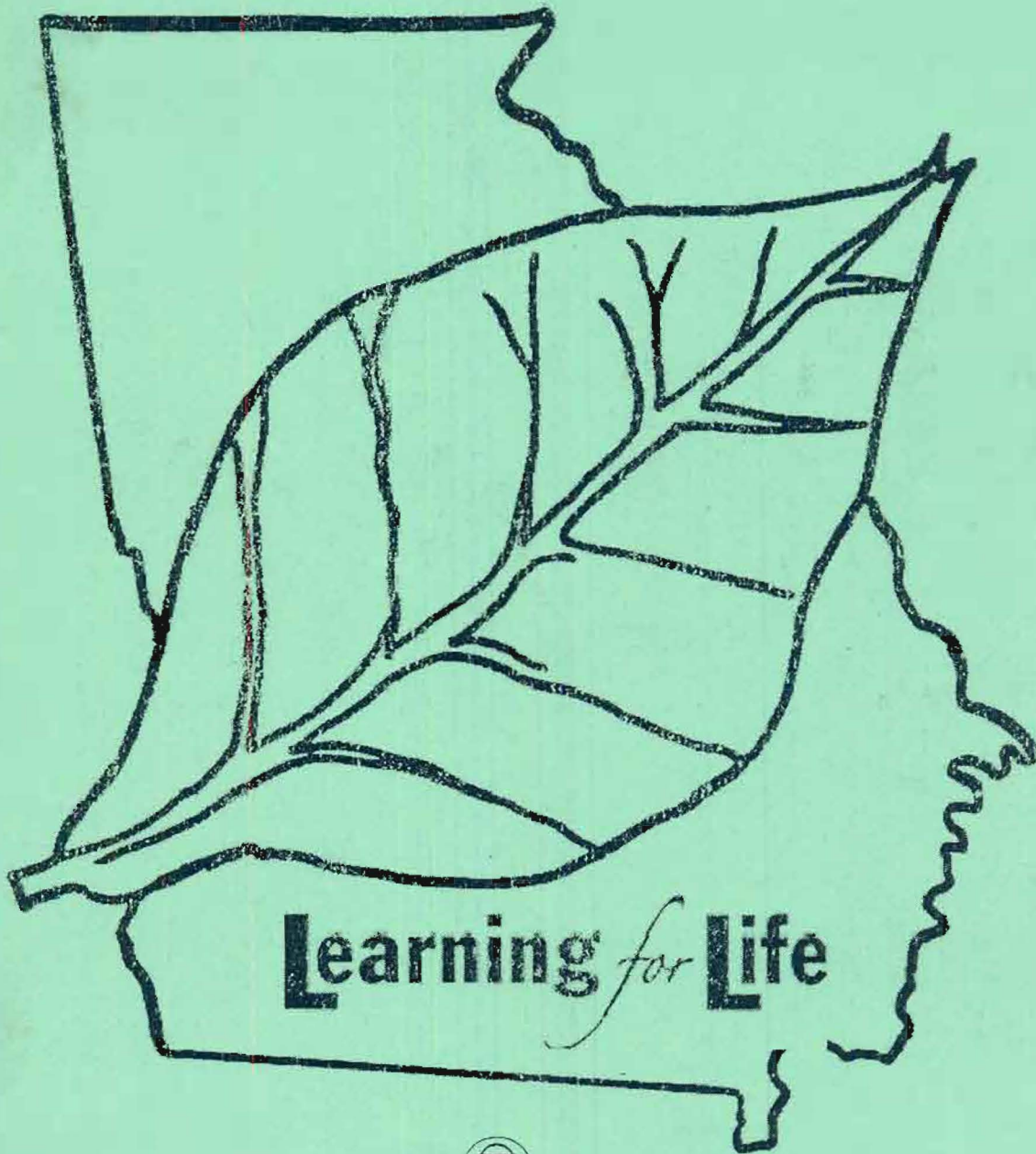


2008

Georgia - Florida Tobacco Tour



The University of Georgia
College of Agricultural & Environmental Sciences

The University of Georgia
College of Agricultural and Environmental Sciences
Cooperative Extension
Tifton, Georgia

EXTENSION OFFICES IN COUNTIES WITH TOBACCO PRODUCTION

<u>County</u>	<u>Phone No.</u>	<u>FAX No.</u>	<u>County</u>	<u>Phone No.</u>	<u>FAX No.</u>
Appling	912-367-8130	912-367-1184	Evans	912-739-1292	912-739-7831
Atkinson	912-422-3277	912-422-6223	Grady	229-377-1312	229-377-9026
Bacon	912-632-5601	912-632-6910	Irwin	229-468-7409	229-468-9838
Ben Hill	229-426-5175	229-426-5176	Jeff Davis	912-375-6648	912-379-1091
Berrien	229-686-5431	229-686-7831	Lanier	229-482-3895	229-482-2654
Brantley	912-462-5724	912-462-5464	Laurens	478-272-2277	478-277-2930
Brooks	229-263-4103	229-263-5607	Lowndes	229-333-5185	229-333-5188
Bulloch	912-871-6130	912-871-6955	Mitchell	229-336-2066	229-336-2068
Candler	912-685-2408	912-685-6614	Pierce	912-449-2034	912-449-8005
Coffee	912-384-1402	912-389-4007	Tattnall, Reidsville	912-557-6724	912-557-3332
Colquitt	229-616-7455	229-616-7033	Thomas	229-225-4130	229-225-4183
Cook	229-896-7456	229-896-7457	Tift	229-391-7980	229-391-7999
Dodge	478-374-8137	478-374-8139	Toombs	912-526-3101	912-526-1012
Echols	229-559-5562	229-559-9436	Treutlen	912-529-3766	912-529-3767
Effingham	912-754-2134	912-754-7632	Ware	912-287-2456	912-287-2499
Emanuel	478-237-1226	478-237-8451	Wayne	912-427-5965	912-427-5967
			Worth	229-776-8216	229-776-8239

BURLEY COUNTIES

Towns	706-896-2024	706-896-8523	Union	706-439-6030	706-439-6036
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UGA Tobacco Home Page

<http://www.georgiatobacco.com>

TOBACCO EXTENSION SCIENTISTS

(see web site for email addresses)

J. Michael Moore, Extension Agronomist - Tobacco, Editor	229-386-3006	229-386-7308
Paul Bertrand, Extension Pathologist (Retired)	229-386-7495	229-386-7415
David Jones, Extension Entomologist (Retired)	912-681-5639	912-681-0376
William D. Givan, Extension Agricultural Economist (Retired)	706-542-2632	706-542-4131
Keith D. Kightlinger, Extension Economist - Farm Management	229-386-3512	229-386-3440
Paul Sumner, Extension Engineer	229-386-3442	229-386-3448
Glendon H. Harris, Extension Agronomist - Environmental Soil and Fertilizer	229-386-3194	229-386-7308

TOBACCO RESEARCH SCIENTISTS

Alex Csinos, Plant Pathology, CPES, Tifton (Retired)	229-386-3373	229-386-7285
Bob McPherson, Entomology, CPES, Tifton	229-386-7141	229-386-3086
Steve LaHue, Bowen Farm Research Coordinator	229-386-3602	229-386-7293
Stephen Mullis, Plant Pathology, CPES, Tifton	229-386-7479	229-386-7285
Claudia Nischwitz, Plant Pathology, CPES, Tifton	229-386-7479	229-386-7285
Ed Troxell, Bowen Farm Supervisor	229-386-3167	229-386-7293
CPES, Bowen Farm	229-386-7053	
Barry Luke, Bowen Farm Summer Intern	229-386-7053	

