2010

Insect Pest Management in Virginia Cotton, Peanut, and Soybean

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INSECT PEST MANAGEMENT IN VIRGINIA

COTTON, PEANUT, AND SOYBEAN

2010

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

Technical Support:
Mike Arrington, Research Specialist, Virginia Tech Tidewater AREC
Rebecca Arrington, Agricultural Technician, Virginia Tech Tidewater AREC
Craig Beale, Agricultural Technician, Virginia Tech Tidewater AREC
David Owens, Agricultural Technician, Virginia Tech Tidewater AREC
Jessica Samler, Graduate Student, Virginia Tech Dept. of Entomology
Matt Winslow, Graduate Student, Virginia Tech Dept. of Entomology
Sean Malone, Research Specialist, Virginia Tech Tidewater AREC
Ed Seymore, Virginia Tech Tidewater AREC
Jack Wright, Virginia Tech Tidewater AREC
John Xenakis, Virginia Tech Tidewater AREC

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UNIVERSITY FACULTY AND STAFF

Virginia Polytechnic Institute and State University

David Holshouser, Soybean Specialist, Tidewater AREC, Suffolk, VA
Patrick Phipps, Plant Pathologist, Tidewater AREC, Suffolk, VA
Maria Balota, Crop Physiologist, 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
Jim Jenrette, Research Assistant, Eastern Shore AREC, Painter, VA

Louisiana State University

Jeffrey Davis, Entomologist, Baton Rouge, LA

Mississippi State University

Fred Musser, Entomologist, Mississippi State, MS

North Carolina State University

Jack Bacheler, Entomologist, Dept. of Entomology, Raleigh, NC
Dan Mott, Research Specialist, Dept. of Entomology, Raleigh, NC
Dominic Reisig, Entomologist, Dept. of Entomology, Plymouth, NC
Steven Roberson, Research Technician, Dept. of Entomology, Plymouth, NC
Yulu Xia, Programmer, Southern Region IPM Center, Raleigh, NC

University of Delaware

Joanne Whalen, Entomologist, Newark, DE

University of Maryland

Gerald Brust, IPM Vegetable Specialist, Upper Marlboro, MD
Galen Dively, Entomologist, College Park, MD

Virginia State University

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

VIRGINIA COOPERATIVE EXTENSION

Mac Saphir, Caroline Co. (retired)
Watson Lawrence, Chesapeake
Mike Parrish, Dinwiddie Co.
Keith Balderson, Essex Co.
Annah Latane, Essex Co. (summer intern)
Janet Spencer, Isle of Wight Co.
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Daniel Nortman, Middlesex Co.
William Shockley, Northampton Co.
Steve Hopkins, Orange Co.
Scott Reiter, Prince George Co.
Kelly Liddington, Richmond Co.
Robert Clark, Shenandoah Co.
Neil Clark, Southampton Co.
Glenn Slade, Surry Co.
Kelvin Wells, Sussex Co.
Sam Johnson, Westmoreland Co. (retired)
Matt Lewis, Lancaster/Northumberland Cos.
Cal Schiemann, Virginia Beach (retired)

NORTH CAROLINA COOPERATIVE EXTENSION

Gaylon Ambrose, Beaufort Co.
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Ryan Jackson, Research Entomologist, Stoneville, MS

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INDEPENDENT CROP CONSULTANTS

Chad Harrell, Hertford Co., NC

Stan Winslow, Matt Winslow, Dale Weeks, and Lee Dail, Tidewater Agronomics, Inc., Camden, NC

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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 = ≥ 50% leaves injured + ≤ 5% terminal buds injured
6 = ≥ 50% leaves injured + 25% terminal buds injured
7 = ≥ 50% leaves injured + 50% terminal buds injured
8 = ≥ 50% leaves injured + 75% terminal buds injured
9 = ≥ 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
cotyl: cotyledon
cwt: hundred-weight
GC: ground-cracking
IF: in-furrow
RCBD: randomized complete block design
Tidewater AREC: Tidewater Agricultural Research and Extension Center

Contents

Climatological Summary of the 2010 Growing Season—Tidewater AREC, Suffolk, VA

Table 1. Daily maximum and minimum temperatures (°F) for 2010.

	JAN		FEB		MAR		APR		MAY		JUN	
Day of month	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	44	33	35	11	51	24	74	39	85	60	90	69
2	44	24	46	19	55	29	78	43	90	65	91	68
3	33	20	43	32	45	31	79	46	93	54	90	67
4	34	15	45	25	41	33	79	47	85	71	90	66
5	38	16	45	31	50	29	80	52	90	54	93	61
6	37	21	50	32	60	34	89	63	94	65	92	60
7	42	17	37	21	59	24	90	63	89	63	94	62
8	43	26	37	20	62	25	90	61	83	66	90	60
9	37	17	42	20	64	26	85	54	91	44	81	56
10	34	16	44	25	70	37	64	34	69	37	91	64
11	38	10	47	23	74	51	69	37	68	40	92	65
12	45	29	48	24	68	54	77	45	73	58	88	65
13	40	18	42	27	64	54	78	41	86	55	93	70
14	46	21	34	21	69	43	76	48	67	55	94	71
15	55	25	45	22	54	41	62	32	90	63	93	72
16	61	27	55	28	53	43	74	49	89	58	91	68
17	63	32	42	25	56	28	89	59	80	57	92	63
18	58	34	44	29	67	35	77	34	63	55	91	64
19	70	40	52	27	65	45	65	34	64	54	92	61
20	61	35	52	21	73	32	66	38	74	55	91	64
21	50	35	58	24	79	46	73	49	81	54	95	63
22	42	25	63	28	74	59	60	41	73	55	99	69
23	45	27	63	39	68	39	75	46	83	63	98	74
24	60	34	50	37	70	42	78	54	84	62	100	71
25	68	57	46	32	72	41	79	56	.	.	101	71
26	65	34	45	33	75	35	82	55	.	.	95	70
27	52	25	48	17	68	30	81	50	.	.	95	74
28	61	26	48	26	69	31	66	40	.	.	100	72
29	52	32			70	54	61	35	.	.	99	73
30	40	22			59	48	84	57	.	.	95	71
31	32	16			67	46			.	.		
Avg.	**48.1**	**26.1**	**46.6**	**25.7**	**63.6**	**38.4**	**76.0**	**46.7**	**81.0**	**56.8**	**93.2**	**66.8**

Table 1, continued. Daily maximum and minimum temperatures (°F) for 2010.

	JUL		AUG		SEP		OCT		NOV		DEC	
Day of month	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**
1	81	61	89	62	97	60	78	59	72	42		
2	85	53	81	65	96	61	72	49	62	32		
3	84	51	83	65	89	61	73	57	56	38		
4	86	55	90	72	86	64	74	50	60	47		
5	93	63	95	70	86	52	62	39	60	44		
6	104	66	96	70	85	53	63	39	60	38		
7	101	68	94	70	90	55	65	43	55	32		
8	93	71	90	67	92	66	80	46	53	27		
9	106	70	91	69	92	59	88	52	63	38		
10	91	70	93	70	88	52	84	48	63	39		
11	90	66	97	75	80	47	85	53	61	33		
12	95	80	99	75	85	60	88	55	62	34		
13	104	73	94	70	74	60	87	60	63	31		
14	94	74	86	65	84	61	76	53	67	29		
15	93	69	89	64	94	52	67	40	69	32		
16	99	72	92	70	92	73	73	53	70	47		
17	97	77	96	72	94	67	75	54	76	52		
18	91	81	97	74	86	57	77	43	61	29		
19	104	84	93	70	84	51	80	50	65	30		
20	97	74	81	66	87	57	72	50	61	32		
21	101	71	91	71	86	47	69	52	69	52		
22	99	72	90	71	81	56	76	38	70	33		
23	100	77	94	68	96	65	65	32	74	47		
24	103	85	96	61	98	67	73	32	77	41		
25	101	82	92	63	96	67	79	46	52	32		
26	105	72	82	62	98	69	83	56	66	36		
27	95	64	91	68	84	67	82	58	66	33		
28	89	77	88	63	76	65	88	69	66	24		
29	86	70	88	59	82	62	83	47	53	23		
30	100	70	92	61	78	62	62	32	60	38		
31	95	72	97	62			63	44				
Avg.	**95.5**	**70.6**	**91.2**	**67.4**	**87.9**	**59.8**	**75.5**	**48.4**	**63.7**	**36.2**		

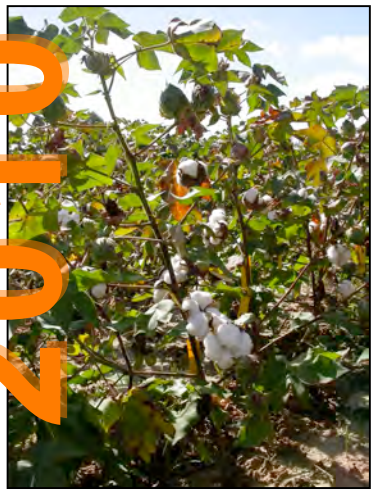
Table 2. Daily precipitation (inches) for 2010—Tidewater AREC, Suffolk, VA.

Day of month	JAN	FEB	MAR	APR	MAY	JUN
1	0.15	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0.8	1.34	0	0	0
4	0	0	0.09	0	0	0
5	0	0	0	0	0	0
6	0	1.98	0.01	0	0.02	0
7	0	0	0	0	0	0.14
8	0.1	0	0.01	0	0	0
9	0	0	0	0.44	0	0.08
10	0	0.7	0	0.03	0	0
11	0	0	0.17	0	0	0
12	0	0	1.06	0	0	0
13	0	0	0.41	0	1.8	0.51
14	0	0	0.14	0.05	0.02	0
15	0	0	0	0	0.08	0
16	0	0.15	0.07	0	1.21	0
17	0.58	0	0	0	0.07	0
18	0	0	0	0	0	0
19	0.38	0	0	0	0.05	0
20	0	0	0	0	0	0
21	0.12	0	0	0.08	0	0
22	0	0	0.03	0.18	2.09	0
23	0.83	0.56	0.12	0	0	0
24	0	0	0	0.01	1.39	0
25	0.76	0.27	0	0.22	.	0.02
26	0.08	0	0.22	0.21	.	0
27	0	0.01	0.26	0.17	.	0
28	0	0	0	0.16	.	0
29	0		2.36	0	.	0
30	0.65		0.16	0	.	0.08
31	0		0		.	
Total	**3.65**	**4.47**	**6.45**	**1.55**	**6.73**	**0.83**

Table 2, continued. Daily precipitation (inches) for 2010—Tidewater AREC, Suffolk, VA.

Day of month	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0.2	0	4.8	0	
2	0	0.14	0	0	0	
3	0	0.45	0.28	0	0	
4	0	0	0.19	0.18	0.05	
5	0	0.6	0	0	0.37	
6	0	0.03	0	0	0.05	
7	0	0	0	0.03	0	
8	0	0	0	0	0	
9	0	0	0	0	0	
10	0.12	0	0	0	0	
11	0	0	0	0	0	
12	0	0	0.31	0	0	
13	0	0.24	0.02	0	0.02	
14	0	0	0	0	0	
15	0.25	0	0	0.58	0	
16	0	0	0	0	0.02	
17	0	0	0	0.03	0.18	
18	0	0	0	0	0	
19	0	0.09	0	0	0	
20	0	0.01	0	0.03	0	
21	0.02	0	0	0.04	0	
22	0	0.03	0	0	0	
23	0	0	0	0	0	
24	0	0	0	0	0.02	
25	0	0.03	0	0	0	
26	0.52	0	0	0	0.01	
27	0	0	1.46	1.1	0	
28	0	0.22	1.57	1.45	0	
29	0	0	0.22	0	0	
30	0.1	0	4.7	0	0	
31	0	0		0		
Total	**1.01**	**2.04**	**8.75**	**8.24**	**0.72**	

2010



Cotton Insect Pest Management Tests and Demonstrations

TEST: CT10THP_Early, Evaluation of at-planting granular insecticides, seed treatments, and foliar sprays for thrips—early planting date

EXPERIMENT TREATMENTS:

#	Material	Rate	Date(s) treated
1	Temik 15G	5 lb/A (IF)	
2	Temik 15G + Aeris*	5 lb/A (IF) Seed trt	
3	Temik 15G + Aeris	3.5 lb/A (IF) Seed trt	
4	Aeris	Seed trt	
5	Temik 15G + Orthene 97	5 lb/A (IF) 4 oz/A (BC @ 1st tl)	May 11
6	Temik 15G + Aeris + Orthene 97	3.5 lb/A (IF) Seed trt 4 oz/A (BC @ 1st tl)	May 11
7	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1st tl)	May 11
8	Untreated	---	

All seed treated with Trilex Advance (Trilex FL @ 0.64 oz/cwt, Baytan 30 @ 0.25 oz/cwt, Allegiance FL @ 0.75 oz/cwt)
*Treated with Aeris @ 0.75 mg ai/seed

Test #: CT10THP_Early	**Planting date:** Apr 26
Year: 2010	**Plot size:** 4 rows x 35’
Crop: Cotton	**Row spacing:** 36”
Variety: ST 4498B2F	**Field #:** 5
Experimental design: RCBD	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
3/20	2,4-D LV4	1 pt
4/13	Glyphosate	1 qt
4/26	Cotoran 4L	1 qt
4/26	Prowl H_2O	1 qt
5/05	Cotoran 4L	1 qt
5/05	Prowl H_2O	1 qt
5/05	Roundup WeatherMax	22 oz
5/28	Roundup WeatherMax	22 oz
6/19	Roundup WeatherMax	22 oz
7/16	MSMA	1 qt
7/16	Cotton Pro	1.5 pt
7/16	Envoke	0.1 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
7/09	Zeal	1.5 oz
8/06	Baythroid XL	3 oz
8/12	Baythroid XL	3 oz

Growth Regulators		
Date	**Product**	**Rate/A**
8/06	Pentia	3 oz

Lime & Fertilizer		
Date	**Product**	**Rate/A**
2/20	N 30%	25 units
3/02	Lime	1500 lb
3/20	N 30%	20 units
4/20	6-16-39	330 lb
6/14	Boron N 30%	1 qt 30 units
6/28	Boron N 30%	1 qt 30 units

Defoliation		
Date	**Product**	**Rate/A**
9/21	Finish	1 qt
9/21	Dropp	3 oz
9/21	Def	6 oz

Land preparation: Rip strip till on Apr 26
Soil pH: 5.71
Soil type(s): Eunola, Dragston, Rains
Nutrient analysis (ppm): P (20), K (50), Ca (326), Mg (22), Zn (0.6), Mn (2.1)
Harvest date: Oct 19
Row feet harvested: 70
Harvest technique: 2-row commercial picker modified for research plots

Treatment application information:

At Planting	**Granular IF**	Tractor-mounted inverted jars
In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 18 **GPA:** 14.3

Comments: Berry Lewis is acknowledged for providing and treating seed. Front of test is Aeris-treated ST 4498B2F. Irrigated 1-inch on Jun 22.

Table 3. Mean number of thrips per 5 plants, CT10THP_Early. Tidewater AREC, Suffolk, VA, 2010. Broadcast at 1st true leaf applications were made on May 11.

#	Material	Rate	May 11 (1st true leaf stage)		May 17 (2nd true leaf stage)		May 24 (4th true leaf stage)		May 31 (4-5 true leaf stage)		Jun 8 (6th true leaf stage)	
			Adult	Immat.	Adult	Immat.	Adult	Immat.	Adult	Immat.	Adult	Immat.
1	Temik 15G	5 lb/A (IF)	0.8	0.3	0.5 b	3.8	1.0 b	0.5 b	1.0	9.8 b	5.0	3.3 bc
2	Temik 15G + Aeris	5 lb/A (IF) Seed trt	0.8	0.0	1.8 b	0.0	2.3 b	0.3 b	1.5	0.8 b	5.5	2.8 bc
3	Temik 15G + Aeris	3.5 lb/A (IF) Seed trt	1.3	0.0	1.5 b	0.0	1.0 b	0.3 b	1.3	1.3 b	6.0	1.8 c
4	Aeris	Seed trt	2.0	0.0	2.5 b	0.0	4.0 b	1.3 b	2.3	10.8 b	7.5	9.3 a-c
5	Temik 15G + Orthene 97	5 lb/A (IF) 4 oz/A (BC @ 1st tl)	.	.	1.0 b	0.0	2.0 b	0.7 b	2.0	9.8 b	3.3	2.5 c
6	Temik 15G + Aeris + Orthene 97	3.5 lb/A (IF) Seed trt 4 oz/A (BC @ 1st tl)	.	.	0.8 b	0.0	1.3 b	0.0 b	0.5	1.0 b	5.0	2.0 c
7	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1st tl)	.	.	4.3 b	0.0	2.5 b	1.3 b	4.5	16.3 b	6.8	10.8 ab
8	Untreated	---	1.0	0.3	10.5 a	4.3	9.3 a	18.5 a	2.5	113.3 a	2.5	17.3 a
	LSD		NS	NS	5.70	NS	4.45	4.21	NS	33.4	NS	8.03

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

Table 4. Mean number of thrips per 5 late emerging plants, CT10THP_Early. Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate	May 28 (1-2 true leaf stage)	
			Adult	Immat.
1	Temik 15G	5 lb/A (IF)	8.5	13.3 c
2	Temik 15G + Aeris	5 lb/A (IF) Seed trt	2.8	1.3 c
3	Temik 15G + Aeris	3.5 lb/A (IF) Seed trt	3.3	0.3 c
4	Aeris	Seed trt	1.8	1.5 c
5	Temik 15G + Orthene 97	5 lb/A (IF) 4 oz/A (BC @ 1st tl)	12.3	45.0 b
6	Temik 15G + Aeris + Orthene 97	3.5 lb/A (IF) Seed trt 4 oz/A (BC @ 1st tl)	2.3	1.5 c
7	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1st tl)	3.3	4.0 c
8	Untreated	---	9.0	84.3 a
	LSD		NS	31.3

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

Table 5. Stand counts[1] and thrips injury ratings[2], CT10THP_Early. Tidewater AREC, Suffolk, VA, 2010. Broadcast at 1st true leaf applications were made on May 11.

#	Material	Rate	Plants per row ft	Thrips injury rating				
				May 21 (2nd true leaf stage)	May 28 (4th true leaf stage)	Jun 1 (4-5 true leaf stage)	Jun 7 (6th true leaf stage)	Jun 17 (7-8 true leaf stage)
1	Temik 15G	5 lb/A (IF)	2.4	0.81 bc	0.75 c	0.69 cd	0.56 bc	0.63 b
2	Temik 15G + Aeris	5 lb/A (IF) Seed trt	2.2	0.31 e	0.50 d	0.56 d	0.31 de	0.25 c
3	Temik 15G + Aeris	3.5 lb/A (IF) Seed trt	2.4	0.44 de	0.56 d	0.63 d	0.38 c-e	0.38 bc
4	Aeris	Seed trt	2.4	1.06 b	1.19 b	0.88 bc	0.63 b	0.25 c
5	Temik 15G + Orthene 97	5 lb/A (IF) 4 oz/A (BC @ 1st tl)	2.6	0.67 cd	0.63 cd	0.63 d	0.50 b-d	0.38 bc
6	Temik 15G + Aeris + Orthene 97	3.5 lb/A (IF) Seed trt 4 oz/A (BC @ 1st tl)	2.4	0.38 e	0.56 d	0.56 d	0.25 e	0.25 c
7	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1st tl)	2.3	0.50 de	0.75 c	0.94 b	0.44 b-e	0.25 c
8	Untreated	---	2.1	3.00 a	3.56 a	3.69 a	3.81 a	2.63 a
	LSD		NS	0.26	0.15	0.23	0.23	0.26

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]Based on the total number of plants in rows 2 and 3 of each plot on May 28 (total of 70 row ft per plot).
[2]Thrips injury based on a 0-5 scale, 0 = no injury and 5 = dead plants.

Table 6. Nodes above white flower (NAWF) and yield, CT10THP_Early. Tidewater AREC, Suffolk, VA, 2010

#	Material	Rate	NAWF[1]		Lint lb/acre[2]
			Jul 13	Jul 20	
1	Temik 15G	5 lb/A (IF)	6.4 ab	4.1	1125
2	Temik 15G + Aeris	5 lb/A (IF) Seed trt	5.0 d	4.0	1220
3	Temik 15G + Aeris	3.5 lb/A (IF) Seed trt	6.5 ab	4.0	1171
4	Aeris	Seed trt	6.9 a	4.1	1107
5	Temik 15G + Orthene 97	5 lb/A (IF) 4 oz/A (BC @ 1st tl)	5.8 bc	3.8	1143
6	Temik 15G + Aeris + Orthene 97	3.5 lb/A (IF) Seed trt 4 oz/A (BC @ 1st tl)	5.7 cd	3.5	1189
7	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1st tl)	6.3 a-c	4.0	1078
8	Untreated	---	6.3 a-c	4.0	866
	LSD		0.74	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]NAWF (the number of main-stem nodes above the uppermost white flower in the first fruiting position) was based on sampling 6 plants per plot.
[2]Cotton was harvested on October 19. Gross yields were reduced by 58.6% to account for seed and trash.

TEST: CT10THP_Late, Evaluation of at-planting granular insecticides, seed treatments, and foliar sprays for thrips—late planting date

EXPERIMENT TREATMENTS:

#	Material	Rate	Date(s) treated
1	Temik 15G	5 lb/A (IF)	
2	Temik 15G	3.5 lb/A (IF)	
3	Temik 15G + Aeris*	3.5 lb/A (IF) Seed trt	
4	Aeris	Seed trt	
5	Temik 15G + Orthene 97	3.5 lb/A (IF) 4 oz/A (BC @ 1st tl)	Jun 8
6	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1st tl)	Jun 8
7	Orthene 97	4 oz/A (BC @ 1st tl)	Jun 8
8	Untreated	---	---

All seed treated with Trilex Advance (Trilex FL @ 0.64 oz/cwt, Baytan 30 @ 0.25 oz/cwt, Allegiance FL @ 0.75 oz/cwt)
*Treated with Aeris @ 0.75 mg ai/seed

Test #: CT10THP_Late	**Planting date:** May 27
Year: 2010	**Plot size:** 4 rows x 35’
Crop: Cotton	**Row spacing:** 36”
Variety: ST 4498B2F	**Field #:** 5
Experimental design: RCBD	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
3/20	2,4-D LV4	1 pt
4/13	Glyphosate	1 qt
5/28	Cotoran 4L	1 qt
5/28	Prowl H_2O	1 qt
5/28	Roundup WeatherMax	22 oz
6/19	Roundup WeatherMax	22 oz
7/16	MSMA	1 qt
7/16	Cotton Pro	1.5 pt
7/16	Envoke	0.1 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
7/09	Zeal	1.5 oz
8/06	Baythroid XL	3 oz
8/12	Baythroid XL	3 oz

Growth Regulators		
Date	**Product**	**Rate/A**
8/06	Pentia	3 oz

Lime & Fertilizer		
Date	**Product**	**Rate/A**
2/20	N 30%	25 units
3/02	Lime	1500 lb
3/20	N 30%	20 units
4/20	6-16-39	330 lb
6/14	Boron N 30%	1 qt 30 units
6/28	Boron N 30%	1 qt 30 units

Defoliation		
Date	**Product**	**Rate/A**
10/07	Finish	1 qt
10/07	Dropp	3 oz
10/07	Def	6 oz

Land preparation: Rip strip till on May 26
Soil pH: 5.71
Soil type(s): Eunola, Dragston, Rains
Nutrient analysis (ppm): P (20), K (50), Ca (326), Mg (22), Zn (0.6), Mn (2.1)
Harvest date: Oct 19
Row feet harvested: 70
Harvest technique: 2-row commercial picker modified for research plots

Treatment application information:

At Planting	**Granular IF**	Tractor-mounted inverted jars
In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 18 **GPA:** 14.3

Comments: Berry Lewis is acknowledged for providing and treating seed. Irrigated 1-inch on Jun 22.

Table 7. Mean number of thrips per 5 plants, CT10THP_Late. Tidewater AREC, Suffolk, VA, 2010. Broadcast at 1st true leaf applications were made on June 8.

#	Material	Rate	Jun 7 (1st true leaf stage)		Jun 15 (3-4 true leaf stage)		Jun 22 (6th true leaf stage)	
			Adult	Immature	Adult	Immature	Adult	Immature
1	Temik 15G	5 lb/A (IF)	1.5 cd	0.0 b	1.5	0.5 b	2.3 bc	1.0 b-d
2	Temik 15G	3.5 lb/A (IF)	0.3 d	0.0 b	0.5	0.3 b	2.5 bc	0.5 cd
3	Temik 15G + Aeris	3.5 lb/A (IF) Seed trt	1.5 cd	0.0 b	0.5	0.8 b	2.3 bc	0.5 cd
4	Aeris	Seed trt	6.0 bc	0.8 b	1.5	6.3 b	4.0 a-c	3.0 bc
5	Temik 15G + Orthene 97	3.5 lb/A (IF) 4 oz/A (BC @ 1st tl)	0.0 d	0.3 b	0.8	0.5 b	1.3 c	0.3 d
6	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1st tl)	1.8 cd	0.3 b	1.5	3.3 b	4.3 ab	2.3 b-d
7	Orthene 97	4 oz/A (BC @ 1st tl)	9.0 b	5.0 b	1.0	5.8 b	3.5 bc	3.5 ab
8	Untreated	---	14.5 a	19.3 b	0.8	40.3 a	6.5 a	6.0 a
	LSD		5.44	6.09	NS	15.85	2.77	2.50

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

Table 8. Stand counts[1] and thrips injury ratings[2], CT10THP_Late. Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate	Plants per row ft	Thrips injury rating		
				Jun 11 (2nd true leaf stage)	Jun 17 (4th true leaf stage)	Jun 22 (6th true leaf stage)
1	Temik 15G	5 lb/A (IF)	2.7	0.75 c-e	0.69 cd	0.50 c
2	Temik 15G	3.5 lb/A (IF)	2.6	0.63 de	0.56 de	0.50 c
3	Temik 15G + Aeris	3.5 lb/A (IF) Seed trt	2.9	0.56 e	0.63 c-e	0.50 c
4	Aeris	Seed trt	2.7	0.88 c	0.75 c	0.75 c
5	Temik 15G + Orthene 97	3.5 lb/A (IF) 4 oz/A (BC @ 1st tl)	2.6	0.63 de	0.63 c-e	0.50 c
6	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1st tl)	2.8	0.81 cd	0.50 e	0.50 c
7	Orthene 97	4 oz/A (BC @ 1st tl)	2.9	2.38 b	2.81 b	2.25 b
8	Untreated	---	2.9	2.75 a	4.00 a	3.56 a
	LSD		NS	0.21	0.15	0.26

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]*Based on the total number of plants in rows 2 and 3 of each plot on June 11 (total of 70 row ft per plot).*
[2]*Thrips injury based on a 0-5 scale, 0 = no injury and 5 = dead plants.*

Table 9. Nodes above white flower (NAWF) and yield, CT10THP_Late. Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate	NAWF[1] Jul 28	Lint lb/acre[2]
1	Temik 15G	5 lb/A (IF)	5.3 c	1175
2	Temik 15G	3.5 lb/A (IF)	5.3 c	1084
3	Temik 15G + Aeris	3.5 lb/A (IF) Seed trt	5.4 bc	1060
4	Aeris	Seed trt	5.8 ab	1093
5	Temik 15G + Orthene 97	3.5 lb/A (IF) 4 oz/A (BC @ 1st tl)	5.3 c	1123
6	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1st tl)	5.1 c	1115
7	Orthene 97	4 oz/A (BC @ 1st tl)	5.3 c	1117
8	Untreated	---	6.0 a	999
	LSD		0.47	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]NAWF (the number of main-stem nodes above the uppermost white flower in the first fruiting position) was based on sampling 6 plants per plot.
[2]Cotton was harvested on October 19. Gross yields were reduced by 59.2% to account for seed and trash.

TEST: CT10THP_Regional_Herbert, Evaluation of foliar insecticide applications following preventive insecticide for management of thrips

EXPERIMENT TREATMENTS:

#	Material	Rate	Date(s) treated
1	Untreated	---	---
2	Temik 15G	5 lb/A	
3	Aeris*	Seed trt	
4	Untreated + Orthene 97	--- 4 oz/A (BC @ 1-2 tl)	 May 21
5	Temik 15G + Orthene 97	5 lb/A 4 oz/A (BC @ 1-2 tl)	 May 21
6	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1-2 tl)	 May 21
7	Untreated + Orthene 97	--- 4 oz/A (BC @ 2-3 tl)	 May 27
8	Temik 15G + Orthene 97	5 lb/A 4 oz/A (BC @ 2-3 tl)	 May 27
9	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 2-3 tl)	 May 27
10	Untreated + Orthene 97 + Orthene 97	--- 4 oz/A (BC @ 1-2 tl) 4 oz/A (BC @ 2-3 tl)	 May 21 May 27
11	Temik 15G + Orthene 97 + Orthene 97	5 lb/A 4 oz/A (BC @ 1-2 tl) 4 oz/A (BC @ 2-3 tl)	 May 21 May 27
12	Aeris + Orthene 97 + Orthene 97	Seed trt 4 oz/A (BC @ 1-2 tl) 4 oz/A (BC @ 2-3 tl)	 May 21 May 27

All seed treated with Trilex Advance (Trilex FL @ 0.64 oz/cwt, Baytan 30 @ 0.25 oz/cwt, Allegiance FL @ 0.75 oz/cwt)
*Treated with Aeris @ 0.75 mg ai/seed

Test #: CT10THP_Regional	**Planting date:** May 4
Year: 2010	**Plot size:** 4 rows x 35’
Crop: Cotton	**Row spacing:** 36”
Variety: ST 4498B2F	**Field #:** 5
Experimental design: RCBD	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
3/20	2,4-D LV4	1 pt
4/13	Glyphosate	1 qt
5/05	Cotoran 4L	1 qt
5/05	Prowl H_2O	1 qt
5/05	Roundup WeatherMax	22 oz
5/28	Roundup WeatherMax	22 oz
6/19	Roundup WeatherMax	22 oz
7/16	MSMA	1 qt
7/16	Cotton Pro	1.5 pt
7/16	Envoke	0.1 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
7/09	Zeal	1.5 oz
8/06	Baythroid XL	3 oz
8/12	Baythroid XL	3 oz

Growth Regulators		
Date	**Product**	**Rate/A**
8/06	Pentia	3 oz

Lime & Fertilizer		
Date	**Product**	**Rate/A**
2/20	N 30%	25 units
3/02	Lime	1500 lb
3/20	N 30%	20 units
4/20	6-16-39	330 lb
6/14	Boron N 30%	1 qt 30 units
6/28	Boron N 30%	1 qt 30 units

Defoliation		
Date	**Product**	**Rate/A**
9/21	Finish	1 qt
9/21	Dropp	3 oz
9/21	Def	6 oz

Land preparation: Rip strip till on May 4
Soil pH: 5.71
Soil type(s): Eunola, Dragston, Rains
Nutrient analysis (ppm): P (20), K (50), Ca (326), Mg (22), Zn (0.6), Mn (2.1)
Harvest date: Oct 19
Row feet harvested: 70
Harvest technique: 2-row commercial picker modified for research plots

Treatment application information:

At Planting	**Granular IF**	Tractor-mounted inverted jars
In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 18 **GPA:** 14.3

Comments: Berry Lewis is acknowledged for providing and treating seed. Irrigated 1-inch on Jun 22.

