-2, Evaluation of soybean seed treatments

#	Material ¹	Rate
1	Untreated	---
2	Gaicho 600FS	62.5 g ai/100 kg
3	Poncho Votivo	0.13 mg ai/seed
4	Gaicho 600FS + Poncho Votivo	78.1 g ai/100 kg 0.13 mg ai/seed
5	Cruiser 5FS	50 g ai/100 kg

¹Treatments 1-4 contain Pentri @ 0.015 mg ai/seed, Allegiance FL @ 0.027 mg ai/seed, Pro-ized red colorant @ 19.6-32.6 ml/100 kg, and Precise S Finisher 1010 @ 65 ml/100 kg. Treatment 5 contains Maxim @ 2.5 g ai/100 kg, Apron XL LS @ 7.5 g ai/100 kg, Pro-ized blue colorant @ 32.6 ml/100 kg, and Precise S Finisher 1010 @ 65 ml/100 kg.

Test: SB12-THP-2
Year: 2012
Crop: Soybean
Variety: HBK RY4620
Field: 43
Location: Tidewater AREC

Experimental design: RCBD
Plot size: 5 rows x 24'
Row spacing: 15"
Planting date: May 8, 2012
Harvest date: Oct. 23
Row feet harvested: 51

Field preparation: Disk/field condition on May 1; field condition on May 8.

Comments: Harvested 3 center rows (3 rows x 17'). There was no noticeable bean leaf beetle injury on June 14.

Table 67. Thrips injury ratings¹ and yield², SB12-THP-2. Tidewater AREC, Suffolk, VA, 2012. Planting date was May 8, 2012.

#	Material ¹	Rate	Thrips injury rating			Yield (bu/acre)
			May 29	Jun 8	Jun 14	
1	Untreated	---	0.81 a	1.56 a	2.00 a	62.2
2	Gaucho 600FS	62.5 g ai/100 kg	0.25 b	0.81 c	0.75 c	63.4
3	Poncho Votivo	0.13 mg ai/seed	0.44 b	0.75 c	0.94 b	58.1
4	Gaucho 600FS + Poncho Votivo	78.1 g ai/100 kg 0.13 mg ai/seed	0.25 b	0.25 d	0.75 c	61.4
5	Cruiser 5FS	50 g ai/100 kg	0.25 b	1.25 b	1.00 b	68.1
	LSD		0.25	0.20	0.09	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

¹Thrips injury based on a 0-5 scale, 0 = no injury and 5 = 100% damaged plants.

²Yield based on weight of soybean with moisture content of 13%.

Test: SB12-THP-3, Evaluation of seed treatments for thrips and bean leaf beetle management in soybean

#	Material	Rate
1	Cruiser Maxx Plus	3.20 oz/cwt
2	Rizolex Flowable + Sebring 318FS + NipsIT INSIDE	0.30 oz/cwt 0.75 oz/cwt 1.28 oz/cwt
3	Rizolex Flowable + AP2 Fungicide + Sebring 318FS + NipsIT INSIDE	0.30 oz/cwt 0.30 oz/cwt 0.1 oz/cwt 1.28 oz/cwt

Test: SB12-THP-3
Year: 2012
Crop: Soybean
Variety: Pioneer 95Y01
Field: 43
Location: Tidewater AREC

Experimental design: RCBD
Plot size: 5 rows x 24'
Row spacing: 15"
Planting date: May 8, 2012
Harvest date: Oct. 23
Row feet harvested: 51

Field preparation: Disk/field condition on May 1; field condition on May 8.

Comments: Harvested 3 center rows (3 rows x 17'). There was no noticeable bean leaf beetle injury on June 14.

Test name: **SB12-THP-3**

Herbicides

Date	Product	Rate/A
5/08	Dual	20 oz
5/08	Prowl	24 oz
6/11	Roundup Weather Max	22 oz
6/11	First Rate	0.3 oz
7/26	Buccaneer	1 qt

Additional insecticides

Date	Product	Rate/A
8/13	Baythroid XL	3 oz

Fertilizer

Date	Product	Rate/A
4/20	3-9-30	250 lb
6/11	Mn	1 qt

Fungicides

Date	Product	Rate/A

Other

Date	Product	Rate/A

Table 68. Stand counts per 10 row feet, thrips injury ratings¹, and yield², SB12-THP-3. Tidewater AREC, Suffolk, VA, 2012.

#	Material	Rate	Plants/10 row ft	Thrips injury rating			Yield (bu/acre)
			May 22	May 29	Jun 8	Jun 14	
1	Cruiser Maxx Plus	3.20 oz/cwt	37.3	0.25	1.25 a	0.94	65.8
2	Rizolex Flowable + Sebring 318FS +NipsIT INSIDE	0.30 oz/cwt 0.75 oz/cwt 1.28 oz/cwt	35.8	0.25	0.69 b	0.81	63.7
3	Rizolex Flowable + AP2 Fungicide + Sebring 318FS + NipsIT INSIDE	0.30 oz/cwt 0.30 oz/cwt 0.1 oz/cwt 1.28 oz/cwt	35.5	0.25	0.75 b	0.94	69.4
	LSD		NS	NS	0.12	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

¹Thrips injury based on a 0-5 scale, 0 = no injury and 5 = 100% damaged plants.

²Yield based on weight of soybean with moisture content of 13%.

