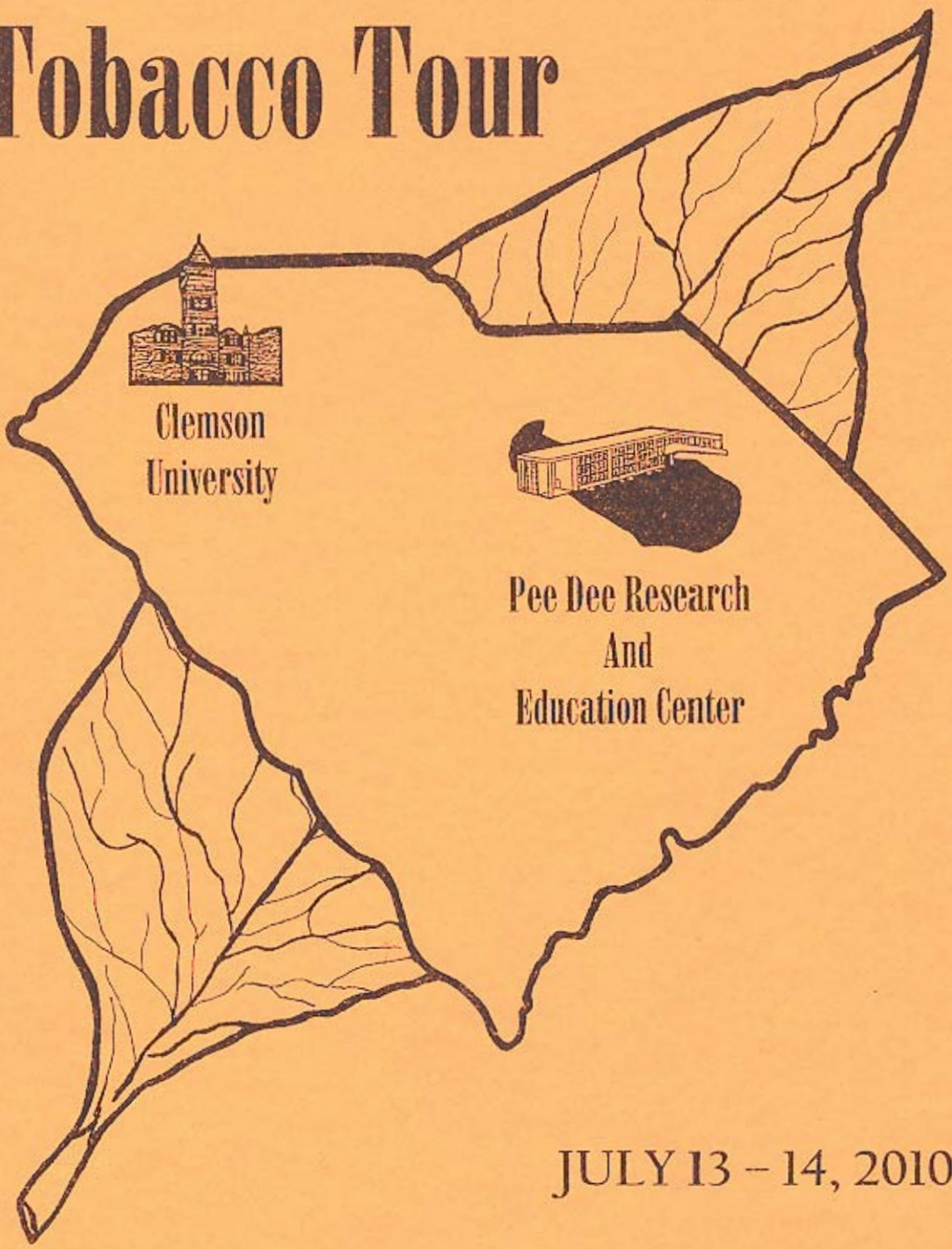
CLEMSON
UNIVERSITY

Clemson University Tobacco Tour



JULY 13 – 14, 2010

CLEMSON UNIVERSITY TOBACCO TOUR
JULY 13 – 14, 2010

JULY 13

	3:30 PM	Registration	PDREC (Meet at Tobacco Facility in back)
(1)	4:00 PM	TSWV Management	Frankie Woodard Farm, Darlington County
	6:00 PM	Social Time	PDREC (Rooms 279 & 282 in Main Building)
	6:30 PM	Dinner	PDREC (Tobacco Team)

JULY 14

	8:00 AM	Registration	PDREC (Meet at Tobacco Facility in back)
	8:20 AM	Welcome	Dr. Bruce Fortnum
	8:30 AM	Agronomy	Glenn Carnell, J. Michael Moore (for DTG)
	9:30 AM	Entomology	Dr. Francis Reay-Jones, Dr. Albert Johnson
	10:15 AM	Diseases	Dr. Bruce Fortnum, Dr. Paul Peterson
(2)	12:15 PM	Black Shank Nursery Ridomil Trials	Buddy Calhoun Farm, Marlboro County
(3)	1:15 PM	Lunch	Charcoal Grill, Dillon
(4)	2:45 PM	Curing Efficiency	Baxley Farms, Marion Bob Bett
(5)	3:30 PM	Herbicide Test	Thad Strickland Farm, Hwy 917 David Gunter, Bruce Johnson
	4:00 PM	End of Tour	

DIRECTIONS TO TEST LOCATIONS

(1) Frankie Woodard Farm – From PDREC, turn right on Pocket Road and travel 1.7 miles. Turn right on Charleston Road (S-16-35) & travel 3.8 miles; turn left on Cashua Ferry Road and travel .10 miles; turn right on Mechanicsville Road and travel 5.2 miles. Dead end into Mont Clare Road. Trial is on right.