Table 10. Plant emergence and mean number of thrips per 5 plants, CT10THP_Regional. Tidewater AREC, Suffolk, VA, 2010. Broadcast at 1-2 and 2-3 true leaf applications were made on May 21 and May 27, respectively.

#	Material	Rate	Emerged on May 14 (Yes/No)[1]	May 19 (early 1st true leaf stage)		May 25 (2nd true leaf stage)		May 31 (2-3 true leaf stage)		Jun 8 (4th true leaf stage)	
				Adult	Immature	Adult	Immature	Adult	Immature	Adult	Immature
1	Untreated	---	Yes	17.5 c	0.0	7.8 ab	35.0 b	2.0	136.8 a	3.0	11.5 a
2	Temik 15G	5 lb/A	Yes	1.0 d	0.0	1.3 c	0.8 c	2.0	14.8 b-d	1.5	2.8 bc
3	Aeris	Seed trt	Yes	2.5 d	0.0	2.8 bc	0.0 c	2.0	8.8 b-d	1.5	6.0 b
4	Untreated + Orthene 97	--- 4 oz/A (BC @ 1-2 tl)	Yes	18.5 bc	0.0	4.3 bc	27.5 b	1.0	40.5 b	2.3	11.8 a
5	Temik 15G + Orthene 97	5 lb/A 4 oz/A (BC @ 1-2 tl)	Yes	2.0 d	0.0	0.3 c	1.5 c	0.8	2.3 d	2.0	4.5 bc
6	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1-2 tl)	Yes	4.8 d	0.0	0.8 c	0.8 c	1.3	6.3 cd	0.8	3.0 bc
7	Untreated + Orthene 97	--- 4 oz/A (BC @ 2-3 tl)	Yes	30.5 a	0.0	12.5 a	52.5 a	0.5	37.0 bc	3.3	3.8 bc
8	Temik 15G + Orthene 97	5 lb/A 4 oz/A (BC @ 2-3 tl)	Yes	0.5 d	0.3	1.8 c	8.5 c	1.0	5.0 cd	2.5	2.3 bc
9	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 2-3 tl)	Yes	5.3 d	0.0	4.8 bc	1.0 c	1.0	4.8 cd	2.8	2.3 bc
10	Untreated + Orthene 97 + Orthene 97	--- 4 oz/A (BC @ 1-2 tl) 4 oz/A (BC @ 2-3 tl)	Yes	24.8 ab	0.0	4.0 bc	33.3 b	0.5	9.0 b-d	3.0	3.0 bc
11	Temik 15G + Orthene 97 + Orthene 97	5 lb/A 4 oz/A (BC @ 1-2 tl) 4 oz/A (BC @ 2-3 tl)	Yes	0.8 d	0.0	0.3 c	0.0 c	0.3	0.8 d	1.0	1.3 bc
12	Aeris + Orthene 97 + Orthene 97	Seed trt 4 oz/A (BC @ 1-2 tl) 4 oz/A (BC @ 2-3 tl)	Yes	2.8 d	0.0	1.3 c	0.8 c	0.5	0.3 d	2.0	1.0 c
	LSD		---	7.17	NS	5.03	14.44	NS	32.39	NS	4.84

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]*Planting date was May 4.*

Table 11. Thrips injury ratings[1], CT10THP_Regional. Tidewater AREC, Suffolk, VA, 2010. Broadcast at 1-2 and 2-3 true leaf applications were made on May 21 and May 27, respectively.

#	Material	Rate	May 28 (2-3 true leaf stage)	Jun 1 (2-3 true leaf stage)	Jun 7 (4th true leaf stage)	Jun 17 (5-6 true leaf stage)
1	Untreated	---	3.94 a	4.44 a	4.56 a	4.13 a
2	Temik 15G	5 lb/A	2.00 c	1.75 d	0.81 d	0.81 e
3	Aeris	Seed trt	1.88 c	1.75 d	0.88 d	0.75 e
4	Untreated + Orthene 97	--- 4 oz/A (BC @ 1-2 tl)	4.00 a	4.25 a	3.31 b	3.44 b
5	Temik 15G + Orthene 97	5 lb/A 4 oz/A (BC @ 1-2 tl)	1.75 c	1.38 e	0.69 d	0.63 e
6	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1-2 tl)	2.13 c	1.56 de	0.69 d	0.69 e
7	Untreated + Orthene 97	--- 4 oz/A (BC @ 2-3 tl)	4.00 a	3.88 b	3.38 b	2.75 c
8	Temik 15G + Orthene 97	5 lb/A 4 oz/A (BC @ 2-3 tl)	1.81 c	1.56 de	0.69 d	0.56 e
9	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 2-3 tl)	1.94 c	1.69 d	0.69 d	0.56 e
10	Untreated + Orthene 97 + Orthene 97	--- 4 oz/A (BC @ 1-2 tl) 4 oz/A (BC @ 2-3 tl)	3.50 b	2.25 c	2.31 c	1.25 d
11	Temik 15G + Orthene 97 + Orthene 97	5 lb/A 4 oz/A (BC @ 1-2 tl) 4 oz/A (BC @ 2-3 tl)	1.81 c	1.31 e	0.63 d	0.44 e
12	Aeris + Orthene 97 + Orthene 97	Seed trt 4 oz/A (BC @ 1-2 tl) 4 oz/A (BC @ 2-3 tl)	2.06 c	1.56 de	0.50 d	0.50 e
	LSD		0.40	0.27	0.41	0.39

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 1-5 scale, where 1=zero damage, 5=equivalent to UTC

Table 12. Plant height, nodes above white flower (NAWF), and yield, CT10THP_Regional. Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate	Plant height[1] (cm)		NAWF[2]		Lint lb/acre[3]
			Jun 8 (4th true leaf stage)	Jun 24 (9th true leaf stage)	Jul 13	Jul 21	
1	Untreated	---	6.5 g	15.6 h	9.0 a	6.8 a	885 e
2	Temik 15G	5 lb/A	9.2 b	26.8 ab	7.3 c-e	4.1 f	1465 a
3	Aeris*	Seed trt	8.2 de	23.9 de	8.4 ab	5.3 b-d	1329 a-c
4	Untreated + Orthene 97	--- 4 oz/A (BC @ 1-2 tl)	7.6 ef	19.1 g	8.0 a-d	5.4 b-d	1141 d
5	Temik 15G + Orthene 97	5 lb/A 4 oz/A (BC @ 1-2 tl)	9.9 a	27.2 a	7.8 b-e	4.7 e	1398 ab
6	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1-2 tl)	8.9 bc	26.0 a-c	8.1 a-d	5.0 c-e	1383 ab
7	Untreated + Orthene 97	--- 4 oz/A (BC @ 2-3 tl)	8.0 d-f	20.5 g	8.0 a-d	5.7 b	1301 bc
8	Temik 15G + Orthene 97	5 lb/A 4 oz/A (BC @ 2-3 tl)	9.4 ab	27.0 ab	7.0 e	5.1 c-e	1423 ab
9	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 2-3 tl)	8.5 cd	22.1 f	7.1 de	5.8 b	1269 b-d
10	Untreated + Orthene 97 + Orthene 97	--- 4 oz/A (BC @ 1-2 tl) 4 oz/A (BC @ 2-3 tl)	7.4 f	22.5 ef	7.9 b-e	5.5 bc	1221 cd
11	Temik 15G + Orthene 97 + Orthene 97	5 lb/A 4 oz/A (BC @ 1-2 tl) 4 oz/A (BC @ 2-3 tl)	9.2 b	25.5 b-d	7.8 b-e	4.9 de	1484 a
12	Aeris + Orthene 97 + Orthene 97	Seed trt 4 oz/A (BC @ 1-2 tl) 4 oz/A (BC @ 2-3 tl)	8.9 bc	24.4 cd	8.2 a-c	5.8 b	1418 ab
	LSD		0.57	1.58	1.01	0.57	158.5

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

[1]*Based on sampling 6 plants per plot.*

[2]*NAWF (the number of main-stem nodes above the uppermost white flower in the first fruiting position) was based on sampling 6 plants per plot.*

[3]*Cotton was harvested on October 19. Gross yields were reduced by 59.1% to account for seed and trash.*

TEST: CT10THP_DuPont, Evaluation of at-planting insecticides for thrips management

EXPERIMENT TREATMENTS:

#	Material	Rate	Date(s) treated
1	DPX-HGW86 20SC DPX-HGW86 10OD	0.088 lb ai/A (6.75 oz/A) (liquid IF) 0.088 lb ai/A (13.5 oz/A) (BC @ 1st tl)	May 21
2	DPX-HGW86 20SC	0.134 lb ai/A (10.3 oz/A) (liquid IF)	
3	DPX-HGW86 20SC	0.176 lb ai/A (13.5 oz/A) (liquid IF)	
4	DPX-HGW86 20SC DPX-HGW86 10OD	0.134 lb ai/A (10.3 oz/A) (liquid IF) 0.088 lb ai/A (13.5 oz/A) (BC @ 1st tl)	May 21
5	Temik 15G	5 lb/A (IF)	
6	Temik 15G + Orthene 97	5 lb/A (IF) 4 oz/A (BC @ 1st tl)	May 21
7	Non-treated	---	

DPX-HGW86 was acidified to a pH of 4.5 with Buffer Xtra Strength (3.5 ml per 2000 ml H_2O) immediately before application

Test #: CT10THP_DuPont	**Planting date:** May 5
Year: 2010	**Plot size:** 4 rows x 35’
Crop: Cotton	**Row spacing:** 36”
Variety: DP 0920B2RF	**Field #:** 36
Experimental design: RCBD	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
4/13	Glyphosate	1 qt
5/06	Prowl H_2O	1 qt
5/06	Cotoran 4L	1 qt
5/06	Roundup WeatherMax	22 oz
5/28	Roundup WeatherMax	22 oz
6/19	Roundup WeatherMax	22 oz
7/17	MSMA	1 qt
7/17	Cotton Pro	1.5 pt
7/17	Envoke	0.1 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
7/08	Zeal	1.5 oz
8/06	Baythroid XL	3 oz
8/12	Baythroid XL	3 oz

Growth Regulators		
Date	**Product**	**Rate/A**
8/06	Pentia	3 oz

Lime & Fertilizer		
Date	**Product**	**Rate/A**
2/20	N 30%	25 units
4/12	6-16-39	330 lb
6/12	Boron N 30%	1 qt 30 units
6/28	Boron N 30%	1 qt 30 units

Defoliation		
Date	**Product**	**Rate/A**
9/21	Finish	1 qt
9/21	Def	6 oz
9/21	Dropp	3 oz

Land preparation: Rip strip till on May 5
Soil pH: 6.52
Soil type(s): Uchee, Nansemond
Nutrient analysis (ppm): P (41), K (34), Ca (243), Mg (28), Zn (0.3), Mn (2.7)
Harvest date: Oct 12
Row feet harvested: 70
Harvest technique: 2-row commercial picker modified for research plots

Treatment application information:

At Planting	**Granular IF**	Tractor-mounted inverted jars
	Liquid	**Nozzle type:** Microtubing **Nozzle spacing:** 36” **psi:** 51 **gpa:** 5
In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 18 **GPA:** 14.3

Comments: Irrigated 1-inch on Jul 7 and Jul 20.

Table 13. Mean number of thrips per 5 plants, CT10THP_DuPont. Tidewater AREC, Suffolk, VA, 2010. Broadcast at first true leaf applications were made on May 21.

#	Material	Rate	May 21 (early 1st true leaf stage)		May 24 (1st true leaf stage)		May 31 (2-3 true leaf stage)		Jun 9 (5-6 true leaf stage)		Jun 16 (6th true leaf stage)	
			Adult	Immat	Adult	Immat	Adult	Immat	Adult	Immat	Adult	Immat
1	DPX-HGW86 20SC DPX-HGW86 10OD	0.088 lb ai/A (liquid IF) 0.088 lb ai/A (BC @ 1st tl)	11.5 b	0.0	4.5 b	0.3 b	2.8 b-d	4.0 c	9.5	3.0 bc	4.3 b	5.8 b
2	DPX-HGW86 20SC	0.134 lb ai/A (liquid IF)	10.0 b	0.5	5.5 b	0.8 b	5.8 a	23.3 b	5.0	3.8 bc	2.0 b	8.5 b
3	DPX-HGW86 20SC	0.176 lb ai/A (liquid IF)	12.5 b	0.0	4.0 b	0.5 b	4.8 ab	12.3 bc	5.0	1.5 c	1.0 b	2.8 b
4	DPX-HGW86 20SC DPX-HGW86 10OD	0.134 lb ai/A (liquid IF) 0.088 lb ai/A (BC @ 1st tl)	12.0 b	0.0	3.5 b	0.5 b	2.8 b-d	2.3 c	3.3	3.0 bc	2.5 b	5.3 b
5	Temik 15G	5 lb/A (IF)	1.5 c	0.0	3.3 b	0.3 b	1.0 cd	17.5 bc	7.8	7.0 b	0.8 b	3.0 b
6	Temik 15G + Orthene 97	5 lb/A (IF) 4 oz/A (BC @ 1st tl)	2.3 c	0.0	1.3 b	0.3 b	0.8 d	3.3 c	5.0	1.5 c	1.8 b	7.0 b
7	Non-treated	---	18.8 a	0.8	14.5 a	4.5 a	3.8 a-c	159.3 a	4.5	13.0 a	10.0 a	19.5 a
	LSD		6.03	NS	7.03	1.90	2.78	16.08	NS	4.14	4.82	9.56

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

Table 14. Thrips injury ratings[1] and yield, CT10THP_DuPont. Tidewater AREC, Suffolk, VA, 2010. Broadcast at first true leaf applications were made on May 21.

#	Material	Rate	Thrips injury rating				Lint lb/acre[2]
			May 28 (2nd true leaf stage)	Jun 1 (2-3 true leaf stage)	Jun 7 (4th true leaf stage)	Jun 17 (6th true leaf stage)	
1	DPX-HGW86 20SC DPX-HGW86 10OD	0.088 lb ai/A (liquid IF) 0.088 lb ai/A (BC @ 1st tl)	2.19 b	1.19 c	1.06 c	1.69 b	1474 ab
2	DPX-HGW86 20SC	0.134 lb ai/A (liquid IF)	1.94 bc	1.44 b	1.69 b	0.75 d	1305 b
3	DPX-HGW86 20SC	0.176 lb ai/A (liquid IF)	1.75 cd	1.19 c	1.56 b	0.94 cd	1549 a
4	DPX-HGW86 20SC DPX-HGW86 10OD	0.134 lb ai/A (liquid IF) 0.088 lb ai/A (BC @ 1st tl)	1.69 cd	1.13 c	0.75 d	0.75 d	1583 a
5	Temik 15G	5 lb/A (IF)	1.50 d	0.75 d	0.94 c	1.25 c	1349 b
6	Temik 15G + Orthene 97	5 lb/A (IF) 4 oz/A (BC @ 1st tl)	1.06 e	0.50 e	0.50 e	0.81 d	1595 a
7	Non-treated	---	3.75 a	4.63 a	4.83 a	4.80 a	619 c
	LSD		0.34	0.17	0.15	0.33	181.5

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 12. Gross yields were reduced by 57.7% to account for seed and trash.*

TEST: CT10THP_Ecotec, Evaluation of foliar-applied Ecotec for thrips management

EXPERIMENT TREATMENTS:

#	Material	Rate/A	Date(s) treated
1	Orthene 97	4 oz	May 12 and 19
2	Radiant SC	6 oz	May 12 and 19
3	Karate Z	1.28 oz	May 12 and 19
4	Ecotec	16 oz	May 12 and 19
5	Ecotec + Saf-T-Side (May 19 only)	16 oz 1% v/v	May 12 and 19
6	Ecotec + Orthene 97	16 oz 4 oz	May 12 and 19
7	Ecotec + Radiant SC	16 oz 6 oz	May 12 and 19
8	Ecotec + Karate Z	16 oz 1.28 oz	May 12 and 19
9	Untreated	---	

All treatments broadcast at 1st true leaf and again at 3-4 true leaf.

Test #: CT10THP_Ecotec	**Planting date:** Apr 29
Year: 2010	**Plot size:** 4 rows x 35’
Crop: Cotton	**Row spacing:** 36”
Variety: PHY 375 WRF	**Field #:** 66
Experimental design: RCBD	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
5/01	Cotoran 4L	1 qt
5/01	Prowl H_2O	1 qt
5/01	Gramoxone	1 pt
5/28	Roundup WeatherMax	22 oz
6/19	Roundup WeatherMax	22 oz
7/17	MSMA	1 qt
7/17	Cotton Pro	1.5 pt
7/17	Envoke	0.1 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
7/08	Zeal	1.5 oz
8/06	Baythroid XL	3 oz
8/14	Steward	5 oz

Growth Regulators		
Date	**Product**	**Rate/A**
8/06	Pentia	3 oz

Lime & Fertilizer		
Date	**Product**	**Rate/A**
4/10	6-16-39	330 lb
6/12	Boron N 30%	1 qt 30 units
6/24	Boron N 30%	1 qt 30 units

Defoliation		
Date	**Product**	**Rate/A**
9/15	Finish	1 qt
9/15	Dropp	3 oz
9/15	Folex	6 oz

Land preparation: Rip strip till on Apr 27
Soil pH: 6.42
Soil type(s): Nansemond, Emporia
Nutrient analysis (ppm): P (27), K (52), Ca (309), Mg (33), Zn (0.6), Mn (1.8)
Harvest date: Oct 12
Row feet harvested: 70
Harvest technique: 2-row commercial picker modified for research plots

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 18 **GPA:** 14.3

Comments: Irrigated 1-inch on Jun 23.

Table 15. Thrips injury ratings[1] and yield, CT10THP_Ecotec. Tidewater AREC, Suffolk, VA, 2010. Treatments were applied on May 12 and again on May 19.

#	Material	Rate	Thrips injury rating					Lint lb/acre[2]
			May 21 (2nd true leaf stage)	May 28 (4th true leaf stage)	Jun 4 (4th true leaf stage)	Jun 11 (6-7 true leaf stage)	Jun 17 (6-7 true leaf stage)	
1	Orthene 97	4 oz	1.38 d	2.50 c	1.63 c	0.50 c	0.50 c	1107
2	Radiant SC	6 oz	1.50 d	3.13 b	2.13 b	0.56 c	0.69 c	1082
3	Karate Z	1.28 oz	1.88 c	3.63 a	4.19 a	3.50 ab	2.69 b	930
4	Ecotec	16 oz	3.00 a	3.75 a	4.25 a	3.19 b	2.38 b	914
5	Ecotec + Saf-T-Side (May 19 only)	16 oz 1% v/v	3.00 a	3.88 a	4.38 a	3.75 a	3.50 a	1040
6	Ecotec + Orthene 97	16 oz 4 oz	1.06 e	2.69 c	1.69 c	0.50 c	0.56 c	1129
7	Ecotec + Radiant SC	16 oz 6 oz	1.50 d	3.13 b	2.31 b	0.50 c	0.50 c	1071
8	Ecotec + Karate Z	16 oz 1.28 oz	2.44 b	3.56 a	4.19 a	3.81 a	3.50 a	1193
9	Untreated	---	3.00 a	3.88 a	4.31 a	3.38 ab	3.06 ab	1057
	LSD		0.29	0.38	0.36	0.56	0.69	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 12. Gross yields were reduced by 55.9% to account for seed and trash.*

TEST: CT10THP_SeedTrt, Evaluation of at-planting granular insecticides, seed treatments, and foliar sprays for thrips

EXPERIMENT TREATMENTS:

#	Material	Rate	Date(s) treated
1	Temik 15G	5 lb/A (IF)	
2	Temik 15G + Aeris*	5 lb/A (IF) Seed trt	
3	Temik 15G + Aeris	3.5 lb/A (IF) Seed trt	
4	Aeris	Seed trt	
5	Avicta CP	Seed trt	
6	Temik 15G + Orthene 97	5 lb/A (IF) 4 oz/A (BC @ 1st tl)	May 21
7	Temik 15G + Aeris + Orthene 97	5 lb/A (IF) Seed trt 4 oz/A (BC @ 1st tl)	May 21
8	Temik 15G + Aeris + Orthene 97	3.5 lb/A (IF) Seed trt 4 oz/A (BC @ 1st tl)	May 21
9	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1st tl)	May 21
10	Avicta CP + Orthene 97	Seed trt 4 oz/A (BC @ 1st tl)	May 21
11	Untreated	---	

All seed treated with fungicide base: ADILN

*Treated with Aeris @ 0.75 mg ai/seed and Trilex Advance (Trilex FL @ 0.64 oz/cwt, Baytan 30 @ 0.25 oz/cwt, Allegiance FL @ 0.75 oz/cwt)

Test #: CT10THP_SeedTrt	**Planting date:** May 3
Year: 2010	**Plot size:** 4 rows x 35’
Crop: Cotton	**Row spacing:** 36”
Variety: DP 1032 B2RF	**Field #:** 67
Experimental design: RCBD	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
5/04	Prowl H2O	1 qt
5/04	Cotoran 4L	1 qt
5/04	Gramoxone	1 pt
5/28	Roundup WeatherMax	22 oz
6/19	Roundup WeatherMax	22 oz
7/17	MSMA	1 qt
7/17	Cotton Pro	1.5 pt
7/17	Envoke	0.1 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
7/08	Zeal	1.5 oz
8/06	Baythroid XL	3 oz
8/14	Steward	5 oz

Growth Regulators		
Date	**Product**	**Rate/A**
8/06	Pentia	3 oz

Lime & Fertilizer		
Date	**Product**	**Rate/A**
2/20	N 30%	25 units
3/02	Lime	1000 lb
4/10	6-16-39	330 lb
6/12	Boron N 30%	1 qt 30 units
6/28	Boron N 30%	1 qt 30 units

Defoliation		
Date	**Product**	**Rate/A**
9/15	Finish	1 qt
9/15	Dropp	3 oz
9/15	Folex	6 oz

Land preparation: Rip strip till on May 3
Soil pH: 6.07
Soil type(s): Eunola, Nansemond, Emporia
Nutrient analysis (ppm): P (23), K (36), Ca (263), Mg (20), Zn (0.4), Mn (1.7)
Harvest date: Sep 24
Row feet harvested: 70
Harvest technique: 2-row commercial picker modified for research plots

Treatment application information:

At Planting	**Granular IF**	Tractor-mounted inverted jars
In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 18 **GPA:** 14.3

Comments: Irrigated 1-inch on Jun 23.

Table 16. Mean number of thrips per 5 plants, CT10THP_SeedTrt. Tidewater AREC, Suffolk, VA, 2010. Broadcast at first true leaf applications were made on May 21.

#	Material	Rate	May 20 (1st true leaf stage)		May 25 (2nd true leaf stage		Jun 1 (2-3 true leaf stage)		Jun 9 (4-5 true leaf stage)		Jun 16 (6th true leaf stage)	
			Adult	Immat.	Adult	Immat.	Adult	Immat.	Adult	Immat.	Adult	Immat.
1	Temik 15G	5 lb/A (IF)	2.5 c	0.0	4.8 b	0.0 b	1.3	22.3 b	4.0	8.8 bc	1.3	3.8 a-c
2	Temik 15G + Aeris*	5 lb/A (IF) Seed trt	0.8 c	0.0	0.8 b	0.0 b	0.5	8.3 b	1.0	2.3 d	0.3	1.0 cd
3	Temik 15G + Aeris	3.5 lb/A (IF) Seed trt	2.3 c	0.0	0.5 b	0.0 b	3.0	5.0 b	1.8	2.5 cd	0.5	0.8 cd
4	Aeris	Seed trt	1.8 c	0.0	3.5 b	0.0 b	1.0	13.0 b	2.3	7.3 cd	2.0	1.5 b-d
5	Avicta CP	Seed trt	5.3 b	0.0	3.5 b	0.8 b	2.3	28.8 b	3.8	15.0 b	2.0	6.5 a
6	Temik 15G + Orthene 97	5 lb/A (IF) 4 oz/A (BC @ 1st tl)	.	.	0.8 b	0.3 b	1.0	6.3 b	3.3	2.8 cd	0.0	0.0 d
7	Temik 15G + Aeris + Orthene 97	5 lb/A (IF) Seed trt 4 oz/A (BC @ 1st tl)	.	.	1.0 b	0.0 b	0.8	2.8 b	1.5	2.8 cd	0.5	0.3 cd
8	Temik 15G + Aeris + Orthene 97	3.5 lb/A (IF) Seed trt 4 oz/A (BC @ 1st tl)	.	.	0.8 b	0.3 b	0.5	4.8 b	2.5	2.8 cd	0.3	1.3 b-d
9	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1st tl)	.	.	1.3 b	0.0 b	1.5	5.3 b	3.0	3.3 cd	1.5	1.0 cd
10	Avicta CP + Orthene 97	Seed trt 4 oz/A (BC @ 1st tl)	.	.	0.8 b	0.0 b	1.3	8.5 b	3.5	3.3 cd	3.5	4.8 ab
11	Untreated	---	18.0 a	0.0	13.3 a	5.0 a	3.5	134.3 a	3.5	25.3 a	7.8	3.0 a-d
	LSD		2.03	NS	5.95	1.94	NS	27.6	NS	6.47	NS	3.53

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

Table 17. Thrips injury ratings[1] and yield[2], CT10THP_SeedTrt. Tidewater AREC, Suffolk, VA, 2010. Broadcast at first true leaf applications were made on May 21.

#	Material	Rate	Thrips injury rating				Lint lb/acre
			May 28 (2nd true leaf stage)	Jun 1 (2-3 true leaf stage)	Jun 7 (5th true leaf stage)	Jun 17 (6-7 true leaf stage)	
1	Temik 15G	5 lb/A (IF)	0.88 cd	1.31 b	2.19 c	1.13 b	1663 a-c
2	Temik 15G + Aeris*	5 lb/A (IF) Seed trt	0.75 c-e	0.69 c	0.69 e-g	0.38 d	1563 b-d
3	Temik 15G + Aeris	3.5 lb/A (IF) Seed trt	0.69 de	0.63 c	0.69 e-g	0.25 d	1577 b-d
4	Aeris	Seed trt	0.88 cd	1.19 b	1.19 d	0.75 c	1427 cd
5	Avicta CP	Seed trt	0.94 c	1.13 b	3.25 b	1.13 b	1547 b-d
6	Temik 15G + Orthene 97	5 lb/A (IF) 4 oz/A (BC @ 1st tl)	0.75 c-e	0.75 c	0.88 e	0.44 d	1827 a
7	Temik 15G + Aeris + Orthene 97	5 lb/A (IF) Seed trt 4 oz/A (BC @ 1st tl)	0.56 e	0.69 c	0.63 fg	0.25 d	1550 b-d
8	Temik 15G + Aeris + Orthene 97	3.5 lb/A (IF) Seed trt 4 oz/A (BC @ 1st tl)	0.69 de	0.69 c	0.50 g	0.25 d	1648 a-d
9	Aeris + Orthene 97	Seed trt 4 oz/A (BC @ 1st tl)	0.81 cd	0.75 c	0.81 ef	0.25 d	1848 a
10	Avicta CP + Orthene 97	Seed trt 4 oz/A (BC @ 1st tl)	1.25 b	0.75 c	1.13 d	0.44 d	1786 ab
11	Untreated	---	3.06 a	3.25 a	4.50 a	3.88 a	1406 d
	LSD		0.19	0.23	0.25	0.19	246.6

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 September 24. Gross yields were reduced by 53.96% to account for seed and trash.*

TEST: CT10BW1, Value of bollworm sprays on double-gene insect-resistant varieties

EXPERIMENT TREATMENTS:

#	Variety*	Classification
1	DP 0912 B2RF	Double-gene insect resistant
2	DP 1028 B2RF	Double-gene insect resistant
3	DP 1032 B2RF	Double-gene insect resistant
4	DP 121 RF	Conventional
5	ST 4288 B2RF	Double-gene insect resistant
6	ST 4498 B2RF	Double-gene insect resistant
7	ST 5288 B2RF	Double-gene insect resistant
8	FM 1740 B2RF	Double-gene insect resistant
9	PHY 375 WRF	Double-gene insect resistant
10	PHY 485 WRF	Double-gene insect resistant
11	PHY 315 RF	Conventional
12	PHY 425 RF	Conventional
13	PHY 525 RF	Conventional
14	CG 3035 RF	Conventional
15	AM 1550 B2RF	Double-gene insect resistant

*Each variety was treated with insecticides and untreated. In the treated plots, double-gene insect resistant varieties received one spray (Baythroid XL @ 2.6 oz/A on Aug. 9) and conventional varieties received two sprays for bollworm (Baythroid XL @ 1.6 on Aug. 3 and 2.6 oz/A on Aug. 9).