Test: SB12-BLB-1, Efficacy of selected insecticides against bean leaf beetle in soybean

#	Material	Rate	Date(s) treated
1	Leverage 360 + Induce (NIS)	2.8 oz/A 0.25% v/v	Jul 17
2	Leverage 360 + Crop oil concentrate	2.8 oz/A 1% v/v	Jul 17
3	Baythroid XL	2.3 oz/A	Jul 17
4	Karate Z	1.7 oz/A	Jul 17
5	Endigo ZCX	4.5 oz/A	Jul 17
6	Belay 2.13 SC	3 oz/A	Jul 17
7	Belay 2.13 SC	4 oz/A	Jul 17
8	Brigade 2EC	5 oz/A	Jul 17
9	Cobalt Advanced	19 oz/A	Jul 17
10	Untreated		---

Test: SB12-BLB-1
Year: 2012
Crop: Soybean
Variety: Pioneer 95Y20
Field: n/a
Location: E.T. Drewry farm, Sussex Co., VA

Experimental design: RCBD
Plot size: 12' wide x 40' long
Row spacing: 7.5"
Planting date: May 10, 2012
Harvest date: n/a
Row feet harvested: n/a

Treatment application(s):

Broadcast using backpack	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 17	GPA: 14.3
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Comments: Pre-treatment counts on July 16 indicated a mean of 58.6 bean leaf beetles per 15 sweeps (n=5). N37.01939 W76.99831

Table 69. Mean number of insects per 15 sweeps at 6 and 9 days after treatment, SB12-BLB-1 (Drewry farm, Sussex Co., VA). Tidewater AREC, Suffolk, VA, 2012. Treatments were applied on July 17.

#	Material	Rate	6 days after treatment		9 days after treatment	
			Bean leaf beetle	Green clover-worm	Bean leaf beetle	Green clover-worm
1	Leverage 360 + Induce (NIS)	2.8 oz/A 0.25% v/v	1.00 c	0.00	2.00 b	0.00
2	Leverage 360 + Crop oil concentrate	2.8 oz/A 1% v/v	1.50 c	0.00	1.25 b	0.00
3	Baythroid XL	2.3 oz/A	5.50 b	0.25	2.25 b	0.00
4	Karate Z	1.7 oz/A	1.00 c	0.00	0.50 b	0.25
5	Endigo ZCX	4.5 oz/A	1.75 c	0.00	2.00 b	0.25
6	Belay 2.13 SC	3 oz/A	1.00 c	0.25	1.50 b	0.00
7	Belay 2.13 SC	4 oz/A	1.75 c	0.00	1.50 b	0.00
8	Brigade 2EC	5 oz/A	1.25 c	0.00	1.25 b	0.00
9	Cobalt Advanced	19 oz/A	3.50 bc	0.00	2.25 b	0.00
10	Untreated		20.00 a	0.00	4.75 a	0.00
	LSD		2.61	NS	1.85	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

Test: SB12-BMSB-1, Evaluation of foliar broadcast insecticides for brown marmorated stink bug management in soybean

#	Material	Rate	Date treated
1	Vydate L	1 pt/A	Aug 22
2	Vydate L	1.5 pt/A	Aug 22
3	Lannate LV	1 pt/A	Aug 22
4	Lannate LV	1.5 pt/A	Aug 22
5	Brigade 2EC	5.12 oz/A	Aug 22
6	Untreated	---	---

Test: SB12-BMSB-1
Year: 2012
Crop: Soybean
Variety:
Field: n/a
Location: Bob Martin farm, Appomattox Co., VA

Experimental design: RCBD
Plot size: 6' x 25'
Row spacing:
Planting date:
Harvest date: n/a
Row feet harvested: n/a

Treatment application(s):

Broadcast using backback	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 18	GPA: 14.3
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Table 70. Mean number of stink bugs (multiple species) per 3-ft rigid beat sheet sample, SB12-BMSB-1 (Appomattox Co., VA). Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were applied on August 22.

#	Material	Rate	Aug 24 (2 DAT)								
			BMSB adults	BMSB nymphs	Total other	Green adults	Green nymphs	Brown adults	Brown nymphs	Red-shouldered adults	Red-shouldered nymphs
1	Vydate L	1 pt/A	0.00	0.00 b	0.00	0.00	0.00 b	0.00	0.00	0.00	0.00
2	Vydate L	1.5 pt/A	0.00	0.00 b	0.25	0.00	0.25 b	0.00	0.00	0.00	0.00
3	Lannate LV	1 pt/A	0.00	0.25 b	0.25	0.00	0.00 b	0.00	0.00	0.00	0.25
4	Lannate LV	1.5 pt/A	0.00	0.25 b	0.00	0.00	0.00 b	0.00	0.00	0.00	0.00
5	Brigade 2EC	5.12 oz/A	0.00	0.25 b	0.25	0.00	0.00 b	0.25	0.00	0.00	0.00
6	Untreated	---	0.00	2.25 a	1.75	0.25	0.75 a	0.00	0.50	0.25	0.00
	LSD		NS	1.37	NS	NS	0.42	NS	NS	NS	NS