(2) Buddy Calhoun Farm – After leaving PDREC turn left on Pocket Road. At the end of Pocket Road, turn left to CR 26 (becomes CR 495) and continue to SC 34 and turn right. Travel about 7.3 miles to CR 31 and turn left. Travel about 3 miles to SC 38. Turn left and travel 1.5 miles to Browntown Church and turn right to CR 32. Travel approximately 10 miles to dirt road just before McLucas Cemetery on left. Test located on right of dirt road.

(3) Charcoal Grill – Continue on CR 32 to Clio. Turn right to SC 9 and travel to Dillon (approximately 15 miles) to Charcoal Grill on 107 N. 1st Avenue.

(4) Baxley Farm – Travel towards Mullins on Hwy. 57 (turns into Hwy. 41). Stay on Hwy. 41 through Mullins. Continue on Hwy 41 to Gap Way Church. At Gap Way Church turn right on Bluff Rd. Go to Thomas Rd. and turn left. Go about one mile and bare to the right. Go ¼ mile to the Melton Baxley Farm (a sign is near the road). Turn to the right into the farm; tobacco barns are down about 100 yards. (Detailed directions will be given after lunch at Charcoal Grill)

(5) Strickland Farm – From Baxley Farm, turn left on County Rd. 91 (paved road). At stop sign, turn left on SC 41 and go approximately 2.6 miles to Gapway Church and turn right on County Rd. 31. Go 1.25 miles and turn right on SC 917. Cross into Horry County and go approximately 3.7 miles, turn left on Nichols Hwy. (County Rd. 23). The field is on the immediate right.

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

2010 TOBACCO TOUR SPONSORS

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CHEMTURA AGROSOLUTIONS

DREXEL CHEMICAL COMPANY

F.W. RICKARD SEEDS

GOLD LEAF SEED COMPANY

2010 PEE DEE REC TOBACCO AGRONOMIC DATA

Soil Type:	Norfolk Loamy Sand
Previous Crop:	Corn
Fumigation:	Telone C-17 (10.5 gal/a in row)
Pre-plant Treatments:	04/14/10 8 oz Spartan 1 qt Command 2 qt Lorsban Materials sprayed on a knocked down bed and incorporated.
Tobacco Transplanted:	April 20, 2010 Ridomil in transplant water (.5 pt) May 3, 2010 – Re-set some transplants because of tornado damage that occurred on April 25.
Fertility:	750 lbs 6-6-18 applied at planting. 200 lbs 15.5 (Cal-nitrate) applied on 05/04/10. 5 lbs of 5-45-15 (starter fertilizer) in transplant water.
Insect Sprays:	5 oz Clorogen in transplant water. 3 times with Tracer
Lay-by Cultivation:	06/04/10
Sucker Control:	1st Contact 06/22/10 for RSP and 06/28/10 for regular crop. 2nd Contact 06/29/10 for RSP and 07/05/10 for regular crop. 3rd Spray 07/09/10for RSP and 07/12/10 for regular crop (1.5 gal RMH + 0.5 gal Flupro). 4th Spray to be applied.
Rainfall since transplanting:	April .81" May 2.81" June 8.58" July (to date) 1.22"

2010 TOBACCO AGRONOMY - PEE DEE RESEARCH & EDUCATION CENTER

CANAL

REGIONAL SMALL PLOT

R3	20	27	21	1	18	6	22	7	23	25	12	9	15	29	5	13	16	2	24	3	14	4	26	10	11	8	31	28	19	17	30
	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93
R2	30	8	10	11	2	20	15	18	22	28	5	21	9	3	12	6	13	25	17	31	7	14	4	16	19	1	24	26	23	29	27
	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
R1	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
	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

OFFICIAL VARIETY TEST

R1	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	32	33	34	35	36	37	38	39	40	41
	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	32	33	34	35	36	37	38	39	40	41
R2	42	43	44	45	46	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	78	79	80	81	82
	2	38	9	40	27	6	6	37	14	18	33	23	20	13	22	17	11	41	28	12	3	35	15	31	36	28	34	4	30	10	7	24	5	25	39	21	1	16	19	29	32
R3	83	84	85	86	87	88	89	90	91	92	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
	4	5	16	24	30	26	37	38	3	1	31	36	27	32	19	6	35	21	23	26	40	10	39	20	29	18	9	14	6	11	12	25	41	22	13	15	2	7	33	17	34

FIELD ROAD

FIELD ROAD

REVISED: 6/4/2010

2010 NORTH CAROLINA FLUE-CURED TOBACCO VARIETY TEST

Commercial Varieties

Trt. No.	Variety or Line	Generation or Year of Release	Pedigree	Disease Resistance[1]						Sponsor
				BS	GW	FW	RK	Bn. Sp.	Virus	
1	CC 65	2007	Hybrid	R	R		M.j/R			CC
2	K 149	1988	([G-28 X 354] X [CB-139 X F-105] X [G-28 X 354]) McNair 399	M	H		R			GL
3	CC 700	2005	Hybrid	R	R		TCN/R			CC
4	CC 35	2007	Hybrid	R	R		M.j/R			CC
5	K 326	1981	McNair 225 (McNair 30 X NC 95)	L	L		R			GLCCRA
6	GF 318	2008	Hybrid	R	R		R			GF
7	RG 17	1993	K 326 X K 399	L	M		R			Rickard
8	PVH 1118	2004	Hybrid	R	R		TCN/R			Rickard
9	RGH 51	1998	Hybrid	R	R		R			Rickard
10	PVH 1596	2008	Hybrid	R	R		R			Profigen
11	GL 939	1992	McN 926 X 80241	R	R		R			GL
12	K 394	1983	Speight G-28 X McNair 944	H	M					GL
13	NC 297	1998	Hybrid	R	R		R		TMV	GL
14	K 399	1979	(C-139 X C-319) X NC 95							GL
15	Speight 220	2002	(K 346 X Sp 117)(SP 116 X K 346)	R	R		R			SPT
16	NC 102	2001	Hybrid	R	R				TMV/PVY	Rickard
17	PVH 1452	2006	Hybrid	R	R		TCN/R			Profigen
18	GL 368	2009	Hybrid	R	R					GL
19	Speight 225	2003	(Sp 168 X K 346)(SPA 95 X SP 168)	R	R		R			SPT
20	GF 52	2007	Hybrid	R	R		R		TMV	GF
21	Speight 236	2005	(SP 168 X SP 196)(SP 179 X SP 177)	R	R		R			SPT
22	CC 37	2006	Hybrid	R	R		TCN/R M.j/R		TMV	CC
23	NC 196	2002	Hybrid	R	L		R			GL
24	NC 291	1997	Hybrid	R	R		TCN/R		PVY/TEV	CC
25	NC 55	1994	(K 346 X DH 1220) X (K 326 X Coker 371-Gold	L	L		R		PVY/TEV	GL