Test #: CT10BW1	**Planting date:** May 7
Year: 2010	**Plot size:** 4 rows x 35’
Crop: Cotton	**Row spacing:** 36”
Varieties: see treatment list	**Field #:** 63a
Experimental design: Split-plot	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
4/13	Glyphosate	1 qt
5/07	Cotoran 4L	1 qt
5/07	Prowl H_2O	1 qt
5/07	Roundup WeatherMax	22 oz
5/26	Roundup WeatherMax	22 oz
6/19	Roundup WeatherMax	22 oz
7/17	MSMA	1 qt
7/17	Cotton Pro	1.5 pt
7/17	Envoke	0.1 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
5/07	Temik 15G	5 lb
6/22	Centric	2 oz
7/08	Zeal	1.5 oz
7/09	Orthene 97	8 oz

Growth Regulators		
Date	**Product**	**Rate/A**
7/15	Pentia	6 oz
8/04	Pentia	8 oz

Lime & Fertilizer		
Date	**Product**	**Rate/A**
2/20	N 30%	25 units
4/20	6-16-39	330 lb
6/14	Boron N 30%	1 qt 30 units
6/28	Boron N 30%	1 qt 30 units

Defoliation		
Date	**Product**	**Rate/A**
9/21	Finish	1 qt
9/21	Dropp	3 oz
9/21	Def	6 oz

Land preparation: Rip strip till on May 7
Soil pH: 6.37
Soil type(s): Emporia, Nansemond
Nutrient analysis (ppm): P (22), K (56), Ca (328), Mg (39), Zn (0.5), Mn (2.5)
Harvest date: Oct 19
Row feet harvested: 70
Harvest technique: 2-row commercial picker modified for research plots

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 30 **GPA:** 16.5

Comments: Gail White, David Horton, and Bobby Ashburn are acknowledged for their assistance with this test.

Table 18. Percent external bollworm damage[1] and yield, CT10BW1. Tidewater AREC, Suffolk, VA, 2010.

#	Variety	Aug 17		Aug 24		Lint lb/acre[2]	
		Protected	Not protected	Protected	Not protected	Protected	Not protected
1	DP 0912 B2RF	0.0 c	1.0 c	0.0	0.0 c	1552	1498
2	DP 1028 B2RF	0.0 c	1.0 c	0.0	0.0 c	1495	1340
3	DP 1032 B2RF	0.0 c	3.0 bc	0.0	0.0 c	1575	1424
4	DP 121 RF	0.0 c	10.0 a	0.0	0.0 c	1338	1163
5	ST 4288 B2RF	1.0 bc	0.0 c	0.0	0.0 c	1492	1348
6	ST 4498 B2RF	0.0 c	0.0 c	0.0	0.0 c	1310	1326
7	ST 5288 B2RF	0.0 c	0.0 c	0.0	1.0 bc	1258	1173
8	FM 1740 B2RF	0.0 c	0.0 c	0.0	0.0 c	1495	1336
9	PHY 375 WRF	0.0 c	0.0 c	0.0	0.0 c	1286	1270
10	PHY 485 WRF	0.0 c	2.0 c	0.0	0.0 c	1455	1181
11	PHY 315 RF	0.0 c	7.0 ab	0.0	3.0 ab	1349	1258
12	PHY 425 RF	0.0 c	7.0 ab	0.0	4.0 a	1382	1128
13	PHY 525 RF	3.0 a	4.0 bc	0.0	0.0 c	1366	1111
14	CG 3035 RF	2.0 ab	4.0 bc	0.0	2.0 a-c	1407	1395
15	AM 1550 B2RF	0.0 c	1.0 c	0.0	0.0 c	1487	1338
	LSD	1.80	4.12	NS	2.35	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]External bollworm damage based on a sample of 25 bolls per plot.
[2]Cotton was harvested on October 9. Gross yields were reduced for each individual plot (56.3-65.8%) to account for seed and trash.

Treatment means (% bollworm damage)	Aug 17	Aug 24	Yield
1. With insecticide	0.4	0.0	1416
2. Without insecticide	2.7	0.7	1286
LSD	---	---	NS

Variety mean (% bollworm damage)	Aug 17	Aug 24	Yield
1. DP 0912 B2RF	0.5	0.0	1525 a
2. DP 1028 B2RF	0.5	0.0	1418 a
3. DP 1032 B2RF	1.5	0.0	1499 a
4. DP 121 RF	5.0	0.0	1250 a
5. ST 4288 B2RF	0.5	0.0	1420 a
6. ST 4498 B2RF	0.0	0.0	1318 a
7. ST 5288 B2RF	0.0	0.5	1215 a
8. FM 1740 B2RF	0.0	0.0	1415 a
9. PHY 375 WRF	0.0	0.0	1278 a
10. PHY 485 WRF	1.0	0.0	1318 a
11. PHY 315 RF	3.5	1.5	1303 a
12. PHY 425 RF	3.5	2.0	1255 a
13. PHY 525 RF	3.5	0.0	1239 a
14. CG 3035 RF	3.0	1.0	1401 a
15. AM 1550 B2RF	0.5	0.0	1412 a
LSD	---	---	440.3

Split plot analysis (% bollworm damage)	Aug 17	Aug 24	Yield
Treatment	0.0066	0.1552	0.0817
Variety	<0.0001	0.0058	0.0230
Treatment x variety	<0.0001	0.0058	0.9565

TEST: CT10BW2, Value of bollworm sprays on non-insect-resistant (conventional) Seed Source Genetics varieties

EXPERIMENT TREATMENTS:

#	Variety*	Classification
1	SSG HQ 110 CT	Conventional
2	SSG HQ 210 CT	Conventional
3	SSG HQ 212 CT	Conventional

*Each variety was treated with insecticides and untreated. In the treated plots, varieties received two sprays for bollworm (Baythroid XL @ 1.6 oz on Aug. 3 and 2.6 oz/A on Aug. 9).

Test #: CT10BW2	**Planting date:** Apr 30
Year: 2010	**Plot size:** 4 rows x 40’
Crop: Cotton	**Row spacing:** 36”
Varieties: see treatment list	**Field #:** 3
Experimental design: Split-plot	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
3/20	2,4-D LV4	1 pt
4/07	Roundup	22 oz
5/01	Cotoran 4L	1 qt
5/01	Prowl H_2O	1 qt
5/01	Gramoxone	1 pt
5/05	Roundup WeatherMax	22 oz
6/18	Select Max	1 pt
6/30	Select Max	1 pt
7/16	MSMA	1 qt
7/16	Cotton Pro	1.5 pt
7/16	Envoke	0.1 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
4/30	Temik 15G	5 lb
5/26	Orthene 97	8 oz
7/08	Zeal	1.5 oz
7/13	Dicofol 4E	1.5 pt
8/06	Baythroid XL	3 oz
8/12	Baythroid XL	3 oz

Growth Regulators		
Date	**Product**	**Rate/A**
7/13	Pentia	2 oz
8/06	Pentia	3 oz

Lime & Fertilizer		
Date	**Product**	**Rate/A**
2/20	N 30%	25 units
3/02	Lime	1000 lb
3/20	N 30%	25 units
4/20	6-16-39	330 lb
6/12	Boron N 30%	1 qt 30 units
6/28	Boron N 30%	1 qt 30 units

Defoliation		
Date	**Product**	**Rate/A**
9/17	Finish	1 qt
9/17	Def	6 oz
9/17	Dropp	3 oz

Land preparation: Rip strip till on Apr 29
Soil pH: 6.16
Soil type(s): Uchee, Emporia, Eunola
Nutrient analysis (ppm): P (22), K (79), Ca (379), Mg (31), Zn (0.5), Mn (1.9)
Harvest date: Oct 12
Row feet harvested: 80
Harvest technique: 2-row commercial picker modified for research plots

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 30 **GPA:** 16.5

Comments: PHY 375WRF on sides of test. Irrigated on May 11 to improve stand. Gail White, David Horton, and Bobby Ashburn are acknowledged for their assistance with this test.

Table 19. Percent external bollworm damage[1] and yield, CT10BW2. Tidewater AREC, Suffolk, VA, 2010. "Protected" plots received two sprays for bollworm (Baythroid XL @ 1.6 oz on Aug. 3 and 2.6 oz/A on Aug. 9).

#	Variety	Aug 17		Aug 24		Lint lb/acre[2]	
		Protected	Not protected	Protected	Not protected	Protected	Not protected
1	SSG HQ 110 CT	1.0	6.0	0.0	1.0	829 b	777 b
2	SSG HQ 210 CT	1.0	8.0	0.0	0.0	995 a	895 a
3	SSG HQ 212 CT	0.0	5.0	0.0	0.0	973 a	916 a
	LSD	NS	NS	NS	NS	48.8	107.1

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]External bollworm damage based on a sample of 25 bolls per plot.
[2]Cotton was harvested on October 12. Gross yields were reduced by 57.4 to 61.8% to account for seed and trash.

Treatment means (% bollworm damage)	**Aug 17**	**Aug 24**	**Yield**
1. With insecticide	0.7	0.0	932.1
2. Without insecticide	6.3	0.3	862.5
LSD	NS	NS	NS

Variety mean (% bollworm damage)	**Aug 17**	**Aug 24**	**Yield**
1. SSG HQ 110 CT	3.5	0.5	802.8 a
2. SSG HQ 210 CT	4.5	0.0	944.7 a
3. SSG HQ 212 CT	2.5	0.0	944.5 a
LSD	NS	NS	151.6

Split plot analysis (% bollworm damage)	**Aug 17**	**Aug 24**	**Yield**
Treatment	0.0596	0.3910	0.1712
Variety	0.3119	0.3966	<0.0001
Treatment x variety	0.6610	0.3966	0.5585

TEST: CT10BW3_Foliar, Evaluation of foliar insecticides for bollworm management

EXPERIMENT TREATMENTS:

#	Material	Rate	Date(s) treated
1	Coragen 1.67SC	5.06 oz/A (BC @ ET) 5.06 oz/A (BC @ 5-7 d after ET)	Aug 3 Aug 9
2	Coragen 1.67SC	6.74 oz/A (BC @ ET) 6.74 oz/A (BC @ 5-7 d after ET)	Aug 3 Aug 9
3	Belt 480 SC	3 oz/A (BC @ ET) 3 oz/A (BC @ 5-7 d after ET)	Aug 3 Aug 9
4	Prevathon	13.3 oz/A (BC @ ET) 13.3 oz/A (BC @ 5-7 d after ET)	Aug 3 Aug 9
5	Radiant SC	4.25 oz/A (BC @ ET) 4.25 oz/A (BC @ 5-7 d after ET)	Aug 3 Aug 9
6	Radiant SC	6 oz/A (BC @ ET) 6 oz/A (BC @ 5-7 d after ET)	Aug 3 Aug 9
7	Baythroid XL	1.6 oz/A (BC @ ET) 2.6 oz/A (BC @ 5-7 d after ET)	Aug 3 Aug 9
8	Leverage 2.7	3.8 oz/A (BC @ ET) 5 oz/A (BC @ 5-7 d after ET)	Aug 3 Aug 9
9	Karate Z	1.6 oz/A (BC @ ET) 2.56 oz/A (BC @ 5-7 d after ET)	Aug 3 Aug 9
10	Endigo ZC	4 oz/A (BC @ ET) 4 oz/A (BC @ 5-7 d after ET)	Aug 3 Aug 9
11	Untreated	---	---

Test #: CT10BW3	**Planting date:** May 5
Year: 2010	**Plot size:** 4 rows x 40’
Crop: Cotton	**Row spacing:** 36”
Variety: PHY 315RF	**Field #:** 22
Experimental design: RCBD	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
4/12	Gramoxone	1 pt
5/05	Cotoran 4L	1 qt
5/05	Prowl H_2O	1 qt
5/05	Roundup WeatherMax	22 oz
5/26	Roundup WeatherMax	22 oz
6/19	Roundup WeatherMax	22 oz
7/25	MSMA	1 qt
7/25	Cotton Pro	1.5 pt
7/25	Envoke	0.1 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
5/05	Temik 15G	5 lb
5/26	Orthene 97	8 oz
7/12	Dicofol 4E	1.5 pt

Growth Regulators		
Date	**Product**	**Rate/A**
7/03	Pentia	10 oz
8/07	Pentia	3 oz

Lime & Fertilizer		
Date	**Product**	**Rate/A**
4/19	6-16-39	330 lb
6/12	Boron N 30%	1 qt 30 units
6/24	Boron N 30%	1 qt 30 units

Defoliation		
Date	**Product**	**Rate/A**
9/15	Finish	1 qt
9/15	Dropp	3 oz
9/15	Folex	6 oz

Land preparation: Rip strip till on May 4
Soil pH: 6.27
Soil type(s): Eunola, Uchee
Nutrient analysis (ppm): P (27), K (61), Ca (229), Mg (44), Zn (0.6), Mn (2.0)
Harvest date: Oct 12
Row feet harvested: 80
Harvest technique: 2-row commercial picker modified for research plots

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 30 **GPA:** 16.5

Table 20. Percent external bollworm damage[1] and yield, CT10BW3. Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate	Percent external bollworm damage		Lint lb/acre[2]
			Aug 17	Aug 24	
1	Coragen 1.67SC	5.06 oz/A (BC @ ET) 5.06 oz/A (BC @ 6 d after ET)	0.0 b	0.0	879
2	Coragen 1.67SC	6.74 oz/A (BC @ ET) 6.74 oz/A (BC @ 6 d after ET)	0.0 b	0.0	874
3	Belt 480 SC	3 oz/A (BC @ ET) 3 oz/A (BC @ 6 d after ET)	0.0 b	0.0	989
4	Prevathon	13.3 oz/A (BC @ ET) 13.3 oz/A (BC @ 6 d after ET)	0.0 b	0.0	864
5	Radiant SC	4.25 oz/A (BC @ ET) 4.25 oz/A (BC @ 6 d after ET)	0.0 b	0.0	889
6	Radiant SC	6 oz/A (BC @ ET) 6 oz/A (BC @ 6 d after ET)	0.0 b	0.0	947
7	Baythroid XL	1.6 oz/A (BC @ ET) 2.6 oz/A (BC @ 6 d after ET)	0.0 b	0.0	958
8	Leverage 2.7	3.8 oz/A (BC @ ET) 5 oz/A (BC @ 6 d after ET)	0.0 b	0.0	921
9	Karate Z	1.6 oz/A (BC @ ET) 2.56 oz/A (BC @ 6 d after ET)	0.0 b	0.0	918
10	Endigo ZC	4 oz/A (BC @ ET) 4 oz/A (BC @ 6 d after ET)	0.0 b	0.0	845
11	Untreated	---	10.0 a	0.0	827
	LSD		1.01	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]External bollworm damage based on a sample of 25 bolls per plot.
[2]Cotton was harvested on October 12. Gross yields were reduced by 55.9% to account for seed and trash.

TEST: CT10_PHY_Everett, On-farm conventional cotton trial

EXPERIMENT TREATMENTS:

#	Variety	Classification
1	PHY 315 RF*	Conventional
2	PHY 425 RF*	Conventional
3	PHY 375 WRF**	Double-gene insect resistant

*PHY 315 RF and PHY 425 RF varieties were scouted for bollworm and insecticide applications were timed on egg threshold and live worms/fresh boll damage:

1) Egg/larval threshold, Karate Z at 2 oz/A (Aug 2)
2) Automatic 7-day, Baythroid XL at 3 oz/A (Aug 9)
3) Baythroid XL at 3 oz/A (Aug 21)

**PHY 375 WRF received one insecticide application: Baythroid XL at 3 oz/A (Aug 21)

Test #: CT10_PHY_Everett	**Planting date:** RF=May 14, WRF=May 21
Year: 2010	**Plot size:** approx. 5 acres
Crop: Cotton	**Row spacing:** 36”
Varieties: see treatment list	**Harvest date:** Nov 15
Experimental design: Replicated strips	**Location:** Lewis Everett farm, Southampton Co., VA

Comments: Cotton was inspected on July 29 for eggs, worms, and external boll damage. 1,000 terminals and fruit were inspected per variety. PHY 315 RF had 1 egg, 4 worms, and 0 damaged bolls; PHY 425 RF had 5 eggs, 4 worms, and 1 damaged boll.

Table 21. Dirty blooms, square retention, internal bug damage, bollworm damage, and yield, CT10_PHY_Everett. L. Everett farm, Southampton Co., VA, 2010.

#	Variety	Percent dirty blooms (10 blooms per plot) Jul 29	Percent square retention (5 whole plants per plot) Jul 29	Percent internal bug damage (50 bolls per variety) Jul 29	Percent of terminals infested with:		Percent of fruit infested with:					Percent external bollworm damage				Lint lb/acre[1]
					Bollworm eggs Aug 2	Live worms Aug 2	Bollworm eggs Aug 2	Live worms				Aug 2	Aug 16	Aug 27	Aug 30	
								Aug 2	Aug 16	Aug 27	Aug 30					
1	PHY 315 RF	0.0	96.8	8.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1250
2	PHY 425 RF	0.0	96.6	4.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1067
3	PHY 375 WRF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1331
	LSD	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).
[1]Cotton was harvested in large, non-replicated plots (PHY 315 RF=5.76 acres; PHY 425 RF=5.39 acres, PHY 375 WRF=5.05 acres) by the grower and was commercially ginned.

TEST: CT10_SSG_Everett, On-farm conventional cotton trial

EXPERIMENT TREATMENTS:

#	Variety*	Classification
1	SSG HQ 110 CT	Conventional
2	SSG HQ 210 CT	Conventional
3	SSG HQ 212 CT	Conventional

*Cotton was scouted for bollworm and insecticide applications were timed on egg threshold and live worms/fresh boll damage.

Everett site bollworm management program:

1) Egg/larval threshold, Karate Z at 2 oz/A (Aug 2)
2) Automatic 7-day, Baythroid XL at 3 oz/A (Aug 9)
3) Baythroid XL at 3 oz/A (Aug 21)

Everett site weed management program:

1) Burndown, Traxion (glyphosate) at 24 oz/acre + Valor at 1 oz
2) Pre-emergence, Prowl H_2O at 1.8 pt + Reflex at 1 pt, + Gramoxone at 8 oz + non-ionic surfactant.
3) Lay-by, Envoke at 0.15 oz

Test #: CT10_SSG_Everett	**Planting date:** May 15
Year: 2010	**Plot size:** approx. 16,000 row ft
Crop: Cotton	**Row spacing:** 36”
Varieties: see treatment list	**Harvest date:** Nov 15
Experimental design: Replicated strips	**Location:** Lewis Everett farm, Southampton Co., VA

Comments: Cotton was inspected on July 29 for eggs, worms, and external boll damage. 800 terminals and fruit were inspected per variety. SSG HQ 110 CT had 0 eggs, 3 worms/damaged bolls; SSG HQ 210 CT had 0 eggs, 12 worms/damaged bolls; SSG HQ 212 CT had 0 eggs and 10 worms/damaged bolls.

Table 22. Dirty blooms, internal bug damage, bollworm damage, and yield, CT10_SSG_Everett. L. Everett farm, Southampton Co., VA, 2010.

#	Variety	Percent dirty blooms (10 blooms per plot) Jul 29	Percent internal bug damage (50 bolls per variety) Jul 29	Percent of terminals infested with:		Percent of fruit infested with:					Percent external bollworm damage				Lint lb/acre[1]
				Bollworm eggs Aug 2	Live worms Aug 2	Bollworm eggs Aug 2	Live worms				Aug 2	Aug 16	Aug 27	Aug 30	
							Aug 2	Aug 16	Aug 27	Aug 30					
1	SSG HQ 110 CT	0.0	14.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	1022
2	SSG HQ 210 CT	0.0	10.0	1.0	0.0	0.0	3.0	0.0	1.0	0.0	4.0	5.0	1.0	0.0	810
3	SSG HQ 212 CT	0.0	8.0	1.0	1.0	0.0	3.0	1.0	0.0	0.0	3.0	3.0	0.0	1.0	774
	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).

[1]*Cotton was harvested on November 15. Sixteen rows were harvested per variety for a total of 15,936-16,200 row ft. Gross yields were reduced by 61.4 % (SSG HQ 110 CT), 63.8% (SSG HQ 210 CT), and 67.8% (SSG HQ 212 CT) to account for seed and trash.*

TEST: CT10PBUG_Valent, Evaluation of foliar-applied insecticides for plant bug management

EXPERIMENT TREATMENTS:

#	Material	Rate/A	Date(s) treated
1	Untreated	---	---
2	Belay + NIS	3 oz 0.25% v/v	Jun 23, Jul 6, Jul 20
3	Belay + NIS	4 oz 0.25% v/v	Jun 23, Jul 6, Jul 20
4	Belay + Brigade + NIS	2 oz 4 oz 0.25% v/v	Jun 23, Jul 6, Jul 20
5	Belay + Brigade + NIS	3 oz 4 oz 0.25% v/v	Jun 23, Jul 6, Jul 20
6	Belay + Orthene 97 + NIS	3 oz 12 oz 0.25% v/v	Jun 23, Jul 6, Jul 20
7	Endigo ZC + NIS	5 oz 0.25% v/v	Jun 23, Jul 6, Jul 20
8	Danitol + Belay + NIS	10.67 oz 2 oz 0.15% v/v	Jun 23, Jul 6, Jul 20
9	Danitol + Belay + NIS	10.67 oz 3 oz 0.15% v/v	Jun 23, Jul 6, Jul 20
10	CMT 560 + Dyne-Amic + UAN 28%	8 oz 0.25% v/v 2.5% v/v	Jun 23, Jul 6, Jul 20

Non-ionic surfactant (NIS) = Induce; Bidrin at 4 oz/A applied to all plots on Aug 4

Test #: CT10PBUG_Valent	**Planting date:** May 3
Year: 2010	**Plot size:** 8 rows x 50’
Crop: Cotton	**Row spacing:** 36”
Variety: FM 1740 B2F	**Hand-harvest date:** Oct 8 (10 row ft/plot)
Experimental design: RCBD	**Location:** Bill Sawyer farm, Pasquotank, NC

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 18 **GPA:** 14.3

Comments: Tidewater Agronomics and Bill, John, Mike, and Steve Sawyer are acknowledged for their assistance with this test. N 36.36697 W 76.35758

Table 23. Percent square retention, CT10PBUG_Valent (Bill Sawyer farm, Pasquotank, NC). Tidewater AREC, Suffolk, VA, 2010. Treatments were applied on June 23, July 6, and July 20.

#	Material	Rate	Based on the four uppermost nodes (10 plants per plot)						Based on one lower branch (10 plants per plot)	Based on entire plant (5 plants per plot)		
			Jun 28	Jul 1	Jul 6	Jul 12	Jul 15	Jul 19	Jul 6	Jul 12	Jul 15	Jul 19
1	Untreated	---	96.3	95.6	93.8	92.5	87.5	92.5 ab	90.6	86.4	85.7	84.3
2	Belay + NIS	3 oz 0.25% v/v	99.4	97.5	93.8	90.0	87.5	90.0 ab	95.8	81.1	88.9	84.5
3	Belay + NIS	4 oz 0.25% v/v	98.1	97.5	97.5	88.8	88.1	94.4 a	90.5	90.7	88.9	87.8
4	Belay + Brigade + NIS	2 oz 4 oz 0.25% v/v	95.6	100.0	91.9	84.4	91.3	85.0 bc	91.0	87.7	85.9	87.2
5	Belay + Brigade + NIS	3 oz 4 oz 0.25% v/v	98.8	97.5	96.3	94.4	90.0	81.3 c	90.5	90.0	86.9	89.7
6	Belay + Orthene 97 + NIS	3 oz 12 oz 0.25% v/v	98.1	97.5	93.1	93.8	93.8	85.0 bc	95.6	89.7	85.4	81.1
7	Endigo ZC + NIS	5 oz 0.25% v/v	95.6	98.1	91.3	90.6	90.0	88.1 a-c	89.4	85.5	86.4	84.5
8	Danitol + Belay + NIS	10.67 oz 2 oz 0.15% v/v	98.1	98.1	97.5	91.9	86.9	86.9 a-c	87.0	89.2	85.3	84.4
9	Danitol + Belay + NIS	10.67 oz 3 oz 0.15% v/v	98.8	97.5	97.5	88.1	81.3	89.4 ab	92.2	88.1	82.3	82.4
10	CMT 560 + Dyne-Amic + UAN 28%	8 oz 0.25% v/v 2.5% v/v	98.8	98.8	95.0	93.1	89.4	91.3 ab	93.9	88.3	84.9	84.3
	LSD		NS	NS	NS	NS	NS	7.52	NS	NS	NS	NS

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

Table 24. Plant bug counts, CT10PBUG_Valent (Bill Sawyer farm, Pasquotank, NC). Tidewater AREC, Suffolk, VA, 2010. Treatments were applied on June 23, July 6, and July 20.

#	Material	Rate	Plant bugs per 25 sweeps in one row													
			Jun 28		Jul 1		Jul 6		Jul 12		Jul 15		Jul 19		Jul 26	
			Nymph	Adult	Nymph	Adult	Nymph	Adult	Nymph	Adult	Nymph	Adult	Nymph	Adult	Nymph	Adult
1	Untreated	---	0.0	0.5	0.0	2.0	0.3	5.3	0.5	1.5	0.0	6.0	1.0	3.8	2.5	3.0
2	Belay + NIS	3 oz 0.25% v/v	0.0	1.0	0.0	2.3	0.0	4.5	0.0	2.0	0.0	6.0	0.5	2.8	1.3	4.8
3	Belay + NIS	4 oz 0.25% v/v	0.0	0.3	0.0	1.5	0.0	3.5	0.0	2.3	0.5	5.0	1.5	2.5	1.8	3.0
4	Belay + Brigade + NIS	2 oz 4 oz 0.25% v/v	0.0	0.5	0.0	1.5	0.0	3.0	0.0	0.5	0.0	3.8	1.5	2.5	1.0	2.5
5	Belay + Brigade + NIS	3 oz 4 oz 0.25% v/v	0.0	0.5	0.0	1.8	0.0	3.5	0.0	0.8	0.0	5.8	0.0	2.8	1.3	2.0
6	Belay + Orthene 97 + NIS	3 oz 12 oz 0.25% v/v	0.0	0.5	0.0	1.0	0.0	2.0	0.0	1.8	1.0	3.5	0.3	4.0	0.8	2.0
7	Endigo ZC + NIS	5 oz 0.25% v/v	0.0	1.0	0.0	1.5	0.0	1.5	0.0	0.5	0.8	5.8	1.0	2.5	3.3	1.0
8	Danitol + Belay + NIS	10.67 oz 2 oz 0.15% v/v	0.0	0.5	0.0	1.3	0.0	3.0	0.0	1.0	0.3	2.3	1.5	2.5	2.5	2.3
9	Danitol + Belay + NIS	10.67 oz 3 oz 0.15% v/v	0.0	0.5	0.0	0.8	0.0	3.3	0.0	0.0	0.0	4.5	2.5	2.3	0.5	1.5
10	CMT 560 + Dyne-Amic + UAN 28%	8 oz 0.25% v/v 2.5% v/v	0.0	0.5	0.3	1.8	0.0	3.8	0.0	1.3	0.3	4.5	1.5	1.5	4.8	2.0
	LSD		NS	NS	NS	NS	NS	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).

Table 25. Percent dirty blooms (based on inspecting 10 white flowers per plot), CT10PBUG_Valent (Bill Sawyer farm, Pasquotank, NC). Tidewater AREC, Suffolk, VA, 2010. Treatments were applied on June 23, July 6, and July 20.

#	Material	Rate	Jul 12	Jul 15	Jul 19	Jul 26
1	Untreated	---	10.0	5.0	22.5	30.0
2	Belay + NIS	3 oz 0.25% v/v	7.5	12.5	20.0	37.5
3	Belay + NIS	4 oz 0.25% v/v	5.0	12.5	15.0	27.5
4	Belay + Brigade + NIS	2 oz 4 oz 0.25% v/v	2.5	15.0	7.5	17.5
5	Belay + Brigade + NIS	3 oz 4 oz 0.25% v/v	2.5	7.5	12.5	17.5
6	Belay + Orthene 97 + NIS	3 oz 12 oz 0.25% v/v	7.5	10.0	12.5	10.0
7	Endigo ZC + NIS	5 oz 0.25% v/v	7.5	15.0	22.5	25.0
8	Danitol + Belay + NIS	10.67 oz 2 oz 0.15% v/v	5.0	7.5	22.5	22.5
9	Danitol + Belay + NIS	10.67 oz 3 oz 0.15% v/v	5.0	2.5	10.0	17.5
10	CMT 560 + Dyne-Amic + UAN 28%	8 oz 0.25% v/v 2.5% v/v	17.5	15.0	17.5	42.5
	LSD		NS	NS	NS	NS

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

Table 26. Percent internal boll damage (based on inspecting 10 bolls per plot) and yield, CT10PBUG_Valent (Bill Sawyer farm, Pasquotank, NC). Tidewater AREC, Suffolk, VA, 2010. Treatments were applied on June 23, July 6, and July 20.

#	Material	Rate	Jul 15	Jul 19	Jul 26	Yield[1]	
						Lint grams/10 row ft	Lint lb/acre
1	Untreated	---	20.0	20.0	60.0 a	365.9	1170
2	Belay + NIS	3 oz 0.25% v/v	15.0	30.0	52.5 ab	306.2	979
3	Belay + NIS	4 oz 0.25% v/v	7.5	17.5	37.5 a-d	371.4	1188
4	Belay + Brigade + NIS	2 oz 4 oz 0.25% v/v	5.0	12.5	15.0 d	293.8	940
5	Belay + Brigade + NIS	3 oz 4 oz 0.25% v/v	7.5	20.0	37.5 a-d	366.6	1173
6	Belay + Orthene 97 + NIS	3 oz 12 oz 0.25% v/v	10.0	22.5	25.0 cd	356.8	1141
7	Endigo ZC + NIS	5 oz 0.25% v/v	10.0	22.5	32.5 b-d	309.5	990
8	Danitol + Belay + NIS	10.67 oz 2 oz 0.15% v/v	2.5	22.5	40.0 a-c	401.5	1284
9	Danitol + Belay + NIS	10.67 oz 3 oz 0.15% v/v	12.5	12.5	22.5 cd	379.0	1212
10	CMT 560 + Dyne-Amic + UAN 28%	8 oz 0.25% v/v 2.5% v/v	7.5	7.5	50.0 ab	381.3	1219
	LSD		NS	NS	23.1	NS	

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]Based on hand-picking 10 row ft per plot on October 8. Gross yields were reduced by 49.4% to account for seed and trash.