#	Material	Rate	Aug 27 (5 DAT)								
			BMSB adults	BMSB nymphs	Total other	Green adults	Green nymphs	Brown adults	Brown nymphs	Red-shouldered adults	Red-shouldered nymphs
1	Vydate L	1 pt/A	0.00	0.00 b	0.50	0.00	0.25	0.25	0.00	0.00	0.00
2	Vydate L	1.5 pt/A	0.00	0.00 b	0.25	0.00	0.25	0.00	0.00	0.00	0.00
3	Lannate LV	1 pt/A	0.00	0.25 b	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Lannate LV	1.5 pt/A	0.00	0.00 b	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Brigade 2EC	5.12 oz/A	0.00	0.00 b	0.75	0.00	0.25	0.25	0.00	0.25	0.00
6	Untreated	---	0.00	0.75 a	0.50	0.00	0.25	0.00	0.25	0.00	0.00
	LSD		NS	0.42	NS	NS	NS	NS	NS	NS	NS

#	Material	Rate	Aug 30 (8 DAT)								
			BMSB adults	BMSB nymphs	Total other	Green adults	Green nymphs	Brown adults	Brown nymphs	Red-shouldered adults	Red-shouldered nymphs
1	Vydate L	1 pt/A	0.50	0.25	0.25	0.00	0.25	0.00	0.00	0.00	0.00
2	Vydate L	1.5 pt/A	0.00	0.00	0.50	0.25	0.00	0.25	0.00	0.00	0.00
3	Lannate LV	1 pt/A	0.00	0.25	0.25	0.25	0.00	0.00	0.00	0.00	0.00
4	Lannate LV	1.5 pt/A	0.00	0.50	0.25	0.00	0.00	0.25	0.00	0.00	0.00
5	Brigade 2EC	5.12 oz/A	0.00	1.00	0.25	0.00	0.00	0.25	0.00	0.00	0.00
6	Untreated	---	0.25	1.00	0.25	0.00	0.25	0.00	0.00	0.00	0.00
	LSD		NS	NS	NS	NS	NS	NS	NS	NS	NS

#	Material	Rate	Sep 5 (14 DAT)								
			BMSB adults	BMSB nymphs	Total other	Green adults	Green nymphs	Brown adults	Brown nymphs	Red-shouldered adults	Red-shouldered nymphs
1	Vydate L	1 pt/A	0.75	0.50	2.25	0.25	1.25	0.50	0.00	0.25	0.00
2	Vydate L	1.5 pt/A	0.00	0.25	0.50	0.00	0.00	0.00	0.00	0.25	0.25
3	Lannate LV	1 pt/A	0.00	0.00	1.00	0.25	0.25	0.00	0.50	0.00	0.00
4	Lannate LV	1.5 pt/A	0.00	0.00	1.00	0.00	0.75	0.00	0.00	0.25	0.00
5	Brigade 2EC	5.12 oz/A	0.00	1.25	0.50	0.25	0.25	0.00	0.00	0.00	0.00
6	Untreated	---	0.25	1.75	0.75	0.00	0.50	0.00	0.00	0.25	0.00
	LSD		NS	NS	NS	NS	NS	NS	NS	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

Test: SB12-BMSB-3, Evaluation of foliar broadcast insecticides for brown marmorated stink bug management in soybean

#	Material	Rate	Date treated
1	DoubleTake	2 oz/A	Aug 22
2	DoubleTake	4 oz/A	Aug 22
3	Dimilin 2L	2 oz/A	Aug 22
4	Dimilin 2L	4 oz/A	Aug 22
5	Karate Z	1.92 oz/A	Aug 22
6	Orthene 97	14.845 oz/A	Aug 22
7	Untreated	---	---

Test: SB12-BMSB-3
Year: 2012
Crop: Soybean
Variety:
Field: n/a
Location: Bob Martin farm, Appomattox Co., VA

Experimental design: RCBD
Plot size: 6' x 25'
Row spacing:
Planting date:
Harvest date: n/a
Row feet harvested: n/a

Treatment application(s):

Broadcast using backback	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 18	GPA: 14.3
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Table 71. Mean number of stink bugs (multiple species) per 3-ft rigid beat sheet sample, SB12-BMSB-3 (Appomattox Co., VA). Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were applied on August 22.

#	Material	Rate	Aug 24 (2 DAT)								
			BMSB adults	BMSB nymphs	Total other	Green adults	Green nymphs	Brown adults	Brown nymphs	Red-shouldered adults	Red-shouldered nymphs
1	DoubleTake	2 oz/A	0.00	0.00	0.75	0.00	0.00	0.00 b	0.50	0.25	0.00
2	DoubleTake	4 oz/A	0.00	0.00	0.00	0.00	0.00	0.00 b	0.00	0.00	0.00
3	Dimilin 2L	2 oz/A	0.25	1.00	0.00	0.00	0.00	0.00 b	0.00	0.00	0.00
4	Dimilin 2L	4 oz/A	0.00	2.00	2.25	0.00	1.75	0.00 b	0.25	0.00	0.25
5	Karate Z	1.92 oz/A	0.00	0.00	0.25	0.00	0.00	0.00 b	0.00	0.25	0.00
6	Orthene 97	14.845 oz/A	0.00	0.00	0.00	0.00	0.00	0.00 b	0.00	0.00	0.00
7	Untreated	---	0.50	1.50	3.50	0.00	1.00	0.50 a	1.25	0.50	0.25
	LSD		NS	NS	NS	NS	NS	0.32	NS	NS	NS