[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 Knot; Bn. Sp. - Brown spot;
TMV - Tobacco Mosaic Virus; PVY - Potato Virus 'y'; TSWV - Tomato Spotted Wilt Virus;
TCN - Tobacco Cyst Nematode; TEV - Tobacco Etch Virus; M.j - Meloidogyne javanica

[2]Non flowering genotypes: Should be topped at 18 harvestable leaves

2010 NORTH CAROLINA FLUE-CURED TOBACCO VARIETY TEST

Commercial Varieties (Continued)

Trt. No.	Variety or Line	Generation or Year of Release	Pedigree	Disease Resistance[1]						Sponsor
				BS	GW	FW	RK	Bn. Sp.	Virus	
26	CC 27	2003	Hybrid	R	R		TCN/R		TMV	CC
27	NC 606	1998	NC 729 X NC 82	R	R		R			Raynor
28	NC 471	2003	Hybrid	R	R				TMV	Raynor
29	NC 299	2001	Hybrid	R	R		TCN/R			CC
30	NC 71	1995	Hybrid	H	M		R			Rickard
39	CC 33	2008	Hybrid	R	R		M.j/R			CC
40	NC92	2007	Hybrid	R	R		TCN/R			NC
41	PVH 2110	2005	Hybrid							Profigen

[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 Knot; Bn. Sp. - Brown spot;
TMV - Tobacco Mosaic Virus; PVY - Potato Virus 'y'; TSWV - Tomato Spotted Wilt Virus;
TCN - Tobacco Cyst Nematode; TEV - Tobacco Etch Virus; M.j - Meloidogyne javanica

[2]Non flowering genotypes: Should be topped at 18 harvestable leaves

2010 FLUE-CURED REGIONAL SMALL PLOT TEST
GEORGIA, SOUTH CAROLINA, NORTH CAROLINA, AND VIRGINIA

Trt. No.	Variety or Line	Generation or Year of Release	Pedigree	Disease Resistance[1]						
				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 NC95)	L	L		R			GL
4	NCEX30	F1		R	R		TCN/R			NC
5	XHN 44	F1	Hybrid				R1&2			Profigen
6	CC 1093	F1	Hybrid	R	R		R			CC
7	CU 144	F1	Hybrid							SC
8	CU 137	F1	Hybrid							SC
9	GL EX 322	F1	Hybrid	R	R		R			GL
10	NCEX33	F1	Hybrid	R	R		TCN/R			NC
11	NCEX29	F1	Hybrid	R	R		TCN/R			NC
12	NCEX32	F1	Hybrid	R	R		TCN/R			NC
13	GL EX 339	F1	Hybrid	R	R		R			GL
14	PXH 2	F1	Hybrid		R		R1		TMV	Profigen
15	CC 1063	F1	Hybrid	R	R		R			CC
16	GL EX 321	F1	Hybrid	R	R		R			GL
17	NCEX34	F1	Hybrid	R	R		TCN/R			NC
18	NCEX31			R	R		TCN/R			NC
19	GF 157	F8	NC 82 X 2012	R	R		R			GF
20	CU 141	F1	Hybrid							SC
21	GL EX 362	F1	Hybrid	R	R		R		PVY	GL
22	CC 26	F1	Hybrid	R	R		R			CC
23	PXH 3	F1	Hybrid		R		R1		TMV	Profigen
24	NCTG 156	F1	Hybrid	R	R		TCN/R1&3			NC
25	GL EX 320	F1	Hybrid	R	R		R			GL

[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 Knot; Bn. Sp. - Brown spot;
TMV - Tobacco Mosaic Virus; PVY - Potato Virus 'y'; TSWV - Tomato Spotted Wilt Virus;
TCN - Tobacco Cyst Nematode; TEV - Tobacco Etch Virus; M.j - Meloidogyne javanica
[2]Non flowering genotypes: Should be topped at 18 harvestable leaves

2010 FLUE-CURED REGIONAL SMALL PLOT TEST
GEORGIA, SOUTH CAROLINA, NORTH CAROLINA, AND VIRGINIA

Trt. No.	Variety or Line	Generation or Year of Release	Pedigree	Disease Resistance[1]						
				BS	GW	FW	RK	Bn Sp.	Virus	Sponsor
26	CU 136	F1	Hybrid							SC
27	PXH 1	F1	Hybrid	R1	R					Profigen
28	NCTG 158	F1	Hybrid	R	R		TCN/R1&3			NC
29	CU 139	F1	Hybrid							SC
30	ULT 123 Exp	F1	Hybrid						TMV	ULT
31	ULT 143 Exp	F1	Hybrid						PVY	ULT