TEST: CT10_PBUG_System Comparison, Evaluation of foliar-applied insecticides for plant bug management

EXPERIMENT TREATMENTS:

#	System	Rate/A	Application	Date treated
1	*Syngenta system:*			
	Centric	2 oz	1	Jun 23
	Endigo ZC	5.4 oz	2	Jul 6
	Endigo ZC	5.4 oz	3	Jul 20
	Karate Z	1.92 oz	4	Jul 28
2	*Bayer system:*			
	Trimax Pro	1.8 oz	1	Jun 23
	Leverage 360	3.2 oz	2	Jul 6
	Leverage 360	3.2 oz	3	Jul 20
	Baythroid XL	2.6 oz	4	Jul 28
3	*Valent system:*			
	Belay	3 oz	1	Jun 23
	Belay + Baythroid XL	3 oz + 1.8 oz	2	Jul 6
	Belay + Baythroid XL	3 oz + 1.8 oz	3	Jul 20
	Baythroid XL	2.6 oz	4	Jul 28

Test #: CT10PBUG_System Comparison	**Planting date:** Apr 30
Year: 2010	**Plot size:** 40 rows x ¾ mile
Crop: Cotton	**Row spacing:** 36”
Variety: ST 4554 B2RF	**Harvest date:** Oct 18
Experimental design: Strip	**Location:** Bill Sawyer farm, Pasquotank, NC

Comments: Tidewater Agronomics, Inc. and Bill, John, Mike, and Steve Sawyer are acknowledged for their assistance with this test. The test was harvested by the grower (3552-4860 row ft/plot) and gross yields were determined using a weigh/dump boll buggy.

Table 27. Percent square retention, CT10PBUG_System Comparison (Bill Sawyer farm, Pasquotank, NC). Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate	Based on 25 terminals/plot						Based on 5 entire plants/plot		
			Jun 28	Jul 1	Jul 5	Jul 12	Jul 15	Jul 19	Jul 12	Jul 15	Jul 19
1	*Syngenta system:*		95.8	99.0	97.5	97.0	96.8	96.0 ab	90.3	87.5	88.3
	Centric	2 oz									
	Endigo ZC	5.4 oz									
	Endigo ZC	5.4 oz									
	Karate Z	1.92 oz									
2	*Bayer system:*		96.5	96.8	97.3	96.5	96.5	98.3 a	92.3	90.3	86.3
	Trimax Pro	1.8 oz									
	Leverage 360	3.2 oz									
	Leverage 360	3.2 oz									
	Baythroid XL	2.6 oz									
3	*Valent system:*		95.3	96.3	98.0	98.3	97.0	94.3 b	85.8	85.8	72.5
	Belay	3 oz									
	Belay + Baythroid XL	3 oz + 1.8 oz									
	Belay + Baythroid XL	3 oz + 1.8 oz									
	Baythroid XL	2.6 oz									
	LSD		NS	NS	NS	NS	NS	2.98	NS	NS	NS

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

Table 28. Plant bug counts (based on four 25-sweep samples per plot), CT10PBUG_System Comparison (Bill Sawyer farm, Pasquotank, NC). Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate	Jun 28	Jul 1	Jul 5	Jul 12	Jul 15	Jul 19	Jul 26		Jul 30	
									Adult	Nymph	Adult	Nymph
1	*Syngenta system:*		2.0	2.5	7.3	0.3	2.0	5.5 a	0.5	0.0	1.3	0.3
	Centric	2 oz										
	Endigo ZC	5.4 oz										
	Endigo ZC	5.4 oz										
	Karate Z	1.92 oz										
2	*Bayer system:*		1.0	1.0	5.0	0.3	0.5	2.3 b	1.0	0.0	0.8	0.8
	Trimax Pro	1.8 oz										
	Leverage 360	3.2 oz										
	Leverage 360	3.2 oz										
	Baythroid XL	2.6 oz										
3	*Valent system:*		1.3	2.0	5.8	0.0	0.5	3.0 b	0.5	0.0	2.3	2.3
	Belay	3 oz										
	Belay + Baythroid XL	3 oz + 1.8 oz										
	Belay + Baythroid XL	3 oz + 1.8 oz										
	Baythroid XL	2.6 oz										
	LSD		NS	NS	NS	NS	NS	1.75	NS	NS	NS	NS

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

Table 29. Percent dirty blooms (based on 25 white flowers per plot), CT10PBUG_System Comparison (Bill Sawyer farm, Pasquotank, NC). Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate	Jul 12	Jul 15	Jul 19	Jul 26	Jul 30
1	*Syngenta system:*		1.0	2.0	5.0	1.0	2.0
	Centric	2 oz					
	Endigo ZC	5.4 oz					
	Endigo ZC	5.4 oz					
	Karate Z	1.92 oz					
2	*Bayer system:*		0.0	3.0	2.0	2.0	3.0
	Trimax Pro	1.8 oz					
	Leverage 360	3.2 oz					
	Leverage 360	3.2 oz					
	Baythroid XL	2.6 oz					
3	*Valent system:*		0.0	5.0	3.0	1.0	4.0
	Belay	3 oz					
	Belay + Baythroid XL	3 oz + 1.8 oz					
	Belay + Baythroid XL	3 oz + 1.8 oz					
	Baythroid XL	2.6 oz					
	LSD		NS	NS	NS	NS	NS

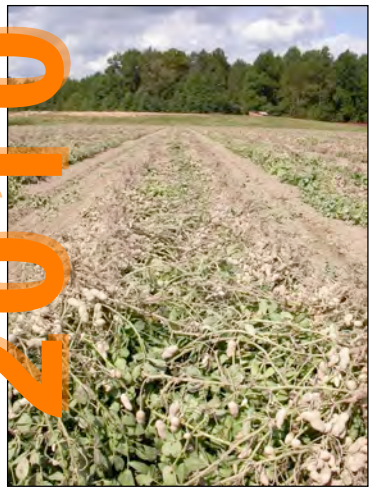
Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).

Table 30. Percent internal boll damage (based on 25 bolls per plot) and yield, CT10PBUG_System Comparison (Bill Sawyer farm, Pasquotank, NC). Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate	Jul 15	Jul 19	Jul 26	Jul 30	Lint lb/acre[1]
1	*Syngenta system:*		3.0	2.0	4.0	8.0	687
	Centric	2 oz					
	Endigo ZC	5.4 oz					
	Endigo ZC	5.4 oz					
	Karate Z	1.92 oz					
2	*Bayer system:*		5.0	3.0	4.0	4.0	788
	Trimax Pro	1.8 oz					
	Leverage 360	3.2 oz					
	Leverage 360	3.2 oz					
	Baythroid XL	2.6 oz					
3	*Valent system:*		4.0	9.0	5.0	10.0	746
	Belay	3 oz					
	Belay + Baythroid XL	3 oz + 1.8 oz					
	Belay + Baythroid XL	3 oz + 1.8 oz					
	Baythroid XL	2.6 oz					
	LSD		NS	NS	NS	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]Cotton was harvested on October 18. Gross yields were reduced by 55.7 to 58.7% to account for seed and trash.

2010



Peanut Insect Pest Management Tests and Demonstrations

TEST: PT10THP_DuPont, Evaluation of at-planting insecticides for thrips management

EXPERIMENT TREATMENTS:

#	Material	Rate	Date(s) treated
1	DPX-HGW86 20SC DPX-HGW86 10OD	0.088 lb ai/A (6.75 oz/A) (liquid IF) 0.088 lb ai/A (13.5 oz/A) (BC @ late GC)	 May 21
2	DPX-HGW86 20SC	0.134 lb ai/A (10.3 oz/A) (liquid IF)	
3	DPX-HGW86 20SC	0.176 lb ai/A (13.5 oz/A) (liquid IF)	
4	DPX-HGW86 20SC DPX-HGW86 10OD	0.134 lb ai/A (10.3 oz/A) (liquid IF) 0.088 lb ai/A (13.5 oz/A) (BC @ late GC)	 May 21
5	Thimet 20G	5 lb/A (IF)	
6	Temik 15G	7 lb/A (IF)	
7	Temik 15G + Orthene 97	7 lb/A (IF) 4 oz/A (BC @ late GC)	 May 21
8	Non-treated	---	

DPX-HGW86 was acidified to a pH of 4.5 with Buffer Xtra Strength.

Test #: PT10THP_DuPont	**Planting date:** Apr 30
Year: 2010	**Plot size:** 4 rows x 40’
Crop: Peanut	**Row spacing:** 36”
Variety: CHAMPS	**Field #:** 15
Experimental design: RCBD	**Location:** Tidewater AREC

Treatment application information:

At Planting	**Granular IF**	Tractor-mounted inverted jars
	Liquid	**Nozzle type:** Microtubing **Nozzle spacing:** 36” **psi:** 31 **gpa:** 5
In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **psi:** 18 **gpa:** 14.3

Herbicides		
Date	**Product**	**Rate/A**
4/14	Prowl 3.3EC	1.5 pt
4/17	Dual II Magnum	1 pt
5/05	Intrro	2 qt
6/25	Basagran	1 pt
6/25	Storm	1.5 pt
8/26	Select Max	12 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
6/24	Baythroid XL	2 oz
8/10	Baythroid XL	3 oz

Fungicides		
Date	**Product**	**Rate/A**
7/14	Folicur 3.6F	7.2 oz
8/10	Provost	8 oz
8/24	Provost	8 oz
9/15	Bravo 720	1.5 pt
9/15	Omega 500	1 pt

Lime, Fertilizer, Landplaster, and Adjuvants		
Date	**Product**	**Rate/A**
4/17	Boron 10%	1 qt
6/17	Landplaster	1200 lb
6/24	Manganese	1 qt
6/25	Induce	1 pt*
7/14	Induce Boron Manganese	1 pt* 1 qt 1 qt
8/10	Boron	1 qt
8/24	Manganese	1 qt
8/26	Induce	1 qt*
*per 100 gal water		

Fumigants		
Date	**Product**	**Rate/A**
4/16	Metam	10 gal

Land preparation: Moldboard plowed and disked on Mar 1, field conditioned on Mar 20 and Apr 14, and cultivated on Jun 16
Soil pH: 6.50
Soil type(s): Emporia, Nansemond
Nutrient analysis (ppm): P (46), K (46), Ca (235), Mg (43), Zn (0.5), Mn (1.7)
Dig date: Sep 23
Harvest date: Oct 7
Row feet harvested: 80
Harvest technique: 2-row commercial picker modified for research plots

Comments: Rows 3 and 4 and plantout = non-treated 'CHAMPS'. Irrigated 1-inch on Jun 21 and Jul 20.

Table 31. Stand counts[1] and thrips injury ratings[2], PT10THP_DuPont. Tidewater AREC, Suffolk, VA, 2010. Broadcast at late ground cracking applications were made on May 21.

#	Material	Rate	Plants/ row ft	Thrips injury rating				
			May 19	May 21	May 28	Jun 1	Jun 7	Jun 17
1	DPX-HGW86 20SC DPX-HGW86 10OD	0.088 lb ai/A (liquid IF) 0.088 lb ai/A (BC @ late GC)	1.8 a	2.13 b	1.69 b	2.13 b	3.38 b	2.31 b
2	DPX-HGW86 20SC	0.134 lb ai/A (liquid IF)	1.7 ab	1.44 c	1.44 bc	2.44 b	3.63 b	1.13 c
3	DPX-HGW86 20SC	0.176 lb ai/A (liquid IF)	1.7 ab	0.69 d	1.44 bc	1.69 bc	3.63 b	1.31 c
4	DPX-HGW86 20SC DPX-HGW86 10OD	0.134 lb ai/A (liquid IF) 0.088 lb ai/A (BC @ late GC)	1.8 a	0.75 d	1.19 cd	0.94 cd	1.25 c	0.69 de
5	Thimet 20G	5 lb/A (IF)	1.8 ab	0.75 d	0.75 e	0.75 d	0.88 c	0.56 e
6	Temik 15G	7 lb/A (IF)	1.4 c	0.56 d	0.94 de	0.69 d	0.94 c	0.88 d
7	Temik 15G + Orthene 97	7 lb/A (IF) 4 oz/A (BC @ late GC)	1.5 bc	0.50 d	0.75 e	0.50 d	0.69 c	0.69 de
8	Non-treated	---	2.0 a	2.63 a	3.75 a	6.50 a	7.81 a	3.94 a
	LSD		0.29	0.33	0.37	0.84	0.84	0.22

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

[1]*Based on the total number of plants in rows 1 and 2 of each plot (total of 80 row ft per plot). Peanut was planted on April 30.*

[2]*Thrips injury rated on a 0-10 scale, 0 = no injury and 10 = dead plants.*

Table 32. Thrips counts, PT10THP_DuPont. Tidewater AREC, Suffolk, VA, 2010. Broadcast at late ground cracking applications were made on May 21.

#	Material	Rate	Thrips per 10 terminal leaflets[1]									
			May 14		May 21		May 25		Jun 1		Jun 8	
			Adult	Immat.	Adult	Immat.	Adult	Immat.	Adult	Immat.	Adult	Immat.
1	DPX-HGW86 20SC DPX-HGW86 10OD	0.088 lb ai/A (liquid IF) 0.088 lb ai/A (BC @ late GC)	2.3 ab	0.0	11.5 a-c	0.0	3.3 cd	0.0 b	4.8	3.8 b	1.3	13.0
2	DPX-HGW86 20SC	0.134 lb ai/A (liquid IF)	0.8 bc	0.0	22.0 a	0.0	17.5 a	2.5 b	3.0	7.8 b	2.0	8.0
3	DPX-HGW86 20SC	0.176 lb ai/A (liquid IF)	3.3 a	0.0	13.3 a-c	0.0	10.0 a-c	0.0 b	2.3	5.5 b	2.8	3.8
4	DPX-HGW86 20SC DPX-HGW86 10OD	0.134 lb ai/A (liquid IF) 0.088 lb ai/A (BC @ late GC)	1.8 a-c	0.0	19.3 ab	0.0	3.3 cd	0.3 b	2.3	2.5 b	1.8	4.8
5	Thimet 20G	5 lb/A (IF)	0.5 bc	0.0	10.3 bc	0.0	7.8 b-d	0.5 b	1.3	4.3 b	1.8	2.5
6	Temik 15G	7 lb/A (IF)	0.0 c	0.0	4.3 c	0.0	5.5 cd	0.0 b	2.8	4.0 b	0.8	1.5
7	Temik 15G + Orthene 97	7 lb/A (IF) 4 oz/A (BC @ late GC)	0.8 bc	0.0	7.8 c	0.0	1.0 d	0.0 b	2.3	0.5 b	1.3	5.5
8	Non-treated	---	2.5 ab	0.0	21.8 a	0.5	15.0 ab	11.5 a	0.8	62.5 a	2.5	5.8
	LSD		2.08	NS	11.29	NS	8.13	5.62	NS	24.7	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]*Ten leaflets were sampled per plot on each date.*

Table 33. Tomato spotted wilt virus (TSWV) and yield, PT10THP_DuPont. Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate	TSWV hits/80 row ft[1]	Yield lb/acre[2]
1	DPX-HGW86 20SC DPX-HGW86 10OD	0.088 lb ai/A (liquid IF) 0.088 lb ai/A (BC @ late GC)	6.0 b	4301.2
2	DPX-HGW86 20SC	0.134 lb ai/A (liquid IF)	7.0 b	4645.8
3	DPX-HGW86 20SC	0.176 lb ai/A (liquid IF)	5.8 b	4237.2
4	DPX-HGW86 20SC DPX-HGW86 10OD	0.134 lb ai/A (liquid IF) 0.088 lb ai/A (BC @ late GC)	4.3 b	4728.4
5	Thimet 20G	5 lb/A (IF)	5.3 b	4714.0
6	Temik 15G	7 lb/A (IF)	6.8 b	4790.3
7	Temik 15G + Orthene 97	7 lb/A (IF) 4 oz/A (BC @ late GC)	5.3 b	4672.7
8	Non-treated	---	12.5 a	4121.6
	LSD		3.19	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]Based on the total number of plants exhibiting visual TSWV symptoms in rows 1 and 2 of each plot on Sep. 23.
[2]Yield based on weight of peanut with moisture content of 7%. Dig date = September 23 and harvest date = October 7.

TEST: PT10THP_Syngenta, Evaluation of at-planting insecticides for thrips management

EXPERIMENT TREATMENTS:

#	Material	Rate
1	Untreated	---
2	Cruiser 70 WS	1 oz/cwt
3	Dynasty PD 5.6 DS	4 oz/cwt
4	Dynasty PD 5.6 DS + Cruiser 70 WS	4 oz/cwt 1 oz/cwt
5	A17461-a	4 oz/cwt
6	Dynasty PD 5.6 DS Cruiser 5FS	4 oz/cwt 1 oz/cwt
7	Dynasty PD 5.6 DS Thimet 20G	4 oz/cwt 5 lb/A (IF)
8	Dynasty PD 5.6 DS Temik 15G	4 oz/cwt 7 lb/A (IF)

Test #: PT10THP_Syngenta	**Planting date:** May 4
Year: 20010	**Plot size:** 4 rows x 40’
Crop: Peanut	**Row spacing:** 36”
Variety: NC-V 11	**Field #:** 39
Experimental design: RCBD	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
4/15	Prowl H_2O	1.5 pt
4/17	Dual II Magnum	1 pt
5/04	Intrro	2 qt
5/04	Gramoxone Inteon	8 oz
6/25	Storm	1.5 pt
6/25	Basagran	1 pt
8/26	Select Max	12 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
6/24	Baythroid XL	2 oz
8/10	Baythroid XL	3 oz

Fungicides		
Date	**Product**	**Rate/A**
7/14	Folicur	7.2 oz
8/10	Provost	8 oz
8/24	Provost	8 oz
9/15	Bravo 720	1.5 pt
9/15	Omega 500	1 pt

Lime, Fertilizer, Landplaster, and Adjuvants		
Date	**Product**	**Rate/A**
4/17	Boron 10%	1 qt
6/17	Landplaster	1200 lb
6/25	Manganese 7% Induce	1 qt 1 pt*
7/14	Induce Boron 10% Manganese 7%	1 pt* 1 qt 1 qt
8/10	Boron 10%	1 qt
8/24	Manganese 7%	1 qt
8/26	Induce	1 qt*
*per 100 gal water		

Fumigants		
Date	**Product**	**Rate/A**
4/16	Metam	10 gal

Land preparation: Disked on Mar 8, moldboard plowed on Mar 9, field conditioned on Mar 23 and Apr 15, cultivated on Jun 15
Soil pH: 6.13
Soil type(s): Emporia, Eunola
Nutrient analysis (ppm): P (18), K (79), Ca (390), Mg (37), Zn (0.6), Mn (2.1)
Dig date: Oct 9
Harvest date: Oct 13
Row feet harvested: 80
Harvest technique: 2-row commercial picker modified for research plots

Treatment application information:

At Planting	**Granular IF**	Tractor-mounted inverted jars

Comments: 'CHAMPS' in rows 3 and 4 and plantout. Irrigated 1-inch on Jun 30, Jul 1, Sep 9, and Sep 10.

Table 34. Stand counts[1] and thrips injury ratings[2], PT10THP_Syngenta. Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate	Plants per row ft	Thrips injury rating				
			Jun 9	May 21	May 28	Jun 2	Jun 10	Jun 17
1	Untreated	---	3.1	3.50 a	3.63 a	4.44 a	7.56 a	5.19 a
2	Cruiser 70 WS	1 oz/cwt	2.9	0.50 cd	0.94 b	1.94 b	3.44 c	2.13 c
3	Dynasty PD 5.6 DS	4 oz/cwt	3.3	2.83 b	3.31 a	4.19 a	7.44 a	5.13 a
4	Dynasty PD 5.6 DS + Cruiser 70 WS	4 oz/cwt 1 oz/cwt	3.1	0.33 d	0.81 bc	1.75 b	3.38 c	2.06 c
5	A17461-a	4 oz/cwt	3.3	0.42 cd	0.88 b	1.88 b	4.44 b	3.25 b
6	Dynasty PD 5.6 DS Cruiser 5FS	4 oz/cwt 1 oz/cwt	2.9	0.42 cd	0.94 b	1.44 b	3.63 c	2.50 c
7	Dynasty PD 5.6 DS Thimet 20G	4 oz/cwt 5 lb/A (IF)	3.3	0.83 c	0.81 bc	1.50 b	0.69 d	0.69 d
8	Dynasty PD 5.6 DS Temik 15G	4 oz/cwt 7 lb/A (IF)	3.3	0.25 d	0.50 c	0.50 c	0.56 d	0.50 d
	LSD		NS	0.42	0.33	0.79	0.36	0.45

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]Based on the total number of plants in rows 1 and 2 of each plot (total of 80 row ft per plot). Peanut was planted on May 4.
[2]Thrips injury rated on a 0-10 scale, 0 = no injury and 10 = dead plants.

Table 35. Thrips counts, PT10THP_Syngenta. Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate	Thrips per 10 terminal leaflets[1]							
			May 26				Jun 3		Jun 10	
			Tobacco thrips adults	Eastern flower thrips adults	Total adult thrips	Immature	Total adult thrips	Immature	Total adult thrips	Immature
1	Untreated	---	6.3	0.0	6.3	0.5	1.8	38.0 ab	1.3	4.3
2	Cruiser 70 WS	1 oz/cwt	1.5	0.0	1.5	0.0	3.8	17.8 bc	1.8	4.3
3	Dynasty PD 5.6 DS	4 oz/cwt	8.3	0.3	8.5	3.5	1.8	70.3 a	1.3	5.8
4	Dynasty PD 5.6 DS + Cruiser 70 WS	4 oz/cwt 1 oz/cwt	4.8	0.3	5.0	0.0	4.0	13.3 bc	1.8	7.3
5	A17461-a	4 oz/cwt	7.3	0.3	7.5	0.0	4.3	10.3 bc	0.5	6.5
6	Dynasty PD 5.6 DS Cruiser 5FS	4 oz/cwt 1 oz/cwt	4.3	0.3	4.5	0.0	6.0	13.5 bc	0.8	5.5
7	Dynasty PD 5.6 DS Thimet 20G	4 oz/cwt 5 lb/A (IF)	3.0	0.3	3.3	0.0	2.5	3.8 c	2.5	1.0
8	Dynasty PD 5.6 DS Temik 15G	4 oz/cwt 7 lb/A (IF)	1.8	0.0	1.8	0.0	1.5	2.5 c	1.5	0.5
	LSD		NS	NS	NS	NS	NS	33.6	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]*Ten leaflets were sampled per plot on each date.*

Table 36. Tomato spotted wilt virus (TSWV) and yield, PT10THP_Syngenta. Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate	TSWV hits/80 row ft[1]	Yield lb/acre[2]
1	Untreated	---	21.3 a	3709 c
2	Cruiser 70 WS	1 oz/cwt	13.3 b	4418 a
3	Dynasty PD 5.6 DS	4 oz/cwt	15.3 b	3839 bc
4	Dynasty PD 5.6 DS + Cruiser 70 WS	4 oz/cwt 1 oz/cwt	14.0 b	4278 ab
5	A17461-a	4 oz/cwt	12.8 b	4403 a
6	Dynasty PD 5.6 DS Cruiser 5FS	4 oz/cwt 1 oz/cwt	13.3 b	4542 a
7	Dynasty PD 5.6 DS Thimet 20G	4 oz/cwt 5 lb/A (IF)	11.0 b	4293 ab
8	Dynasty PD 5.6 DS Temik 15G	4 oz/cwt 7 lb/A (IF)	13.3 b	4290 ab
	LSD		5.09	517.1

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]Based on the total number of plants exhibiting visual TSWV symptoms in rows 1 and 2 of each plot on Sep. 27.
[2]Yield based on weight of peanut with moisture content of 7%. Dig date = October 9 and harvest date = October 13.

TEST: PT10THP_Ecotec, Evaluation of foliar-applied Ecotec for thrips management

EXPERIMENT TREATMENTS:

#	Material	Rate/A	Date(s) treated
1	Orthene 97	4 oz	May 21 and May 27
2	Radiant SC	6 oz	May 21 and May 27
3	Karate Z	1.28 oz	May 21 and May 27
4	Ecotec	16 oz	May 21 and May 27
5	Ecotec + Saf-T-Side	16 oz 1% v/v	May 21 and May 27
6	Ecotec + Orthene 97	16 oz 4 oz	May 21 and May 27
7	Ecotec + Radiant SC	16 oz 6 oz	May 21 and May 27
8	Ecotec + Karate Z	16 oz 1.28 oz	May 21 and May 27
9	Untreated	---	

Test #: PT10THP_Ecotec	**Planting date:** Apr 28
Year: 2010	**Plot size:** 4 rows x 40’
Crop: Peanut	**Row spacing:** 36”
Variety: CHAMPS	**Field #:** 39
Experimental design: RCBD	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
4/15	Prowl H_2O	1.5 pt
4/17	Dual II Magnum	1 pt
5/04	Intrro	2 qt
5/04	Gramoxone Inteon	8 oz
6/25	Basagran	1 pt
6/25	Storm	1.5 pt
8/26	Select Max	12 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
6/24	Baythroid XL	2 oz
8/10	Baythroid XL	3 oz

Fungicides		
Date	**Product**	**Rate/A**
7/14	Folicur 3.6F	7.2 oz
8/10	Provost	8 oz
8/24	Provost	8 oz
9/15	Bravo 720	1.5 pt
9/15	Omega 500	1 pt

Lime, Fertilizer, Landplaster, and Adjuvants		
Date	**Product**	**Rate/A**
4/17	Boron 10%	1 qt
6/17	Landplaster	1200 lb
6/25	Manganese 7%	1 qt
6/25	Induce	1 pt*
7/14	Induce Boron 10% Manganese 7%	1 pt* 1 qt 1 qt
8/10	Boron	1 qt
8/24	Manganese	1 qt
8/26	Induce	1 qt*
*per 100 gal water		

Fumigants		
Date	**Product**	**Rate/A**
4/16	Metam	10 gal

Land preparation: Disked on Mar 8, moldboard plowed on Mar 9, field conditioned on Mar 23 and Apr 15, and cultivated on Jun 15
Soil pH: 6.13
Soil type(s): Emporia, Eunola
Nutrient analysis (ppm): P (18), K (79), Ca (390), Mg (37), Zn (0.6), Mn (2.1)
Dig date: Oct 9
Harvest date: Oct 13
Row feet harvested: 80
Harvest technique: 2-row commercial picker modified for research plots

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **psi:** 18 **gpa:** 14.3

Comments: Irrigated 1-inch on Jun 30, Jul 1, Sep 9, and Sep 10.

Table 37. Thrips injury ratings[1], stand counts[2], tomato spotted wilt virus[3] (TSWV), and yield[4], PT10THP_Ecotec. Tidewater AREC, Suffolk, VA, 2010. Broadcast at late ground cracking applications were made on May 21 and again on May 27.

#	Material	Rate/A	Thrips injury rating				Plants per row ft	TSWV hits/80 row ft	Yield lb/acre
			May 28	Jun 4	Jun 10	Jun 17			
1	Orthene 97	4 oz	1.88 de	1.56 c	1.63 c	1.56 c	2.8	16.8 bc	4137
2	Radiant SC	6 oz	2.25 d	1.44 c	1.75 c	1.31 c	3.0	14.0 c	4088
3	Karate Z	1.28 oz	3.13 bc	6.13 b	7.25 a	3.94 b	3.1	17.8 bc	4094
4	Ecotec	16 oz	3.56 ab	6.13 b	7.38 a	4.81 a	2.9	20.5 b	3384
5	Ecotec + Saf-T-Side	16 oz 1% v/v	3.56 ab	6.38 a	7.50 a	4.94 a	3.0	20.3 bc	3690
6	Ecotec + Orthene 97	16 oz 4 oz	1.75 e	1.56 c	1.63 c	1.38 c	2.9	17.0 bc	4165
7	Ecotec + Radiant SC	16 oz 6 oz	2.88 c	1.50 c	1.31 d	1.63 c	2.9	16.0 bc	3828
8	Ecotec + Karate Z	16 oz 1.28 oz	3.13 bc	6.25 ab	6.81 b	4.19 b	3.1	20.3 bc	3647
9	Untreated	---	3.63 a	6.44 a	7.50 a	4.88 a	2.9	30.8 a	3668
	LSD		0.49	0.25	0.30	0.40	NS	6.36	NS

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 April 28.*

[2]*Based on the total number of plants in rows 1 and 2 of each plot (total of 80 row ft per plot).*

[3]*Based on the total number of plants exhibiting visual TSWV symptoms in rows 1 and 2 of each plot on Sep. 27.*

[4]*Yield based on weight of peanut with moisture content of 7%. Dig date = October 9 and harvest date = October 13.*

TEST: PT10THP_Nichino, Evaluation of foliar-applied insecticides for thrips management

EXPERIMENT TREATMENTS:

#	Material	Rate/A	Date(s) treated
1	Baythroid XL + Induce	2.8 oz 0.25% v/v	May 21 and May 27
2	Tolfenpyard 15EC + Induce	14 oz 0.25% v/v	May 21 and May 27
3	Tolfenpyard 15EC + Induce	17 oz 0.25% v/v	May 21 and May 27
4	Tolfenpyard 15EC + Induce	21 oz 0.25% v/v	May 21 and May 27
5	Tolfenpyard 15EC + Baythroid XL + Induce	14 oz 2.8 oz 0.25% v/v	May 21 and May 27
6	Tolfenpyard 15EC + Baythroid XL + Induce	17 oz 2.8 oz 0.25% v/v	May 21 and May 27
7	Orthene 97	4 oz	May 21 and May 27
8	Untreated	---	

Test #: PT10THP_Nichino	**Planting date:** May 4
Year: 2010	**Plot size:** 4 rows x 40’
Crop: Peanut	**Row spacing:** 36”
Variety: CHAMPS	**Field #:** 39
Experimental design: RCBD	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
4/15	Prowl H_2O	1.5 pt
4/17	Dual II Magnum	1 pt
5/04	Intrro	2 qt
5/04	Gramoxone Inteon	8 oz
6/25	Basagran	1 pt
6/25	Storm	1.5 pt
8/26	Select Max	12 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
6/24	Baythroid XL	2 oz
8/10	Baythroid XL	3 oz

Fungicides		
Date	**Product**	**Rate/A**
7/14	Folicur 3.6F	7.2 oz
8/10	Provost	8 oz
8/24	Provost	8 oz
9/15	Bravo 720	1.5 pt
9/15	Omega 500	1 pt

Lime, Fertilizer, Landplaster, and Adjuvants		
Date	**Product**	**Rate/A**
4/17	Boron 10%	1 qt
6/17	Landplaster	1200 lb
6/25	Manganese 7%	1 qt
6/25	Induce	1 pt*
7/14	Induce Boron 10% Manganese 7%	1 pt* 1 qt 1 qt
8/10	Boron	1 qt
8/24	Manganese	1 qt
8/26	Induce	1 qt*
*per 100 gal water		

Fumigants		
Date	**Product**	**Rate/A**
4/16	Metam	10 gal

Land preparation: Disked on Mar 8, moldboard plowed on Mar 9, field conditioned on Mar 23 and Apr 15, and cultivated on Jun 15
Soil pH: 6.13
Soil type(s): Emporia, Eunola
Nutrient analysis (ppm): P (18), K (79), Ca (390), Mg (37), Zn (0.6), Mn (2.1)
Dig date: Oct 9
Harvest date: Oct 13
Row feet harvested: 80
Harvest technique: 2-row commercial picker modified for research plots

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **psi:** 18 **gpa:** 14.3

Comments: Irrigated 1-inch on Jun 30, Jul 1, Sep 9, and Sep 10.

