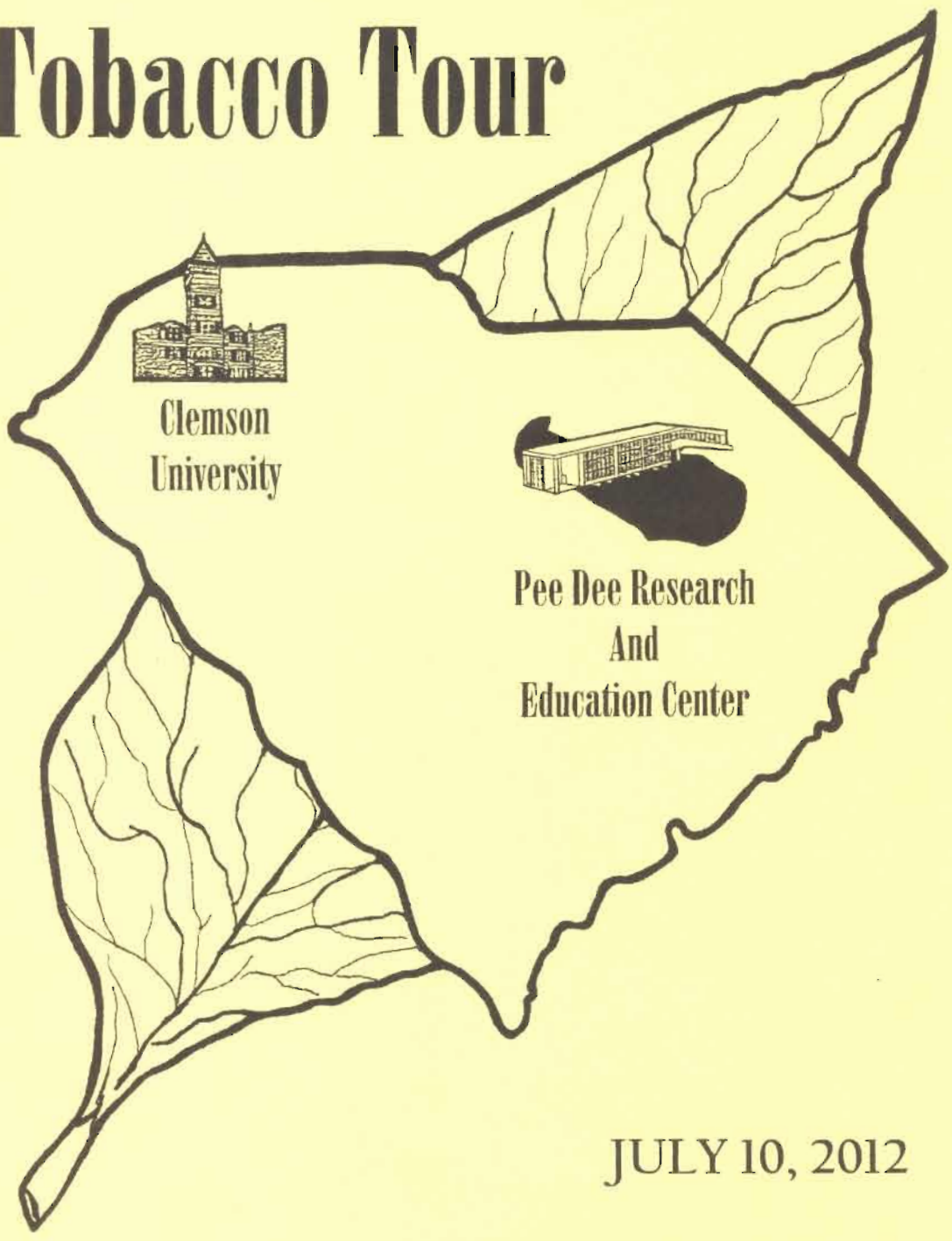
CLEMSON
UNIVERSITY

Clemson University Tobacco Tour



JULY 10, 2012

JULY 10

(1)	8:15 AM	Registration	PDREC (Meet at Tobacco Facility in Back)
	8:30 AM	Welcome	Dr. Bruce Fortnum, PDREC Director
	8:40AM	Solar Curing	Dr. Bruce Fortnum, Russell Henderson
	9:00AM	Agronomy	Dr. Dewitt Gooden
	9:50AM	Curing Study	Mr. Russell Henderson- Graduate Student
	10:10AM	Entomology	Dr. Francis Reay-Jones
	10:40 AM	Diseases	Dr. Bruce Fortnum, Dr. Paul Peterson
	12:30PM	Lunch	Thunderbird Country Buffet and Restaurant
(2)	2:30PM	Black Shank Nursery	Lee Newman Farm—Sumter County David Dewitt—County Agent
	3:30 PM	End of Tour	

DIRECTIONS TO TEST LOCATIONS

(1) Pee Dee Research and Education Center- From I-95 South take exit 169 and turn right (west). Go to end of road and turn left. PDREC about 1 mile on right. Tour starts at Tobacco Facility at rear of PDREC.

(2) Lunch: Thunderbird Country Buffet and Restaurant- After leaving PDREC turn right to I-95 South. Take exit 164 to right. Cross over US-52 as the Thunderbird is straight ahead.