[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 Knot; Bn. Sp. - Brown spot;
TMV - Tobacco Mosaic Virus; PVY - Potato Virus 'y'; TSWV - Tomato Spotted Wilt Virus;
TCN - Tobacco Cyst Nematode; TEV - Tobacco Etch Virus; M.j - Meloidogyne javanica
[2]Non flowering genotypes: Should be topped at 18 harvestable leaves

2010 FLUE-CURED REGIONAL FARM TEST
GEORGIA, SOUTH CAROLINA, NORTH CAROLINA, AND VIRGINIA

Trt. No.	Variety or Line	Generation or Year of Release	Pedigree	Disease Resistance[1]						Sponsor
				BS	GW	FW	RK	Bn Sp.	Virus	
REGIONAL FARM TEST										
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	GL EX328	F1	Hybrid	R	R		R		TMV	GL
4	CC 304	F1	Hybrid	R	R		R		TMV	CC
5	GL 395	F1	Hybrid	R	R		R			GL
6	AOV 911	F1	Hybrid						TMV	AO
7	NCEX25	F1	Hybrid	R			R			NC
8	NCEX10	F1	Hybrid	R	R		TCN/R			NC
9	XP 248	F1	Hybrid		R		R1			Profigen
10	CU 110	F1	Hybrid							SC
11	NCEX24	F1	Hybrid	R	R		TCN/R			NC
12	XP 275	F1	Hybrid		R		R1		PYV/TMV	Profigen
13	CU 75	F1	Hybrid							SC
14	ULT 142	F1	Hybrid						PVY	ULT
15	ULT 112	F1	Hybrid						TMV	ULT

[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 Knot; Bn. Sp. - Brown spot;
TMV - Tobacco Mosaic Virus; PVY - Potato Virus 'y'; TSWV - Tomato Spotted Wilt Virus;
TCN - Tobacco Cyst Nematode; TEV - Tobacco Etch Virus; M.j - Meloidogyne javanica

2010 Regional Tobacco Growth Regulator Test: Two-row plots, 4 Replications

	FORMULATED CHEMICAL (ml/1000 ml) (applications)				SPRAY METHOD (applications)			
TREATMENTS	1st	2nd	3rd	4th	1st	2nd	3rd	4th
1. Topped and not suckered	-	-	-	-	-	-	-	-
2. OST 85/OST85/(RMH-30 & PRIME+) TM 2.0 GPA/2.5 GPA/(1.5 GPA & 0.5 GPA)	40	50	(30+10)	-	OT	OT+3-5D	OT+7D	-
3. OST 85/OST 85/FLUPRO 2.0 GPA/2.5 GPA/0.5 GPA	40	50	10	-	OT	OT+3-5D	OT+7D	-
4. OST 85/OST 85/ PRIME+ 2.0 GPA/2.5 GPA/ 0.5 GPA	40	50	10	-	OT	OT+3-5D	OT+7D	-
5. OST 85/ OST 85/ DREXALIN PLUS 2.0 GPA/2.5 GPA/0.5 GPA	40	50	10	-	OT	OT+3-5D	OT+7D	-
6. OST 85/OST 85/PRIME+ (2011 Formulation) 2.0 GPA/2.5 GPA/ 0.5 GPA	40	50	10	-	OT	OT+3-5D	OT+7D	-
7. OST 85/ OST 85/(RMH 30 & PRIME+) TM 2.0 GPA/ 2.5 GPA/(1.5 GPA & 0.5 GPA)	40	50	(30+10)	-	OT	OT+3-5D	OT+7D	-
8. OST 85/ OST 85 - 2.0 GPA/2.5 GPA (RMH 30 & PRIME+) (0.25 GPA & 0.5 GPA) (RMH 30 & PRIME+) (0.75 GPA & 0.25 GPA) MH APPLIED AFTER 1ST HARVEST	40	50	(3.75+10)	(15+5)	OT	OT+3-5D	OT+7D	OT+7D
9. OST 85/ OST 85 - 2.0 GPA/2.5 GPA (RMH 30 & PRIME+) (0.25 GPA & 0.5 GPA) (RMH 30 & PRIME+) (0.5 GPA & 0.25 GPA) MH APPLIED AFTER 1ST HARVEST	40	50	(3.75+10)	(10+5)	OT	OT+3-5D	OT+7D	OT+7D
10. OST 85/ OST 85/ PRIME+/(RMH-30 & PRIME +) 2.0 GPA/ 2.5 GPA/ 0.5 GPA/ (0.5 GPA & 0.25 GPA) PRIME+ APPLIED AFTER 1ST HARVEST	40	50	10	(10+5)	OT	OT+3-5D	OT+7D	OT+7D
11. OST 85/ OST 85/ PRIME+/(RMH 30 & PRIME+) 2.0 GPA/ 2.5 GPA/0.5 GPA/(1.0 GPA & 0.25 GPA) PRIME+ APPLIED AFTER 1ST HARVEST	40	50	10	(20+5)	OT	OT+3-5D	OT+7D	OT+7D
12. OST 85/ OST 85/ PRIME+/RMH 30 2.0 GPA/ 2.5 GPA/ 0.5 GPA/ 1.0 GPA PRIME+ APPLIED AFTER 1ST HARVEST	40	50	10	20	OT	OT+3-5D	OT+7D	OT+7D

GPA = S0 gallons per acre; Equivalents based on 6000 plants per acre.

OT = over-the-top as 30 ml/plant early button stage; OT @ 3 - 5D = 3-5 days after 1st application;
OT@7d = 7 days after 2nd and 3rd application.

OST 85, RMH 30 AND Flupro from Chemtura Corporation.