Table 38. Thrips injury ratings[1], thrips counts[2], stand counts[3], and yield[4], PT10THP_Nichino. Tidewater AREC, Suffolk, VA, 2010. Broadcast at late ground cracking applications were made on May 21 and again on May 27.

			Thrips injury rating				Thrips per 10 terminal leaflets						
							May 26	Jun 3		Jun 10		Plants per row ft	Yield lb/acre
#	Material	Rate/A	May 28	Jun 2	Jun 10	Jun 17	Adults	Adults	Immat.	Adults	Immat.		
1	Baythroid XL + Induce	2.8 oz 0.25% v/v	1.94 bc	3.69 b	6.50 b	4.00 bc	8.8 bc	3.3	49.3	0.8	22.5	3.3	4628
2	Tolfenpyard 15EC + Induce	14 oz 0.25% v/v	3.00 a	3.56 bc	6.25 bc	3.81 c	17.0 ab	3.5	28.8	0.0	11.3	2.7	4069
3	Tolfenpyard 15EC + Induce	17 oz 0.25% v/v	2.56 ab	3.38 cd	6.19 bc	4.06 bc	10.0 a-c	5.0	36.0	2.0	13.5	2.4	4319
4	Tolfenpyard 15EC + Induce	21 oz 0.25% v/v	1.75 c	3.25 de	6.00 cd	4.38 b	8.5 c	3.0	32.0	0.8	25.8	2.3	4491
5	Tolfenpyard 15EC + Baythroid XL + Induce	14 oz 2.8 oz 0.25% v/v	1.75 c	3.00 ef	6.19 bc	4.06 bc	5.3 c	5.5	32.5	1.3	19.0	2.5	4552
6	Tolfenpyard 15EC + Baythroid XL + Induce	17 oz 2.8 oz 0.25% v/v	1.38 cd	2.94 f	5.69 d	4.50 b	8.0 c	4.5	26.0	0.8	33.3	2.7	4649
7	Orthene 97	4 oz	1.00 d	1.75 g	2.44 e	1.56 d	7.0 c	1.0	18.5	1.5	8.8	2.6	4576
8	Untreated	---	3.00 a	4.75 a	7.63 a	5.31 a	18.3 a	3.3	60.8	1.8	8.5	3.0	4282
	LSD		0.73	0.31	0.38	0.52	8.25	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).

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

[2]*Ten leaflets were sampled per plot on each date.*

[3]*Based on the total number of plants in rows 1 and 2 of each plot.*

[4]*Yield based on weight of peanut with moisture content of 7%. Dig date = October 9 and harvest date = October 13.*

Table 39. Thrips species identification (adults)[1], PT10THP_Nichino. Tidewater AREC, Suffolk, VA, 2010. Broadcast at late ground cracking applications were made on May 21 and again on May 27.

#	Material	Rate/A	May 26			Jun 3			Jun 10		
			F. fusca	*T. tabaci*	*F. tritici*	*F. fusca*	*T. tabaci*	*F. tritici*	*F. fusca*	*T. tabaci*	*F. tritici*
1	Baythroid XL + Induce	2.8 oz 0.25% v/v	8.75 bc	0.00	0.00	3.00	0.00	0.25	0.75	0.00	0.00
2	Tolfenpyard 15EC + Induce	14 oz 0.25% v/v	16.75 ab	0.00	0.25	3.50	0.00	0.00	0.00	0.00	0.00
3	Tolfenpyard 15EC + Induce	17 oz 0.25% v/v	9.75 a-c	0.00	0.25	5.00	0.00	0.00	1.50	0.00	0.50
4	Tolfenpyard 15EC + Induce	21 oz 0.25% v/v	8.25 c	0.00	0.25	2.75	0.00	0.25	0.75	0.00	0.00
5	Tolfenpyard 15EC + Baythroid XL + Induce	14 oz 2.8 oz 0.25% v/v	5.25 c	0.00	0.00	5.50	0.00	0.25	1.25	0.00	0.00
6	Tolfenpyard 15EC + Baythroid XL + Induce	17 oz 2.8 oz 0.25% v/v	8.00 c	0.00	0.00	4.00	0.00	0.50	0.50	0.00	0.25
7	Orthene 97	4 oz	6.50 c	0.00	0.25	1.00	0.00	0.00	1.25	0.00	0.00
8	Untreated	---	17.75 a	0.25	0.25	3.25	0.00	0.00	0.00	0.25	1.00
	LSD		8.12	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).
[1]*Ten leaflets were sampled per plot on each date.*

TEST: PT10THP_VA Lines, Evaluation of virginia-type lines for resistance to thrips

EXPERIMENT TREATMENTS:

#	Variety*
1	VT 003069
2	VT 003194
3	VT 004152
4	VT 024077
5	VT 024051
6	Titan (VT 9506083-3)
7	Bailey

*All varieties were treated with fungicide (including Dynasty) @ 4 oz/cwt.
Each variety was either treated with insecticides or non-treated. Treated plots received Temik 15G @ 7 lb/A in-furrow at planting, followed by Orthene 97 @ 4 oz/A broadcast at late-ground cracking on May 20 and again on May 26.

Test #: PT10THP_VA_LINES	**Planting date:** Apr 29
Year: 2010	**Plot size:** 4 rows x 30’
Crop: Peanut	**Row spacing:** 36”
Varieties: see treatment list	**Field #:** 64b
Experimental design: Split-plot	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
4/15	Prowl H_2O	1.5 pt
4/16	Dual II Magnum	1 pt
5/05	Intrro	2 qt
6/25	Basagran	1 pt
6/25	Storm	1.5 pt
8/26	Select Max	12 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
6/24	Baythroid XL	2 oz
8/10	Baythroid XL	3 oz

Fungicides		
Date	**Product**	**Rate/A**
7/14	Folicur 3.6F	7.2 oz
8/10	Provost	8 oz
8/24	Provost	8 oz
9/15	Bravo 720	1.5 pt
9/15	Omega 500	1 pt

Lime, Fertilizer, Landplaster, and Adjuvants		
Date	**Product**	**Rate/A**
4/16	Boron 10%	1 qt
6/17	Landplaster	1200 lb
6/25	Manganese 7% Induce	1 qt 1 pt*
7/14	Induce Boron 10% Manganese 7%	1 pt* 1 qt 1 qt
8/10	Boron	1 qt
8/24	Manganese 7%	1 qt
8/26	Induce	1 qt*
*per 100 gal water		

Fumigants		
Date	**Product**	**Rate/A**
4/16	Metam	10 gal

Land preparation: Moldboard plowed and disked on Mar 2, field conditioned on Mar 25 and Apr 15, and cultivated on Jun 16
Soil pH: 6.28
Soil type(s): Nansemond, Emporia
Nutrient analysis (ppm): P (30), K (80), Ca (385), Mg (46), Zn (0.7), Mn (2.0)
Dig date: Sep 23
Harvest date: Oct 6
Row feet harvested: 60
Harvest technique: 2-row commercial picker modified for research plots

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **psi:** 18 **gpa:** 14.3

Comments: ‘VT 003069’ was 3 seed/ft; all other varieties was 4 seed/ft. CHAMPS plantout behind test (no Temik). Irrigated 0.8-inch on Jul 26.

Table 40. Thrips injury ratings and thrips counts, PT10THP_VA_Lines. Tidewater AREC, Suffolk, VA, 2010. Treated plots received Temik 15G @ 7 lb/A in-furrow at planting, followed by Orthene 97 @ 4 oz/A broadcast at late-ground cracking on May 20 and again on May 26.

#	Variety TREATED	Thrips injury rating[1]					Thrips per 10 terminal leaflets[2]							
							May 11		May 17		May 26		Jun 7	
		May 21	May 28	Jun 4	Jun 11	Jun 17	Adult	Immat.	Adult	Immat.	Adult	Immat.	Adult	Immat.
1	VT 003069	0.56	0.31 b	0.50	0.50	0.50	0.3	0.0	1.0	0.0	1.5	0.0	1.3	3.3
2	VT 003194	0.31	0.31 b	0.38	0.44	0.50	0.0	0.0	0.5	0.0	1.0	0.3	1.0	0.3
3	VT 004152	0.38	0.31 b	0.38	0.50	0.44	0.0	0.0	1.8	0.0	1.8	0.0	1.3	1.5
4	VT 024077	0.38	0.25 b	0.44	0.50	0.50	0.0	0.0	1.0	0.0	0.8	0.5	1.3	2.8
5	VT 024051	0.50	0.38 b	0.44	0.44	0.50	0.0	0.0	1.0	0.0	1.8	0.0	0.0	1.5
6	Titan (VT 9506083-3)	0.44	0.81 a	0.50	0.44	0.44	0.0	0.0	1.0	0.0	4.0	0.3	1.0	1.8
7	Bailey	0.44	0.38 b	0.44	0.44	0.44	0.0	0.0	0.3	0.3	1.8	0.0	1.5	0.5
	LSD	NS	0.34	NS	NS	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).
[1]Thrips injury rated on a 0-10 scale, 0 = no injury and 10 = dead plants. Peanut was planted on April 29.
[2]Ten leaflets were sampled per plot on each date.

Table 41. Thrips injury ratings and thrips counts, PT10THP_VA_Lines. Tidewater AREC, Suffolk, VA, 2010.

#	Variety NON-TREATED	Thrips injury rating[1]					Thrips per 10 terminal leaflets[2]							
							May 11		May 17		May 26		Jun 7	
		May 21	May 28	Jun 4	Jun 11	Jun 17	Adult	Immat.	Adult	Immat.	Adult	Immat.	Adult	Immat.
1	VT 003069	2.75 a	3.94 b	5.88	7.81	4.44 ab	0.0	0.0	14.3 bc	1.3	9.3 ab	12.5	2.5	12.0 b
2	VT 003194	1.88 d	3.69 c	6.06	7.56	4.00 c	1.0	0.0	14.3 bc	0.8	3.8 c	25.3	2.0	7.0 b
3	VT 004152	2.31 b	3.81 bc	5.75	7.63	4.25 bc	0.3	0.0	28.5 a	2.0	7.0 bc	26.5	1.8	11.0 b
4	VT 024077	2.31 b	3.88 bc	5.63	7.75	4.56 a	0.5	0.0	23.0 ab	2.8	5.8 bc	20.5	2.0	5.8 b
5	VT 024051	2.19 bc	3.75 bc	5.88	7.56	4.25 bc	0.8	0.0	24.0 ab	1.5	12.5 a	13.3	2.3	8.0 b
6	Titan (VT 9506083-3)	2.06 b-d	4.31 a	6.13	7.75	4.31 ab	0.3	0.0	17.0 bc	1.5	9.3 ab	15.0	3.5	21.8 a
7	Bailey	2.00 cd	3.88 bc	5.94	7.63	4.19 bc	0.3	0.0	11.3 c	1.3	8.3 ab	9.3	1.8	10.3 b
	LSD	0.28	0.19	NS	NS	0.31	NS	NS	9.79	NS	4.39	NS	NS	6.46

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 April 29.*
[2]*Ten leaflets were sampled per plot on each date.*

Treatment means (thrips injury ratings)	May 21	May 28	Jun 4	Jun 11	Jun 17
1. With insecticide	0.43	0.39 b	0.44 b	0.46 b	0.47
2. Without insecticide	2.21	3.89 a	5.89 a	7.67 a	4.29
LSD	---	0.20	0.48	0.12	---

Variety mean (thrips injury ratings)	May 21	May 28	Jun 4	Jun 11	Jun 17
1. VT 003069	1.66	2.13 b	3.19	4.16	2.47
2. VT 003194	1.09	2.00 b	3.22	4.00	2.25
3. VT 004152	1.34	2.06 b	3.06	4.06	2.34
4. VT 024077	1.34	2.06 b	3.03	4.13	2.53
5. VT 024051	1.34	2.06 b	3.16	4.00	2.38
6. Titan (VT 9506083-3)	1.25	2.56 a	3.31	4.09	2.38
7. Bailey	1.22	2.13 b	3.19	4.03	2.31
LSD	---	0.38	NS	NS	---

Split plot analysis (thrips injury ratings)	May 21	May 28	Jun 4	Jun 11	Jun 17
Treatment	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Variety	<0.0001	<0.0001	0.2456	0.3046	0.0194
Treatment x variety	0.0023	0.7284	0.3879	0.7091	0.0355

Treatment means (adult thrips counts)	May 11	May 17	May 26	Jun 7
1. With insecticide	0.04	0.93	1.79	1.04
2. Without insecticide	0.43	18.89	7.96	2.25
LSD	NS	---	NS	NS

Variety mean (adult thrips counts)	May 11	May 17	May 26	Jun 7
1. VT 003069	0.13	7.63	5.38 a	1.88
2. VT 003194	0.50	7.38	2.38 a	1.50
3. VT 004152	0.13	15.13	4.38 a	1.50
4. VT 024077	0.25	12.00	3.25 a	1.63
5. VT 024051	0.38	12.50	7.13 a	1.13
6. Titan (VT 9506083-3)	0.13	9.00	6.63 a	2.25
7. Bailey	0.13	5.75	5.00 a	1.63
LSD	NS	---	11.88	NS

Split plot analysis (adult thrips counts)	May 11	May 17	May 26	Jun 7
Treatment	0.2496	0.0048	0.0534	0.0610
Variety	0.8494	0.0035	0.0044	0.8633
Treatment x variety	0.5950	0.0145	0.0753	0.7056

Treatment means (immature thrips counts)	May 11	May 17	May 26	Jun 7
1. With insecticide	0.0	0.04	0.14	1.64
2. Without insecticide	0.0	1.57	17.46	10.82
LSD	NS	NS	NS	---

Variety mean (immature thrips counts)	May 11	May 17	May 26	Jun 7
1. VT 003069	0.0	0.63	6.25	7.63
2. VT 003194	0.0	0.38	12.75	3.63
3. VT 004152	0.0	1.00	13.25	6.25
4. VT 024077	0.0	1.38	10.50	4.25
5. VT 024051	0.0	0.75	6.63	4.75
6. Titan (VT 9506083-3)	0.0	0.75	7.63	11.75
7. Bailey	0.0	0.75	4.63	5.38
LSD	NS	NS	NS	---

Split plot analysis (immature thrips counts)	May 11	May 17	May 26	Jun 7
Treatment	---	0.0959	0.2453	0.0077
Variety	---	0.7277	0.2396	0.0004
Treatment x variety	---	0.6645	0.2626	0.0007

Table 42. Stand counts[1] and yield[2], PT10THP_VA_Lines. Tidewater AREC, Suffolk, VA, 2010. Treated plots received Temik 15G @ 7 lb/A in-furrow at planting, followed by Orthene 97 @ 4 oz/A broadcast at late-ground cracking on May 20 and again on May 26.

#	Variety	Plants/row ft				Yield (lb/A)	
		May 20		Oct 5			
		Treated	Non-treated	Treated	Non-treated	Treated	Non-treated
1	VT 003069	1.8 c	2.1 b	2.0 c	1.9 b	3879.4	3503.4
2	VT 003194	2.4 a	2.8 a	2.8 a	2.5 a	4760.2	4139.4
3	VT 004152	2.4 a	2.8 a	2.7 a	2.5 a	4019.1	3485.1
4	VT 024077	2.1 b	2.3 b	2.3 b	2.1 b	4735.9	3486.3
5	VT 024051	2.0 bc	2.3 b	2.2 bc	1.9 b	4142.7	3849.7
6	Titan (VT 9506083-3)	1.5 d	1.8 c	1.4 d	1.4 c	3399.8	3055.8
7	Bailey	2.0 b	2.7 a	2.7 a	2.7 a	4604.8	4009.4
	LSD	0.24	0.27	0.25	0.22	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]Based on the total number of plants in rows 1 and 2 of each plot (total of 60 row ft per plot). Peanut was planted on April 29.
[2]Yield based on weight of peanut with moisture content of 7%. Dig date = September 23 and harvest date = October 6.

Treatment means (plants/row ft)	**May 20**	**Oct 5**	**Yield**
1. With insecticide	2.03 b	2.30 a	4220.2 a
2. Without insecticide	2.39 a	2.14 b	3647.0 b
LSD	0.1989	0.0910	460.9

Variety mean (plants/row ft)	**May 20**	**Oct 5**	**Yield**
1. VT 003069	1.92 de	1.94 c	3691.4 ab
2. VT 003194	2.59 ab	2.66 a	4449.8 a
3. VT 004152	2.64 a	2.58 a	3752.1 ab
4. VT 024077	2.22 b-d	2.18 b	4111.1 a
5. VT 024051	2.12 cd	2.07 bc	3996.2 ab
6. Titan (VT 9506083-3)	1.62 e	1.44 d	3227.8 b
7. Bailey	2.35 a-c	2.67 a	4307.1 a
LSD	0.372	0.170	862.3

Split plot analysis (plants/row ft)	**May 20**	**Oct 5**	**Yield**
Treatment	0.0106	0.0111	0.0288
Variety	<0.0001	<0.0001	0.0028
Treatment x variety	0.3279	0.3441	0.6986

TEST: PT10THP_OLEIC, Evaluation of high-oleic lines for resistance to thrips

EXPERIMENT TREATMENTS:

#	Variety*
1	N08070olJC
2	N08081olJC
3	N08071olJC
4	N08085olJCT
5	N08075olCT
6	N08074olC
7	N08069olJCT
8	N07037olSm
9	N07001 (Hirsuta line)

*All varieties were treated with fungicide (including Dynasty) @ 4 oz/cwt.
Each variety was either treated with insecticides or non-treated. Treated plots received Temik 15G @ 7 lb/A in-furrow at planting, followed by Orthene 97 @ 4 oz/A broadcast at late-ground cracking on May 20 and again on May 26.

Test #: PT10THP_OLEIC	**Planting date:** Apr 29
Year: 2010	**Plot size:** 4 rows x 30’
Crop: Peanut	**Row spacing:** 36”
Varieties: see treatment list	**Field #:** 64b
Experimental design: Split-plot	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
4/15	Prowl H_2O	1.5 pt
4/16	Dual II Magnum	1 pt
5/05	Intrro	2 qt
6/25	Basagran	1 pt
6/25	Storm	1.5 pt
8/26	Select Max	12 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
6/24	Baythroid XL	2 oz
8/10	Baythroid XL	3 oz

Fungicides		
Date	**Product**	**Rate/A**
7/14	Folicur 3.6F	7.2 oz
8/10	Provost	8 oz
8/24	Provost	8 oz
9/15	Bravo 720	1.5 pt
9/15	Omega 500	1 pt

Lime, Fertilizer, Landplaster, and Adjuvants		
Date	**Product**	**Rate/A**
4/16	Boron 10%	1 qt
6/17	Landplaster	1200 lb
6/25	Manganese 7% Induce	1 qt 1 pt*
7/14	Induce Boron 10% Manganese 7%	1 pt* 1 qt 1 qt
8/10	Boron	1 qt
8/24	Manganese 7%	1 qt
8/26	Induce	1 qt*
*per 100 gal water		

Fumigants		
Date	**Product**	**Rate/A**
4/16	Metam	10 gal

Land preparation: Moldboard plowed and disked on Mar 2, field conditioned on Mar 25 and Apr 15, and cultivated on Jun 16
Soil pH: 6.28
Soil type(s): Nansemond, Emporia
Nutrient analysis (ppm): P (30), K (80), Ca (385), Mg (46), Zn (0.7), Mn (2.0)
Dig date: Sep 23
Harvest date: Oct 6
Row feet harvested: 60
Harvest technique: 2-row commercial picker modified for research plots

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **psi:** 18 **gpa:** 14.3

Comments: CHAMPS plantout behind test (no Temik). Irrigated 0.8-inch on Jul 26.

Table 43. Thrips injury ratings and thrips counts, PT10THP_OLEIC. Tidewater AREC, Suffolk, VA, 2010. Treated plots received Temik 15G @ 7 lb/A in-furrow at planting, followed by Orthene 97 @ 4 oz/A broadcast at late-ground cracking on May 20 and again on May 26.

#	Variety TREATED	Thrips injury rating[1]					Thrips per 10 terminal leaflets[2]							
							May 11		May 17		May 26		Jun 7	
		May 21	May 28	Jun 4	Jun 11	Jun 17	Adult	Immat.	Adult	Immat.	Adult	Immat.	Adult	Immat.
1	N08070olJC	0.56	0.38	0.44	0.50	0.56	0.0	0.0	1.0	0.0	0.5	0.0 b	1.5	1.0
2	N08081olJC	0.50	0.50	0.44	0.50	0.56	0.0	0.0	1.0	0.0	0.3	0.0 b	0.3	1.0
3	N08071olJC	0.50	0.44	0.38	0.38	0.50	0.0	0.0	0.5	0.0	0.5	0.0 b	0.8	0.3
4	N08085olJCT	0.50	0.44	0.44	0.31	0.44	0.0	0.0	0.5	0.0	0.3	0.0 b	0.0	0.5
5	N08075olCT	0.50	0.38	0.50	0.38	0.56	0.0	0.0	1.5	0.0	0.3	0.0 b	0.0	0.0
6	N08074olC	0.63	0.44	0.50	0.50	0.56	0.0	0.0	2.0	0.0	1.3	0.0 b	1.0	0.0
7	N08069olJCT	0.50	0.44	0.50	0.38	0.56	0.0	0.0	0.3	0.0	1.0	0.8 a	0.5	1.3
8	N07037olSm	0.56	0.38	0.50	0.50	0.56	0.0	0.0	1.8	0.0	0.5	0.0 b	1.3	2.0
9	N07001 (Hirsuta line)	0.50	0.38	0.50	0.44	0.56	0.0	0.0	1.0	0.0	0.8	0.0 b	1.3	0.5
	LSD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.24	NS	NS

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 April 29.*
[2]*Ten leaflets were sampled per plot on each date.*

Table 44. Thrips injury ratings and thrips counts, PT10THP_OLEIC. Tidewater AREC, Suffolk, VA, 2010.

#	Variety NON-TREATED	Thrips injury rating[1]					Thrips per 10 terminal leaflets[2]							
							May 11		May 17		May 26		Jun 7	
		May 21	May 28	Jun 4	Jun 11	Jun 17	Adult	Immat.	Adult	Immat.	Adult	Immat.	Adult	Immat.
1	N08070olJC	2.06	3.81	6.25	7.69	3.88	0.3 b	0.0	11.8	0.0	5.0 b-d	11.5	0.8	3.8
2	N08081olJC	2.00	3.75	6.50	7.44	3.44	1.3 a	0.0	7.0	0.0	3.8 cd	13.0	2.3	4.0
3	N08071olJC	1.94	3.75	6.06	7.63	3.63	0.3 b	0.0	5.0	0.0	4.0 cd	16.8	1.3	3.3
4	N08085olJCT	2.06	3.75	6.19	7.50	3.75	0.5 b	0.0	15.5	0.5	6.5 a-c	16.3	0.3	1.5
5	N08075olCT	1.94	3.81	6.19	7.50	3.94	0.3 b	0.0	3.0	0.0	3.8 cd	7.8	1.3	3.8
6	N08074olC	2.25	3.75	6.19	7.63	3.69	0.0 b	0.0	9.8	0.0	4.3 b-d	10.3	1.3	5.5
7	N08069olJCT	2.06	3.75	6.06	7.69	3.88	0.0 b	0.0	3.5	0.0	2.8 d	10.8	1.5	1.3
8	N07037olSm	1.81	3.69	6.31	7.50	3.50	0.3 b	0.0	13.5	0.3	7.5 ab	23.3	0.8	9.8
9	N07001 (Hirsuta line)	2.13	3.81	5.88	7.50	3.88	0.0 b	0.0	16.0	0.0	8.5 a	22.0	1.0	5.3
	LSD	NS	NS	NS	NS	NS	0.60	NS	NS	NS	3.45	NS	NS	NS

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 April 29.
[2]Ten leaflets were sampled per plot on each date.

Treatment means (thrips injury ratings)	May 21	May 28	Jun 4	Jun 11	Jun 17
1. With insecticide	0.53 b	0.42 b	0.47 b	0.43 b	0.54 b
2. Without insecticide	2.03 a	3.76 a	6.18 a	7.56 a	3.73 a
LSD	0.13	0.12	0.16	0.18	0.13

Variety mean (thrips injury ratings)	May 21	May 28	Jun 4	Jun 11	Jun 17
1. N08070olJC	1.31	2.09	3.34	4.09	2.22
2. N08081olJC	1.25	2.13	3.47	3.97	2.00
3. N08071olJC	1.22	2.09	3.22	4.00	2.06
4. N08085olJCT	1.28	2.09	3.31	3.91	2.09
5. N08075olCT	1.22	2.09	3.34	3.94	2.25
6. N08074olC	1.44	2.09	3.34	4.06	2.13
7. N08069olJCT	1.28	2.09	3.28	4.03	2.22
8. N07037olSm	1.19	2.03	3.41	4.00	2.03
9. N07001 (Hirsuta line)	1.31	2.09	3.19	3.97	2.22
LSD	NS	NS	NS	NS	NS

Split plot analysis (thrips injury ratings)	May 21	May 28	Jun 4	Jun 11	Jun 17
Treatment	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Variety	0.1616	0.9936	0.2171	0.2450	0.1573
Treatment x variety	0.4673	0.9357	0.1380	0.2450	0.1866

Treatment means (adult thrips counts)	May 11	May 17	May 26	Jun 7
1. With insecticide	0.00	1.06	0.58	0.72
2. Without insecticide	0.31	9.44	5.11	1.14
LSD	---	NS	---	NS

Variety mean (adult thrips counts)	May 11	May 17	May 26	Jun 7
1. N08070olJC	0.13	6.38	2.75	1.13
2. N08081olJC	0.63	4.00	2.00	1.25
3. N08071olJC	0.13	2.75	2.25	1.00
4. N08085olJCT	0.25	8.00	3.38	0.13
5. N08075olCT	0.13	2.25	2.00	0.63
6. N08074olC	0.00	5.88	2.75	1.13
7. N08069olJCT	0.00	1.88	1.88	1.00
8. N07037olSm	0.13	7.63	4.00	1.00
9. N07001 (Hirsuta line)	0.00	8.50	4.63	1.13
LSD	---	NS	---	NS

Split plot analysis (adult thrips counts)	May 11	May 17	May 26	Jun 7
Treatment	0.0351	0.0737	0.0205	0.3593
Variety	0.0021	0.2702	0.0264	0.7713
Treatment x variety	0.0021	0.3186	0.0170	0.4721

Treatment means (immature thrips counts)	May 11	May 17	May 26	Jun 7
1. With insecticide	0.0	0.00	0.08 b	0.72 b
2. Without insecticide	0.0	0.08	14.61 a	4.22 a
LSD	NS	NS	14.35	1.67

Variety mean (immature thrips counts)	May 11	May 17	May 26	Jun 7
1. N08070olJC	0.0	0.00	5.75	2.38 ab

2. N08081olJC	0.0	0.00	6.50	2.50 ab
3. N08071olJC	0.0	0.00	8.38	1.75 b
4. N08085olJCT	0.0	0.25	8.13	1.00 b
5. N08075olCT	0.0	0.00	3.88	1.88 b
6. N08074olC	0.0	0.00	5.13	2.75 ab
7. N08069olJCT	0.0	0.00	5.75	1.25 b
8. N07037olSm	0.0	0.13	11.63	5.88 a
9. N07001 (Hirsuta line)	0.0	0.00	11.00	2.88 ab
LSD	NS	NS	NS	3.55

Split plot analysis (immature thrips counts)	**May 11**	**May 17**	**May 26**	**Jun 7**
Treatment	---	0.3910	0.0485	0.0069
Variety	---	0.4484	0.3054	0.0405
Treatment x variety	---	0.4484	0.2723	0.1896

Table 45. Stand counts[1] and yield[2], PT10THP_OLEIC. Tidewater AREC, Suffolk, VA, 2010. Treated plots received Temik 15G @ 7 lb/A in-furrow at planting, followed by Orthene 97 @ 4 oz/A broadcast at late-ground cracking on May 20 and again on May 26.

#	Variety	Plants/row ft				Yield (lb/A)	
		May 19		Oct 5			
		Treated	Non-treated	Treated	Non-treated	Treated	Non-treated
1	N08070olJC	1.9 cd	2.6 b-d	2.7 bc	2.6 a-d	4192.3	4061.7
2	N08081olJC	2.3 ab	2.5 cd	2.5 c	2.1 d	4070.5	3371.1
3	N08071olJC	2.1 bc	2.5 b-d	2.8 bc	2.3 b-d	4611.1	4013.3
4	N08085olJCT	2.2 a-c	3.0 ab	2.8 bc	2.7 a-c	4043.6	3397.3
5	N08075olCT	2.5 a	3.1 a	3.3 a	3.0 a	4603.2	4028.2
6	N08074olC	1.6 d	2.6 b-d	3.4 a	2.8 ab	3763.4	3174.3
7	N08069olJCT	2.2 a-c	2.8 a-c	2.8 bc	2.7 a-c	4689.5	4268.9
8	N07037olSm	2.2 a-c	2.7 a-d	3.1 ab	2.8 ab	4459.4	4230.0
9	N07001 (Hirsuta line)	2.5 ab	2.3 d	2.5 c	2.3 cd	3467.7	3417.9
	LSD	0.44	0.44	0.44	0.48	NS	NS

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]Based on the total number of plants in rows 1 and 2 of each plot (total of 60 row ft per plot). Peanut was planted on April 29.
[2]Yield based on weight of peanut with moisture content of 7%. Dig date = September 23 and harvest date = October 6.