Physical / Postal Address: 4604 Research Way, UGA Tifton Campus / P. O.Box 748, Tifton, Georgia, 31793, USA

**THE GEORGIA EXTENSION TOBACCO TEAM EXPRESSES
APPRECIATION TO THE FOLLOWING FINANCIAL
SUPPORTERS OF THE 2008 GEORGIA TOBACCO TOUR**

Agrium, Inc.	F.W. Rickard Seeds, Inc.
Agri Supply of Tifton & Statesboro	"Georgia Tobacco Commission"
Alliance One International	GoldLeaf Seed Co.
Bayer CropScience, Inc.	Helena
Berrien Co. Farm Bureau	Jimmy Dockery
Carolina Soil Co., Inc.	Leasing Unlimited
Chemtura Corporation	McLean Ag Chem, Inc.
Cross Creek Seeds, Inc.	Mosaic USA, Inc.
Cross Creek Coating, Inc.	Philip Morris, Intl
CURECO, Inc.	Philip Morris, USA
Dixon Farm Supply & Dixon Gin	R.J. Reynolds Tobacco
Dow AgroSciences	Syngenta Crop Protection
Drexel Chemical Company	United Phosphorus, Inc.
	YARA North America

GEORGIA - FLORIDA TOBACCO TOUR

RULES OF THE ROAD

- **Headlights should ALWAYS BE ON when participating in the tour.**
- **Follow close enough to the next vehicle to show that you are a part of the tour, but far enough back to avoid a collision.**
- **Be cautious at intersections but promptly follow the directions of law enforcement assisting the tour.**
- **Always "fuel-up" the night before. The Tour will depart as sheduled.**
- **Wait until the Tour has "left you" rather than trying to "leave the tour". THOSE BEHIND YOU WILL FOLLOW YOU!!!**



THE UNIVERSITY OF GEORGIA

COOPERATIVE EXTENSION

Colleges of Agricultural and Environmental Sciences & Family and Consumer Sciences

P.O. Box 748, Tifton, GA 31793 PH: 229-386-3006 FAX: 229-386-7308 Cell: 229-392-6424

SCHEDULE - 2008 GEORGIA-FLORIDA TOBACCO TOUR

Monday, June 9, 2008

5:00 pm - Check-in Holiday Inn, Lake City, FL 213 S.W. Commerce Drive Blvd
PH: 386-754-1411

6:30 pm - Social - Columbia County Extension Office - Lake City, FL

7:00 pm - Supper - Columbia County Extension Office, Lake City, FL

Directions: Columbia County Extension Office, Lake City, FL

From I-75, take the exit for Highway 90. Go east on 90 to the fourth traffic light (Walgreens will be on the right). Turn right at this intersection onto Highway 247 (Branford Highway). Go approximately 1/4 of a mile and turn right onto Mary Ethel Lane (first road on the right). Turn into the second gate on the left to enter the Columbia County Fairgrounds. The Extension Service office is the long concrete block building on the right as you enter the parking lot. Phone: (386) 752-5384

Tuesday, June 10, 2008

7:30 am - Leave Holiday Inn parking lot.

7:50 am - Arrive Roosevelt & Travis Dicks Farm - Columbia County
(Released Varieties Demonstration)
- Bill Thomas, County Extension Agent

9:10 am - Arrive Herring Plots - Lowndes County
(Provado 1.6 F / Admire Pro 4.6SC / Actigard WG on Bed Plants)
- Jake Price, County Extension Agent

10:10 am - Arrive Paul Folsom Plot - Lanier County
(Regional Variety Farm Test)
- Elvin Andrews, County Extension Coordinator

10:45 am - Arrive Brian Lanier Farm - Berrien County
(Released Variety Test)
- Tim Flanders, County Extension Coordinator

11:15 am - Arrive Trent Hughes Farm - Berrien County
(Strip-Till Tomato Spotted Wilt Virus Test)
- Tim Flanders, County Extension Coordinator

Tuesday, June 10, 2008

12:30 am **-SPONSORED LUNCH -**
Rural Development Center
Tifton Campus Conference Center
University of Georgia, Tifton, GA

- lunch Courtesy of: Georgia Tobacco Commission

1:30 pm - Leave **RDC**

1:45 pm - Arrive Bowen Farm - Coastal Plain Experiment Station

Bob McPherson, Entomologist
Tobacco Entomology Research Projects

Paul Bertrand, Pathologist
Strip-Till Effects on TSWV Incidence

Gina Angelella – Graduate Student
Studies On Thrips Reproduction

Steve LaHue, Research Coordinator
Regional Variety Small Plot Test
Georgia Official Variety Test

Claudia Nischwitz - Postdoctoral Associate
Plant Age and Admire-Actigard Treatments

Lara Lee Hickman - Research Professional
-TSWV Management

J. Michael Moore, Extension Agronomist - Tobacco
Sidedress Nitrogen Fertilizer Source Demonstration
Transplant Water Fertilizer Demonstration

Steve Mullis, Research Professional, Virology Lab
Effect of Actigard and Admire Pro on TSWV and Plant Yield
Update on the Survey of Weeds as Hosts of Tomato spotted wilt virus
(TSWV) in the Farmscape of Southern Georgia

Steve LaHue, Research Coordinator
Albert Johnson Breeding Lines Evaluation for TSWV

5:00 pm - Check-in Holiday Inn, Waycross PH: 912-283-4490

6:30 pm - Social - Mixon's Pond - Hwy. 82, Waresboro, Ware Co.

7:00 pm - Supper - Mixon's Pond - Hwy. 82, Waresboro, Ware Co.

Wednesday, June 11, 2008

7:30 am - Leave Holiday Inn parking lot.

8:00 am - Arrive Nathan Henderson Plot - Coffee County
(Strip-Till Effects on TSWV Incidence)
(Varieties Demonstration)
(Drip Irrigation Demonstration)
- Eddie McGriff, County Extension Coordinator

9:10 am - Arrive Kenneth Williams Farm - Jeff Davis County
(Imidacloprid Source and Actigard 50WG Test)
- Tim Varnedore, Jeff Davis County Extension Coordinator

9:55 am - Arrive Jerry Wooten Farm - Jeff Davis County
(Evaluation Of Selected Pesticides For
Suppression Of Tobacco Pests In Flue-Cured Tobacco)
- Tim Varnedore, Jeff Davis County Extension Coordinator

**THIS IS THE END OF
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DIRECTIONS FOR 2008 GEORGIA-FLORIDA TOBACCO TOUR

Monday, June 9

Mileage

Directions (* - indicates traffic assistance needed)

Directions: Columbia County Extension Office, Lake City, FL

From I-75, take the exit for Highway 90. Go east on 90 to the fourth traffic light (Walgreens will be on the right). Turn right at this intersection onto Highway 247 (Branford Highway). Go approximately 1/4 of a mile and turn right onto Mary Ethel Lane (first road on the right). Turn into the second gate on the left to enter the Columbia County Fairgrounds. The Extension Service office is the long concrete block building on the right as you enter the parking lot.