(3) Lee Newman Farm—Leave the Thunderbird and turn right to I-95 South for 29 miles to exit 135. Turn right to US 378 and go 12 miles to SC 763 and turn left. After about 300 yards turn left to Mims Road. Continue about 5 miles to the Black Shank Nursery on the left. Test is across road from Boulevard Road (behind Corn).

2012 PEE DEE REC TOBACCO AGRONOMIC DATA

Soil Type: Norfolk loamy sand

Previous Crop: Corn

Fumigation: C-17 (10.5 gal/a in row)

Preplant : 4/9/12 8 oz Spartan, 1qt Command, 2qt Lorsban, 8 oz Ridomil (TPW).

Materials sprayed on knocked down bed and incorporated.

Tobacco Transplanted: 4/17/12 (general crop-NC 196).

Soil Test: pH= 6.25, P = H (66), K = L+ M- (68)

Fertility: 830 lbs 6-6-18 at planting.

150 lbs of 15.5 (Cal-nitrate) ---73 lbs nitrogen total

5 lbs of 12-48-8 (starter fertilizer) in TPW.

Adj. fertility on 5-22-12; 75 lbs 15.5-0-0 and 100 lbs 0-0-22

Insect Sprays: Coragen 6 oz in TPW

Tracer- 6/1/12

Tracer-6/11/12

Coragen-5oz + Orthene - .75lb- 6/22/12

Lay-by Cultivation: 5/28/12

Sucker Control: RGR -1st contact- 6/18/12; Chemtura- 1st contact- 6/18/12

2nd contact- 6/21/12; Chemtura- 2nd spray-6/21/12

3rd spray-6/28/12; Chemtura- 3rd spray-6/28/12

4th spray- Chemtura-7/5/12

OVT, RFT, RSP- 1st contact- 6/15/12, 6/18/12, 6/21/12

2nd contact- 6/25/12; 3rd spray- 6/28/12

3rd spray-6/28/12—Flupro- 2 qts

Drexel- 1st contact(4%)- 6/25/12; 2nd contact(5%) –6/28/12

3rd spray-7/5/12

Rainfall since transplanting: 4/17/12- April- 2.46"

May 8.84" June 2.07 "

Irrigation: 6/22/12 -1.0"

6/29/12 -1.25"

Harvest Dates: 7/12/12

We would like to thank the following sponsors for their continued support of our tobacco educational programs in South Carolina:

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GOLDLEAF SEED COMPANY

RJ REYNOLDS

CROSS CREEK SEED

2012 Agonomic Trials

RSP

B	B																											B	X	X
		49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	Px	Px			
		9	14	17	15	4	10	16	24	23	2	5	19	18	21	1	3	11	22	20	13	8	12	6	7	H7	H7			
B	B	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	Px	Px			
		5	16	20	19	23	18	2	7	15	10	12	11	6	9	13	17	8	1	22	14	4	21	24	3	H7	H7			
B	B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Px	Px			
		1	2	4	3	5	6	7	8	9	10	11	12	15	16	17	18	19	20	21	22	13	14	23	24	H7	H7			

RGR

		29	30	31	32	33	B	X	X
		7	16	4	10	2			
		15	16	17	18	19	B	X	X
		4	7	5	6	14			
		1	2	3	4	5	B	X	X
		1	2	3	4	5			

OVT

B	B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	B	X	X
		1	2	4	3	6	5	7	8	9	10	11	12	15	16	17	18	19	20	21	22	13	14	23	24	25	26	27	28	29	30	31			
B	B	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	B	X	X
		3	14	40	22	29	32	13	23	41	38	4	30	27	21	1	2	28	20	9	31	37	5	26	35	34	33	25	17	7	24	46			
B	B	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	B	X	X
		27	16	41	39	22	45	12	42	24	25	30	40	26	8	43	5	1	36	18	35	37	32	6	3	11	33	44	2	7	19	21			

RGR

B	34	35	36	37	38	39	40	41	42	13	14	15	16	17	18	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	16	17	18	B
	11	6	1	13	9	8	5	14	3	3	4	2	5	6	1	5	12	7	6	11	1	9	13	14	10	15	8	16	2	4	3	1	5	3	
B	20	21	22	23	24	25	26	27	28	7	8	9	10	11	12	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	13	14	15	B
	2	3	13	8	11	9	12	1	10	6	5	2	1	3	4	1	2	11	16	12	14	3	15	13	5	8	4	7	10	9	6	4	8	2	
B	6	7	8	9	10	11	12	13	14	1	2	3	4	5	6	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	10	11	12	B
	6	7	8	9	10	11	12	13	14	1	2	3	4	5	6	10	16	9	12	5	6	7	11	8	13	2	3	14	15	4	1	8	2	4	

Chemtura

RFT

Drexel

OVT

B	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	1	2	3	B
	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	12	9	11	6	1	10	4	5	3	15	7	13	8	16	14	2	3	5	1	
B	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	4	5	6	B
	6	11	12	15	39	16	18	42	43	44	10	45	36	19	8	8	12	13	9	6	11	14	7	10	4	1	15	2	5	3	16	2	3	5	
B	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	7	8	9	B
	10	4	13	38	31	34	14	20	28	9	29	15	23	46	17	13	8	3	16	2	6	1	15	9	10	5	11	12	14	7	4	1	4	6	