Treatment means (plants/row ft)	May 19	Oct 5	Yield
1. With insecticide	2.17	2.9 a	4211.2 a
2. Without insecticide	2.67	2.6 b	3773.6 b
LSD	---	0.2287	311.0

Variety mean (plants/row ft)	May 19	Oct 5	Yield
1. N08070olJC	2.20	2.7 a-c	4127.0 a-c
2. N08081olJC	2.43	2.3 c	3720.8 b-d
3. N08071olJC	2.31	2.6 bc	4312.2 ab
4. N08085olJCT	2.59	2.8 a-c	3720.4 b-d
5. N08075olCT	2.82	3.1 a	4315.7 ab
6. N08074olC	2.10	3.1 a	3468.8 cd
7. N08069olJCT	2.47	2.7 a-c	4479.2 a
8. N07037olSm	2.45	3.0 ab	4344.7 ab
9. N07001 (Hirsuta line)	2.42	2.4 c	3442.8 d
LSD	---	0.49	659.7

Split plot analysis (plants/row ft)	May 19	Oct 5	Yield
Treatment	0.0034	0.0249	0.0208
Variety	0.0015	<0.0001	0.0020
Treatment x variety	0.0184	0.8150	0.9502

TEST: PT10CEW1, Evaluation of foliar insecticides for lepidopteran pest management

EXPERIMENT TREATMENTS:

#	Material	Rate	Date(s) treated
1	Prevathon 0.43SC	0.033 lb ai/A (9.8 oz/A)	Aug 6
2	Prevathon 0.43SC	0.045 lb ai/A (13.4 oz/A)	Aug 6
3	DPX-HGW86 10 OD*	0.045 lb ai/A (6.9 oz/A)	Aug 6
4	Prevathon 0.43SC + Asana XL	0.033 lb ai/A (9.8 oz/A) 0.036 lb ai/A (7 oz/A)	Aug 6
5	Belt 4SC	0.09375 lb ai/A (3 oz/A)	Aug 6
6	Steward 1.25SC	0.045 lb ai/A (4.6 oz/A)	Aug 6
7	Steward 1.25SC	0.065 lb ai/A (6.7 oz/A)	Aug 6
8	Karate Z	1.92 oz/A	Aug 6
9	Baythroid XL	2.4 oz/A	Aug 6
10	Brigade 2EC	5.12 oz/A	Aug 6
11	Danitol 2.4EC	10.67 oz/A	Aug 6
12	Non-treated	---	---

*DPX-HGW86 10OD was acidified to a pH of 4.5 with Buffer Xtra Strength.

Test #: PT10CEW1	**Planting date:** May 28
Year: 2010	**Plot size:** 4 rows x 40’
Crop: Peanut	**Row spacing:** 36”
Variety: Phillips	**Field #:** n/a
Experimental design: RCBD	**Location:** M&W Inc. farm, Suffolk, VA

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** D2-13 **Nozzle spacing:** 3 nozzles per row (full coverage) **PSI:** 42 **GPA:** 14.7

Comments: Wayne and Mack Byrum are acknowledged for their assistance with this test. Pre-treatment counts on Aug. 6 indicated 1 small, 8 medium, and 11 large larvae per 3-ft beat cloth sample. Mandibular dissection of 36 larvae collected on Aug. 12 from an insecticide-treated area outside the test (Baythroid XL @ 2 oz/A on Aug. 10) indicated 14% corn earworm and 86% tobacco budworm.

Table 46. Mean number of larvae per 3-ft beat cloth sample[1] in peanut, PT10CEW1 (Wayne Byrum farm, Suffolk, VA). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on August 6. No larvae were detected in the test on August 20.

#	Material	Rate (oz/A)	Aug 9				Aug 12				CLD[2]
			Small	Medium	Large	Total	Small	Medium	Large	Total	
1	Prevathon 0.43SC	9.8	0.1 b	0.8 b-e	0.0 e	0.9 cd	0.0	0.3 cd	0.1 d	0.4 de	2.0
2	Prevathon 0.43SC	13.4	0.0 b	0.3 de	0.9 c-e	1.1 cd	0.0	0.0 d	0.0 d	0.0 e	1.7
3	DPX-HGW86 10 OD	6.9	0.4 b	1.0 b-e	0.9 c-e	2.3 c	0.0	0.5 b-d	0.4 cd	0.9 c-e	4.8
4	Prevathon 0.43SC+ Asana XL	9.8 7.0	0.0 b	0.0 e	0.0 e	0.0 d	0.0	0.0 d	0.1 d	0.1 de	0.2
5	Belt 4SC	3.0	0.4 b	1.5 bc	0.3 de	2.1 c	0.0	0.4 b-d	0.1 d	0.5 de	3.9
6	Steward 1.25SC	4.6	0.0 b	0.3 de	1.0 c-e	1.3 cd	0.1	0.8 b-d	1.3 a-c	2.1 bc	5.1
7	Steward 1.25SC	6.7	0.1 b	0.4 de	1.3 b-d	1.8 c	0.0	0.3 cd	0.5 b-d	0.8 de	3.9
8	Karate Z	1.92	0.5 b	1.1 b-d	2.4 ab	4.0 b	0.3	1.0 bc	1.8 a	3.0 ab	10.5
9	Baythroid XL	2.4	0.8 b	1.8 b	1.8 a-c	4.3 b	0.0	1.3 ab	1.5 ab	2.8 ab	10.7
10	Brigade 2EC	5.12	0.3 b	0.6 c-e	1.1 c-e	2.0 c	0.0	0.8 b-d	0.6 b-d	1.4 cd	5.1
11	Danitol 2.4EC	10.67	0.1 b	0.6 c-e	0.8 c-e	1.5 cd	0.0	0.4 b-d	0.5 b-d	0.9 c-e	3.6
12	Non-treated	---	2.6 a	3.8 a	2.8 a	9.1 a	0.0	2.1 a	1.8 a	3.9 a	19.5
	LSD		0.79	1.03	1.18	1.63	NS	0.95	1.04	1.28	---

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

[1]*Two 3-ft samples were taken per plot.*

[2]*Cumulative larval days (CLD) are calculated with the following equation: $\Sigma (X_{i+1} - X_i)[(Y_i + Y_{i+1})/2]$, where X_i and X_{i+1} are adjacent sample dates and Y_i and Y_{i+1} are corresponding points of total larvae per 3 row ft beat cloth sample.*

2010

Soybean Insect Pest Management Tests and Demonstrations

TEST: SB10THP_Allen, Evaluation of seed treatments for early-season insect management

EXPERIMENT TREATMENTS:

#	Material
1	ApronMaxx (insecticide untreated)
2	Avicta Complete Bean
3	CruiserMaxx

Test #: SB10THP_Allen	**Planting date:** May 26
Year: 2010	**Plot size:** 40 rows x 550’
Crop: Soybean	**Row spacing:** 36”
Variety: S49-W6	**Field #:** n/a
Experimental design: Strip	**Location:** John Allen farm, Isle of Wight Co., VA

Table 47. Thrips counts and yield, SB10THP_Allen (John Allen farm, Isle of Wight Co., VA). Tidewater AREC, Suffolk, VA, 2010.

#	Material	Thrips per 10 plants (Jun 7 and 14) or 10 uppermost fully expanded trifoliates (Jun 21 and 29)								Yield (bu/A)[3]
		Jun 7 (V1 stage)		Jun 14		Jun 21 (V4 stage)		Jun 29		
		Adult[1]	Immat.	Adult[2]	Immat.	Adult	Immat.	Adult	Immat.	
1	ApronMaxx (Insecticide untreated)	2.3	0.0	1.8	0.8	0.3	0.3	0.3	0.8	35.3
2	Avicta Complete Bean	0.3	0.0	1.3	0.0	1.0	0.0	0.5	0.8	35.1
3	CruiserMaxx	0.5	0.0	2.0	0.3	1.3	2.3	1.5	2.5	37.5
	LSD	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).
[1]*Species composition in Treatment 1 on June 7 was Frankliniella fusca (57.1%), Thrips tabaci (14.3%), and Neohydatothrips variabilis (28.6%).*
[2]*Species composition in Treatment 1 on June 14 was Frankliniella fusca (66.7%) and Neohydatothrips variabilis (33.3%).*
[3]*Yield based on report from grower.*

TEST: SB10THP_BLB_Syngenta, Evaluation of at-planting insecticides for thrips and bean leaf beetle management

EXPERIMENT TREATMENTS:

#	Material	Rate (g ai per 100 kg seed)
1	A18059	0.99
2	Apron Maxx RTA + Moly 0.166ES	6.25
3	Apron Maxx RTA + Moly 0.166ES Cruiser 5FS	6.25 50.0
4	A14379 A18059	56.25 0.99
5	A18212 A18059	61.25 0.99
6	A18046 A18059	58.25 0.99
7	Apron Maxx RTA + Moly 0.166ES A16148	6.25 5.0
8	Apron Maxx RTA + Moly 0.166ES A16148 Cruiser 5FS	6.25 5.0 50.0
9	STP15154 STP15101 STP15201	4.0 2.5 50.0
10	STP17141 STP15154 STP27320 STP15273	5.2 10.2 3.44 62.6
11	A18046 A18059 STP20339	58.25 0.99 9.68

Test #: SB10THP_BLB_Syngenta	**Planting date:** May 27
Year: 2010	**Plot size:** 2 rows x 40’
Crop: Soybean	**Row spacing:** 36”
Variety: S56-L5	**Field #:** 63c
Experimental design: RCBD	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
5/27	Prowl H_2O	1.5 pt
6/18	Roundup	22 oz
6/18	First Rate	0.3 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
8/09	Baythroid XL	3 oz
9/02	Orthene 97	8 oz
9/02	Larvin 3.2	12 oz

Fertilizer		
Date	**Product**	**Rate/A**
4/22	3-9-30	250 lb
6/18	Mandate	1 qt
7/27	Mandate	1 qt

Land preparation: Disked on Apr 14, land conditioned on May 27
Soil pH: 6.29
Soil type(s): Dragston
Nutrient analysis (ppm): P (22), K (101), Ca (363), Mg (75), Zn (0.4), Mn (2.2)
Harvest date: Oct 21
Row feet harvested: 80
Harvest technique: Small-plot combine

Comments: Syngenta provided treated seed **(**group 5.6, glyphosate-tolerant). 2-row borders ('AG 4630') between treatments.

Table 48. Stand counts, thrips counts, and yield, SB10THP_BLB_Syngenta. Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate (g ai per 100 kg seed)	Plants per row ft[1]			Thrips per 5 plants (Jun 7 and 14) or 5 uppermost fully expanded trifoliates (Jun 21 and 29)								Yield (bu/A)[6]
						Jun 7 (V1 stage)		Jun 14 (V2 stage)		Jun 21 (V4 stage)		Jun 29 (V6 stage)		
			Jun 4	Jun 11	Jun 24	Adult[2]	Immat	Adult[3]	Immat	Adult[4]	Immat	Adult[5]	Immat	
1	A18059	0.99	6.8 ab	7.1	6.3	6.5 ab	0.8	6.5	46.0 a	3.8	17.0 a	2.3	4.5	26.9
2	Apron Maxx RTA + Moly 0.166ES	6.25	6.7 ab	7.2	6.2	8.0 a	0.5	6.3	53.3 a	3.0	14.0 ab	2.5	3.8	28.6
3	Apron Maxx RTA + Moly 0.166ES Cruiser 5FS	6.25 50.0	7.0 a	7.2	6.7	3.5 bc	0.0	3.3	5.3 b	2.5	10.3 bc	1.8	5.3	29.8
4	A14379 A18059	56.25 0.99	6.7 ab	7.0	6.4	1.5 c	0.3	2.8	6.5 b	1.8	8.0 bc	0.5	6.8	27.8
5	A18212 A18059	61.25 0.99	7.0 a	7.2	6.2	1.8 c	0.3	5.0	8.8 b	2.0	8.3 bc	2.3	4.5	28.6
6	A18046 A18059	58.25 0.99	6.9 a	6.9	6.2	3.3 bc	0.0	4.0	4.3 b	2.5	10.0 bc	0.8	8.8	27.4
7	Apron Maxx RTA + Moly 0.166ES A16148	6.25 5.0	6.4 b	6.8	6.5	6.0 ab	1.5	3.5	41.3 a	2.3	18.8 a	2.5	4.5	28.8
8	Apron Maxx RTA + Moly 0.166ES A16148 Cruiser 5FS	6.25 5.0 50.0	7.0 a	7.4	6.5	1.5 c	0.0	6.0	10.5 b	0.8	7.3 c	0.8	3.8	28.6
9	STP15154 STP15101 STP15201	4.0 2.5 50.0	6.4 b	6.5	5.9	6.0 ab	0.3	7.3	46.3 a	1.3	14.0 ab	1.5	4.0	27.9
10	STP17141 STP15154 STP27320 STP15273	5.2 10.2 3.44 62.6	6.8 ab	6.9	6.4	2.0 c	0.0	6.5	13.0 b	2.0	13.0 a-c	2.3	4.8	28.3
11	A18046 A18059 STP20339	58.25 0.99 9.68	7.0 a	7.2	6.5	1.0 c	0.0	5.8	7.0 b	1.5	12.8 a-c	0.5	6.0	29.4
	LSD		0.42	NS	NS	3.31	NS	NS	24.91	NS	6.27	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 the total number of plants in rows 1 and 2 of each plot (80 row feet).*

[2]*Species composition in Treatment 2 on June 7 was Frankliniella fusca (59.4%), Thrips tabaci (12.5%), F. occidentalis (3.1%), F. tritici (15.6%), and Neohydatothrips variabilis (9.4%).*

[3]*Species composition in Treatment 2 on June 14 was F. fusca (8.0%), T. tabaci (4.0%), and N. variabilis (88.0%).*

[4]*Species composition in Treatment 2 on June 21 was T. tabaci (8.3%), F. tritici (25.0%), and N. variabilis (66.7%).*

[5]*Species composition in Treatment 2 on June 29 was F. tritici (20.0%) and N. variabilis (80.0%).*

[6]*Yield based on weight of soybean with moisture content of 13%.*

Table 49. Thrips injury ratings[1], SB10THP_BLB_Syngenta. Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate (g ai per 100 kg seed)	Jun 17 (V3 growth stage)	Jun 22	Jul 1
1	A18059	0.99	1.19 b	1.13 b	0.0
2	Apron Maxx RTA + Moly 0.166ES	6.25	1.44 a	1.56 a	0.0
3	Apron Maxx RTA + Moly 0.166ES Cruiser 5FS	6.25 50.0	0.31 e	0.63 c	0.0
4	A14379 A18059	56.25 0.99	0.25 e	0.50 c	0.0
5	A18212 A18059	61.25 0.99	0.38 de	0.56 c	0.0
6	A18046 A18059	58.25 0.99	0.31 e	0.63 c	0.0
7	Apron Maxx RTA + Moly 0.166ES A16148	6.25 5.0	0.94 c	0.56 c	0.0
8	Apron Maxx RTA + Moly 0.166ES A16148 Cruiser 5FS	6.25 5.0 50.0	0.38 de	0.56 c	0.0
9	STP15154 STP15101 STP15201	4.0 2.5 50.0	0.56 d	0.50 c	0.0
10	STP17141 STP15154 STP27320 STP15273	5.2 10.2 3.44 62.6	0.56 d	0.50 c	0.0
11	A18046 A18059 STP20339	58.25 0.99 9.68	0.44 de	0.50 c	0.0
	LSD		0.22	0.36	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 = 100% damaged plants.

Table 50. Percent crop injury ratings[1], SB10THP_BLB_Syngenta. Tidewater AREC, Suffolk, VA, 2010. Soybean were planted on May 27.

#	Material	Rate (g ai per 100 kg seed)	Jun 4 (VC growth stage)	Jun 17 (V3 growth stage)
1	A18059	0.99	0.0	0.0
2	Apron Maxx RTA + Moly 0.166ES	6.25	0.0	0.0
3	Apron Maxx RTA + Moly 0.166ES Cruiser 5FS	6.25 50.0	0.0	0.0
4	A14379 A18059	56.25 0.99	0.0	0.0
5	A18212 A18059	61.25 0.99	0.0	0.0
6	A18046 A18059	58.25 0.99	0.0	0.0
7	Apron Maxx RTA + Moly 0.166ES A16148	6.25 5.0	0.0	0.0
8	Apron Maxx RTA + Moly 0.166ES A16148 Cruiser 5FS	6.25 5.0 50.0	0.0	0.0
9	STP15154 STP15101 STP15201	4.0 2.5 50.0	0.0	0.0
10	STP17141 STP15154 STP27320 STP15273	5.2 10.2 3.44 62.6	0.0	0.0
11	A18046 A18059 STP20339	58.25 0.99 9.68	0.0	0.0
	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 visual phytotoxicity ratings (including deformed/discolored plants).

TEST: SB10THP/BLB_Valent, Evaluation of seed treatments and a foliar-applied insecticide for early-season insect management

EXPERIMENT TREATMENTS:

#	Material	Rate	Date treated
1	Untreated	---	
2	Maxim 4FS Apron XL Cruiser 5FS	0.08 fl oz/cwt 0.64 fl oz/cwt 1.28 fl oz/cwt	
3	Trilex 2SC Allegiance-FL 2.65SC Yield Shield 100SS Gaucho 600FS	0.32 fl oz/cwt 0.75 fl oz/cwt 0.10 oz pw/cwt 1.60 fl oz/cwt	
4	Inovate, consisting of: Rancona XXTRA 0.24FS V-10209 2.65 FS Nipsit INSIDE 5FS	 3.50 fl oz/cwt 0.55 fl oz/cwt 1.28 fl oz/cwt	
5	Inovate, consisting of: Rancona XXTRA 0.24FS V-10209 2.65 FS Nipsit INSIDE 5FS + Belay 2.13 SC	 3.50 fl oz/cwt 0.55 fl oz/cwt 1.28 fl oz/cwt 3 oz/A (foliar BC)	 Jun 18 (V3 stage)
6	Temik 15G	5 lb/A	

Test #: SB10THP/BLB_Valent	**Planting date:** May 27
Year: 2010	**Plot size:** 2 rows x 40’
Crop: Soybean	**Row spacing:** 36”
Variety: Asgrow 5605RR	**Field #:** 63c
Experimental design: RCBD	**Location:** Tidewater AREC

Herbicides		
Date	**Product**	**Rate/A**
5/27	Prowl H_2O	1.5 pt
6/18	Roundup	22 oz
6/18	First Rate	0.3 oz

Additional Insecticides		
Date	**Product**	**Rate/A**
8/09	Baythroid XL	3 oz
9/02	Orthene 97	8 oz
9/02	Larvin 3.2	12 oz

Fertilizer		
Date	**Product**	**Rate/A**
4/22	3-9-30	250 lb
6/18	Mandate	1 qt
7/27	Mandate	1 qt

Land preparation: Disked on Apr 14, land conditioned on May 27
Soil pH: 6.29
Soil type(s): Dragston
Nutrient analysis (ppm): P (22), K (101), Ca (363), Mg (75), Zn (0.4), Mn (2.2)
Harvest date: Oct 21
Row feet harvested: 80
Harvest technique: Small-plot combine

Comments: 2-row borders (‘AG 4630’) between treatments.

Table 51. Stand counts, thrips counts, and yield, SB10THP_BLB_Valent. Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate	Plants per row ft[1]			Thrips per 5 plants (Jun 7 and 14) or 5 uppermost fully expanded trifoliates (Jun 21 and 29)								Yield (bu/A)[6]
						Jun 7 (V1 stage)		Jun 14 (V2 stage)		Jun 21 (V4 stage)		Jun 29 (V6 stage)		
			Jun 4	Jun 11	Jun 25	Adult[2]	Immat	Adult[3]	Immat	Adult[4]	Immat	Adult[5]	Immat	
1	Untreated	---	6.9 b	7.2	7.0 bc	10.0 a	2.0 a	6.5	44.3 a	1.8	8.3 ab	1.8	1.8	29.6
2	Maxim 4FS Apron XL Cruiser 5FS	0.08 fl oz/cwt 0.64 fl oz/cwt 1.28 fl oz/cwt	7.7 a	7.0	7.6 a	2.5 b	0.0 b	3.5	5.5 c	2.5	4.8 bc	0.5	4.0	30.3
3	Trilex 2SC Allegiance-FL 2.65SC Yield Shield 100SS Gaucho 600FS	0.32 fl oz/cwt 0.75 fl oz/cwt 0.10 oz pw/cwt 1.60 fl oz/cwt	7.8 a	7.7	7.3 ab	4.8 ab	0.0 b	7.8	7.8 c	4.0	11.0 a	2.5	4.5	30.4
4	Inovate, consisting of: Rancona XXTRA 0.24FS V-10209 2.65 FS Nipsit INSIDE 5FS	 3.50 fl oz/cwt 0.55 fl oz/cwt 1.28 fl oz/cwt	7.0 b	7.1	6.8 c	8.3 a	0.5 b	3.8	22.0 b	2.0	10.5 a	2.3	2.3	31.4
5	Inovate, consisting of: Rancona XXTRA 0.24FS V-10209 2.65 FS Nipsit INSIDE 5FS + Belay 2.13 SC	 3.50 fl oz/cwt 0.55 fl oz/cwt 1.28 fl oz/cwt 3 oz/A (BC)	7.9 a	7.4	6.9 bc	8.5 a	1.0 ab	3.3	21.5 b	1.5	2.3 c	0.8	1.5	28.8
6	Temik 15G	5 lb/A	6.9 b	7.1	7.0 bc	2.8 b	0.3 b	1.8	2.0 c	0.5	0.8 c	1.3	2.0	31.0
	LSD		0.56	NS	0.48	5.41	1.21	NS	11.17	NS	4.92	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 the total number of plants in rows 1 and 2 of each plot (80 row feet).*

[2]*Species composition in the untreated check on June 7 was Frankliniella fusca (65.7%), F. tritici (2.9%), and Neohydatothrips variabilis (31.4%).*

[3]*Species composition in the untreated check on June 14 was F. fusca (24.0%), F. tabaci (4.0%), F. tritici (4.0%), and N. variabilis (68.0%).*

[4]*Species composition in the untreated check on June 21 was F. fusca (14.3%), F. tabaci (14.3%), and N. variabilis (71.4%).*

[5]*Species composition in the untreated check on June 29 was F. tritici (14.3%) and N. variabilis (85.7%).*

[6]*Yield based on weight of soybean with moisture content of 13%.*

Table 52. Thrips injury ratings[1], SB10THP_BLB_Valent. Tidewater AREC, Suffolk, VA, 2010.

#	Material	Rate	Jun 17 (V3 growth stage)	Jun 22	Jul 1
1	Untreated	---	1.50 a	1.63 a	0.0
2	Maxim 4FS Apron XL Cruiser 5FS	0.08 fl oz/cwt 0.64 fl oz/cwt 1.28 fl oz/cwt	0.50 d	0.38 bc	0.0
3	Trilex 2SC Allegiance-FL 2.65SC Yield Shield 100SS Gaucho 600FS	0.32 fl oz/cwt 0.75 fl oz/cwt 0.10 oz pw/cwt 1.60 fl oz/cwt	0.50 d	0.50 bc	0.0
4	Inovate, consisting of: Rancona XXTRA 0.24FS V-10209 2.65 FS Nipsit INSIDE 5FS	 3.50 fl oz/cwt 0.55 fl oz/cwt 1.28 fl oz/cwt	0.63 c	0.56 b	0.0
5	Inovate, consisting of: Rancona XXTRA 0.24FS V-10209 2.65 FS Nipsit INSIDE 5FS + Belay 2.13 SC	 3.50 fl oz/cwt 0.55 fl oz/cwt 1.28 fl oz/cwt 3 oz/A (foliar BC)	0.75 b	0.38 bc	0.0
6	Temik 15G	5 lb/A	0.31 e	0.31 c	0.0
	LSD		0.12	0.24	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 = 100% damaged plants.

TEST: SB10BLB2, Evaluation of foliar-applied insecticides for bean leaf beetle management

EXPERIMENT TREATMENTS:

#	Material	Rate/A	Date(s) treated
1	Danitol	10.67 oz	Aug 25
2	Baythroid XL	2.8 oz	Aug 25
3	Karate Z	1.6 oz	Aug 25
4	Cobalt	19 oz	Aug 25
5	Larvin 3.2	18 oz	Aug 25
6	Orthene 97	12 oz	Aug 25
7	Belay	3 oz	Aug 25
8	Sevin 4F	16 oz	Aug 25
9	Endigo	3.5 oz	Aug 25
10	Untreated	---	---

Test #: SB10BLB2	**Planting date:** Apr 26
Year: 2010	**Plot size:** 4 rows x 40’
Crop: Soybean	**Row spacing:** 36”
Variety: Asgrow 4907	**Field #:** n/a
Experimental design: RCBD	**Location:** Terra Ceia, Beaufort Co., NC

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8004E **Nozzle spacing:** 1 nozzle over each row **PSI:** 22 **GPA:** 16.5

Comments: Dominic Reisig is acknowledged for his assistance with this test. We also thank Gary Respass of Flatland Farms for his permission to conduct this trial. Pre-treatment counts indicated 38 bean leaf beetles per 15 sweeps. N 35° 36’ 50” W 76° 44’ 39”

Table 53. Mean number of bean leaf beetles per 15 sweeps, SB10BLB2. Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on August 25.

#	Material	Rate	Aug 28	Sep 1	Sep 7
1	Danitol	10.67 oz	0.0 b	4.0 d	2.8 e
2	Baythroid XL	2.8 oz	0.5 b	4.5 d	11.0 c-e
3	Karate Z	1.6 oz	0.3 b	3.0 d	7.3 de
4	Cobalt	19 oz	0.8 b	6.3 cd	6.8 de
5	Larvin 3.2	18 oz	4.8 b	12.8 bc	27.8 ab
6	Orthene 97	12 oz	4.0 b	9.5 b-d	18.3 b-d
7	Belay	3 oz	0.5 b	9.8 b-d	35.8 a
8	Sevin 4F	16 oz	2.0 b	16.0 b	32.3 a
9	Endigo	3.5 oz	0.0 b	2.8 d	5.0 e
10	Untreated	---	36.3 a	29.0 a	23.0 a-c
	LSD		6.83	8.14	12.93

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

TEST: SB10CEW1, Evaluation of foliar insecticides for lepidopteran pest management

EXPERIMENT TREATMENTS:

#	Material	Rate	Date(s) treated
1	Prevathon 0.43SC	0.033 lb ai/A (9.8 oz/A)	Jul 28
2	Prevathon 0.43SC	0.045 lb ai/A (13.4 oz/A)	Jul 28
3	DPX-HGW86 10 OD*	0.045 lb ai/A (6.9 oz/A)	Jul 28
4	Prevathon 0.43SC + Asana XL	0.033 lb ai/A (9.8 oz/A) 0.036 lb ai/A (7 oz/A)	Jul 28
5	Belt 4SC	0.09375 lb ai/A (3 oz/A)	Jul 28
6	Steward 1.25SC	0.045 lb ai/A (4.6 oz/A)	Jul 28
7	Karate Z	1.6 oz/A	Jul 28
8	Baythroid XL	2.8 oz/A	Jul 28
9	Brigade 2EC	5.12 oz/A	Jul 28
10	Danitol 2.4EC	10.67 oz/A	Jul 28
11	Non-treated	---	---

*DPX-HGW86 10OD was acidified to a pH of 4.5 with Buffer Xtra Strength.

Test #: SB10CEW1	**Planting date:** May 11
Year: 2010	**Plot size:** 4 rows x 40’
Crop: Soybean	**Row spacing:** 36”
Variety: Asgrow 6301	**Field #:** n/a
Experimental design: RCBD	**Location:** Barry Bryant farm, Jackson, NC

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 18 **GPA:** 14.3

Comments: Craig Ellison is acknowledged for his assistance with this test. Mandibular dissection of 48 larvae collected from untreated plots indicated 98% corn earworm and 2% tobacco budworm.
36° 21.725'N 77° 24.771'W

Table 54. Mean number of larvae and bean leaf beetles (BLB) per 15 sweeps and cumulative larval days[1], SB10CEW1 (Barry Bryant farm, Jackson, NC). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on July 28.