#	Material	Rate	Aug 27 (5 DAT)								
			BMSB adults	BMSB nymphs	Total other	Green adults	Green nymphs	Brown adults	Brown nymphs	Red-shouldered adults	Red-shouldered nymphs
1	DoubleTake	2 oz/A	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.25	0.00
2	DoubleTake	4 oz/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Dimilin 2L	2 oz/A	0.00	0.50	0.25	0.00	0.00	0.25	0.00	0.00	0.00
4	Dimilin 2L	4 oz/A	0.00	0.50	0.25	0.00	0.25	0.00	0.00	0.00	0.00
5	Karate Z	1.92 oz/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Orthene 97	14.845 oz/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Untreated	---	0.00	0.00	0.75	0.25	0.50	0.00	0.00	0.00	0.00
	LSD		NS	NS	NS	NS	NS	NS	NS	NS	NS

#	Material	Rate	Aug 30 (8 DAT)								
			BMSB adults	BMSB nymphs	Total other	Green adults	Green nymphs	Brown adults	Brown nymphs	Red-shouldered adults	Red-shouldered nymphs
1	DoubleTake	2 oz/A	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	DoubleTake	4 oz/A	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Dimilin 2L	2 oz/A	0.00	1.00	0.25	0.00	0.00	0.00	1.00	0.00	0.00
4	Dimilin 2L	4 oz/A	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Karate Z	1.92 oz/A	0.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00	0.00
6	Orthene 97	14.845 oz/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Untreated	---	0.25	2.25	0.75	0.00	0.50	0.00	0.00	0.00	0.25
	LSD		NS	NS	NS	NS	NS	NS	NS	NS	NS

#	Material	Rate	Sep 5 (14 DAT)								
			BMSB adults	BMSB nymphs	Total other	Green adults	Green nymphs	Brown adults	Brown nymphs	Red-shouldered adults	Red-shouldered nymphs
1	DoubleTake	2 oz/A	0.00	0.00 b	1.00	0.00	0.00	0.75	0.25	0.00	0.00
2	DoubleTake	4 oz/A	0.00	0.00 b	0.25	0.25	0.00	0.00	0.00	0.00	0.00
3	Dimilin 2L	2 oz/A	0.00	0.75 ab	0.25	0.00	0.25	0.00	0.00	0.00	0.00
4	Dimilin 2L	4 oz/A	0.00	0.75 ab	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Karate Z	1.92 oz/A	0.00	0.00 b	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Orthene 97	14.845 oz/A	0.00	0.00 b	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Untreated	---	0.00	1.50 a	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	LSD		NS	0.95	NS	NS	NS	NS	NS	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

Test: SB12-BMSB-4, Evaluation of foliar broadcast insecticides for brown marmorated stink bug management in soybean

#	Material	Rate	Date treated
1	Vydate L	1 pt/A	Aug 28
2	Vydate L	1.5 pt/A	Aug 28
3	Lannate LV	1 pt/A	Aug 28
4	Lannate LV	1.5 pt/A	Aug 28
5	Brigade 2EC	5.12 oz/A	Aug 28
6	Untreated	---	---

Test: SB12-BMSB-4
Year: 2012
Crop: Soybean
Variety: USG 74B58
Field: n/a
Location: Vern Moyer farm, Goochland Co., VA

Experimental design: RCBD
Plot size: 6' x 30'
Row spacing: 7.5"
Planting date: May 10
Harvest date: n/a
Row feet harvested: n/a

Treatment application(s):

Broadcast using backpack	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 18	GPA: 14.3
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Table 72. Mean number of stink bugs (multiple species) per 15 sweeps, SB12-BMSB-4 (Goochland Co., VA). Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were applied on August 28.

#	Material	Rate	Aug 30 (2 DAT)						
			Green adults	Green nymphs	Brown adults	Brown nymphs	BMSB adults	BMSB nymphs	Total
1	Vydate L	1 pt/A	0.00	0.50	0.00	0.00	0.00	1.00	1.50 b
2	Vydate L	1.5 pt/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00 b
3	Lannate LV	1 pt/A	0.00	0.00	0.00	0.00	0.00	0.50	0.50 b
4	Lannate LV	1.5 pt/A	0.00	0.50	0.00	0.00	0.00	0.00	0.50 b
5	Brigade 2EC	5.12 oz/A	0.00	0.50	0.00	0.00	0.00	0.00	0.50 b
6	Untreated	---	0.00	3.00	0.00	0.00	0.00	2.50	5.50 a
	LSD		NS	NS	NS	NS	NS	NS	2.42

#	Material	Rate	Sep 4 (7 DAT)						
			Green adults	Green nymphs	Brown adults	Brown nymphs	BMSB adults	BMSB nymphs	Total
1	Vydate L	1 pt/A	0.50	4.00 ab	0.00	0.00	0.00	0.50	5.00 ab
2	Vydate L	1.5 pt/A	1.50	0.50 bc	0.00	0.00	0.00	0.00	2.00 b
3	Lannate LV	1 pt/A	1.00	6.50 a	0.00	0.50	0.50	1.00	9.50 a
4	Lannate LV	1.5 pt/A	2.00	2.50 bc	0.00	0.00	0.00	0.50	5.00 ab
5	Brigade 2EC	5.12 oz/A	0.00	0.00 c	0.00	0.00	0.00	0.00	0.00 b
6	Untreated	---	0.50	6.50 a	0.00	0.00	1.00	0.00	8.00 a
	LSD		NS	3.57	NS	NS	NS	NS	5.19