2012 NORTH CAROLINA FLUE-CURED TOBACCO VARIETY TEST

Commercial Varieties

Trt. No	Variety or Line	Generation or Year of Release	Pedigree	BS	GW	FW	RK	Bn. Sp.	Virus	Sponsor
1	GL 368	2009	Hybrid	R	R					GL
2	K 326	1981	McNair 225 (McNair 30 X NC 95)	L	L		R			CLCCRA
3	CC 65	2007	Hybrid	R	R		M.j/R			CC
4	CC 67	2008	Hybrid	R	R		TCN/R		TMV	CC
5	PVH 1452	2006	Hybrid	R	R		TCN/R			Profigen
6	NC 102	2001	Hybrid	R	R				TMV/PVY	Rickard
7	NC 606	1998	NC 729 X NC 82	R	R		R			Raynor
8	Speight 220	2002	(K-346 X Sp 117)(SP 116 X K 346)	R	R		R			SPT
9	GF 318	2008	Hybrid	R	R		R			GF
10	CC 304	2010	Hybrid	R	R		R		TMV	CC
11	CC 27	2003	Hybrid	R	R		TCN/R		TMV	CC
12	NC 299	2001	Hybrid	R	R		TCN/R			CC
13	GL 338	2009	Hybrid	R	R					GL
14	CC 13	2005	Hybrid	R	R		M.j/R			CC
15	Speight 227	2003	(SP 151 X K 346)(SP 202 X K 346)	R	R		R			SPT
16	NC 196	2002	Hybrid	R	L		R			GL
17	CC 33	2008	Hybrid	R	R		M.j/R			CC
18	NC 925	2010	Hybrid	R			R			NC
19	PVH 1118	2004	Hybrid	R	R		TCN/R			Rickard
20	Speight 255	2003	(SP 168 XK 346)(SPA-95 X SP 168)	R	R		R			SPT
21	Speight 236	2005	(SP 168 X SP 196)(SP 179 X SP 177)	R	R		R			SPT
22	PVH 2110	2005	Hybrid							Profigen
23	NC 92	2007	Hybrid	R	R		TCN/R			NC
24	PVH 2275	2010	Hybrid		R		R1		PVY/TEV	Profigen
25	NC 72	1996	Hybrid	H	L		R			Rickard
26	GL 939	1992	McN 926 X 80241	R	R		R			GL
27	NC 297	1998	Hybrid	R	R		R		TMV	GL
28	NC 71	1995	Hybrid	H	M		R			Rickard
29	NC 55	1994	(K 346 X DH 1220)X(K326 X Coker 371-Gold)	L	L		R		PVY/TEV	GL
30	PVH 2248	2010	Hybrid		R		R1			Profigen
31	CC 35	2007	Hybrid	R			M.j/R			CC
32	K 346	1988	McNair 926 X 80241	H	H		R			GL
33	CC 700	2005	Hybrid	R	R		TCN/R			CC
34	Speight 168	1996	Coker 371G X Spt. G 118	H	H		R			SPT
35	GL 395	2010	Hybrid	R	R		R			GL
36	NC 471	2003	Hybrid	R	R				TMV	Raynor
37	CC 37	2006	Hybrid	R	R		TCN/R	M.j/R	TMV	CC
38	K 399	1979	(C-139 X C-139) X NC 95							GL
39	NC 291	1997	Hybrid	R	R		TCN/R		PVY/TEV	CC
40	PVH 2254	2011	Hybrid	R					TMV	Rickard
41	RJR 901	2011	Hybrid	R			R			RJR
42	CC 1063	2011	Hybrid	R			R			CC
43	GF 157	2011	Hybrid	R			R			GF
44	NC2326	1965	(HicksX9012)(Hicks)Hicks)Hicks	L	Su	M				NC
45	NC 95	1961	(C-139XBel.4-30)X(C-139XHicks	L	H	M				NC
[illegible]	[illegible]									

[1]Resistance; H - High; M - Moderate; L - Low; R - Resistance; T - Tolerant; Su - Susceptable
Diseases: BS - Black Shank; GW - Granville Wilt; FW - Fusarium Wilt; RK - Root Know; Bn. Sp. - Brown Spot;
TMV - Tobacco Mosaic Virus; PVY - Potato Virus 'y'; TSMV - Tomato Spotted Wilt Virus;
TCN - Tobacoo Cyst Nematode; TEV - Tobacco Etch Virus; M.j. - Meloidogyne javanica