#	Material	Rate	Jul 30					Aug 2					CLD
			Small larvae	Medium larvae	Large larvae	Total larvae	BLB	Small larvae	Medium larvae	Large larvae	Total larvae	BLB	
1	Prevathon 0.43SC	9.8 oz/A	0.3	0.8 b	0.0 b	1.0 b	0.3	0.0	0.3 de	0.0 c	0.3 c	0.5	2.0
2	Prevathon 0.43SC	13.4 oz/A	0.3	1.0 b	0.0 b	1.3 b	0.0	0.0	0.3 de	0.5 c	0.8 c	0.5	3.2
3	DPX-HGW86 10 OD	6.9 oz/A	0.0	0.8 b	0.3 b	1.0 b	0.0	0.0	0.8 c-e	0.0 c	0.8 c	0.0	2.7
4	Prevathon 0.43SC + Asana XL	9.8 oz/A 7 oz/A	0.3	0.3 b	0.0 b	0.5 b	0.0	0.0	0.3 de	0.3 c	0.5 c	0.3	1.5
5	Belt 4SC	3 oz/A	0.5	1.3 b	0.0 b	1.8 b	0.8	0.0	0.5 c-e	0.3 c	0.8 c	0.5	3.9
6	Steward 1.25SC	4.6 oz/A	0.5	0.3 b	0.0 b	0.8 b	0.0	0.3	0.3 de	0.0 c	0.5 c	0.3	2.0
7	Karate Z	1.6 oz/A	0.0	1.8 b	0.8 b	2.5 b	0.0	0.8	2.3 b	2.8 a	5.8 a	0.3	12.5
8	Baythroid XL	2.8 oz/A	0.3	0.3 b	0.0 b	0.5 b	0.3	0.0	0.0 e	0.3 c	0.3 c	0.3	1.2
9	Brigade 2EC	5.12 oz/A	0.0	1.5 b	0.3 b	1.8 b	0.0	0.3	1.5 bc	0.8 bc	2.5 b	0.5	6.5
10	Danitol 2.4EC	10.67 oz/A	0.0	0.3 b	0.5 b	0.8 b	0.0	0.0	1.3 b-d	0.0 c	1.3 bc	0.0	3.2
11	Non-treated	---	1.3	5.3 a	2.0 a	8.5 a	0.3	0.8	4.3 a	2.0 ab	7.0 a	0.3	23.3
	LSD		NS	1.82	1.18	2.30	NS	NS	1.05	1.32	1.56	NS	---

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

[1]*Cumulative larval days (CLD) are calculated with the following equation: $\Sigma (X_{i+1} - X_i)[(Y_i + Y_{i+1})/2]$, where X_i and X_{i+1} are adjacent sample dates and Y_i and Y_{i+1} are corresponding points of total larvae per 15-sweep sample.*

TEST: SB10CEW2, Evaluation of foliar insecticides for lepidopteran pest management

EXPERIMENT TREATMENTS:

#	Material	Rate	Date(s) treated
1	Prevathon 0.43SC	0.033 lb ai/A (9.8 oz/A)	Aug 4
2	Prevathon 0.43SC	0.045 lb ai/A (13.4 oz/A)	Aug 4
3	DPX-HGW86 10 OD	0.045 lb ai/A (6.9 oz/A)	Aug 4
4	Endigo	4.5 oz/A	Aug 4
5	Belt 4SC	0.09375 lb ai/A (3 oz/A)	Aug 4
6	Steward 1.25SC	0.045 lb ai/A (4.6 oz/A)	Aug 4
7	Karate Z	1.6 oz/A	Aug 4
8	Baythroid XL	2.8 oz/A	Aug 4
9	Brigade 2EC	5.12 oz/A	Aug 4
10	Danitol 2.4EC	10.67 oz/A	Aug 4
11	Non-treated	---	---

DPX-HGW86 10OD was acidified to a pH of 4.5 with Buffer Xtra Strength.

Test #: SB10CEW2	**Planting date:** May 19
Year: 2010	**Plot size:** 4 rows x 40’
Crop: Soybean	**Row spacing:** 36”
Variety: Pioneer 95M82	**Field #:** n/a
Experimental design: RCBD	**Location:** Capron, VA

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8004 **Nozzle spacing:** 1 nozzle centered over each row **PSI:** 22 **GPA:** 16.5

Comments: Pre-treatment counts on Aug 4 indicated 1 small, 5 medium, and 8.5 large larvae per 15-sweep sample (n=4). Mandibular dissection of 45 larvae collected from untreated plots indicated 84% corn earworm and 16% tobacco budworm. Will Gillette and Bob Marks are acknowledged for their assistance with this test.

Table 55. Mean number of larvae per 15 sweeps and cumulative larval days[1], SB10CEW2 (Capron, VA). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on August 4. No larvae were detected in the test on August 16.

#	Material	Rate (oz/A)	Aug 6				Aug 9				CLD
			Small	Medium	Large	Total	Small	Medium	Large	Total	
1	Prevathon 0.43SC	9.8	0.5 cd	2.0 ab	0.0 d	2.5 cd	0.3 c	0.0 c	0.3	0.5 c	4.5
2	Prevathon 0.43SC	13.4	0.3 cd	0.5 bc	0.0 d	0.8 de	0.5 c	0.0 c	0.5	1.0 c	2.7
3	DPX-HGW86 10 OD	6.9	2.3 ab	2.3 ab	1.5 a-c	6.0 b	0.3 c	0.3 bc	0.5	1.0 c	10.5
4	Endigo	4.5	0.8 cd	2.0 ab	1.0 b-d	3.8 bc	0.5 c	0.0 c	0.8	1.3 c	7.7
5	Belt 4SC	3.0	1.0 b-d	0.8 bc	0.5 b-d	2.3 c-e	0.0 c	0.3 bc	0.0	0.3 c	3.9
6	Steward 1.25SC	4.6	0.0 d	0.0 c	0.0 d	0.0 e	0.5 c	0.0 c	0.5	1.0 c	1.5
7	Karate Z	1.6	0.0 d	2.3 ab	1.8 ab	4.0 bc	0.3 c	0.3 bc	0.5	1.0 c	7.5
8	Baythroid XL	2.8	0.0 d	1.0 bc	0.3 cd	1.3 de	0.0 c	0.3 bc	0.0	0.3 c	2.4
9	Brigade 2EC	5.12	1.3 b-d	3.0 a	1.0 b-d	5.3 b	1.8 b	0.8 ab	0.5	3.0 b	12.5
10	Danitol 2.4EC	10.67	1.5 bc	0.8 bc	0.5 b-d	2.8 cd	2.8 ab	0.5 bc	0.8	4.0 b	10.2
11	Non-treated	---	3.3 a	3.3 a	2.8 a	9.3 a	3.0 a	1.3 a	2.0	6.3 a	23.4
	LSD		1.48	1.78	1.42	2.47	1.24	0.73	NS	1.56	---

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

[1]Cumulative larval days (CLD) are calculated with the following equation: $\Sigma (X_{i+1} - X_i)[(Y_i + Y_{i+1})/2]$, where X_i and X_{i+1} are adjacent sample dates and Y_i and Y_{i+1} are corresponding points of total larvae per 15-sweep sample.

TEST: SB10CEW3, Evaluation of foliar insecticides for lepidopteran pest management

EXPERIMENT TREATMENTS:

#	Material	Rate	Date(s) treated
1	Belt 4SC	2 oz/A	Aug 5 (growth stage R2)
2	Non-treated	---	---
3	Belt 4SC	3 oz/A	Aug 5 (growth stage R2)

Test #: SB10CEW3	**Planting date:** May 19
Year: 2010	**Plot size:** 6 rows x 300’
Crop: Soybean	**Row spacing:** 36”
Variety: Pioneer 95M82	**Field #:** n/a
Experimental design: Strip trial	**Location:** Capron, VA

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8004 **Nozzle spacing:** 1 nozzle centered over each row **PSI:** 22 **GPA:** 16.5

Comments: Pre-treatment counts on Aug 4 indicated 1 small, 6.8 medium, and 9.3 large larvae per 15-sweep sample (n=4).

Table 56. Mean number of corn earworm/budworm larvae per 15 sweeps, SB10CEW3 (Capron, VA). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on August 5 (growth stage = R2). No corn earworm/budworm larvae were detected in the test on August 16 or 23.

#	Material	Rate	Aug 9				Aug 12				Aug 16	Aug 23
			Small	Medium	Large	Total	Small	Medium	Large	Total	Total	Total
1	Belt 4SC	2 oz/A	0.3 b	0.4 b	0.4 b	1.0 b	0.0	0.0	0.0	0.0 b	0.0	0.0
2	Non-treated	---	3.0 a	3.4 a	2.0 a	8.4 a	0.5	0.8	0.3	1.5 a	0.0	0.0
3	Belt 4SC	3 oz/A	0.4 b	0.3 b	0.0 b	0.6 b	0.0	0.0	0.0	0.0 b	0.0	0.0
	LSD	---	1.22	1.26	0.77	2.01	NS	NS	NS	0.58	NS	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 corn earworm/budworm, soybean looper, and green cloverworm larvae per 15 sweeps, SB10CEW3 (Capron, VA). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on August 5 (growth stage = R2).

#	Material	Rate	Aug 31			Sep 8		
			Small CEW or budworm	Soybean looper	Green cloverworm	CEW or budworm	Soybean looper	Green cloverworm
1	Belt 4SC	2 oz/A	0.3 b	0.5 b	0.5 b	0.0	0.8	0.0 b
2	Non-treated	---	1.5 a	4.0 a	7.5 a	0.3	1.8	11.5 a
3	Belt 4SC	3 oz/A	0.0 b	0.0 b	0.0 b	0.0	1.0	0.0 b
	LSD	---	0.64	1.15	1.29	NS	NS	3.11

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

Table 58. Mean number of corn earworm/budworm, soybean looper, and green cloverworm larvae per 15 sweeps, SB10CEW3 (Capron, VA). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on August 5 (growth stage = R2).

#	Material	Rate	Sep 16			Sep 22		
			CEW or budworm	Soybean looper	Green cloverworm	CEW or budworm	Soybean looper	Green cloverworm
1	Belt 4SC	2 oz/A	0.0	0.3	0.0 b	0.0	0.0	0.0
2	Non-treated	---	0.0	0.8	4.0 a	0.0	0.0	0.5
3	Belt 4SC	3 oz/A	0.0	0.3	0.0 b	0.0	0.0	0.0
	LSD	---	NS	NS	2.31	NS	NS	NS

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

TEST: SB10CEW4, Evaluation of foliar insecticides for lepidopteran pest management

EXPERIMENT TREATMENTS:

#	Material	Rate	Date(s) treated
1	Belt 4SC	2 oz/A	Aug 23 (growth stage R3)
2	Non-treated	---	---
3	Belt 4SC	3 oz/A	Aug 23 (growth stage R3)

Test #: SB10CEW4	**Planting date:** May 19
Year: 2010	**Plot size:** 6 rows x 300’
Crop: Soybean	**Row spacing:** 36”
Variety: Pioneer 95M82	**Field #:** n/a
Experimental design: Strip trial	**Location:** Capron, VA

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8004 **Nozzle spacing:** 1 nozzle centered over each row **PSI:** 22 **GPA:** 16.5

Comments: Pre-treatment counts on Aug 9 indicated 2.8 small, 2.3 medium, and 1.2 large larvae per 15 sweeps. No larvae were detected in the pre-treatment counts on Aug 23.

Table 59. Mean number of corn earworm/budworm, soybean looper, and green cloverworm larvae per 15 sweeps, SB10CEW4 (Capron, VA). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on August 23 (growth stage = R3).

#	Material	Rate	Aug 31			Sep 8		
			Small CEW or budworm	Soybean looper	Green cloverworm	CEW or budworm	Soybean looper	Green cloverworm
1	Belt 4SC	2 oz/A	0.0 b	0.0 b	0.0 b	0.0	0.3	0.0
2	Non-treated	---	2.5 a	3.5 a	5.0 a	0.0	0.8	4.8
3	Belt 4SC	3 oz/A	0.0 b	0.0 b	0.0 b	0.0	0.0	0.0
	LSD	---	1.00	1.29	0.82	NS	NS	NS

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

Table 60. Mean number of corn earworm/budworm, soybean looper, and green cloverworm larvae per 15 sweeps, SB10CEW4 (Capron, VA). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on August 23 (growth stage = R3).

#	Material	Rate	Sep 16			Sep 22		
			CEW or budworm	Soybean looper	Green cloverworm	CEW or budworm	Soybean looper	Green cloverworm
1	Belt 4SC	2 oz/A	0.0	0.0 b	0.0 b	0.3	0.0	0.0
2	Non-treated	---	0.0	0.8 a	2.3 a	0.0	0.5	0.5
3	Belt 4SC	3 oz/A	0.0	0.0 b	0.0 b	0.0	0.0	0.0
	LSD	---	NS	0.50	0.96	NS	NS	NS

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

TEST: SB10CEW5, Evaluation of foliar insecticides for lepidopteran pest management

EXPERIMENT TREATMENTS:

#	Material	Rate	Date treated
1	Prevathon 0.43SC	9.8 oz/A	Aug 10
2	DPX-HGW86 10 OD*	6.9 oz/A	Aug 10
3	Endigo	4.5 oz/A	Aug 10
4	Karate Z	1.92 oz/A	Aug 10
5	Brigade 2EC	5.12 oz/A	Aug 10
6	Danitol 2.4EC	10.67 oz/A	Aug 10
7	Baythroid XL	2.8 oz/A	Aug 10
8	Baythroid XL + Larvin	2.0 oz/A 6.0 oz/A	Aug 10
9	Baythroid XL + Orthene 97	2.8 oz/A 8.0 oz/A	Aug 10
10	Larvin	10.0 oz/A	Aug 10
11	Belt 4SC	3 oz/A	Aug 10
12	Steward 1.25SC	4.6 oz/A	Aug 10
13	Success	4 oz/A	Aug 10
14	Non-treated	---	---

*DPX-HGW86 10OD was acidified to a pH of 4.5 with Buffer Xtra Strength.

Test #: SB10CEW5	**Planting date:** May 31
Year: 2010	**Plot size:** 10’ x 40’
Crop: Soybean	**Row spacing:** 15”
Variety: Pioneer 95M82	**Field #:** n/a
Experimental design: RCBD	**Location:** Reiter farm, Dinwiddie, VA

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 18 **GPA:** 14.3

Comments: Scott Reiter, George Reiter, and Mike Parrish are acknowledged for their assistance with this test. Pre-treatment counts on August 10 indicated 14.0 small, 22.75 medium, and 12.5 large larvae per 15 sweeps, covering 2 rows per sweep (n=4). Mandibular dissection of 33 larvae collected on Aug. 13 indicated 100% corn earworm.

Table 61. Mean number of corn earworm (CEW) larvae per 15 sweeps, SB10CEW5 (George Reiter farm, Dinwiddie, VA). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on August 10.

#	Material	Rate	Aug 13				Aug 16			
			Small CEW	Medium CEW	Large CEW	Total CEW	Small CEW	Medium CEW	Large CEW	Total CEW
1	Prevathon 0.43SC	9.8 oz/A	0.8 bc	0.8 bc	1.0 bc	2.5 bc	0.0	0.0 c	0.8	0.8 c
2	DPX-HGW86 10 OD	6.9 oz/A	0.0 c	1.3 bc	2.3 bc	3.5 bc	0.0	0.0 c	0.5	0.5 c
3	Endigo	4.5 oz/A	0.0 c	1.3 bc	1.8 bc	3.0 bc	0.0	0.0 c	0.8	0.8 c
4	Karate Z	1.92 oz/A	0.8 bc	1.3 bc	2.0 bc	4.0 bc	0.0	3.0 ab	1.5	4.5 ab
5	Brigade 2EC	5.12 oz/A	0.8 bc	3.0 b	3.0 b	6.8 b	0.0	0.5 c	2.5	3.0 bc
6	Danitol 2.4EC	10.67 oz/A	0.8 bc	1.0 bc	0.5 c	2.3 bc	0.3	1.0 c	1.0	2.3 bc
7	Baythroid XL	2.8 oz/A	0.3 bc	0.3 c	1.3 bc	1.8 bc	0.0	0.8 c	2.0	2.8 bc
8	Baythroid XL + Larvin	2.0 oz/A 6.0 oz/A	0.3 bc	0.3 c	1.3 bc	1.8 bc	0.0	0.0 c	0.8	0.8 c
9	Baythroid XL + Orthene 97	2.8 oz/A 8.0 oz/A	0.0 c	0.3 c	0.0 c	0.3 c	0.0	0.0 c	0.8	0.8 c
10	Larvin	10.0 oz/A	0.0 c	0.3 c	0.0 c	0.3 c	0.3	0.3 c	1.0	1.5 c
11	Belt 4SC	3 oz/A	0.0 c	0.3 c	1.0 bc	1.3 c	0.0	1.0 c	0.0	1.0 c
12	Steward 1.25SC	4.6 oz/A	1.8 b	0.8 bc	1.3 bc	3.8 bc	0.0	1.5 bc	0.3	1.8 c
13	Success	4 oz/A	0.0 c	0.0 c	0.3 c	0.3 c	0.3	0.5 c	1.0	1.8 c
14	Non-treated	---	4.0 a	10.3 a	8.3 a	22.5 a	0.5	4.5 a	2.0	7.0 a
	LSD		1.62	2.31	2.38	5.08	NS	1.88	NS	2.62

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

Table 62. Mean number of corn earworm (CEW) larvae per 15 sweeps and cumulative larval days (CLD), SB10CEW5 (George Reiter farm, Dinwiddie, VA). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on August 10. Samples on August 23 indicated less than 0.8 larvae in the non-treated plots (data not included).

#	Material	Rate	Aug 19				CLD[1]
			Small CEW	Medium CEW	Large CEW	Total CEW	
1	Prevathon 0.43SC	9.8 oz/A	0.0	0.5	1.0	1.5	8.4
2	DPX-HGW86 10 OD	6.9 oz/A	0.0	0.0	0.5	0.5	7.5
3	Endigo	4.5 oz/A	0.0	0.3	0.3	0.5	7.7
4	Karate Z	1.92 oz/A	0.0	0.3	0.8	1.0	21.0
5	Brigade 2EC	5.12 oz/A	0.0	1.0	0.8	1.8	21.9
6	Danitol 2.4EC	10.67 oz/A	0.0	1.0	1.8	2.8	14.6
7	Baythroid XL	2.8 oz/A	0.0	0.0	1.0	1.0	12.6
8	Baythroid XL + Larvin	2.0 oz/A 6.0 oz/A	0.0	0.0	0.8	0.8	6.3
9	Baythroid XL + Orthene 97	2.8 oz/A 8.0 oz/A	0.0	0.3	1.3	1.5	5.1
10	Larvin	10.0 oz/A	0.0	0.0	0.8	0.8	6.2
11	Belt 4SC	3 oz/A	0.0	0.0	0.5	0.5	5.7
12	Steward 1.25SC	4.6 oz/A	0.0	0.0	0.5	0.5	11.9
13	Success	4 oz/A	0.0	0.3	0.8	1.0	7.4
14	Non-treated	---	0.0	0.5	0.8	1.3	56.7
	LSD		NS	NS	NS	NS	---

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

[1]*Cumulative larval days (CLD) are calculated with the following equation: $\Sigma (X_{i+1} - X_i)[(Y_i + Y_{i+1})/2]$, where X_i and X_{i+1} are adjacent sample dates and Y_i and Y_{i+1} are corresponding points of total larvae per 15-sweep sample.*

Table 63. Mean number of corn earworm/budworm, soybean looper, and green cloverworm larvae per 15 sweeps on September 1, 2010, SB10CEW5 (George Reiter farm, Dinwiddie, VA). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on August 10.

#	Material	Rate	Corn earworm/tobacco budworm				Soybean looper				Green cloverworm			
			Small	Med-ium	Large	Total	Small	Med-ium	Large	Total	Small	Med-ium	Large	Total
1	Prevathon 0.43SC	9.8 oz/A	0.0 d	0.0 b	0.0	0.0 c	0.0 c	0.3 c	0.0	0.3 c	0.3 b	0.5	0.0	0.8
2	DPX-HGW86 10 OD	6.9 oz/A	0.0 d	0.0 b	0.0	0.0 c	0.5 bc	1.0 bc	0.3	1.8 bc	0.0 b	0.3	0.0	0.3
3	Endigo	4.5 oz/A	0.3 cd	0.5 a	0.0	0.8 a-c	0.0 c	1.3 bc	0.0	1.3 c	0.3 b	0.0	0.0	0.3
4	Karate Z	1.92 oz/A	1.3 a	0.0 b	0.0	1.3 a	1.5 ab	1.8 b	0.5	3.8 ab	0.8 b	0.3	0.0	1.0
5	Brigade 2EC	5.12 oz/A	0.0 d	0.0 b	0.0	0.0 c	0.3 c	1.8 b	0.3	2.3 bc	0.0 b	0.0	0.0	0.0
6	Danitol 2.4EC	10.67 oz/A	1.0 ab	0.0 b	0.0	1.0 ab	0.8 a-c	1.0 bc	0.3	2.0 bc	0.0 b	1.8	0.0	1.8
7	Baythroid XL	2.8 oz/A	0.3 cd	0.0 b	0.0	0.3 bc	0.5 bc	0.8 bc	0.0	1.3 c	0.3 b	0.8	0.0	1.0
8	Baythroid XL + Larvin	2.0 oz/A 6.0 oz/A	0.5 b-d	0.0 b	0.0	0.5 a-c	0.5 bc	2.0 ab	0.0	2.5 bc	0.5 b	1.0	0.0	1.5
9	Baythroid XL + Orthene 97	2.8 oz/A 8.0 oz/A	0.5 b-d	0.0 b	0.0	0.5 a-c	1.8 a	3.3 a	0.0	5.0 a	0.0 b	0.3	0.0	0.3
10	Larvin	10.0 oz/A	0.0 d	0.0 b	0.0	0.0 c	0.0 c	1.3 bc	0.0	1.3 c	0.0 b	1.3	0.0	1.3
11	Belt 4SC	3 oz/A	0.0 d	0.0 b	0.0	0.0 c	0.0 c	0.3 c	0.0	0.3 c	0.0 b	0.5	0.0	0.5
12	Steward 1.25SC	4.6 oz/A	0.8 a-c	0.0 b	0.0	0.8 a-c	0.5 bc	0.3 c	0.0	0.8 c	0.8 b	1.0	0.0	1.8
13	Success	4 oz/A	0.3 cd	0.0 b	0.0	0.3 bc	0.8 a-c	1.0 bc	0.0	1.8 bc	0.8 b	0.3	0.0	1.0
14	Non-treated	---	0.3 cd	0.0 b	0.0	0.3 bc	0.5 bc	0.3 c	0.0	0.8 c	2.0 a	1.3	0.0	3.3
	LSD		0.71	0.22	NS	0.76	1.05	1.47	NS	2.28	0.99	NS	NS	NS

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

TEST: SB10SL1, Evaluation of foliar insecticides for soybean looper management

EXPERIMENT TREATMENTS:

#	Material	Rate/A	Date treated
1	Success	3 oz	Aug 31
2	Intrepid 2F	4 oz	Aug 31
3	Intrepid 2F	6 oz	Aug 31
4	Radiant SC	2 oz	Aug 31
5	Radiant SC	4 oz	Aug 31
6	Consero	2 oz	Aug 31
7	Consero	3 oz	Aug 31
8	Karate Z	1.92 oz	Aug 31
9	XenTari	1 lb	Aug 31
10	Untreated	---	---

Test #: SB10SL1	**Planting date:** Jun 2
Year: 2010	**Plot size:** 6 rows x 45’
Crop: Soybean	**Row spacing:** 14”
Variety: Asgrow 4907	**Field #:** n/a
Experimental design: RCBD	**Location:** Edward Winslow farm, Belvidere, NC

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 18 **GPA:** 14.3

Comments: Pre-treatment counts indicated 149 soybean looper larvae per 15 sweeps. N 36° 18’ 19” W 76° 29’ 47”

Table 64. Mean number of soybean looper larvae per 15 sweeps, SB10SL1 (Belvidere, NC). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on August 31.

#	Material	Rate/A	Sep 2				Sep 10			
			Small	Med-ium	Large	Total	Small	Med-ium	Large	Total
1	Success	3 oz	1.0 e	3.5 c	2.3 bc	6.8 d	0.5 bc	8.3 ab	12.0 ab	20.8 ab
2	Intrepid 2F	4 oz	6.8 ab	12.8 bc	4.0 bc	23.5 bc	0.8 bc	5.5 b-d	6.0 cd	12.3 b-d
3	Intrepid 2F	6 oz	5.3 b-d	12.5 bc	4.3 bc	22.0 b-d	0.5 bc	2.8 d	2.5 d	5.8 d
4	Radiant SC	2 oz	2.3 de	8.5 bc	4.0 bc	14.8 cd	0.0 c	7.5 a-c	15.0 a	22.5 a
5	Radiant SC	4 oz	1.0 e	5.3 c	1.5 c	7.8 cd	0.3 c	6.8 a-c	8.3 bc	15.3 a-c
6	Consero	2 oz	2.5 c-e	11.8 bc	4.3 bc	18.5 b-d	0.8 bc	5.3 b-d	9.0 bc	15.0 a-c
7	Consero	3 oz	0.8 e	10.3 bc	2.8 bc	13.8 cd	0.3 c	4.3 cd	5.5 cd	10.0 cd
8	Karate Z	1.92 oz	5.5 a-c	17.8 b	8.8 ab	32.0 b	2.5 a	10.0 a	10.3 a-c	22.8 a
9	XenTari	1 lb	5.3 b-d	9.8 bc	0.5 c	15.5 cd	0.5 bc	5.0 b-d	9.3 bc	14.8 a-c
10	Untreated	---	8.5 a	41.3 a	15.0 a	64.8 a	1.8 ab	4.8 cd	8.0 bc	14.5 a-c
	LSD		3.20	9.93	6.92	15.76	1.43	3.50	5.45	8.74

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

Table 65. Mean number of soybean looper larvae per 15 sweeps, cumulative larval days (CLD), and percent control, SB10SL1 (Belvidere, NC). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on August 31.

#	Material	Rate/A	Sep 13				CLD[1]	% Control[2]
			Small	Medium	Large	Total		
1	Success	3 oz	0.0	1.5 bc	8.8 ab	10.3 ab	157.1	54.9
2	Intrepid 2F	4 oz	0.3	2.0 a-c	2.3 c	4.5 bc	168.4	51.7
3	Intrepid 2F	6 oz	0.3	0.8 c	2.3 c	3.3 c	124.9	64.2
4	Radiant SC	2 oz	0.0	3.3 ab	10.3 a	13.5 a	203.2	41.7
5	Radiant SC	4 oz	0.0	4.0 a	8.8 ab	12.8 a	134.6	61.4
6	Consero	2 oz	0.0	3.3 ab	9.8 a	13.0 a	176.0	49.5
7	Consero	3 oz	0.3	3.0 ab	9.3 ab	12.5 a	129.0	63.0
8	Karate Z	1.92 oz	0.8	4.0 a	8.3 ab	13.0 a	272.9	21.7
9	XenTari	1 lb	0.0	1.3 bc	8.0 ab	9.3 ab	157.4	54.8
10	Untreated	---	0.3	1.3 bc	4.8 bc	6.3 bc	348.4	0.0
	LSD		NS	2.20	4.60	5.76	---	---

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]Cumulative larval days (CLD) are calculated with the following equation: $\Sigma (X_{i+1} - X_i)[(Y_i + Y_{i+1})/2]$, where X_i and X_{i+1} are adjacent sample dates and Y_i and Y_{i+1} are corresponding points of total larvae per 15-sweep sample.
[2]Based on cumulative larval days.

TEST: SB10SL2, Evaluation of foliar insecticides for soybean looper management

EXPERIMENT TREATMENTS:

#	Material	Rate/A	Date treated
1	Steward 1.25SC	6 oz	Aug 31
2	Steward 1.25SC	8 oz	Aug 31
3	Prevathon 0.43SC	9.8 oz	Aug 31
4	Prevathon 0.43SC	13.4 oz	Aug 31
5	Belt	2 oz	Aug 31
6	Belt	3 oz	Aug 31
7	Larvin	16 oz	Aug 31
8	Larvin	18 oz	Aug 31
9	Baythroid XL	2.8 oz	Aug 31
10	Untreated	---	---

Test #: SB10SL2	**Planting date:** Jun 2
Year: 2010	**Plot size:** 6 rows x 45’
Crop: Soybean	**Row spacing:** 14”
Variety: Asgrow 4907	**Field #:** n/a
Experimental design: RCBD	**Location:** Edward Winslow farm, Belvidere, NC

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 18 **GPA:** 14.3

Comments: Pre-treatment counts indicated 149 soybean looper larvae per 15 sweeps. N 36° 18’ 19” W 76° 29’ 47”

Table 66. Mean number of soybean looper larvae per 15 sweeps, SB10SL2 (Belvidere, NC). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on August 31.

#	Material	Rate/A	Sep 2				Sep 10			
			Small	Med-ium	Large	Total	Small	Med-ium	Large	Total
1	Steward 1.25SC	6 oz	0.0 c	0.5 c	0.3 b	0.8 c	0.8	4.3 c	2.8 bc	7.8 bc
2	Steward 1.25SC	8 oz	0.3 c	0.8 c	0.0 b	1.0 c	0.0	2.3 cd	0.3 d	2.5 d
3	Prevathon 0.43SC	9.8 oz	3.0 bc	8.3 bc	3.5 b	14.8 bc	0.8	3.5 cd	0.3 d	4.5 cd
4	Prevathon 0.43SC	13.4 oz	3.0 bc	6.0 bc	2.0 b	11.0 bc	0.0	0.5 d	0.0 d	0.5 d
5	Belt	2 oz	1.8 bc	5.5 bc	0.5 b	7.8 bc	1.0	1.3 cd	0.3 d	2.5 d
6	Belt	3 oz	0.8 c	4.3 bc	0.3 b	5.3 bc	0.8	2.3 cd	1.0 cd	4.0 cd
7	Larvin	16 oz	0.8 c	1.5 c	0.5 b	2.8 c	1.8	11.0 ab	5.8 a	18.5 a
8	Larvin	18 oz	1.5 bc	2.8 c	2.0 b	6.3 bc	0.3	8.0 b	3.8 b	12.0 b
9	Baythroid XL	2.8 oz	4.3 b	14.8 b	4.0 b	23.0 b	3.3	14.0 a	4.0 ab	21.3 a
10	Untreated	---	10.3 a	35.5 a	25.8 a	71.5 a	2.3	4.0 cd	3.5 b	9.8 b
	LSD		3.07	10.83	6.84	18.09	NS	3.74	1.92	5.12

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

Table 67. Mean number of soybean looper larvae per 15 sweeps, cumulative larval days (CLD), and percent control, SB10SL2 (Belvidere, NC). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on August 31.

#	Material	Rate/A	Sep 13				CLD[1]	% Control[2]
			Small	Medium	Large	Total		
1	Steward 1.25SC	6 oz	0.0	5.0 b	1.8 a-c	6.8 b	56.3	84.0
2	Steward 1.25SC	8 oz	0.5	4.5 bc	1.8 a-c	6.8 b	28.0	92.0
3	Prevathon 0.43SC	9.8 oz	0.5	0.5 d	0.0 c	1.0 c	85.5	75.6
4	Prevathon 0.43SC	13.4 oz	0.0	0.5 d	0.8 a-c	1.3 c	48.7	86.1
5	Belt	2 oz	0.0	1.8 cd	0.0 c	1.8 c	47.7	86.4
6	Belt	3 oz	0.0	1.8 cd	0.3 bc	2.0 c	46.2	86.8
7	Larvin	16 oz	0.5	9.5 a	2.3 a	12.3 a	131.4	62.5
8	Larvin	18 oz	1.0	3.8 bc	2.5 a	7.3 b	102.2	70.9
9	Baythroid XL	2.8 oz	1.5	12.3 a	2.5 a	16.3 a	233.6	33.4
10	Untreated	---	1.3	4.0 bc	2.0 ab	7.3 b	350.9	0.0
	LSD		NS	2.80	1.90	4.11	---	---

Means within a column followed by the same letter(s) are not significantly different (Protected LSD, P=0.05).
[1]Cumulative larval days (CLD) are calculated with the following equation: $\Sigma (X_{i+1} - X_i)[(Y_i + Y_{i+1})/2]$, where X_i and X_{i+1} are adjacent sample dates and Y_i and Y_{i+1} are corresponding points of total larvae per 15-sweep sample.
[2]Based on cumulative larval days.