Phone: (386) 752-5384

Tuesday, June 10

Mileage

Directions (* - indicates traffic assistance needed)

	*	Right out of Holiday Inn onto Commerce Blvd.
0.1		Left on US 90 (stay in Left lane)
		Left onto I-75 South
4.7		Right at Exit
		Left at top of exit on 47
0.2		Right onto 242
1.2		Right onto 131
4.5		Left into Dicks Farm
		(Roosevelt & Travis Dicks Farms)
		Right out of Dick Farm on 131
4.5		Left onto 242
0.1		Right onto I-75 north
43.75		Right on Lake Blvd Exit
2.9		Right onto 41 South to 376 East
0.1		Left on 376 E
2.2		Left onto Corbett Rd (dirt)
0.7		Left into field
		(Herring Farm TSWV Plots)
		Right out of field onto Corbett Road
0.7		Left onto 376 East
5.0		Left onto GA Hwy 135
12.3	*	Cross Hwy 84 / Hwy 38 at Naylor
9.4	*	Left at stop sign in Lakeland on onto 37 / 129
0.3		Right on Hwy 11 ByPass
		Cross Church Street
2.3		Right into field road at UGA Tobacco Plot Sign
		Paul Folsom Farm (Regional Variety Farm Test)
		Right out of field road onto State Hwy 150
4.1		Straight across S.R. 64 at Teeterville
1.4		Right onto Empire Church Road
1.1		Left onto Irene Church Road
0.6		Right onto Mt Pleasant Church Road
0.7		Left into field
		(Brian Lanier Farm – Released Variety Test)
		Left out of field
1.3		Left onto Mudd Creek Road
0.1		Right on Mt Pleasant Church Road
0.7		Right at stop sign on 168
0.6		Left onto Popular Springs Church Road
1.5		Right into field
		(Trent Hughes Farm – Strip-till Test)

Tuesday, June 10 (continued)

<u>Mileage</u>	<u>Directions (* - indicates traffic assistance needed)</u>
	Exit Hughes Farm Left onto Radio Station Road
8.4	Right at traffic light onto 168
0.1	Left at traffic light onto 125
20	Left through the Industrial Park
1.2	Cross RR tracks
0.2	Cross Hwy 41 at light
0.1	Right onto I-75 north
5.0	Right Exit 64 onto Hwy 41
	Left onto Hwy 41
0.2	Left onto RDC Road
	Left into Rural Development Center
	(Lunch)
	Right out of RDC
0.1	Right onto RDC Road
0.1	Right onto Hwy 41
0.6	Left onto 20 th Street at light
0.9	Cross Tift Avenue at light
0.9	Left at stop light onto Old Omega Road
0.2	Right at light onto Kent Road
1.1	Cross New River Church Road at stop sign onto Arnett Mill Road
0.6	Left onto Hwy 319 toward Omega at the stop sign
1.1	Right onto Goat Road
0.6	Left into UGA Bowen Farm
	(Bowen Farm)
	Right out of Bowen Farm
0.6	Left onto Hwy 319
1.9	Left onto New River Church Road
1.2	Left onto Hwy 82
70	Hwy 82 X US 1, Holiday Inn - Waycross
	To Social and Dinner at Mixon's Pond
*	Left out of Holiday Inn onto Hwy 82 West and through Waycross
8.2	Right onto Harley Mixon Road into Mixon's Pond Drive

Wednesday, June 11 (continued)

Mileage Directions (* - indicates traffic assistance needed)

11 Right onto Hwy 82 West and through Waycross
16 Right onto Hwy 158 just beyond Mile Marker 11
 Left into Nathan Henderson Farm
 (Nathan Henderson Farm – Strip – Ti II, Variety Trial, Drip Irrigation)

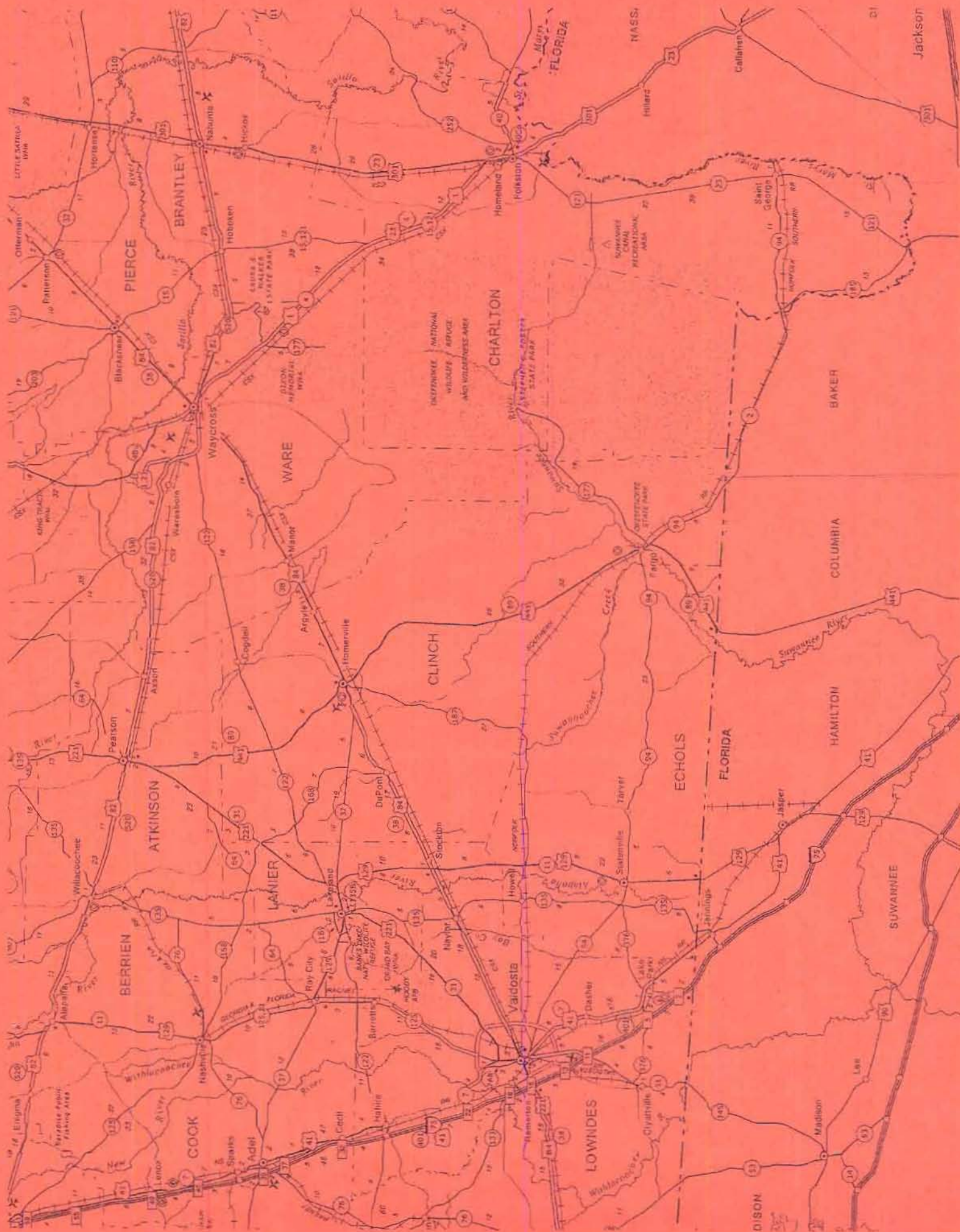
 Right out of Henderson Farm
2 Left onto Andrew Tanner Road toward Nichols
6 Left onto Flying Hawk Road
1.8 Cross RRX
0.1 Cross Hwy 32 at Traffic Light
8.3 Right at Stop Sign onto John Moore Road
0.6 Continue straight on John Moore Road
1.7 Right at Stop Sign onto Mark Mobley Road
2.9 Left onto C.R. 612 (Old Bell Telephone Road)
8.2 Right onto Ira Graham Road
1.4 Right onto Bridgeford Church Road
0.9 Left onto C.R. 131 at house with blue shutters
0.3 Left into Kenneth Williams Farm
 (Kenneth Williams Farm – Imidacloprid Source and Actigard 50WG Test)