#	Material	Rate	Sep 7 (10 DAT)						Total
			Green adults	Green nymphs	Brown adults	Brown nymphs	BMSB adults	BMSB nymphs	
1	Vydate L	1 pt/A	0.00	6.50	0.00	1.00	0.00	1.50	9.00
2	Vydate L	1.5 pt/A	1.50	1.00	0.00	0.50	0.00	0.00	3.00
3	Lannate LV	1 pt/A	0.00	5.00	0.00	1.00	0.50	0.00	6.50
4	Lannate LV	1.5 pt/A	0.50	4.00	0.00	0.50	0.00	1.50	6.50
5	Brigade 2EC	5.12 oz/A	0.00	0.50	0.00	0.00	0.00	0.50	1.00
6	Untreated	---	0.50	9.00	0.50	0.50	0.50	0.00	11.00
	LSD		NS	NS	NS	NS	NS	NS	NS

#	Material	Rate	Sep 10 (13 DAT)						Total
			Green adults	Green nymphs	Brown adults	Brown nymphs	BMSB adults	BMSB nymphs	
1	Vydate L	1 pt/A	0.50	5.00	0.00	0.50	0.50	0.00	6.50
2	Vydate L	1.5 pt/A	1.00	3.00	0.00	0.00	1.00	0.00	5.00
3	Lannate LV	1 pt/A	1.00	5.00	0.00	0.50	0.00	1.00	7.50
4	Lannate LV	1.5 pt/A	0.50	9.50	1.00	0.00	0.00	0.50	11.50
5	Brigade 2EC	5.12 oz/A	0.50	2.00	0.00	0.00	0.00	0.00	2.50
6	Untreated	---	1.00	4.50	0.00	0.50	0.00	0.50	6.50
	LSD		NS	NS	NS	NS	NS	NS	NS

#	Material	Rate	Sep 13 (16 DAT)						Total
			Green adults	Green nymphs	Brown adults	Brown nymphs	BMSB adults	BMSB nymphs	
1	Vydate L	1 pt/A	0.50	9.50	0.50	0.00	0.00	0.50	11.00
2	Vydate L	1.5 pt/A	1.00	8.00	0.00	0.00	0.00	0.00	9.00
3	Lannate LV	1 pt/A	0.50	9.00	0.00	2.00	0.00	0.50	12.00
4	Lannate LV	1.5 pt/A	0.50	4.00	0.00	0.50	0.00	0.50	5.50
5	Brigade 2EC	5.12 oz/A	0.00	0.50	0.00	0.50	0.00	0.00	1.00
6	Untreated	---	0.00	5.00	0.50	1.00	0.00	0.00	6.50
	LSD		NS	NS	NS	NS	NS	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

Test: SB12-BMSB-6, Evaluation of foliar broadcast insecticides for brown marmorated stink bug management in soybean

#	Material	Rate	Date treated
1	DoubleTake	2 oz/A	Aug 28
2	DoubleTake	4 oz/A	Aug 28
3	Dimilin 2L	2 oz/A	Aug 28
4	Dimilin 2L	4 oz/A	Aug 28
5	Karate Z	1.92 oz/A	Aug 28
6	Orthene 97	14.845 oz/A	Aug 28
7	Untreated	---	---

Test: SB12-BMSB-6
Year: 2012
Crop: Soybean
Variety: USG 74B58
Field: n/a
Location: Vern Moyer farm, Goochland Co., VA

Experimental design: RCBD
Plot size: 6' x 30'
Row spacing: 7.5"
Planting date: May 10
Harvest date: n/a
Row feet harvested: n/a

Treatment application(s):

Broadcast using backpack	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 18	GPA: 14.3
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Table 73. Mean number of stink bugs (multiple species) per 15 sweeps, SB12-BMSB-6 (Goochland Co., VA). Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were applied on August 28.

#	Material	Rate	Aug 30 (2 DAT)						
			Green adults	Green nymphs	Brown adults	Brown nymphs	BMSB adults	BMSB nymphs	Total
1	DoubleTake	2 oz/A	0.00	1.00	0.50	0.00 c	0.00	0.50	2.00 c
2	DoubleTake	4 oz/A	0.00	0.50	0.50	0.00 c	0.00	0.50	1.50 c
3	Dimilin 2L	2 oz/A	0.00	3.00	0.00	0.50 c	0.00	2.50	6.00 b
4	Dimilin 2L	4 oz/A	0.00	1.00	0.00	2.00 b	0.50	2.50	6.00 b
5	Karate Z	1.92 oz/A	0.00	0.00	0.00	0.00 c	0.00	0.50	0.50 c
6	Orthene 97	14.845 oz/A	0.00	0.00	0.00	0.00 c	0.00	0.00	0.00 c
7	Untreated	---	0.00	4.00	0.50	3.50 a	0.50	4.50	13.00 a
	LSD		NS	NS	NS	1.36	NS	NS	3.56