2012 FLUE-CURED REGIONAL SMALL PLOT TEST										
GEORGIA, SOUTH CAROLINA, NORTH CAROLINA, AND VIRGINIA										
Trt. No	Variety or Line	Generation or Year of Release	Pedigree	BS	GW	FW	RK	Bn. Sp.	Virus	Sponsor
1	NC 2326	1965	(Hicks X 9102)(Hicks)Hicks)Hicks)	L	Su	M				NC
2	NC 95	1961	(C-139XBel.4-30)XC-139xHicks)	L	H	M	R			NC
3	K 326	1981	McNair 225 (McNair 30 X NC95)	L	L		R			GL
4	NCEX47	F1	Hybrid	R	R		R			NC
5	GLEX 365	F1	Hybrid	R	R		R			GL
6	CU 171	F1	Hybrid							SC
7	GLEX 331	F1	Hybrid	R	R		R			GL
8	PXH 10	F1	Hybrid	R		R	M.incog./ M.aren		TMV/ PVY	Rickard
9	PXH 14	F1	Hybrid	R	R		M.incog.			Rickard
10	NCEX42	F1	Hybrid	R	R		R			NC
11	GLEX 398	F1	Hybrid	R	R		R			GL
12	NCEX51	Advanced		R	R		R			NC
13	CU 176	F1	Hybrid							SC
14	NCEX44	F1	Hybrid	R	R		R			NC
15	NCEX50	Advanced		R	R		R			NC
16	AOV 212	F1	Hybrid	R					TMV	AO
17	GLEX 372	F1	Hybrid	R	R		R			GL
18	PXH 12	F1	Hybrid	R	R		M.incog.		TMV	Rickard
19	CU 201	F1	Hybrid							SC
20	PXH 7	F1	Hybrid	R		R	M.incog./ M.aren		TMV/ PVY	Rickard
21	NCEX45	F1	Hybrid	R	R		TCN/R			NC
22	CU 186	F1	Hybrid							SC
23	PXH 13	F1	Hybrid	R	R		M.incog.			Rickard
24	CU 159	F1	Hybrid							SC

[1]Resistance; H - High; M - Moderate; L - Low; R - Resistance; T - Tolerant; Su - Susceptable
Diseases: BS - Black Shank; GW - Granville Wilt; FW - Fusarium Wilt; RK - Root Know; Bn. Sp. - Brown Spot; TMV - Tobacco Mosaic Virus; PVY - Potato Virus 'y'; TSMV - Tomato Spotted Wilt Virus; TCN - Tobacoo Cyst Nematode; TEV - Tobacco Etch Virus; M.j. - Meloidogyne javanica

2012 FLUE-CURED REGIONAL FARM TEST										
GEORGIA, SOUTH CAROLINA, NORTH CAROLINA, AND VIRGINIA										
Trt. No	Variety or Line	Generation or Year of Release	Pedigree	BS	GW	FW	RK	Bn. Sp.	Virus	Sponsor
1	NC 2326	1965	(Hicks X 9102)(Hicks)(Hicks)Hicks)	L	Su	M				NC
2	NC 95	1961	(C-139 X Bel. 4-30)X(C-139 X Hicks)	L	H	M	R			NC
3	K 326	1981	McNair 225(McNair 30 X NC 95)	L	L		R			GL
4	CU 124	F1	Hybrid							SC
5	ULT 143	F1	Hybrid						PVY	ULT
6	PXH 1	F1	Hybrid	R	R					Rickard
7	GLEX 362	F1	Hybrid	R	R		R		PVY	GL
8	NCEX39	F1	Hybrid	R	R		TCN/R			NC
9	GLEX 328	F1	Hybrid	R	R		R		TMV	GL
10	CC 143	F1	Hybrid	R	R		R			CC
11	PXH 9	F1	Hybrid	R	R		R			Rickard
12	NCEX24	F1	Hybrid	R	R		TCN/R			NC
13	ULT 113	F1	Hybrid						TMV/PVY	ULT
14	CU 144	F1	Hybrid							SC
15	ULT 123	F1	Hybrid						TMV	ULT
16	NCEX38	F1	Hybrid	R	R		R		TMV	NC

[1]Resistance; H - High; M - Moderate; L - Low; R - Resistance; T - Tolerant; Su - Susceptable
Diseases: BS - Black Shank; GW - Granville Wilt; FW - Fusarium Wilt; RK - Root Know; Bn. Sp. - Brown Spot;
TMV - Tobacco Mosaic Virus; PVY - Potato Virus 'y'; TSMV - Tomato Spotted Wilt Virus;
TCN - Tobacoo Cyst Nematode; TEV - Tobacco Etch Virus; M.j. - Meloidogyne javanica

2012 Regional Growth Regulator Test

Treatment GPA	1st-formulated chemical- ml/1000ml	2nd formulated chemical ml/1000ml	3rd formulated chemical ml/1000ml	4th formulated chemical ml/1000ml after 1st harvest
1.TNS				
2.F85/F85/Fair+&P+ 2/2.5/1.5&.5	40	50	30 & 10	
3. F85/F85/P+/Fair+ 2/2.5/.5/1.5	40	50	10 Conveyor	30 Conveyor
4. F85/F85/P+/Fair+ 2/2.5/.5/1.5	40	50	10	30
5. F85/F85/P+/Fair+ 2/2.5/.5/1.0	40	50	10 Conveyor	20 Conveyor
6. F85/F85/P+/Fair+ 2/2.5/.5/1.0	40	50	10	20
7. F85/F85/P+/Fair+ 2/2.5/.5/.5	40	50	10 Conveyor	10 Conveyor
8. F85/F85/P+/Fair+ 2/2.5/.5/.5	40	50	10	10
9. F85/F85/Fair+ & P+/P+ 2/2.5/.5&.5/.25	40	50	10 &10 Conveyor	5 Conveyor
10. F85/F85/Fair+ &P+/P+ 2/2.5/.5&.5/.25	40	50	10 & 10	5
11. F85/F85/P+/P+ 2/2.5/.5/.25	40	50	10 Conveyor	5 Conveyor
12.F85/F85/P+/P+ 2/2.5/.5/.25	40	50	10	5
13. F85/F85/P+/But 2/2.5/.5/.25	40	50	10 Conveyor	5 Conveyor
14. F85/F85/P+/But 2/2.5/.5/.25	40	50	10	5