TEST: SB10_STAN_BAYER_LOOPER, Evaluation of foliar insecticides for soybean looper management

EXPERIMENT TREATMENTS:

#	Material	Rate/A	Date treated
1	Belt SC	1.5 oz	Sep 1
2	Belt SC	2.0 oz	Sep 1
3	Belt SC	2.5 oz	Sep 1
4	Belt SC	3.0 oz	Sep 1
5	Untreated	---	---

Test #: SB10_STAN_BAYER_LOOPER	**Planting date:** Jun 3
Year: 2010	**Plot size:** 6 rows x 40’
Crop: Soybean	**Row spacing:** 14”
Variety: Asgrow 4907	**Field #:** n/a
Experimental design: RCBD	**Location:** Stan Winslow farm, Belvidere, NC

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 18 **GPA:** 14.3

Comments: N 36° 19’ 46” W 76° 29’ 14”

Table 68. Mean number of soybean looper larvae per 15 sweeps, SB10_Stan_Bayer_Looper (Belvidere, NC). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on September 1.

#	Material	Rate/A	Sep 3				Sep 7				Sep 10			
			Small	Med-ium	Large	Total	Small	Med-ium	Large	Total	Small	Med-ium	Large	Total
1	Belt SC	1.5 oz	2.5 b	4.3 c	2.0 b	8.8 b	0.3 b	1.0 b	0.5	1.8 b	0.5	0.5 ab	1.3 b	2.3 ab
2	Belt SC	2.0 oz	2.5 b	5.0 bc	2.3 b	9.8 b	0.3 b	1.5 b	1.8	3.5 b	0.0	0.5 ab	0.8 b	1.3 b
3	Belt SC	2.5 oz	1.5 b	4.8 c	2.0 b	8.3 b	0.0 b	0.3 b	0.0	0.3 b	0.0	0.0 b	0.0 b	0.0 b
4	Belt SC	3.0 oz	2.3 b	8.0 b	3.5 b	13.8 b	0.0 b	0.8 b	0.3	1.0 b	0.0	0.0 b	0.8 b	0.8 b
5	Untreated	---	10.8 a	14.5 a	11.3 a	36.5 a	1.5 a	5.5 a	2.3	9.3 a	0.5	1.5 a	3.3 a	5.3 a
	LSD		3.95	3.04	2.54	5.55	0.98	2.23	NS	3.63	NS	1.01	1.88	3.18

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

Table 69. Mean number of soybean looper larvae per 15 sweeps, cumulative larval days (CLD), and percent control, SB10_Stan_Bayer_Looper (Belvidere, NC). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on September 1.

#	Material	Rate/A	Sep 13				CLD[1]	% Control[2]
			Small	Medium	Large	Total		
1	Belt SC	1.5 oz	0.0	0.0	0.0	0.0	30.8	75.4
2	Belt SC	2.0 oz	0.0	0.3	0.3	0.5	36.5	70.8
3	Belt SC	2.5 oz	0.0	0.3	0.0	0.3	18.1	85.5
4	Belt SC	3.0 oz	0.0	0.0	0.0	0.0	33.5	73.2
5	Untreated	---	0.3	1.0	1.3	2.5	125.2	0.0
	LSD		NS	NS	NS	NS	---	---

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

[1]Cumulative larval days (CLD) are calculated with the following equation: $\Sigma (X_{i+1} - X_i)[(Y_i + Y_{i+1})/2]$, where X_i and X_{i+1} are adjacent sample dates and Y_i and Y_{i+1} are corresponding points of total larvae per 15-sweep sample.

[2]Based on cumulative larval days.

TEST: SB10_STAN_DUPONT_LOOPER, Evaluation of foliar insecticides for soybean looper management

EXPERIMENT TREATMENTS:

#	Material	Rate/A	Date treated
1	Steward 1.25SC	6 oz	Sep 1
2	Steward 1.25SC	7 oz	Sep 1
3	Steward 1.25SC	8 oz	Sep 1
4	Steward 1.25SC	9 oz	Sep 1
5	Steward 1.25SC	10 oz	Sep 1
6	Coragen	3.5 oz	Sep 1
7	Untreated	---	---

Test #: SB10_STAN_DUPONT_LOOPER	**Planting date:** Jun 3
Year: 2010	**Plot size:** 6 rows x 40’
Crop: Soybean	**Row spacing:** 14”
Variety: Asgrow 4907	**Field #:** n/a
Experimental design: RCBD	**Location:** Stan Winslow farm, Belvidere, NC

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 18 **GPA:** 14.3

Comments: N 36° 19’ 46” W 76° 29’ 14”

Table 70. Mean number of soybean looper larvae per 15 sweeps, SB10_Stan_DuPont_Looper (Belvidere, NC). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on September 1.

#	Material	Rate/A	Sep 3				Sep 7				Sep 10			
			Small	Med-ium	Large	Total	Small	Med-ium	Large	Total	Small	Med-ium	Large	Total
1	Steward 1.25SC	6 oz	0.3 b	1.3 c	1.0 b	2.5 bc	0.0 b	1.5 b	0.5 b	2.0 b	0.0	0.8 b	0.5	1.3
2	Steward 1.25SC	7 oz	0.0 b	0.3 c	0.3 b	0.5 c	0.0 b	0.3 b	0.5 b	0.8 b	0.0	0.3 b	0.3	0.5
3	Steward 1.25SC	8 oz	0.0 b	0.8 c	0.8 b	1.5 c	0.0 b	0.0 b	0.3 b	0.3 b	0.3	1.0 ab	0.3	1.5
4	Steward 1.25SC	9 oz	0.0 b	0.3 c	1.0 b	1.3 c	0.0 b	0.3 b	1.0 b	1.3 b	0.0	0.0 b	0.8	0.8
5	Steward 1.25SC	10 oz	0.0 b	0.0 c	0.0 b	0.0 c	0.0 b	0.8 b	1.0 b	1.8 b	0.0	0.5 b	0.3	0.8
6	Coragen	3.5 oz	0.5 b	3.5 b	2.0 b	6.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0	0.0 b	0.0	0.0
7	Untreated	---	9.8 a	12.0 a	11.0 a	32.8 a	2.0 a	4.5 a	3.5 a	10.0 a	0.0	2.3 a	0.8	3.0
	LSD		1.22	1.45	2.06	3.54	0.79	1.82	2.07	3.36	NS	1.43	NS	NS

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

Table 71. Mean number of soybean looper larvae per 15 sweeps, cumulative larval days (CLD), and percent control, SB10_Stan_DuPont_Looper (Belvidere, NC). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on September 1.

#	Material	Rate (oz/A)	Sep 13				CLD[1]	% Control[2]
			Small	Medium	Large	Total		
1	Steward 1.25SC	6 oz	0.0	0.3 b	1.0	1.3	17.85	84.9
2	Steward 1.25SC	7 oz	0.0	0.3 b	1.0	1.3	7.25	93.9
3	Steward 1.25SC	8 oz	0.0	0.0 b	0.3	0.3	9.0	92.4
4	Steward 1.25SC	9 oz	0.0	0.3 b	0.0	0.3	10.0	91.5
5	Steward 1.25SC	10 oz	0.0	0.0 b	0.5	0.5	9.45	92.0
6	Coragen	3.5 oz	0.0	0.3 b	0.0	0.3	12.45	89.5
7	Untreated	---	0.5	2.0 a	3.3	5.8	118.3	0.0
	LSD		NS	1.00	NS	NS	---	---

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

[1]Cumulative larval days (CLD) are calculated with the following equation: $\Sigma (X_{i+1} - X_i)[(Y_i + Y_{i+1})/2]$, where X_i and X_{i+1} are adjacent sample dates and Y_i and Y_{i+1} are corresponding points of total larvae per 15-sweep sample.

[2]Based on cumulative larval days.

TEST: SB10_STAN_LARVIN_LOOPER, Evaluation of foliar insecticides for soybean looper management

EXPERIMENT TREATMENTS:

#	Material	Rate/A	Date treated
1	Larvin 3.2	12 oz	Sep 1
2	Larvin 3.2	16 oz	Sep 1
3	Larvin 3.2	18 oz	Sep 1
4	Larvin 3.2	20 oz	Sep 1
5	Larvin 3.2	24 oz	Sep 1
6	Larvin 3.2	30 oz	Sep 1
7	Orthene 97 + Larvin 3.2	8 oz 12 oz	Sep 1
8	Orthene 97	12 oz	Sep 1
9	Untreated	---	---

Test #: SB10_STAN_LARVIN_LOOPER	**Planting date:** Jun 3
Year: 2010	**Plot size:** 6 rows x 40’
Crop: Soybean	**Row spacing:** 14”
Variety: Asgrow 4907	**Field #:** n/a
Experimental design: RCBD	**Location:** Stan Winslow farm, Belvidere, NC

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 18 **GPA:** 14.3

Comments: N 36° 19’ 46” W 76° 29’ 14”

Table 72. Mean number of soybean looper larvae per 15 sweeps, SB10_Stan_Larvin_Looper (Belvidere, NC). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on September 1.

#	Material	Rate/A	Sep 3				Sep 7				Sep 10			
			Small	Med.	Large	Total	Small	Med.	Large	Total	Small	Med.	Large	Total
1	Larvin 3.2	12 oz	0.5 c	1.8 c	1.3 c	3.5 c	1.0 b	1.5 b	1.3 b	3.8 bc	0.0	1.8	3.5	5.3
2	Larvin 3.2	16 oz	0.3 c	2.5 c	0.0 c	2.8 c	0.0 b	1.8 b	2.0 b	3.8 bc	0.0	2.5	2.3	4.8
3	Larvin 3.2	18 oz	0.3 c	1.8 c	1.5 c	3.5 c	0.0 b	0.8 b	1.3 b	2.0 bc	0.0	1.0	2.0	3.0
4	Larvin 3.2	20 oz	0.0 c	1.0 c	0.0 c	1.0 c	0.0 b	0.3 b	0.3 b	0.5 c	0.0	0.3	0.3	0.5
5	Larvin 3.2	24 oz	0.0 c	1.8 c	0.0 c	1.8 c	0.0 b	0.3 b	0.3 b	0.5 c	0.0	0.8	0.3	1.0
6	Larvin 3.2	30 oz	0.0 c	0.8 c	0.0 c	0.8 c	0.3 b	0.8 b	1.5 b	2.5 bc	0.0	1.5	1.0	2.5
7	Orthene 97 + Larvin 3.2	8 oz 12 oz	0.0 c	0.3 c	1.5 c	1.8 c	0.3 b	0.5 b	0.5 b	1.3 bc	0.3	0.5	2.0	2.8
8	Orthene 97	12 oz	6.8 b	8.8 b	8.5 b	24.0 b	0.5 b	2.5 b	3.0 ab	6.0 b	0.0	1.5	3.3	4.8
9	Untreated	---	12.0 a	14.5 a	14.5 a	41.0 a	2.3 a	6.3 a	5.8 a	14.3 a	0.3	1.3	1.5	3.0
	LSD		1.92	3.09	2.66	6.08	1.07	2.27	2.84	5.30	NS	NS	NS	NS

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

Table 73. Mean number of soybean looper larvae per 15 sweeps, cumulative larval days (CLD), and percent control, SB10_Stan_Larvin_Looper (Belvidere, NC). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on September 1.

#	Material	Rate/A	Sep 13				CLD[1]	% Control[2]
			Small	Medium	Large	Total		
1	Larvin 3.2	12 oz	0.0	2.0 ab	0.8	2.8	40.4	72.0
2	Larvin 3.2	16 oz	0.0	1.8 a-c	2.0	3.8	39.0	72.9
3	Larvin 3.2	18 oz	0.8	1.3 a-d	0.3	2.3	26.5	81.6
4	Larvin 3.2	20 oz	0.3	0.3 cd	0.3	0.8	6.5	95.5
5	Larvin 3.2	24 oz	0.0	0.0 d	0.3	0.3	8.8	93.9
6	Larvin 3.2	30 oz	0.0	2.8 a	1.5	4.3	24.3	83.1
7	Orthene 97 + Larvin 3.2	8 oz 12 oz	0.3	0.5 b-d	1.0	1.8	19.3	86.6
8	Orthene 97	12 oz	0.3	1.5 a-d	1.5	3.3	88.4	38.7
9	Untreated	---	0.5	0.5 b-d	1.0	2.0	144.1	0.0
	LSD		NS	1.69	NS	NS	---	---

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

[1]*Cumulative larval days (CLD) are calculated with the following equation: $\Sigma (X_{i+1} - X_i)[(Y_i + Y_{i+1})/2]$, where X_i and X_{i+1} are adjacent sample dates and Y_i and Y_{i+1} are corresponding points of total larvae per 15-sweep sample.*

[2]*Based on cumulative larval days.*

TEST: SB10SBUG_Valent, Evaluation of foliar-applied insecticides for stink bug management

EXPERIMENT TREATMENTS:

#	Material	Rate	Date(s) treated
1	Untreated	---	
2	Belay 2.13SC + Induce	3 oz/A 0.25% v/v	Oct 18
3	Belay 2.13SC + Induce	4 oz/A 0.25% v/v	Oct 18
4	Belay 2.13SC + Orthene 97 + Induce	3 oz/A 8 oz/A 0.25% v/v	Oct 18
5	Orthene 97 + Induce	8 oz/A 0.25% v/v	Oct 18
6	Brigade 2EC + Belay 2.13 SC + Induce	4 oz/A 2 oz/A 0.25% v/v	Oct 18
7	Brigade 2EC + Belay 2.13 SC + Induce	4 oz/A 3 oz/A 0.25% v/v	Oct 18
8	Brigade 2EC + Induce	6.4 oz/A 0.25% v/v	Oct 18
9	Endigo ZC + Induce	4.5 oz/A 0.25% v/v	Oct 18
10	Danitol 2.4EC + Induce	10.67 oz/A 0.25% v/v	Oct 18
11	Danitol 2.4EC + Belay 2.13 SC + Induce	10.67 oz/A 2 oz/A 0.25% v/v	Oct 18
12	Danitol 2.4EC + Belay 2.13 SC + Induce	10.67 oz/A 3 oz/A 0.25% v/v	Oct 18

Test #: SB10SBUG_Valent	**Planting date:** Jul 1
Year: 2010	**Plot size:** 6’ x ~190’
Crop: Soybean	**Row spacing:** 15”
Variety: Multiple varieties	**Field #:** n/a
Experimental design: Non-replicated strip	**Location:** Eastern Shore AREC, Painter, VA

Treatment application information:

In-Season	**Liquid**	**Nozzle type:** 8002VS **Nozzle spacing:** 18” **PSI:** 18 **GPA:** 14.3

Comments: Tom Kuhar and David Holshouser are acknowledged for their assistance with this test.
Pre-treatment counts on October 18 indicated a mean of 10 green stink bug adults, 1 brown stink bug adult, and 3 green stink bug nymphs per 15 sweeps (n=4 samples).

Table 74. Mean number of stink bugs per 15-sweep sample, SB10SBUG_Valent (Painter, VA). Tidewater AREC, Suffolk, VA, 2010. Insecticide treatments were applied on October 18. Species composition was approximately 90% green stink bug, 8-9% brown stink bug, and 1-2% "other" stink bug.

#	Material	Rate	Oct 21			Oct 25		
			Adults	Nymphs	Total	Adults	Nymphs	Total
1	Untreated	---	5.8 a	3.3 a	9.0 a	2.8 ab	6.0 a	8.8 a
2	Belay 2.13SC + NIS	3 oz/A 0.25% v/v	3.3 a-d	0.5 c	3.8 b-d	2.0 a-c	1.0 bc	3.0 b-d
3	Belay 2.13SC + NIS	4 oz/A 0.25% v/v	4.0 a-c	0.5 c	4.5 bc	2.5 ab	1.0 bc	3.5 bc
4	Belay 2.13SC + Orthene 97 + NIS	3 oz/A 8 oz/A 0.25% v/v	5.0 ab	0.0 c	5.0 bc	3.3 a	0.5 bc	3.8 bc
5	Orthene 97 + NIS	8 oz/A 0.25% v/v	1.0 cd	1.3 bc	2.3 b-e	1.0 bc	1.3 bc	2.3 b-d
6	Brigade 2EC + Belay 2.13 SC + NIS	4 oz/A 2 oz/A 0.25% v/v	0.0 d	0.0 c	0.0 e	0.3 c	0.0 c	0.3 d
7	Brigade 2EC + Belay 2.13 SC + NIS	4 oz/A 3 oz/A 0.25% v/v	2.5 a-d	2.8 ab	5.3 b	0.3 c	0.0 c	0.3 d
8	Brigade 2EC + NIS	6.4 oz/A 0.25% v/v	0.3 d	0.0 c	0.3 de	2.5 ab	2.5 b	5.0 b
9	Endigo ZC + NIS	4.5 oz/A 0.25% v/v	0.0 d	0.0 c	0.0 e	0.3 c	0.0 c	0.3 d
10	Danitol 2.4EC + NIS	10.67 oz/A 0.25% v/v	1.5 b-d	0.0 c	1.5 c-e	1.0 bc	0.3 bc	1.3 cd
11	Danitol 2.4EC + Belay 2.13 SC + NIS	10.67 oz/A 2 oz/A 0.25% v/v	0.0 d	0.3 c	0.3 de	0.5 c	2.3 bc	2.8 b-d
12	Danitol 2.4EC + Belay 2.13 SC + NIS	10.67 oz/A 3 oz/A 0.25% v/v	0.0 d	0.0 c	0.0 e	1.3 bc	0.5 bc	1.8 cd
	LSD		3.53	1.76	3.63	1.82	2.45	3.05

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, 2010.

County	# Fields	# Ears Sampled	% Ears Infested	Field type(s)
Eastern Shore				
Accomack	5	250	38.0	Random sample
Northampton	5	250	53.2	Random sample
Regional avg. %			*45.6*	
Mid-Eastern				
Charles City	5	250	35.2	Random sample
Essex	5	250	35.2	Random sample
Gloucester	5	250	38.6	Random sample
Henrico	5	250	46.4	Random sample
King and Queen	5	250	39.6	Random sample
King William	5	250	33.2	Random sample
Mathews	5	250	41.3	Random sample
Middlesex	5	250	46.4	Random sample
New Kent	5	250	33.6	Random sample
Regional avg. %			*38.8*	
Southeast				
Chesapeake	5	250	56.4	Random sample
Greensville	5	250	66.4	Random sample
Isle of Wight	4	200	46.5	3 Bt, 1 non-Bt
Prince George	5	250	59.2	1 unknown, 1 mixed, 2 Bt, 1 non-Bt
Southampton	5	250	55.6	Random sample
Suffolk	5	250	68.0	Random sample
Surry	5	250	52.0	3 Bt, 2 unknown
Sussex	4	200	21.5	3 Bt, 1 non-Bt
Virginia Beach	5	250	57.2	Random sample
Regional avg. %			*53.6*	
Northern Neck				
Lancaster	5	250	18.8	Random sample
Northumberland	5	250	26.8	Random sample
Richmond	5	250	15.2	4 Bt, 1 non-Bt
Westmoreland	5	250	39.6	Random sample
Regional avg. %			*25.1*	
Northern				
Caroline	5	250	14.0	5 Non-Bt
King George	2	100	10.0	1 Bt, 1 Non-Bt
Regional avg. %			*12.0*	
State average			**40.3%**	

Table 76. Results of the 2010 Virginia soybean insecticide usage survey.

District	Acres in region	Estimated acreage treated for:[1]												Acres scouted	Acres treated[3]	Acres over-treated	Acres under-treated
		Corn earworm-1	Corn earworm-2	Corn earworm-3	Soybean aphid	Green cloverworm	Spider mite	Bean leaf beetle	Grasshopper	Thrips	Stink bug species	Soybean looper	Other pests and/or complex[2]				
NORTHERN																	
Shenandoah, Page, Clarke, Frederick, & Warren	5800	0	0	0	0	0	0	0	0	0	0	0	0	1000	0	0	0
CENTRAL															0		
Orange	4400	0	0	0	0	0	600	0	0	0	0	0	1200	800	1800	400	400
EASTERN																	
Eastern Shore																	
Accomack & Northampton	50000	40000	20000	10000	0	15000	2000	0	0	0	0	10000	30000	47500	127000	20000	10000
Mid-Eastern																	
Essex, King and Queen, & King William	54500	45500	3000	1500	0	0	750	0	0	0	0	300	0	40000	51050	0	1000
Middlesex, Mathews, & Gloucester	23000	20000	12000	3000	200	0	1600	0	225	0	0	1000	0	40000	38025	1500	1000
Southeast																	
Chesapeake	29350	28000	20000	0	0	0	0	5000	3000	0	3000	18000	0	15000	77000	1000	500
Dinwiddie	15000	8000	1500	0	500	200	0	0	100	0	0	200	9500	10000	20000	1000	2000
Greensville	12000	6000	3000	1000	0	1000	0	0	0	0	0	0	0	6000	11000	2000	1000
Isle of Wight	20977	0	0	0	0	0	0	0	0	0	0	20977	20977	10400	41954	0	0
Prince George	11000	9000	4000	0	0	500	0	0	100	0	2000	500	0	9000	16100	3000	500
Southampton	36000	18400	9850	1640	0	0	0	0	0	0	280	970	0	23400	31140	2800	4480
Surry	16600	11000	10000	5000	0	5000	0	0	5000	0	18000	0	0	11000	54000	4000	1000
Sussex	27500	7000	1500	0	0	0	0	0	0	0	0	0	0	22000	8500	1250	700
Virginia Beach	16000	14500	0	0	0	0	0	0	0	0	0	15500	0	16000	30000	0	0
Northern Neck																	
Lancaster & Northumberland	21900	18000	10000	0	0	0	23000	0	0	0	0	0	0	14000	51000	5000	3000
Richmond	13000	10400	3250	0	0	0	0	0	0	0	0	0	0	9000	13650	900	1500
Westmoreland	15300	12300	3825	0	0	0	0	0	0	0	0	0	0	10710	16125	1410	1900
GRAND TOTAL	**372327**	**248100**	**101925**	**22140**	**700**	**21700**	**27950**	**5000**	**8425**	**0**	**23280**	**67447**	**61677**	**285810**	**588344**	**44260**	**28980**

[1]*Corn earworm-1 = acres treated once for this pest; Corn earworm-2 = acres treated twice for this pest; Corn earworm-3 = acres treated three times for this pest.*

[2]*Other pests and/or species complexes included defoliators (Orange), corn earworm/stink bug (Dinwiddie, Greensville, Isle of Wight), beet armyworm (Dinwiddie, Eastern Shore), and soybean looper (Dinwiddie).*

[3]*Treated acreage may exceed actual acreage due to some acres being treated more than once.*

Table 77. 2010 Virginia soybean insecticide usage percentages by district and state total.

District	Total acreage surveyed	% Acreage scouted	% Acreage treated[1]	% Acreage overtreated	% Acreage undertreated
Northern	5,800	17.2	0.0	0.0	0.0
Central	4,400	18.2	40.9	9.1	9.1
Eastern (total)	**362,127**	**73.7**	**162.0**	**12.1**	**7.9**
Eastern Shore	50,000	95.0	254.0	40.0	20.0
Mid-Eastern	77,500	81.3	114.9	1.9	2.6
Southeast	184,427	66.6	157.1	8.2	5.5
Northern Neck	50,200	67.2	160.9	14.6	12.7
STATE TOTAL[2]	**372,327**	**72.2**	**158.0**	**11.9**	**7.8**

[1]*Acreage treated for all arthropod pests, combined. Treated acreage may exceed actual acreage due to some acres being treated more than once.*
[2]*State totals are determined using grand total data from Table 76, not by means of district data.*

Figure 1. Corn earworm regression. Relationship between the percentage of total soybean acreage treated for corn earworm from 1976-2010 and the percentage of corn ears infested in mid-July. Eastern Virginia, 2010. Y = 1.12x – 3.36; R^2 = 0.46

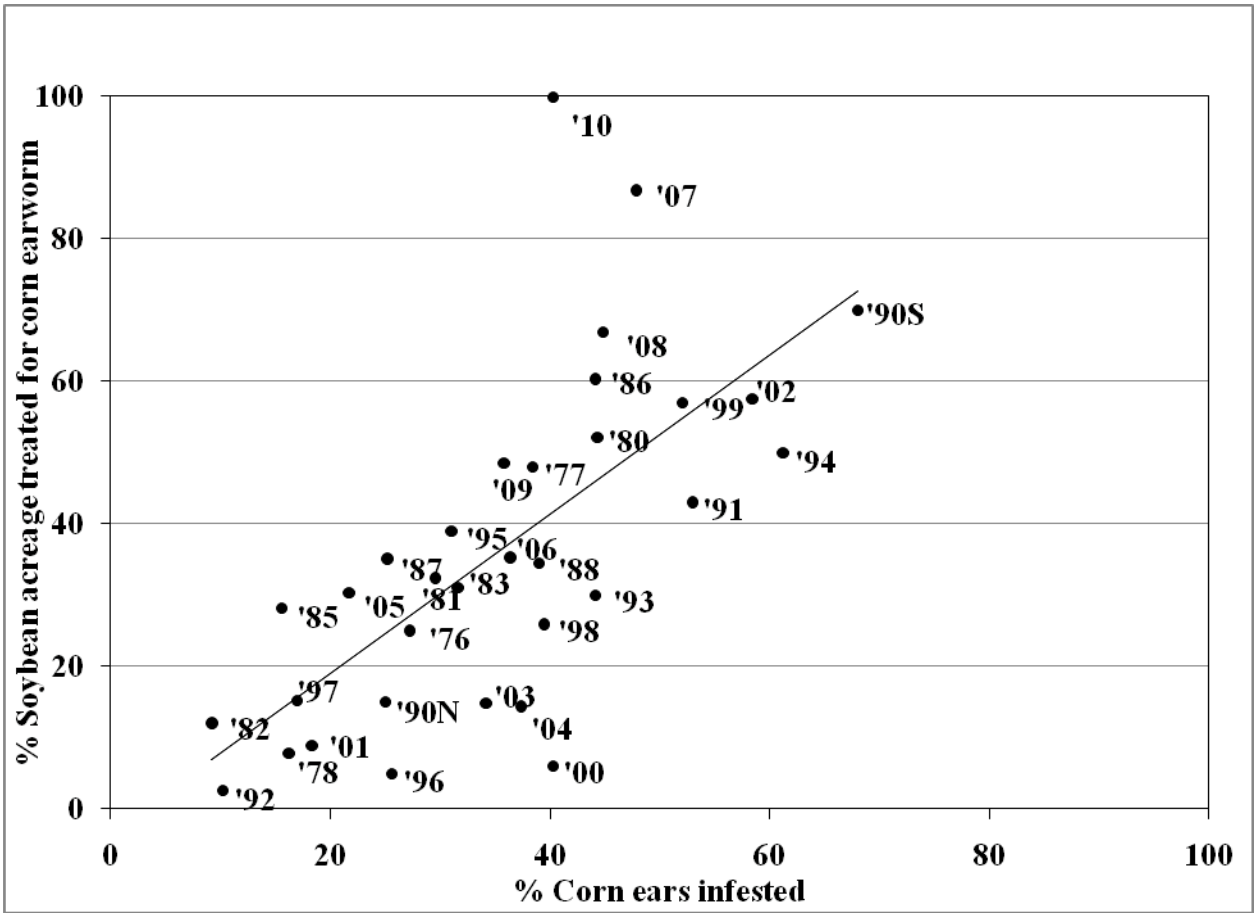


Table 78. Average nightly number of corn earworm moths captured in eastern Virginia black light traps, 2010 season.

	Nightly trap catch average for week ending:																	
Location (county-town)	5/20	5/27	6/03	6/10	6/17	6/24	7/01	7/08	7/15	7/22	7/29	8/05	8/12	8/19	8/26	9/02	9/09	9/16	9/23
Southeast																			
Chesapeake	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Petersburg	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.0	0.0	1.6	3.6	18.6	23.6	48.1	33.6	53.4	93.9	38.3	9.6
Prince George-Disputanta 1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1.0	1.4	4.0	13.0	7.5	4.3	15.0	10.0	7.5	4.0	2.0	n/a
Prince George-Disputanta 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.7	11.4	30.7	75.8	50.2	10.0	75.0	50.1	34.3	18.0	9.0	n/a
Southampton-Courtland	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.2	0.3	10.0	40.0	40.0	45.0	56.3	68.0	42.0	43.0	43.0	4.0
Suffolk-Holland	0.0	0.0	0.0	0.0	0.1	0.1	0.6	0.1	0.0	3.6	27.3	25.7	17.0	9.7	18.4	26.6	82.3	26.4	10.3
Sussex-Waverly	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	30.3	25.7	29.6	18.3	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	0.0	0.3	5.0	3.4	5.7	4.8	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	9.0	10.0	15.8	12.5	10.5	25.6	19.8	n/a	n/a	n/a	n/a
Northumberland	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.2	0.8	0.6	17.1	23.6	20.7	5.9	15.7	18.6	11.1	8.6	n/a
Middlesex	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.0	7.1	16.8	19.0	28.0	21.0	n/a	n/a	n/a	n/a
New Kent	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.0	5.2	18.0	15.0	23.0	14.0	n/a	n/a	n/a	n/a
Richmond Co.-Warsaw	n/a	n/a	n/a	0.0	0.0	0.4	0.0	0.4	0.3	6.9	69.3	73.4	27.9	30.7	28.4	81.0	82.6	21.6	20.6

n/a = report not available.