#	Material	Rate	Sep 4 (7 DAT)						
			Green adults	Green nymphs	Brown adults	Brown nymphs	BMSB adults	BMSB nymphs	Total
1	DoubleTake	2 oz/A	0.00	1.00	0.50	1.50	0.00 c	0.50	3.50 bc
2	DoubleTake	4 oz/A	0.00	0.00	0.00	1.00	0.00 c	0.00	1.00 c
3	Dimilin 2L	2 oz/A	1.00	3.50	0.50	1.00	0.50 bc	1.50	8.00 b
4	Dimilin 2L	4 oz/A	0.50	4.50	1.00	1.50	0.00 c	0.50	8.00 b
5	Karate Z	1.92 oz/A	0.00	0.00	0.00	0.00	1.00 ab	0.00	1.00 c
6	Orthene 97	14.845 oz/A	0.00	1.00	0.00	1.00	0.00 c	0.50	2.50 c
7	Untreated	---	0.50	11.00	0.50	2.50	1.50 a	2.00	18.00 a
	LSD		NS	NS	NS	NS	0.84	NS	5.08

#	Material	Rate	Sep 7 (10 DAT)						Total
			Green adults	Green nymphs	Brown adults	Brown nymphs	BMSB adults	BMSB nymphs	
1	DoubleTake	2 oz/A	0.00	2.00	0.50	1.00	0.00	0.00	3.50
2	DoubleTake	4 oz/A	0.50	1.00	1.00	1.50	0.00	0.50	4.50
3	Dimilin 2L	2 oz/A	0.00	5.00	0.50	1.00	0.50	1.00	8.00
4	Dimilin 2L	4 oz/A	0.50	2.00	0.50	2.00	0.50	0.00	5.50
5	Karate Z	1.92 oz/A	0.00	0.00	0.50	0.00	0.00	0.50	1.00
6	Orthene 97	14.845 oz/A	0.50	2.50	1.00	0.00	0.00	1.00	5.00
7	Untreated	---	0.50	6.50	0.50	1.00	0.00	1.50	10.00
	LSD		NS	NS	NS	NS	NS	NS	NS

#	Material	Rate	Sep 10 (13 DAT)						Total
			Green adults	Green nymphs	Brown adults	Brown nymphs	BMSB adults	BMSB nymphs	
1	DoubleTake	2 oz/A	0.50	3.00 bc	0.50	1.50 ab	0.00	0.00	5.50 bc
2	DoubleTake	4 oz/A	0.00	0.00 c	0.00	0.00 c	0.00	0.00	0.00 c
3	Dimilin 2L	2 oz/A	0.00	4.50 b	1.50	2.50 a	1.00	0.00	9.50 ab
4	Dimilin 2L	4 oz/A	0.00	3.00 bc	0.00	1.50 ab	0.00	0.00	4.50 bc
5	Karate Z	1.92 oz/A	0.00	0.00 c	0.00	0.00 c	0.00	0.00	0.00 c
6	Orthene 97	14.845 oz/A	0.50	2.50 bc	0.00	1.00 bc	0.00	0.00	4.00 bc
7	Untreated	---	0.00	8.50 a	0.50	2.50 a	0.50	0.00	12.00 a
	LSD		NS	3.70	NS	1.19	NS	NS	5.63

#	Material	Rate	Sep 13 (16 DAT)						Total
			Green adults	Green nymphs	Brown adults	Brown nymphs	BMSB adults	BMSB nymphs	
1	DoubleTake	2 oz/A	0.00	2.00 bc	0.00	0.00	0.00	0.00	2.00 cd
2	DoubleTake	4 oz/A	0.00	0.50 c	0.50	1.50	0.00	0.00	2.50 cd
3	Dimilin 2L	2 oz/A	0.00	4.50 ab	0.00	1.00	0.00	1.50	7.00 ab
4	Dimilin 2L	4 oz/A	0.50	7.00 a	1.00	0.50	0.50	0.50	10.00 a
5	Karate Z	1.92 oz/A	0.00	0.50 c	0.00	0.50	0.00	0.00	1.00 d
6	Orthene 97	14.845 oz/A	0.00	3.50 bc	0.00	0.50	0.00	0.00	4.00 b-d
7	Untreated	---	0.00	3.50 bc	0.00	1.50	0.00	0.50	5.50 bc
	LSD		NS	3.14	NS	NS	NS	NS	4.29

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

Test: SB12-SBUG-1, Evaluation of foliar broadcasts for brown and green stink bug management in soybean

#	Material	Rate	Date(s) treated
1	Untreated	---	---
2	Belay 2.13SC + Induce	4 oz/A 0.25% v/v	Aug 31
3	Belay 2.13SC + Brigade 2EC + Induce	2 oz/A 2.6 oz/A 0.25% v/v	Aug 31
4	Endigo ZC 2.06SC + Induce	4.5 oz/A 0.25% v/v	Aug 31

Test: SB12-SBUG-1
Year: 2012
Crop: Soybean
Variety: USG 74B58
Field: n/a
Location: Vern Moyer farm, Goochland Co., VA

Experimental design: Replicated strip
Plot size: 12' x 40'
Row spacing: 7.5"
Planting date: May 10
Harvest date: n/a
Row feet harvested: n/a

Treatment application(s):

Broadcast using backpack	Nozzle type: 8002VS	Nozzle spacing: 18"	PSI: 18	GPA: 14.3
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Table 74. Mean number of stink bugs (multiple species) per 15 sweeps, SB12-SBUG-1 (Goochland Co., VA). Tidewater AREC, Suffolk, VA, 2012. Insecticide treatments were applied on August 31.