Treatment	1st ml/1000ml	2nd ml/1000 ml	3rd ml/1000 ml	4th ml/1000 ml
1.OST/ OST/ RMH + FP 2/2.5/1.5 +.5	40	50	30 +10	
2. OST/ OST+FP/ OST + FP 2/2 +.5/2 +.5	40 Conveyor	40 + 10 Conveyor	40 + 10 Conveyor	
3. OST/OST + FP OST + FP/ OST + FP 2/2 +.25/2 +.25 /2 + .25	40 Conveyor	40 + 5 Conveyor	40 + 5 Conveyor	40 + 5 Conveyor
4. Roy/ Roy + FP/ Roy + FP 1.5/1.5 + .5/1.5 +.5	30 Conveyor	30 +10 Conveyor	30 + 10 Conveyor	
5. Roy/Roy + FP/ Roy + FP/ Roy + FP 1.5/1.5 +.25/ 1.5 + .25/ 1.5 + .25	30 Conveyor	30 +5 Conveyor	30 + 5 Conveyor	30 + 5 Conveyor
6. Roy/Roy + FP/ Roy + FP 1.5/1.5 +.25/ 1.5 + + .5	30 Conveyor	30 + 5 Conveyor	30 + 10 Conveyor	

TRT	Product	*Rate / 3 Gallon Tank*		Timing
		Product	Water	
1	Sucker Plucker 4%	454 mL	10902 mL	Pre Top 1
	Sucker Plucker 4%	454 mL	10902 mL	Pre Top 2
	Sucker Plucker 5%	568 mL	10789 mL	Pre Top 3
	DRX 101	114 mL	11243 mL	At Top
	DRX 106	57 mL	11300 mL	5-7 DATop
2	Sucker Plucker 4%	454 mL	10902 mL	Pre Top 1
	Sucker Plucker 4%	454 mL	10902 mL	Pre Top 2
	Sucker Plucker 5%	568 mL	10789 mL	Pre Top 3
	DRX102	114 mL	11243 mL	At Top
	DRX107	57 mL	11300 mL	5-7 DATop
3	Sucker Plucker 4%	454 mL	10902 mL	Pre Top 1
	Sucker Plucker 4%	454 mL	10902 mL	Pre Top 2
	Sucker Plucker 5%	568 mL	10789 mL	Pre Top 3
	DRX103	454 mL	10902 mL	At Top
	DRX108	57 mL	11300 mL	5-7 DATop
4	Sucker Plucker 4%	454 mL	10902 mL	Pre Top 1
	Sucker Plucker 4%	454 mL	10902 mL	Pre Top 2
	Sucker Plucker 5%	568 mL	10789 mL	Pre Top 3
	DRX104	568 mL	10789 mL	At Top
	DRX109	57 mL	11300 mL	5-7 DATop
5	Sucker Plucker 4%	454 mL	10902 mL	Pre Top 1
	Sucker Plucker 4%	454 mL	10902 mL	Pre Top 2
	Sucker Plucker 5%	568 mL	10789 mL	Pre Top 3
	DRX105	708 mL	10648 mL	At Top
	DRX 110	57 mL	11300 mL	5-7 DATop
6	Sucker Plucker 4%	454 mL	10902 mL	Pre Top 1
	Sucker Plucker 4%	454 mL	10902 mL	Pre Top 2
	Sucker Plucker 5%	568 mL	10789 mL	Pre Top 3
	TOPPED NOT SUCKERED	TOPPED NOT SUCKERED	TOPPED NOT SUCKERED	TOPPED NOT SUCKERED

Mix given Volume of Listed Products in given Volumes of Water into (1) 3 gallon tank and apply the mixture at 50GPA over 4 treatments

Test: Drought stress curing study

Location: Pee Dee REC

Variety: NC 196

Purpose: Collect curing data on drought stressed tobacco

Transplanted: 5/25/1012

Treatment List:
1. Conventional

2. Normal N rate, normal irrigation

3. Additional 23 lbs N, normal irrigation

4. Normal N rate, deficit irrigation

5. Additional 23 lbs N, deficit irrigation

2012 Drought Stress Curing Study Plot Plan

Plot	1	2	3	4	5	6	7	8	9	10	11	12	13	14		B	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	B	B
Treatment	4	5	3	5	1	4	2	1	2	5	3	4	1	3			2	2	3	4	5	1	4	5	1	2	3	5	1	2	3	4		
Nitrogen		+	+	+						+	+			+					+		+			+			+	+			+			
Irrigation	–	–		–		–				–		–								–	–		–	–				–				–		

Study conducted by R.D. Henderson, B.A. Fortnum, & D.T. Gooden

Evaluation of New Insecticides for Tobacco Hornworm and Tobacco Budworm Control on Tobacco

Francis Reay-Jones

Greenhouse tray drench, transplant water

Coragen (DuPont):	Chemical class: Anthranilic diamide Active ingredient: Chlorantraniliprole (Rynaxypyr)
New DuPont insecticide: (Verimark, Exirel, Benevia):	Chemical class: Anthranilic diamide Active ingredient: Cyantraniliprole (Cyazypyr)