Drexalin Plus from Drexel Chemical Corporation.

PRIME+ from Syngenta Corporation. (Trts 6 and 7 intended to be the Prime+ formulation to be marketed in 2011).

RMH 30 = 1.5 lb ai/gal; OST-85 = 6.01 lb ai/gal; Flupro = 1.2 lb ai/gal; Drexalin Plus = 1.2 lb ai/gal; Prime+ = 1.2 lb ai/gal.

2010 CHEMTURA TOBACCO GROWTH REGULATOR TEST: ONE ROW PLOTS, 3 REPLICATIONS

	FORMULATED CHEMICAL (ml/1000 ml) (applications)				SPRAY METHOD (applications)			
TREATMENTS	**1st**	**2nd**	**3rd**	**4th**	**1st**	**2nd**	**3rd**	**4th**
1. OST/OST/FP/FP 2.0 GPA/2.5 GPA/ .25 GPA/.25 GPA	40	50	5	5	-	5 DAYS	5-7 DAYS	5-7 DAYS
2. OST 85/ OST 85/ FP/ RMH+FP 2.0 GPA/2.5 GPA/.25 GPA/(1.0 GPA+.25 GPA)	40	50	5	20+5		5 DAYS	5-7 DAYS	5-7 DAYS
3. OST 85/OST 85/FP/RMH+FP 2.0 GPA/2.5 GPA/.25 GPA(1.5 GPA+.25 GPA)	40	50	5	30+5		5 DAYS	5-7 DAYS	5-7 DAYS
4. OST 85/OST 85/ RMH + FP 2.0 GPA/2.5 GPA/(1.0 GPA + .5 GPA)	40	50	20 + 10	-		5 DAYS	5-7 DAYS	-
5. OST 85/ OST 85/ RMH + FP 2.0 GPA/2.5 GPA/(1.5 GPA + .5 GPA)	40	50	30 + 10	-		5 DAYS	5-7 DAYS	-
6. OST 85/OST 85/FP/ RMH + FP 2.0 GPA/2.5 GPA/ .25 GPA/(1.0 GPA + .5 GPA)	40	50	5	20 + 10		5 DAYS	5-7 DAYS	5-7 DAYS
7. TOPPED AND NOT SUCKERED (FROM RGR TEST)								-

GPA = 50 gallons per acre; Equivalents based on 6000 plants per acre.

RMH 30 = 1.5 lb ai/gal; OST-85 = 6.01 lb ai/gal; Flupro = 1.2 lb ai/gal.

Evaluation of Insecticides for Tobacco Hornworm and Budworm Control on Tobacco

Francis Reay-Jones

Greenhouse tray drench, transplant water

Durivo (Syngenta):	Chemical class: Anthranilic diamide + neonicotinoid Active ingredients: Rynaxypyr + thiamethoxam
Coragen (DuPont):	Chemical class: Anthranilic diamide Active ingredient: Rynaxypyr
New DuPont insecticide:	Chemical class: Anthranilic diamide Active ingredient: Cyazypyr

Foliar applications

Belt (Bayer):	Chemical class: Phthalic Acid Diamide Active ingredient: Flubendiamide
Coragen (DuPont):	Chemical class: Anthranilic diamide Active ingredient: Rynaxypyr
New DuPont insecticide:	Chemical class: Anthranilic diamide Active ingredient: Cyazypyr
Tracer (DowAgroSciences):	Chemical class: Naturalyte Active ingredient: Spinosad
Voliam Flexi (Syngenta):	Chemical class: Anthranilic diamide + neonicotinoid Active ingredients: Rynaxypyr + thiamethoxam
Voliam Express (Syngenta):	Chemical class: Anthranilic diamide + pyrethroid Active ingredients: Rynaxypyr + lambda-cyhalothrin

Map of tobacco insecticide trial, Pee Dee REC, 2010

Rep 4	A	N	H	M	A	G	B	K	S	P	R	F	T	E	L	O	U	J	C	Q	I	D
Rep 3	V	R	D	E	U	B	H	G	P	I	S	L	F	Q	K	C	N	T	A	J	O	M
Rep 2	V	I	M	U	B	K	A	F	L	S	P	Q	T	N	O	H	E	J	D	C	R	G
Rep 1	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	A

1	A	Coragen 0.045 lb ai/ac	FOLIAR
2	B	Coragen 0.066 lb ai/ac	FOLIAR
3	C	Cyazypyr 0.044 lb ai/ac	FOLIAR
4	D	Cyazypyr 0.088 lb ai/ac	FOLIAR
5	E	Belt 2 oz/ac	FOLIAR
6	F	Belt 3 oz/ac	FOLIAR
7	G	Untreated	-
8	H	Coragen 5 oz/ac	TRANSPLANT WATER
9	I	Coragen 7 oz/ac	TRANSPLANT WATER
10	J	Cyazypyr 10.3 oz/ac	TRANSPLANT WATER
11	K	Coragen 0.051 oz/1000 plants	TRAY DRENCH
12	L	Coragen 0.068 oz/1000 plants	TRAY DRENCH
13	M	Cyazypyr 1.35 oz/1000 plants	TRAY DRENCH
14	N	Durivo 10 oz/ac	TRAY DRENCH
15	O	Durivo 10 oz/ac	TRANSPLANT WATER
16	P	Voliam Flexi 2.5 oz/ac	FOLIAR
17	Q	Voliam Flexi 4 oz/ac	FOLIAR
18	R	Voliam Xpress 5 oz/ac	FOLIAR
19	S	Voliam Xpress 7 oz/ac	FOLIAR
20	T	Voliam Xpress 9 oz/ac	FOLIAR
21	U	Tracer 2 oz/ac	FOLIAR
22	V	Coragen 0.045 lb ai/ac	FOLIAR