#	Material	Rate	Sep 2 (2 DAT)						
			Green adults	Green nymphs	Brown adults	Brown nymphs	BMSB adults	BMSB nymphs	Total
1	Untreated	---	0.50	6.00 a	0.25	1.00	0.25	0.50	8.50 a
2	Belay 2.13SC + Induce	4 oz/A 0.25% v/v	0.75	0.50 b	0.25	0.75	0.00	0.75	3.00 b
3	Belay 2.13SC + Brigade 2EC + Induce	2 oz/A 2.6 oz/A 0.25% v/v	0.25	0.25 b	0.50	0.25	0.00	0.00	1.25 bc
4	Endigo ZC 2.06SC + Induce	4.5 oz/A 0.25% v/v	0.00	0.00 b	0.50	0.00	0.00	0.25	0.75 c
	LSD		NS	2.14	NS	NS	NS	NS	2.21

#	Material	Rate	Sep 4 (4 DAT)						
			Green adults	Green nymphs	Brown adults	Brown nymphs	BMSB adults	BMSB nymphs	Total
1	Untreated	---	0.75	4.25 a	0.75	1.25	0.25	0.50	7.75 a
2	Belay 2.13SC + Induce	4 oz/A 0.25% v/v	0.25	0.25 b	0.50	1.00	0.00	0.25	2.25 b
3	Belay 2.13SC + Brigade 2EC + Induce	2 oz/A 2.6 oz/A 0.25% v/v	0.00	0.50 b	0.25	0.75	0.00	0.00	1.50 b
4	Endigo ZC 2.06SC + Induce	4.5 oz/A 0.25% v/v	0.00	0.00 b	0.50	0.25	0.00	0.00	0.75 b
	LSD		NS	1.41	NS	NS	NS	NS	3.25

#	Material	Rate	Sep 7 (7 DAT)						
			Green adults	Green nymphs	Brown adults	Brown nymphs	BMSB adults	BMSB nymphs	Total
1	Untreated	---	0.25	1.75	0.50	2.75 a	0.00	0.25	5.50 a
2	Belay 2.13SC + Induce	4 oz/A 0.25% v/v	0.00	2.75	0.25	1.00 b	0.00	0.00	4.00 ab
3	Belay 2.13SC + Brigade 2EC + Induce	2 oz/A 2.6 oz/A 0.25% v/v	0.00	0.00	0.50	0.00 b	0.00	0.25	0.75 b
4	Endigo ZC 2.06SC + Induce	4.5 oz/A 0.25% v/v	0.00	0.00	0.25	0.00 b	0.00	1.00	1.25 b
	LSD		NS	NS	NS	1.07	NS	NS	3.47

#	Material	Rate	Sep 10 (10 DAT)						Total
			Green adults	Green nymphs	Brown adults	Brown nymphs	BMSB adults	BMSB nymphs	
1	Untreated	---	0.75	2.00	0.25	1.75 a	0.25	0.00	5.00
2	Belay 2.13SC + Induce	4 oz/A 0.25% v/v	0.25	3.50	0.00	0.25 b	0.25	0.00	4.25
3	Belay 2.13SC + Brigade 2EC + Induce	2 oz/A 2.6 oz/A 0.25% v/v	0.00	1.75	0.75	0.00 b	0.00	0.25	2.75
4	Endigo ZC 2.06SC + Induce	4.5 oz/A 0.25% v/v	0.00	0.25	0.25	0.00 b	0.00	0.00	0.50
	LSD		NS	NS	NS	0.75	NS	NS	NS

#	Material	Rate	Sep 13 (13 DAT)						Total
			Green adults	Green nymphs	Brown adults	Brown nymphs	BMSB adults	BMSB nymphs	
1	Untreated	---	0.25	3.00 a	0.00	1.25	0.00	0.00	4.50 a
2	Belay 2.13SC + Induce	4 oz/A 0.25% v/v	0.25	2.00 ab	0.25	1.00	0.50	0.00	4.00 ab
3	Belay 2.13SC + Brigade 2EC + Induce	2 oz/A 2.6 oz/A 0.25% v/v	0.00	0.25 b	0.00	0.25	0.00	0.00	0.50 c
4	Endigo ZC 2.06SC + Induce	4.5 oz/A 0.25% v/v	0.00	0.50 b	0.25	0.50	0.00	0.50	1.75 bc
	LSD		NS	1.81	NS	NS	NS	NS	2.72

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, $P=0.05$).

Table 75. Corn earworm survey of field corn in Virginia, 2012.