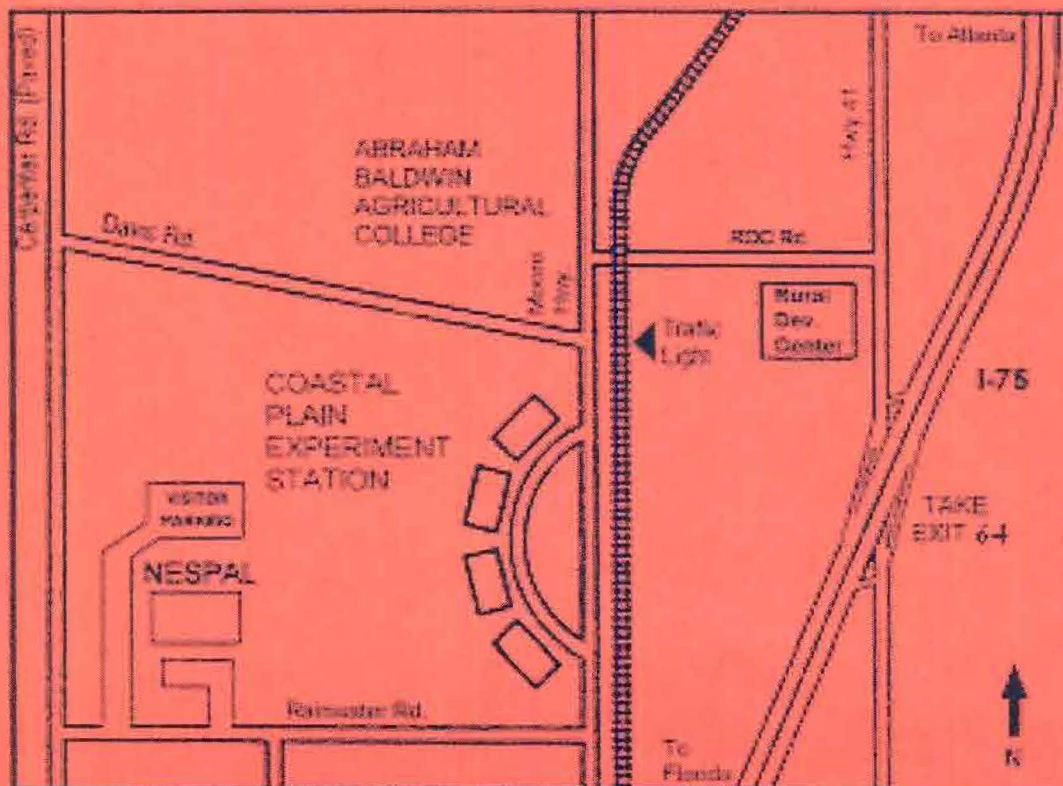
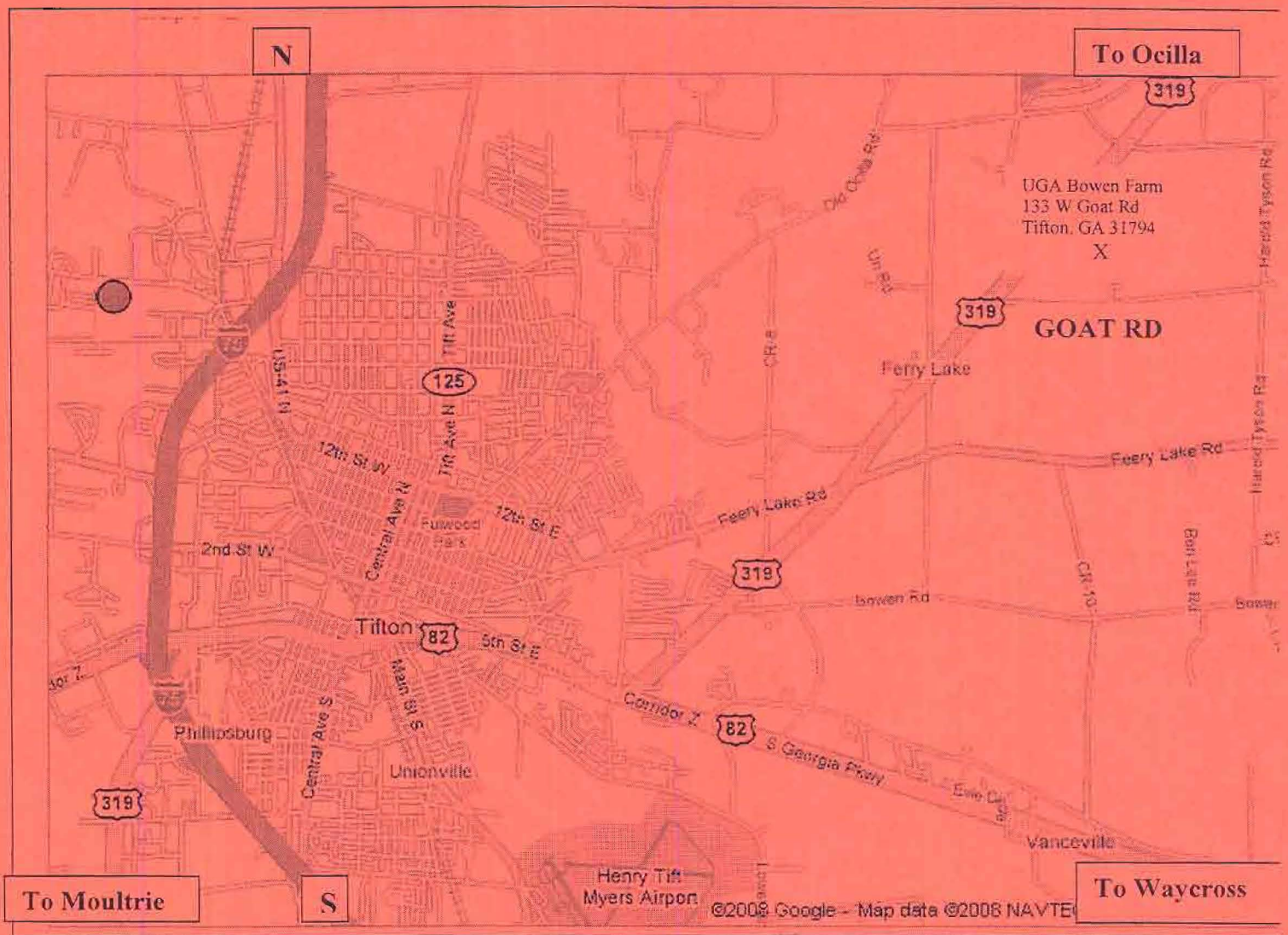
 Right out of field
0.9 Right at Stop Sign onto Bridgeford Church Road
2.4 Left onto Satilla Church Road
1.1 Stop sign at Bell Telephone Road onto Elizabeth Church Road
3.0 Stop sign at 221/135 onto Preston Rd
0.5 Left onto Hazlehurst Hwy/Broxtown Hwy
4.0 Right at Snipesville onto Hwy 107
2.8 Left onto W. H. Smith Road
0.9 Demonstration on the right