Tomato Spotted Wilt Trial – 2010
Tobacco Pathology

Georgetown County – Lloyd Baxley
Darlington – Frankie Woodard
Bruce Fortnum & Lanair Johnson

Treatments

1. Check – no treatment
2. Admire
3. Admire + actigard on a 10 spray schedule
4. Admire + actigard at the transplanting
5. Admire + actigard first appearance
6. Admire + actigard occurrence at 10%/level

Plot plan

1 2 3 4 5 6 3 5 1 2 4 6

2 5 3 6 1 4 6 3 1 5 4

Treatment	Percent Disease		
	05/01/09	05/22/09	06/11/09
1	1.1	4.6	14
2	0.2	1.5	5.9
3	0	1.4	3.6
4	0	1.8	6.3
5	0.1	1.5	4

Ralstonia solanacearum Virulence/Pathogenicity Trial

Paul Peterson
Bruce Fortnum
Asimina Mila

Title: Evaluation of the virulence of *R. solanacearum* isolates when mechanically inoculated to above ground portions of tobacco stems.

Inoculation date: July 12, 2010

1. NC 132
2. 108-3
3. SC 06
4. SC 10
5. K 74
6. SC 11
7. GA 91A
8. SC12
9. RSO 81-5
10. DILY
11. Y6
12. Y3
13. 82-7
14. MM-121
15. MM-60
16. MM-96
17. MM-114
18. RS 346 M7
19. MM-139
20. MM-115
21. MM-85
22. MM-113
23. MM-118
24. Control – hand topped

R. solanacearum Strain Trial 2010

16	18	11	6	2	23	3	7	20	15	1	4
12	24	13	8	12	17	9	14	10	21	5	19
73	**74**	**75**	**76**	**77**	**78**	**79**	**80**	**81**	**82**	**83**	**84**

ROW NUMBER

14	2	5	17	13	8	22	23	3	18	11	21
6	1	15	9	4	16	12	7	20	19	10	24
49	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**

ROW NUMBER

5	10	24	20	16	19	21	2	22	7	13	9
11	15	6	14	3	12	23	18	1	8	17	4
25	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**

ROW NUMBER

13	14	15	16	17	18	19	20	21	22	23	24
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**

ROW NUMBER

Pee Dee REC 2010

Bruce Fortnum
Paul Peterson

Title: Evaluation of biological control organisms for suppression of mechanical transmission of *Ralstonia solanacearum* during topping.

Selected *R. solanacearm* germplasm

Treatment list:

	DI 8/27/09	Stem Necrosis
1. SC 10	4.5	4.7
2. NC 132	4.5	4.4
3. SC10 + Bio 1	1.0	0.6
4. SC10 + Bio 2	2.0	1.7
5. SC10 + Bio 4	3.0	2.7
6. SC 10 + Bio 3	4.5	4.3
7. NC 132 + Bio 1	2.5	1.9
8. NC 132 + Bio 2	2.5	2.2
9. NC132 + Bio 4	3.3	2.8
10. NC 132 + Bio 3	4.3	3.1
11. Bio 1	0.5	0.5
12. Bio 2	0.3	0.5
13. Bio 4	0.3	0.2
14. Bio 3	0.5	0.4
15. UTC	0	0.1
16. Hand topped	0.3	0.3

Bacterial Wilt Harvesting Trial
Pee Dee REC 2010

Paul Peterson
Bruce Fortnum

Title: Effect of chemical application on control of mechanical spread of bacterial wilt during leaf removal.

Treatment list:

1. UT
2. 7 days pretrt
3. 14 days pretrt
4. Immed. Post leaf removal
5. 4 days post trt

Inoculated with *R. solanacearum* on treatment #4 date

Rep 4 Trt	3	1	5	2	4
Plot	16	17	18	19	20
Rep 3 Trt	5	4	2	3	1
Plot	11	12	13	14	15
Rep 2 Trt	4	5	1	2	3
Plot	6	7	8	9	10
Rep 1 Trt	1	2	3	4	5
Plot	1	2	3	4	5
	I –NI	NI – I	I-NI	I-NI	NI-I

Bacterial Wilt Topping Trial
Pee Dee REC 2010

Paul Peterson
Bruce Fortnum

Title: Evaluation of chemical treatments to reduce mechanical transmission of *R. solanacearum* during topping

1. UT
2. 8 days pretrt
3. 4 days pretrt + *R. solancearum*
4. Post flower removal treatment + *R. solancearum*

Rep 4 Trt	3	1	4	2
Plot	13	14	15	16
Rep 3 Trt	1	4	2	3
Plot	9	10	11	12
Rep 2 Trt	4	3	1	2
Plot	5	6	7	8
Rep 1 Trt	1	2	3	4
Plot	1	2	3	4
	I –NI	NI – I	I- NI	I-NI