County	# Fields	# Ears Sampled	% Ears Infested	Field type(s)
Eastern Shore				
Accomack	5	250	46.8	5 random samples
Northampton	5	250	14.4	5 random samples
<i>Regional avg. %</i>			30.6	
Mid-Eastern				
Charles City	5	250	33.2	2 Bt, 1 non-Bt, 2 random samples
Essex	5	250	12.4	5 random samples
Gloucester	5	250	22.0	5 random samples
Hanover	5	250	22.8	3 Bt, 1 non-Bt, 1 refuge mix
Henrico	5	250	48.0	5 random samples
James City	5	250	44.4	5 random samples
King and Queen	5	250	24.0	2 Bt, 3 "refuge in a bag"
King William	5	250	28.4	2 Bt, 1 non-Bt, 2 "refuge in a bag"
Mathews	5	250	23.2	5 random samples
Middlesex	5	250	43.6	5 random samples
<i>Regional avg. %</i>			30.2	
Southeast				
Chesapeake	5	250	22.8	3 Bt, 2 non-Bt
Dinwiddie	5	250	52.8	2 Bt, 3 non-Bt
Greensville	5	250	22.4	5 random samples
Isle of Wight	5	200	60.8	4 Bt, 1 random sample
Prince George	5	250	42.4	5 random samples
Southampton	5	250	53.6	3 Bt, 2 random samples
Suffolk	5	250	41.6	5 random samples
Surry	5	250	20.0	4 Bt, 1 random sample
Sussex	5	200	25.2	3 Bt, 1 non-Bt, 1 random sample
Virginia Beach	5	250	35.2	4 Bt, 1 non-Bt
<i>Regional avg. %</i>			37.7	
South-Central				
Goochland	3	150	20.0	2 Bt, 1 non-Bt
Lunenburg	5	250	44.0	1 non-Bt, 4 random samples
Nottoway	5	250	60.8	1 Bt, 3 non-Bt, 1 mix of Bt/non-Bt
Powhatan	5	250	13.2	4 Bt, 1 mix of Bt/non-Bt
<i>Regional avg. %</i>			34.5	
Northern Neck				
Lancaster	5	250	13.6	5 random samples
Northumberland	5	250	18.8	5 random samples
Richmond	5	250	10.8	5 random samples
Westmoreland	5	250	16.8	4 Bt, 1 non-Bt
<i>Regional avg. %</i>			15.0	
Northern				
Caroline	5	250	8.4	4 Bt, 1 non-Bt
King George	5	250	8.4	1 Bt, 4 non-Bt
<i>Regional avg. %</i>			8.4	
State average			29.8%	

Table 76. Average nightly number of corn earworm moths captured in eastern Virginia black light traps, 2012 season.

Nightly trap catch average for week ending:																				
Location (county-town)	5/03	5/10	5/17	5/24	5/31	6/07	6/14	6/21	6/28	7/05	7/12	7/19	7/26	8/02	8/09	8/16	8/23	8/30	9/06	9/13
Southeast																				
Accomack-Painter	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chesapeake-Ballahack Rd.	n/a	n/a	n/a	n/a	n/a	0.0	0.3	1.0	0.6	n/a	0.3	0.6	n/a	n/a	n/a	n/a	5.7	n/a	n/a	n/a
Dinwiddie-Old Hickory	n/a	n/a	n/a	n/a	6.6	5.4	7.1	5.2	n/a	9.2	22.4	13.9	11.3	10.5	12.0	14.0	n/a	n/a	38.5	31.3
Dinwiddie-North	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Isle of Wight	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.3	7.4	8.6	11.7	3.0	n/a	1.7	n/a	n/a
Petersburg	n/a	n/a	n/a	n/a	0.0	0.0	0.3	1.1	0.6	0.4	0.1	0.4	3.0	8.0	5.6	3.6	7.1	5.3	5.4	5.6
Prince George-Templeton	n/a	n/a	n/a	n/a	n/a	0.0	0.3	0.1	0.8	0.4	0.5	1.3	4.3	3.6	2.6	1.9	3.7	5.3	6.2	n/a
Prince George-Disputanta	n/a	n/a	n/a	n/a	n/a	0.0	0.3	0.3	0.6	0.3	0.3	0.7	2.5	4.3	20.3	9.6	9.3	5.7	8.4	9.1
Southampton	n/a	0.3	1.2	0.4	0.6	0.0	0.1	0.4	0.4	0.9	1.1	2.0	13.3	23.0	4.4	6.0	8.0	9.0	n/a	n/a
Suffolk-Holland	1.7	1.9	5.9	2.6	0.7	0.0	0.6	1.1	11.7	4.4	3.7	1.0	14.6	27.9	26.4	5.3	5.9	9.1	10.9	7.1
Surry	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	16.0	21.1	23.6	8.9	n/a	n/a
Sussex-Waverly	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.9	12.4	n/a	n/a	n/a	n/a	n/a	n/a
Virginia Beach-HRAREC	0.0	0.0	0.0	0.0	n/a	n/a	n/a	0.1	0.3	0.0	0.3	0.0	1.6	0.0	0.0	0.1	n/a	0.4	1.9	2.3
Virginia Beach-West Neck	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.5	n/a	4.1	6.4	n/a	n/a	n/a	n/a	n/a
North of James River																				
Essex	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1.0	0.5	1.0	1.1	0.5	n/a	n/a	n/a	n/a
Gloucester	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.0	9.0	n/a	11.0	n/a	n/a	n/a	n/a
King William	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.1	0.3	0.4	6.1	6.5	27.0	2.3	5.0	1.4	0.1	0.6	1.1	0.0
Northumberland	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Middlesex	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.0	15.0	15.0	18.0	19.0	15.0	n/a	n/a
New Kent	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.3	4.3	21.3	1.4	40.1	37.0	39.1	2.0	1.7
Richmond Co.-Warsaw	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.2	0.3	0.3	1.1	1.4	11.1	31.0	25.0	33.4	16.8	28.7	87.6	22.1

n/a = report not available.