**(Jerry Wooten Farm - Evaluation Of Selected Pesticides For
Suppression Of Tobacco Pests In Flue-Cured Tobacco)**

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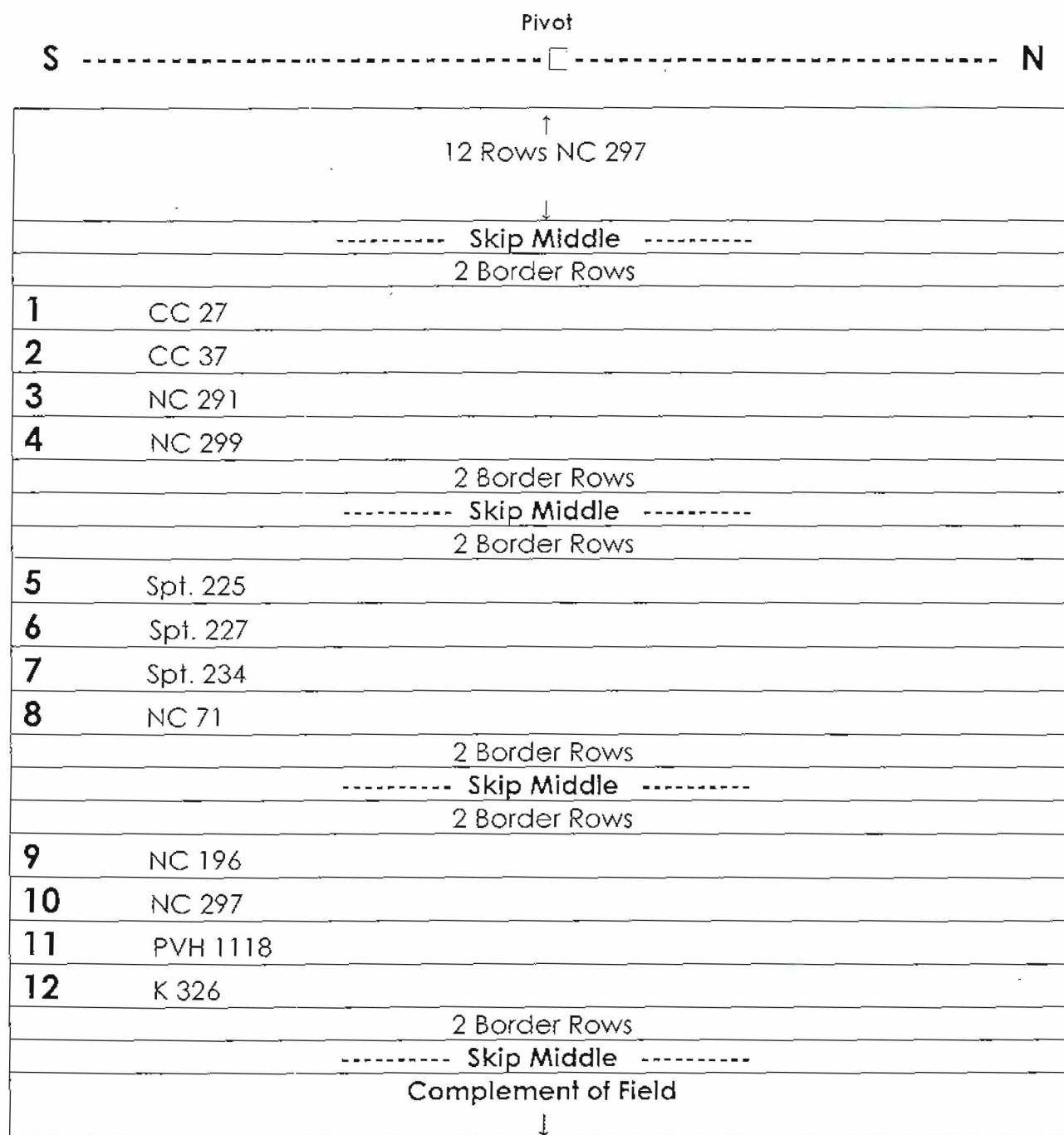




2008 Florida Released Tobacco Variety Trial

R&T Dicks Farm, Lake City, Florida

Plot Layout in Field



Transplanted April 8, 2008. Each Treatment consists of 2 rows the full length of the field.
Greenhouse Plants treated with Admire Pro and Actigard prior to transplanting.

**2008 Released Variety Demonstration,
Roosevelt and Travis Dicks Farm
Columbia County, Florida**

Agent: Bill Thomas, Columbia County Extension Agent

Variety		Pedigree	BS	GW	RK	Virus
1	CC 27	Hybrid 2003 CC	R	R	TCN/R	TMV
2	CC 37	Hybrid 2007 CC	R	R	TCN/R	TMV
3	NC 291	Hybrid 1997 CC	R	R	TCN/R	PVY/ TEV
4	NC 299	Hybrid 2001 CC	R	R	TCN/R	
5	Spt 225	(SP 168 X K 346) (SPA 95 X SP 168) 2003 SPT	R	R	R	
6	Spt 227	(SP 151 X K 346) (SP 202 X K 346) 2003 SPT	R	R	R	
7	Spt 234	(SP 168 X K 346) 2004 SPT	R	R	R	
8	NC 71	Hybrid 1995 RICKARD	H	M	R	
9	NC 196	Hybrid 2002 NCSU	R	L	R	
10	NC 297	Hybrid 1998 GL	R	R	R	TMV
11	PVH 1118	Hybrid 2004 RICKARD	R	R	TCN/R	
12	K 326	McNair 225(McNair30 X NC95) 1981 GL	L	L	R	

2008 LOWNDES CO. PLANT BED TRIAL (Early)

IN THE MAP EACH ROW OF ***** = 4 ROWS OF TOBACCO

TRANSPLANTED 09 APRIL 2008

***** Ac *****	*** Ac+Ad **	***** Ac *****	*** Ac+Ad **
***** Pv *****	***** Ad *****	*** Pv+Ad **	***** Ck *****
*** Pv+Ad **	***** Pv *****	***** Ck *****	***** Ad *****

***** Ck *****	*** Pv+Ad **	***** Ad *****	***** Pv *****
***** Ad *****	***** Ck *****	***** Pv *****	*** Pv+Ad **

TRANSPLANTED 16 APRIL 2008

*** Ac+Ad **	***** Ac *****	*** Ac+Ad **	***** Ac *****
***** Ad *****	***** Pv *****	*** Pv+Ad **	***** Ck *****
*** Pv+Ad **	***** Pv *****	***** Ck *****	***** Ad *****

***** Ck *****	*** Pv+Ad **	***** Ad *****	***** Pv *****
***** Ad *****	***** Ck *****	***** Pv *****	*** Pv+Ad **

PLANT BED TREATMENTS:

- Ia. 5-7 DAYS BEFORE TRANSPLANT SPRAY A BED WITH ACTIGARD (Ac) @ 1.0 oz/100,000 SEEDLINGS
- Ib. A BED NOT SPRAYED WITH ACTIGARD

II. PROVADO (Pv) 1.6F @ 6.5 oz/10,000 SEEDLINGS 12 HRS BEFORE TRANSPLANTING:

TREAT A PORTION OF THE ACTIGARD TREATED BED (Ia)
& THE UNTREATED BED (Ib)

TRANSPLANT WATER TREATMENT:

- I. ADMIRE PRO (Ad) @ 1.2 oz/1,000 SEEDLINGS

Procedure: Spray Provado on plant bed the evening prior to transplant. The treatments will be Provado alone, Provado + Admire, Admire alone, and Untreated. There will be two plots planted. The first one will be early on in the planting and the second plot, which is the same design as the first, will be planted at the end of planting. This separates the planting dates as much as possible. A space will be left next to the first plot to come back and add the second plot towards the end of planting.