	2010 Bacterial Wilt Variety Test					Pee Dee Res. & Ed. Ctr.				
	R 7	V 35	V 4	S 12	V 15	**G 11**	V 33	R 11	S 1	V 23
	V 10	S 29	**G 5**	V 19	V 2	V 29	R 9	S 26	V 14	V 22
	V 1	S 28	S 21	V 30	R 13	V 32	**G46-3**	S 5	V 38	S 22
	S 6	V 37	R 4	V 31	V 3	S 27	S 2	V 25	**G 32**	R 12
	R 14	S 7	V 24	R 6	S 4	V 12	**G 51**	R 10	S 3	V 6
	V 39	S 17	V 11	S 9	V 16	S 10	V 26	**G 9**	R 15	V 18
	V 21	V 28	R 8	V 17	V 40	V 41	S 13	S 24	V 27	**G 1**
	V 20	S 16	S 25	V 34	R 5	**G 29**	S 30	V 13	V 5	S 23
	R 1	V 8	S 14	R 2	S 15	**G 32**	V 9	R 3	S 11	V 7
	S 29	S 30	**G45-2**	S 20	**G 8**	S 19	V 36	S 8	S 18	S 31
	S 13	R 14	V 36	V 32	V 33	V 1	S 25	V 26	R 9	V 6
F	**G 15**	V 41	S 2	V 16	R 15	V 40	S 1	V 17	V 39	S 14
R	**G 53**	S 18	S 12	V 23	V 22	V 24	S 24	V 15	V 34	S 4
O	S 23	V 30	S 6	**G 6**	R 6	V 3	V 14	V 31	S 5	R 13
N	V 37	S 31	V 19	S 26	S 17	V 35	S 3	R 6	V 11	**G 40**
T	S 28	V 7	**G 12**	S 15	R 8	S 27	V 38	V 18	V 2	R 7
	V 10	R 10	V 25	S 8	**G 2**	V 9	R 12	**G 25**	S 20	V 8
	V 27	R 3	S 19	V 5	V 28	**G 4**	R 4	S 7	V 4	V 29
	R 1	V 20	S 11	R 2	V 41	V 16	S 11	V 36	R 3	S 22
	V 13	S 16	**G 36**	S 22	S 21	S 9	R 11	V 21	S 10	V 12
	S 25	S 12	V 1	V 39	R 4	S 16	S 23	V 17	V 40	**G 3**
	S 6	V 18	R 8	S 5	V 26	S 4	**G41-1**	V 14	V 37	S 3
	S 1	R 2	V 35	V 3	S 24	S 2	**G 4**	V 38	V 7	R 13
	V 4	V 31	S 7	S 21	S 30	V 30	S 13	R 14	V 29	**G 38**
	V 5	V 24	V 10	R 15	**G 8**	S 9	V 20	V 9	S 8	S 27
	V 8	V 33	S 28	**G 28**	V 34	S 26	R 5	S 14	V 25	V 6
	V 13	S 20	R 11	S 10	V 2	V 27	R 7	S 17	V 22	R 1
	R 6	V 11	V 32	V 12	V 28	V 15	S 29	R 12	V 19	S 31
	V 21	S 15	V 23	R 10	S 18	R 9	S 19			

TOBACCO PATHOLOGY

Pee Dee REC 2010

Bruce Fortnum
Paul Peterson

CORESTA – *Meloidogyne arenaria* race 2 Tolerance Trial

Title: Evaluation of tobacco germplasm for tolerance to *Meloidogyne arenaria* race 2.

NF	LK 113	K 326	LK 89	CC 37
F	LK 113	K 326	LK 89	CC 37
NF	XP 2A	LK 89	CC 13	K 371
F	XP 2A	LK 89	CC 13	K 371
F	CC 37	LK 113	PVH 2259	LK 113
NF	CC 37	LK 113	PVH 2259	LK 113
F	LK 89	XP 2A	CC 33	NC 95
NF	LK 89	XP 2A	CC 33	NC 95
NF	CC 13	CC 37	K 326	K RK 6
F	CC 13	CC 37	K 326	K RK 6
NF	NC 95	PVH 2259	K 371	CC 35
F	NC 95	PVH 2259	K 371	CC 35
F	PVH 2259	PVH 2275	LK 113	STNCB
NF	PVH 2259	PVH 2275	LK 113	STNCB
F	CC 33	STNCB	K RK 6	XP 2A
NF	CC 33	STNCB	K RK 6	XP 2A
NF	STNCB	K RK 6	XP 2A	PVH 2259
F	STNCB	K RK 6	XP 2A	PVH 2259
NF	LK 89	PVH 2275	NC 95	PVH 2275
F	LK 89	PVH 2275	NC 95	PVH 2275
F	K RK 6	K 371	CC 37	CC 13
NF	K RK 6	K 371	CC 37	CC 13
F	CC 35	CC 13	STNCB	PVH 2275
NF	CC 35	CC 13	STNCB	PVH 2275
NF	K 371	CC 33	NC 95	CC 33
F	K 371	CC 33	NC 95	CC 33
NF	K 326	CC 35	CC 35	K 326
F	K 326	CC 35	CC 35	K 326

2008 data

Entry	Yield	Yield + 1,3-D	RG	RG + 1,3-D
C 371	2001	3928	7.2	4.8
RJR 35	3590	3928	3.4	0.8
RJR 39	2539	3786	2.6	1
CC13	3125	4322	4.4	2.8
CC33	2796	3936	3.3	1.3
PVH 2259	3196	4188	5.8	1.9
PVH 2275	3140	3906	3.3	1.2
KRK 26	2739	4060	3.1	1.2
K 30 R	2639	3216	5.8	3.1
NC 95	2248	3381	6.4	3.6
STNCB	3008	3621	1.7	0.8
Okinawa	1922	1876	6.0	0.9
XP1A	2798	3447	2.5	1
XP2A	3075	3511	2.4	1

Black Shank Trial 2010

Bruce Fortnum

Title: Evaluation of Ridomil transplant water treatments for control of black shank of flue-cured tobacco.