Foliar applications

Belt (Bayer):	Chemical class: Phthalic Acid Diamide Active ingredient: Flubendiamide
Coragen (DuPont):	Chemical class: Anthranilic diamide Active ingredient: Chlorantraniliprole (Rynaxypyr)
New DuPont insecticide (Verimark, Exirel, Benevia):	Chemical class: Anthranilic diamide Active ingredient: Cyantraniliprole (Cyazypyr)
Tracer (DowAgroSciences):	Chemical class: Naturalyte Active ingredient: Spinosad (44.2%)
Blackhawk (DowAgroSciences)	Chemical class: Naturalyte Active ingredient: Spinosad (36%)
Besiege (Syngenta):	Chemical class: Anthranilic diamide + pyrethroid Active ingredients: Chlorantraniliprole + lambda-cyhalothrin
Denim (Syngenta):	Chemical class: Avermectin Active ingredient: Emamectin benzoate

Map of tobacco insecticide trial, Pee Dee REC, 2012

I	E	B	D	A	F	C	J	H	G
H	I	J	F	E	A	D	C	B	G
B	A	E	I	H	D	J	G	F	C
A	B	C	D	E	F	G	H	I	J

X	L	P	S	T	Q	W	M	K	U	V	R	O	N
L	P	R	U	M	K	W	N	S	O	X	T	Q	V
U	V	P	K	T	M	W	S	R	Q	N	O	X	L
K	L	M	N	O	P	Q	R	S	T	U	V	W	X

		Greenhouse	Transplant water	Field
1	A	Cyazypyr 0.088 oz	Coragen 5 oz	Tracer 1.75oz/ac
2	B	Cyazypyr 0.134 oz	Coragen 5 oz	Tracer 1.75oz/ac
3	C	Cyazypyr 0.176 oz	Coragen 5 oz	Tracer 1.75oz/ac
4	D	Cyazypyr 0.176 oz, Admire Pro	-	Tracer 1.75oz/ac
5	E	Cyazypyr 0.176 oz, Admire Pro	Coragen 5 oz	Tracer 1.75oz/ac
6	F	-	-	-
7	G	Admire Pro	Coragen 5 oz	Cyazypyr 0.066 oz
8	H	Admire Pro	Coragen 5 oz	Cyazypyr 0.088 oz
9	I	Admire Pro	Coragen 5 oz	Cyazypyr 0.134 oz
10	J	Admire Pro	Coragen 5 oz	-
11	K	Admire Pro	-	Tracer 0.25 oz
12	L	Admire Pro	-	Tracer 0.75 oz
13	M	Admire Pro	-	Tracer 1.25 oz
14	N	Admire Pro	-	Tracer 1.75 oz
15	O	Admire Pro	-	Blackhawk 0.35 oz
16	P	Admire Pro	-	Blackhawk 1.04 oz
17	Q	Admire Pro	-	Blackhawk 1.7 oz
18	R	Admire Pro	-	Blackhawk 2.43 oz
19	S	Admire Pro	-	Denim 8 oz
20	T	Admire Pro	-	Denim 12 oz
21	U	Admire Pro	-	-
22	V	Admire Pro	-	Besiege 5 oz
23	W	Admire Pro	-	Besiege 9 oz
24	X	Admire Pro	-	Belt

13

TEST: **Bacterial Wilt Variety Trial**

COUNTY: Florence, Pee Dee REC

SPECIALIST INVOLVED: Bruce A. Fortnum, Professor, Pee Dee REC
Lanier Johnson, Extension and Research Associate
Mark Pullen, Research Associate

PURPOSE: Evaluate RSP, OVT and RFT for resistance to bacterial wilt
PLANTING DATE: 1 May

CHEMICALS APPLIED:

Herbicides	16-Apr	Command, Reflex, Spartan, Ridomil, Lorsban
Planted	1-May	Starter fert. 5 lb 12-48-8, Ridomil 0.5 pt TPW
Fertilizer	1-May	6/6/18 800 lb/Ac.
Soda	10-May	150 lb 15.5 Ca Nitrate
Soda Xtra	23-May	75 lb 15.5 Ca Nitrate
Tracer	4-Jun	70 ml/23 gal.
Tracer+Orthene	4-Jun	Applied to grass around field for grasshoppers.
		Rained a little, 1 hr. after application.
Tracer	13-Jun	70 ml/23 gal.
Coragen +	22-Jun	5 oz./23 gal.
Orthene		3/4 lb./23 gal.