67 plants needed per 100' row Plant spacing is 18" apart
268 plants needed per 400' row

Hypothesis: The addition of Provado to plant beds is sometimes beneficial in reducing TSWV and sometimes it is not significantly beneficial. It is thought that Provado may provide some benefit if thrips move shortly after transplant while Provado is active in the plants and before the plants can gain a benefit from Admire. If thrip movement is a couple weeks after transplant the Provado benefit will be gone and all the reduction in TSWV is most likely due to the Admire being absorbed. This research trial will monitor thrip movement and correlate it with final incidence of TSWV.

Herring Farm
Provado/Admire Test Early Plot (Planted 4/9/8)
Jake Price, Lowndes County Extension Agent

[illegible]

2008 LOWNDES CO. PLANT BED TRIAL (Late)

IN THE MAP EACH ROW OF ***** = 4 ROWS OF TOBACCO

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*****
*****
*****
TRANSPLANTED 09 APRIL 2008
***** Ac ***** *** Ac+Ad *** ***** Ac ***** *** Ac+Ad ***
***** Pv ***** ***** Ad ***** *** Pv+Ad *** ***** Ck *****
***** Pv+Ad *** ***** Pv ***** ***** Ck ***** ***** Ad *****

***** Ck ***** *** Pv+Ad *** ***** Ad ***** ***** Pv *****
***** Ad ***** ***** Ck ***** ***** Pv ***** *** Pv+Ad ***
*****
TRANSPLANTED 16 APRIL 2008
*** Ac+Ad *** ***** Ac ***** *** Ac+Ad *** ***** Ac *****
*** Ad *** ***** Pv ***** *** Pv+Ad *** ***** Ck *****
*** Pv+Ad *** ***** Pv ***** ***** Ck ***** ***** Ad *****

***** Ck ***** *** Pv+Ad *** ***** Ad ***** ***** Pv *****
***** Ad ***** ***** Ck ***** ***** Pv ***** *** Pv+Ad ***
*****

```

PLANT BED TREATMENTS:

- Ia. 5-7 DAYS BEFORE TRANSPLANT SPRAY A BED WITH ACTIGARD (Ac) @ 1.0 oz/100,000 SEEDLINGS
- Ib. A BED NOT SPRAYED WITH ACTIGARD

II. PROVADO (Pv) 1.6F @ 6.5 oz/10,000 SEEDLINGS 12 HRS BEFORE TRANSPLANTING:

TREAT A PORTION OF THE ACTIGARD TREATED BED (Ia)
& THE UNTREATED BED (Ib)

TRANSPLANT WATER TREATMENT:

- I. ADMIRE PRO (Ad) @ 1.2 oz/1,000 SEEDLINGS

Herring Farm
Provado/Admire Test Late Plot (Planted 4/16/8)
Jake Price, Lowndes County Extension Agent

[illegible]

2008 UNIVERSITY OF GEORGIA
COOPERATIVE EXTENSION SERVICE
TOBACCO ON-FARM DEMONSTRATIONS

Title: Regional Variety Farm Test

Farmer Name/Address: Paul Folsom

County: Lanier

Extension Agent: Elvin Andrews, Lanier County Extension Coordinator

Extension Specialist Responsible: J. MICHAEL MOORE

2008 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						
				BS	GW	FW	RK	Bn Sp.	Virus	Sponsor
REGIONAL FARM TEST										
1	NC 2326	1965	(Hicks X 9102)(Hicks)Hicks)Hicks)	L	SU	M				NC
2	NC 95	1961	(C-139XBel.4-30)X(C-139XHicks)	L	H	M	R			NC
3	XP 596	F1	Hybrid	R	R		R			Profigen
4	RJR 75	F1	Hybrid	R	R		TCN/R M.j/R		TMV	RJR
5	GF 318	F1	Hybrid	R	R		R		TMV	GF
6	RJR 15	F1	Hybrid	R	R		M.j/R			RJR
7	NCEX08	F1	Hybrid	R	R		TCN/R			NC
8	CC 67	F1	Hybrid	R	R		TCN/R		TMV	CC
9	NCEX09	F1	Hybrid	R	R		TCN/R			NC
10	CC 33	F1	Hybrid	R	R		M.j/R			CC
11	NCEX07	F1	Hybrid	R	R		TCN/R			NC

¹Resistance; H - High; M - Moderate; L - Low; R- Resistant; T - Tolerant; Su - Susceptible
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

2008 TSWV INSECTICIDE SPRAY TRIAL (PLAN-8)

EACH ROW OF ***** = 1 ROW OF TOBACCO

[<-150'->]

```

|-----|
|*****|
|*** C ***|
|*** H ***|
NO SPRAY--|*** E ***|
|*** C ***|
|*** K ***|
|*****|
|*****|
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|-----|
|*****|
|*** C ***|
|*** H ***|
SPRAY--|*** E ***|
|*** C ***|
|*** K ***|
|*****|
|*****|
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|-----|
|*****|
|*** C ***|
|*** H ***|
NO SPRAY--|*** E ***|
|*** C ***|
|*** K ***|
|*****|
|*****|
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|-----|
|*****|
|*** C ***|
|*** H ***|
SPRAY--|*** E ***|
|*** C ***|
|*** K ***|
|*****|
|*****|
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|-----|
|*****|
|*** C ***|
|*** H ***|
NO SPRAY--|*** E ***|
|*** C ***|
|*** K ***|
|*****|
|*****|
|-----|

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PLOT = 40 ROWS X 300' LONG (CAN BE SIZED TO FIT FIELD)
ENTIRE PLOT GETS ORTHENE @ 1.0 lb/ACRE IN TRANSPLANT WATER

CK = UNTREATED SEEDLINGS = 6857

AD = SEEDLINGS TREATED WITH ADMIRE PRO @ 1.0 oz/1,000 = 6857

SPRAY = ORTHENE EVERY 7 DAYS TRANPLANT TO LAYBY
NO SPRAY = SPRAY ONLY AS ABSOLUTLY NECESSARY:
(TRACER FOR BUDWORM OR BT FOR HORNWORM)

On-Farm Curing With Ventilation Controllers

Paul E Sumner, Extension Engineer

J. Michael Moore, Extension Agronomist - Tobacco

Fuel energy conservation is on every growers mind today. One way of energy conservation during curing is the use of a microprocessor based ventilation/curing controllers. These controllers control the humidity in the curing barn to optimize the coloring, wilting and leaf drying phases of curing tobacco. Identical barns (manufacturer and heat exchanger) that could be loaded each on the same day with similar tobacco were chosen at six locations for the test.