Treatments

1. check
2. 10-34-0 starter fertilizer
3. *Ridomil 0.33 pt/A TPW*
4. *Ridomil 0.33 pt/ATPW* + 10-34-0
5. Ridomil 1 pt/A soil Spray
6. *Ridomil 0.33 pt/A TPW* + 1 pt/A 1st cult
7. Ridomil 1 pt/A soil spray + 1 pt at 1st cult
8. *Ridomil 0.33 pt/A* + 1 pt 1st cult + 1 pt layby
9. Ridomil 1 pt soil spray + 1 pt 1st cult + 1 pt at Layby

Ridomil Gold for Black Shank Control - 2008

TRT	Rate	App timing	Yield	% disease
UTC	---	---	1269 c	17 a
Revus	1 oz (x3)	ATTrp, posttrp,LB	2364 bc	5 b
Revus	4 oz (x3)	ATTrp, posttrp,LB	3343 ab	0 b
RGold	1 pt (x3)	ATTrp, posttrp,LB	4284 a	1 b
RGold	0.5 + 1pt	trans water, layby	3877 a	2 b

2010 Black shank Variety Test							Cooperator: Buddy Calhoun													
S 8	S 30	R 6	S 28	V 6	R 15	R 10	V 18	S 20	V 5	S 5	R 14	S 31	V 35	V 13	S 19	V 7				
V 33	V 36	V 28	S 9	S 14	V 21	S 16	V 32	V 9	V 25	S 10	V 35	V 36	S 21	V 34	V 41	V 38				
V 13	V 38	S 31	V 4	R 5	S 10	S 26	R 15	V 31	S 27	V 2	V 4	R 7	R 10	S 26	S 4	R 5				
R 9	V 39	V 26	R 14	S 25	V 10	V 34	S 18	R 2	R 7	S 28	S 2	S 18	V 30	R 13	V 6	S 13				
S 6	R 7	V 11	V 5	V 15	R 2	V 8	S 22	S 13	V 24	R 8	S 25	V 29	V 1	V 31	S 22	S 23				
V 19	V 34	S 17	V 13	S 19	S 22	V 29	V 10	V 1	V 17	S 11	V 22	R 12	S 30	V 3	R 9	V 32				
V 32	S 27	S 2	V 27	S 12	S 4	R 12	V 33	V 41	S 7	S 4	S 15	S 11	S 7	S 6	V 5	V 17	V 8	V 27		
S 16	S 15	R 13	V 35	V 24	V 3	S 20	V 30	S 19	R 1	S 29	S 14	V 15	S 27	V 24	S 1	V 11	V 28	S 9	S 16	
V 29	S 1	V 30	S 23	V 20	S 24	S 21	S 31	S 8	V 40	V 3	V 21	R 13	V 33	V 39	R 3	V 23	S 8	S 10	V 26	
V 9	V 22	V 2	V 14	S 18	V 17	R 3	R 9	V 19	S 6	V 38	R 11	V 16	S 20	S 5	V 4	V 40	S 3	V 14	R 15	
R 12	V 18	V 41	V 7	R 10	S 5	V 27	V 13	V 26	S 23	R 3	V 14	R 4	R 14	S 39	V 37	S 15	R 8	R 2	S 17	
S 26	R 8	S 13	S 29	R 4	R 1	V 11	S 12	R 5	V 20	S 3	S 30	V 36	V 22	V 2	S 2	R 4	V 12	V 19	V 20	
V 40	V 31	V 23	S 11	V 25	V 16	V 12	V 6	V 39	V 23	V 7	V 37	S 24	V 9	V 10	S 12	V 16	R 1	S 14	V 15	
V 37	V 1	S 3	R 11	V 8	S 7	S 17	V 28	S 1	S 9	R 6	S 21	S 28	S 25	R 6	R 11	V 25	V 21	V 18	S 24	
								FRONT OF FIELD												

Effect of Automatic Damper Control on Curing Efficiency - South Carolina

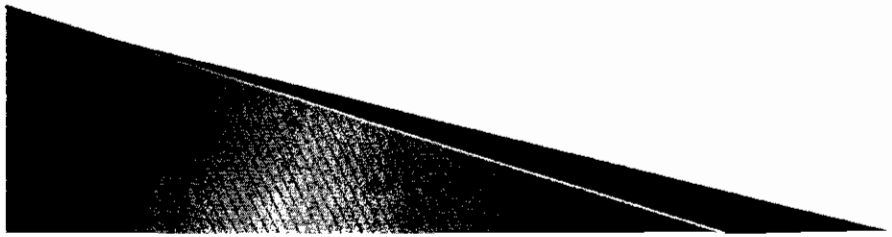
Location**	Automatic Damper Control*			Check Barn			% Savings
	Gallons Fuel	Lbs cured leaf	lbs/gal	Gallons Fuel	Lbs cured leaf	lbs/gal	
A	410	2850	7.0	410	2750	6.8	3
B	464	2680	5.8	447	2594	5.8	0
D1	407	2640	6.5	583	2450	4.2	55
D2	433	2593	6.0	583	2450	4.2	43
E	317	2886	9.1	393	2643	6.7	36

*Location A = Bulk-to-bac Damper Control
Locations B, D1, and E – Cureco Damper Control
Location D2 = Marco Damper Control
**Average of 5 – 7 cures each

Effect of Additional Barn Insulation on Curing Efficiency South Carolina

Location*	Check Barn			Insulated Barn			% Savings
	Gal Fuel	lbs cured leaf	lbs/gal	Gal Fuel	lbs cured leaf	lbs/gal	
A	506	2871	5.7	381	2827	7.4	30
B	447	2594	5.8	471	2539	5.4	-7
C	380	2363	6.2	370	2330	6.3	2
E	393	2643	6.7	333	2913	8.7	30

*Average of 5 – 7 cures each.



Curing Efficiency Studies*
South Carolina - 2008

System	Gal	lbs cured leaf	lb/gal	% Increase over NADC + NI
ADC + I	286	2808	9.8	46
ADC + NI	317	2886	9.1	36
NADC + I	333	2913	8.7	30
NADC + NI	393	2643	6.7	--

ADC = Automatic Damper Control
NADC = No Automatic Damper Control
I = Insulation Added
NI = No Insulation Added
*Average of 5 cures