2012 Bacterial Wilt Plot Plan

R 1									
V 43	R 12	V 28	V 27	S 10	S 17	R 14	S 11	V 41	R 10
S 14	R 2	V 32	V 33	S 7	R 3	R 4	V 29	V 30	V 31
V 14	V 6	V 26	R 11	S 1	S 15	V 38	V 37	V 36	V 35
S 19	S 16	R 13	V 5	V 4	V 21	V 2	S 12	S 13	R 8
V 3	S 6	S 5	R 6	V 25	V 15	V 16	R 15	S 23	S 24
V 42	R 7	V 40	V 39	V 34	S 9	S 8	V 44	V 45	V 46
V 20	V 22	V 23	R 16	S 22	S 20	S 21	V 9	V 24	V 1
V 13	V 12	V 11	V 10	R 9	S 2	S 3	S 4	V 8	V 7
K730	S 18	R 9	R 16	R 5	K730	S 18	V 17	V 18	V 19
V 45	V 46	S 3	R 8	V 42	V 43	V 29	S 23	S 24	R 15
S 8	V 27	V 39	V 44	R 2	V 28	R 14	V 36	V 35	V 34
V 7	V 6	S 16	S 17	S 1	R 6	V 22	R 1	S 22	V 5
V 32	V 33	S 9	R 3	V 40	V 41	S 10	V 30	V 31	R 7
R 4	V 37	V 38	V 26	R 5	S 7	S 15	V 19	V 3	V 4
S 20	S 19	V 16	V 15	V 14	R 12	S 21	V 11	V 12	V 1
V 2	V 9	R 10	S 11	S 12	V 24	V 23	S 4	V 8	V 18
S 2	S 13	V 25	V 20	V 21	R 13	S 6	S 14	V 10	V 13
V 17	S 5	R 11	V 44	V 30	V 29	V 28	V 27	R 11	S 3
V 37	V 35	V 34	R 15	V 39	V 38	R 12	S 2	V 46	V 40
R 2	R 3	S 7	S 6	S 5	R 6	V 10	V 6	V 11	V 24
V 43	R 4	R 5	S 4	R 1	V 42	V 5	V 4	V 22	V 23
S 11	S 10	V 45	V 32	V 31	S 1	R 16	V 41	V 33	V 36
S 17	S 18	S 24	K730	V 25	S 13	V 16	S 19	R 9	R 8
V 1	V 2	V 3	S 9	V 21	R 13	V 17	V 20	S 12	V 8
V 15	V 13	S 22	S 21	V 14	V 9	S 8	S 15	S 14	R 7
S 23	S 16	V 12	V 7	R 10	V 26	V 18	S 20	S 19	R 14

F R O N T

TEST: **Bacterial Wilt and MH Application Topping Trial**

COUNTY: Florence, Pee Dee REC

SPECIALIST INVOLVED: Bruce A. Fortnum., Professor, Pee Dee REC
Lanier Johnson, Extension and Research Associate
Mark Pullen, Research Associate

VARIETY: K 346

CHEMICALS APPLIED: Telone C-17 was applied 10.5 gal/A in-row. See additional items next page

PURPOSE: Evaluate the effectiveness of MH application on disease suppression.

TREATMENTS:

1. UT /INOC
2. MH 1.5 gal/A in 50 gal of water
3. MH 1.0 gal/A in 50 gal of water
4. MH 0.5 gal/A in 50 gal of water
5. MH 1 qt gal/A in 50 gal of water
6. MH 1 pt/A in 50 gal of water
7. 1.5 gal stem/A in 50 gal of water

Rep 4

Rep 3	2	3	4	5	1	7	6	6	3	
Rep 2	6	5	1	7	3	4	2	4	5	
Rep 1	1	2	3	4	5	6	7	1	2	7

2012 Topping Trials

Fumigated	14-Mar			
Herbicides	18-Apr	Command, Reflex, Spartan, Ridomil, Lorsban		
Planted	24-Apr	Starter fert. (5lb/100 gal), Ridomil (4oz/100 gal). Coragen (135 ml/100 gal)		
Fertilizer	24-Apr	800 lbs/Acre.		
Soda	150 lb	Ca Nitrate + 75 lb	Ca Nitrate	
Tracer	4-Jun	Rained a little, 2 hr. after application.		70 ml/23g
	11-Jun	Rained a bunch before completing.		70 ml/23 g
	13-Jun			70 ml/23 g
Coragen + Orthene	22-Jun	5 oz./23 gal. 3/4 lb/23 gal.	23 gals./Acre	
1st OST	20-Jun	2 gal/48 gal. H2O		
2nd OST	27-Jun	2.5 gal./47.5 gal H2O	Used Sucker Plucker	
Flupro	2-Jul	2 qt./Acre (2 qt./49.5 gal H2O)		
Irrigated	6-Jul			
MH Trial 1	24-Jun			
MH 1 Inoc.	29-Jun			
MH 2	5-Jul			
MH 2 Inoc.	9-Jul			

Bacterial wilt- MH harvesting/field trials

TREATMENT LIST:

1. UT Left /right inoc
2. MH 1.5 gal/A Spray Conv/spray
3. MH 1.0 gal/A Spray Conv/spray
4. MH 0.5 gal/A Spray Conv/spray
5. MH 1.5 gal/A Paint/spray
6. MH 1.0 gal/A Paint/spray
7. MH 0.5 gal/A Paint /spray

Inoculated with *R. solanacearum* 4 days after treatment

Rep 4 Trt	3	1	7	5	2	6	4
Plot	22	23	24	25	26	27	28
Rep 3 Trt	5	7	4	6	2	3	1
Plot	15	16	17	18	19	20	21
Rep 2 Trt	4	5	6	1	2	7	3
Plot	8	9	10	11	12	13	14
Rep 1 Trt	1	2	3	4	5	6	7
Plot	1	2	3	4	5	6	7

Conveyor on the left (two row plot)
Paint = spray to stripped stem
Spray = course spray to run down stem