Table 1. Comparison of gallons LP burned per barns for automatic controller vs conventional for curing bulk tobacco. Georgia. 2007.

Location	No. Cures	Controller (gal/cure)	Check (gal/cure)	Savings (Gallons)	(%)	Controller
Deas	7	325	409	84	20.6	Cureco
Ivey	4	229	313	84	26.8	MarCo
Vickers	5	337	339	2	0.8	Cureco
Rutland	5	349	323	26	8.1	Cureco
Draughn	4	318	356	38	10.6	Cureco
Turner	5	370	466	96	20.6	Cureco
Burch	7	378	351	27	7.7	MarCo
Johnson	7	329	295	34	11.4	Cureco
Average	5.5	329	357	28	7.6	

Table 2. Comparison of pounds cured leaf per gallon LP burned for automatic controller vs conventional for bulk curing tobacco. Georgia. 2007.

Location	No. Cures	Controller (lb/gal lp)	Check (lb/gal lp)	Savings (lb/gal lp)	(%)	Controller
Deas	7	8.73	7.10	1.63	23.1	Cureco
Ivey	4	12.20	8.95	3.25	36.3	MarCo
Vickers	5	8.91	8.84	0.06	0.8	Cureco
Rutland	5	9.01	10.51	-1.50	14.3	Cureco
Draughn	4	10.06	8.99	1.07	11.9	Cureco
Turner	5	8.65	6.87	1.78	25.9	Cureco
Burch	7	8.03	8.65	-0.62	7.2	MarCo
Johnson	7	9.85	11.43	-1.58	13.8	Cureco
Average	5.5	9.29	8.73	0.56	6.4	

*Average pounds cured per barn was 3057 lbs for controller and 3113 lbs for check.

Insulating Bulk Tobacco Barns

Paul E. Sumner, Extension Engineer

During the 1980's several insulating studies were conducted for fuel conservation for curing flue-cured tobacco. Prices for LP and diesel fuel during that time were \$0.65 to 0.80/gallon. At that time cost for curing was 10 to 15% of production cost. Today, curing fuel is close to 24% of production costs.

Tobacco growers' average fuel consumption ranges from 7.1 to 12.1 lbs cured leaf/gallon LP burn. This relatively high fuel consumption results from:

1. Poor cure management—venting more air than is required to dry tobacco
2. Improper adjustment of burner—indirect-fired LP and fuel oil burners typically operate in the combustion range 75-80 percent
3. Poor maintenance of equipment—excessive air leakage resulting from poor sealing of the foundation slab, and leakage around the doors where the gasket material has been torn away
4. Structural heat loss—lack of insulation under the concrete foundation slab, and in the side walls and roof of the barn

All can be corrected very easily except for insulating the structure which requires monetary investment and time.

From 1977 to 1985 tests were conducted on growers' farms and the Coastal Plains Experiment Station, to determine the benefit of insulation given typical on-farm conditions. Measurements of fuel and cured weight were made. Here are some of the findings.

Insulating Existing Un-insulated Barns -- Several kinds of insulation can be used for tobacco barns. Use a material that has a high R-value per inch (greater than 6) and does not absorb moisture. Styrofoam bead board and polyurethane type are the insulations of choice. When using the board-type insulation, be sure you get a tight fit. If the board insulation does not fit tightly, heat (energy) will be lost at these points.

Pad Installation -- Concrete and soil are poor insulators. This area goes from 75°F at the beginning of the cure to 165°F and back in 7 days. For new concrete foundation installations place at least one inch of board-type insulation under the concrete foundation (Figure 1). When pouring concrete on top of insulation be sure to stand on insulation to eliminate it floating up in the slab.

Lower Plenum -- The side walls of the lower plenum of most bulk barns are difficult to insulate. The drying floor is difficult to remove, and exterior metal sheeting will cover most of it on the outside. The side walls need to be insulated because of their construction, which usually is only a 1/8-inch piece of metal.

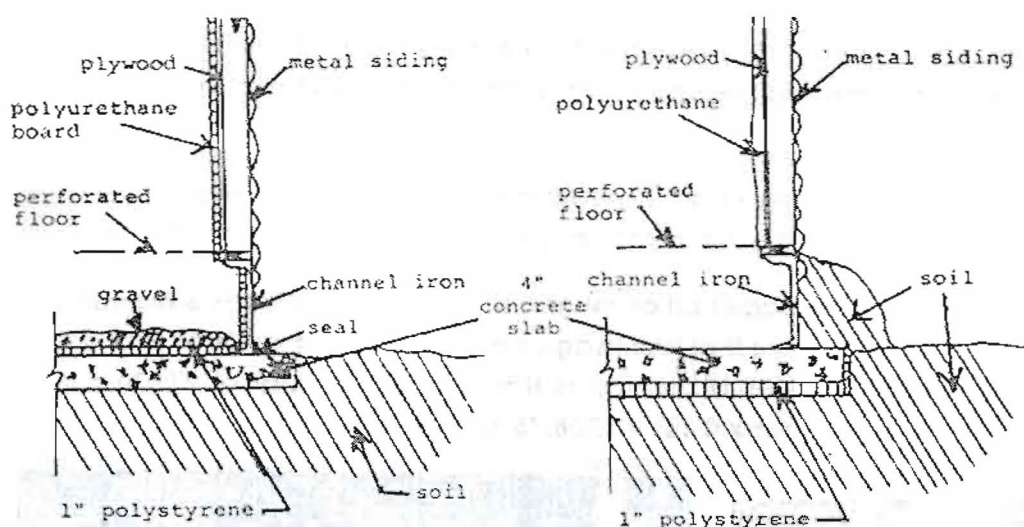


Figure 1. Diagram of floor and wall insulation.

Results

It is evident that insulating the barn from the ground gives the greatest savings. The reduction in heat loss resulting from placement of 1.5 inches of polystyrene board under the concrete foundation slab was found to be 21 gallons LP for two year study. Placing insulation in the side walls and doors saved 6.5 gallons LP per cure. Insulating the return plenum saved 15.5 gallons LP per cure. The total savings resulting from insulation averaged 43 gallons LP per cure.

Comparison of fuel consumption for insulating a bulk tobacco barn.

Cure	Un-insulated (lbs Cured Leaf/gallon LP)	Insulated (lbs Cured Leaf/gallon LP)	% Savings
1	6.9	8.1	18.0
2	7.8	10.8	39.1
3	9.4	12.0	27.1
4	10.5	12.3	17.0
5	13.7	13.1	-4.5
6	11.7	17.1	47.1
7	14.0	14.7	5.0
Average	10.6	12.6	19.2

Barn Insulation -- If the bulk barn is only a few years old, it probably has adequate insulation, but you can reduce fuel costs for older barns by insulating with a material having a R-value of 3.5 or more. Placing insulation under the concrete pad reduces fuel consumption by 5.1 percent. If it is possible insulation of side walls of delivery plenum will reduce fuel consumption by 1.4 percent. With the combination of the previous two factors, the losses can be reduced fuel consumption in the delivery plenum by 9.6 percent. Insulating the roof area can reduce fuel consumption by 8.1 percent. If the

side walls and doors are insulated, the losses can be reduced by 3.2 percent. A grower can reduce his fuel losses by 14.6 percent if he insulates the barn according to these studies. Figure 2 shows infrared thermal scans of an un-insulated and insulated (R-Value 3.5 added) bulk curing barn.