Inoc 2 x 10^6

2012 Harvesting Trials

Fumigated	14-Mar					
Herbicides	18-Apr	Command, Reflex, Spartan, Ridomil, Lorsban				
Planted	24-Apr	Starter fert. (5lb/100 gal), Ridomil (4oz/100 gal). Coragen (135 ml/100 gal)				
Fertilizer	24-Apr	800 lbs/Acre.				
Soda	150 lb	15.5	Ca Nitrate	+ 75 lb	Ca Nitrate	
Tracer	4-Jun	Rained a little, 2 hr. after application.				70 ml/23g
	11-Jun	Rained a bunch before completing.				70 ml/23 g
	13-Jun					70 ml/23 g
Coragen + Orthene	22-Jun	5 oz./23 gal. 3/4 lb/23 gal.		23 gals./Acre		
1st OST	20-Jun	2 gal/48 gal. H2O = 1 lb. Orthene				
2nd OST	27-Jun	2.5 gal./47.5 gal H2O		Used Sucker Plucker		
Flupro	2-Jul	2 qt./Acre (2 qt./49.5 gal H2O)				
Irrigated	6-Jul					

TEST: **Mechanical Transmission by Harvester**

COUNTY: Florence

SPECIALIST INVOLVED: Bruce A. Fortnum., Professor, Pee Dee REC
Lanier Johnson, Extension Associate
Mark Pullen, Research Associate

VARIETY: K 346

CHEMICALS APPLIED: Telone C-17 were applied in-row at 10.5 gal/A
See additional sheet

PURPOSE: Evaluate the effectiveness of a modified harvester to reduce mechanical spread of bacterial wilt.

TREATMENTS

	Standard system	**Belt system**
1.	Mach untreated check	Mach untreated check
2.	Hand Harvested	No leaf removed
3.	Control	C10 FA 8% rate (640 ml/TV8000)
4.	Control	C10 FA 16% rate (1280 ml/TV8000)
5.	Mach untreated check	Mach untreated check **new defoliators**
6.	Control	C10 FA 8% rate (640 ml/TV8000) **new def**
7.	Control	C10 FA 16% rate (1280 ml/TV8000) **new def**
8.	**Contamination plot**	**Contamination plot**

One gal/A = 39ml /108ft

	6	4	5	7	2	8	3	1
Plot	25	26	27	28	29	30	31	32
	8	7	5	4	6	3	1	2
Plot	17	18	19	20	21	22	23	24
	2	1	3	8	7	5	6	4
Plot	9	10	11	12	13	14	15	16
	1	2	3	4	5	6	7	8
Plot	1	2	3	4	5	6	7	8

TEST: **Black Shank Variety Trial**

COUNTY:	Sumter
SPECIALIST INVOLVED:	Bruce A. Fortnum, Professor, Pee Dee REC Lanier Johnson, Extension and Research Associate Mark Pullen, Research Associate

PURPOSE: Evaluate RSP, OVT and RFT for resistance to Black Shank

Planting Date: April 18

2012 Black shank Plot Plan

R 10	V 35	V 15	S 2	S 12	S 23	S 7	S 17	S 2	V 38	S 11	S 13	V 30	V 5	V 36	S 8
R 5	V 34	V 16	S 3	S 11	S 22	S 6	V 10	S 1	V 39	1071	R 16	V 15	V 19	V 31	V 18
R 8	V 32	V 17	S 4	S 10	S 19	S 5	S 15	S 6	V 40	R 5	V 38	V 14	V 45	V 10	V 21
R 9	V 26	V 18	S 16	R 12	S 17	S 4	V 21	S 7	V 31	R 11	V 40	V 13	V 33	S 16	V 7
R 7	V 27	R 2	V 13	V 38	R 8	R 3	R 16	S 22	V 32	V 6	V 41	R 2	V 44	V 28	1071
V 30	V 5	V 46	V 33	V 37	V 32	R 4	S 24	S 21	V 33	V 7	V 42	S 24	V 16	V 29	V 8
V 11	V 4	V 42	V 31	V 35	R 6	S 9	S 23	R 7	V 34	V 8	V 26	V 39	K730	V 24	V 36
V 23	R 13	S 7	V 29	V 20	S 13	S 8	S 22	S 19	V 1	V 9	R 15	V 37	R 12	V 23	V 35
V 36	R 14	S 8	V 28	V 14	S 14	S 21	S 19	R 9	V 2	S 1	S 15	V 43	S 5	V 26	V 20
V 37	R 15	S 20	V 6	R 16	S 15	S 20	S 18	S 3	V 3	S 2	R 13	V 46	R 1	V 25	V 9
V 39	S 5	S 10	V 7	R 13	S 16	S 18	S 13	S 17	V 4	S 3	S 14	R 12	V 34	V 27	V 22
V 22	V 2	S 11	V 8	S 12	V 14	R 15	S 12	S 18	V 15	V 43	R 14	R 4	R 8	S 10	R 5
V 40	V 3	V 45	1071	V 21	V 13	R 1	K730	R 10	V 22	V 41	V 1	R 9	S 4	S 9	R 6
S 20	V 1	R 6	R 1	R 14	V 12	R 2	V 24	V 2	V 23	V 42	V 44	R 3	S 23	V 12	V 17
S 21	V 5	V 44	R 3	V 28	V 11	V 30	V 25	V 45	V 19	V 17	V 3	R 10	R 7	V 21	R 11
V 12	S 6	V 43	R 4	V 27	V 11	V 29	S 14	K730	V 20	V 18	V 4				
V 41	R 11	V 19	V 9	S 1	V 10	V 25	V 24	V 46	S 24	V 16	V 6				

LEFT SIDE