The payback for insulating varies from operation to operation, but when insulation was installed in old bulk barns, the payback for investment was one to two years.

Based on 2007 data, the average fuel consumption per barn per cure is around 300 gallons LP. Research has shown that fuel usage can be reduced by 10 to 20 percent. Using 15 percent at \$2.25/gallon LP for 7 cures this equals a savings of = $(300 \text{ gal LP/cure} \times \$2.25/\text{gal LP} \times 7 \text{ cures} \times 0.15) = \$708.75/\text{year per barn}$.

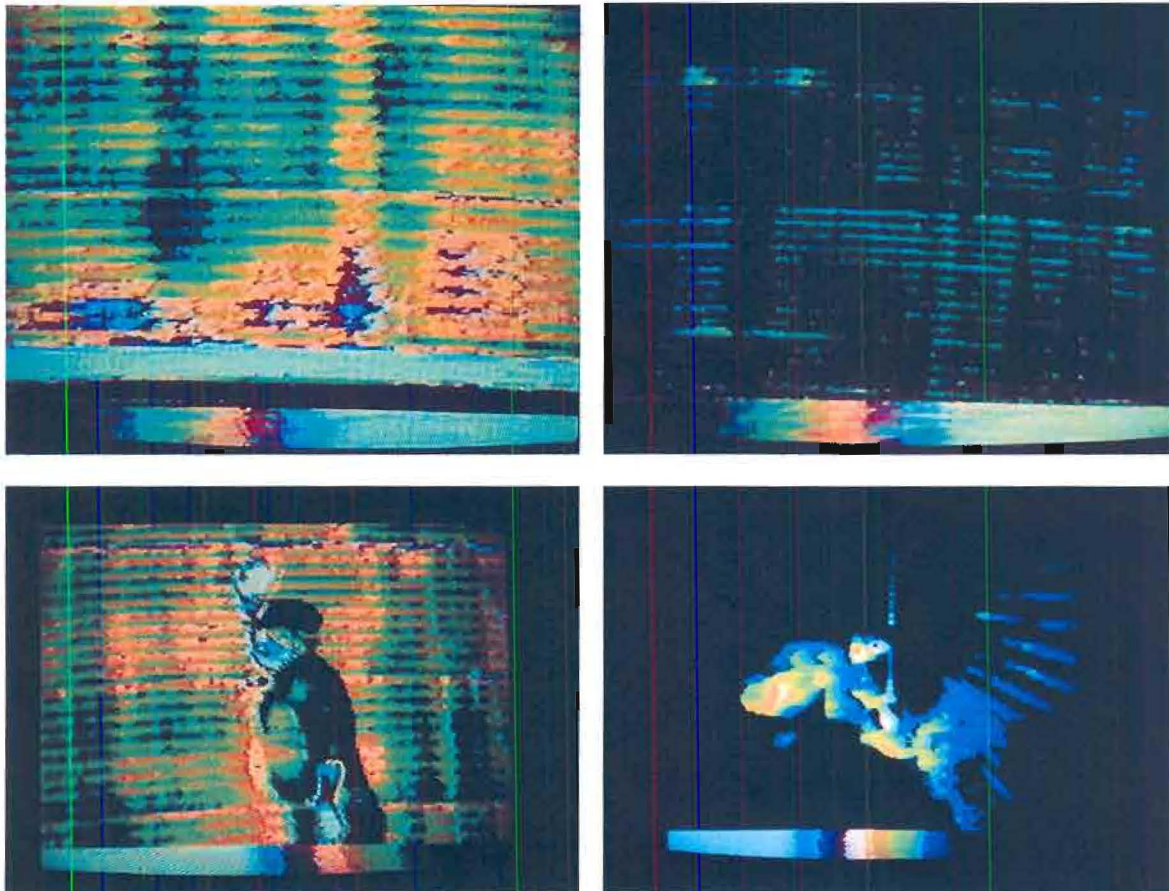


Figure 2. Un-insulated barn on left and insulated (R-value 3.0) barn on right. Inside temperature was 160°F.

DIESEL FUEL

Another issue growers should keep in mind is the use of diesel for curing. As you well know diesel fuel has increase tremendously this past year. When barns were converted to heat exchangers some growers elected to continue using diesel as a source for curing fuel. Here are some facts.

LP gas at \$2.25/gal = diesel at \$3.43 /gal but diesel cost is currently ~ \$4.05/gal. (6/2/08)

If we use 300 gal LP/cure average this equals 198 gal diesel/cure then the total cost is \$675 for LP and \$801.90 for Diesel per cure. This is an increase of \$126.90/cure or \$888.30/season (7 cures).

**2008 Released Variety Demonstration,
Brian Lanier Farm
Berrien County, Georgia**

Agent: Tim Flanders, Berrien County Extension Coordinator

Fertilization: 100 lb/A 15.5-0-0
1500 lb/A 4-8-12

Insecticides: Orthene 97 PE 1 lb/A
Orthene 97 PE 1 lb/A
Dipel 1 qt/A

Variety		Pedigree	BS	GW	RK	Virus
1	CC 27	Hybrid 2003 CC	R	R	TCN/R	TMV
2	CC 37	Hybrid 2007 CC	R	R	TCN/R	TMV
3	NC 291	Hybrid 1997 CC	R	R	TCN/R	PVY/ TEV
4	NC 299	Hybrid 2001 CC	R	R	TCN/R	
5	Spt 225	(SP 168 X K 346) (SPA 95 X SP 168) 2003 SPT	R	R	R	
6	Spt 227	(SP 151 X K 346) (SP 202 X K 346) 2003 SPT	R	R	R	
7	Spt 234	(SP 168 X K 346) 2004 SPT	R	R	R	
8	NC 71	Hybrid 1995 RICKARD	H	M	R	
9	NC 196	Hybrid 2002 NCSU	R	L	R	
10	NC 297	Hybrid 1998 GL	R	R	R	TMV
11	PVH 1118	Hybrid 2004 RICKARD	R	R	TCN/R	
12	K 326	McNair 225(McNair30 X NC95) 1981 GL	L	L	R	

2008 STRIP-TILL TOBACCO

Trent Hughes, Grower, Berrien County
Tim Flanders, Berrien County Extension Coordinator

EACH ROW OF ***** = 4 ROWS OF TOBACCO (NC-297)

{<----- 400-600' ----->}

ST-CK	**** SHORT WHEAT/TRITICALE ****	***** TALL WHEAT/RYE *****
ST-AA	**** SHORT WHEAT/TRITICALE ****	***** TALL WHEAT/RYE *****
CT-AA	*****	*****
CT-CK	*****	*****
CT-AA	*****	*****
CT-CK	*****	*****
ST-CK	***** TALL WHEAT/RYE *****	**** SHORT WHEAT/TRITICALE ****
ST-AA	***** TALL WHEAT/RYE *****	**** SHORT WHEAT/TRITICALE ****
ST-AA	**** SHORT WHEAT/TRITICALE ****	***** TALL WHEAT/RYE *****
ST-CK	**** SHORT WHEAT/TRITICALE ****	***** TALL WHEAT/RYE *****
CT-CK	*****	*****
CT-AA	*****	*****
ST-AA	***** TALL WHEAT/RYE *****	**** SHORT WHEAT/TRITICALE ****
ST-CK	***** TALL WHEAT/RYE *****	**** SHORT WHEAT/TRITICALE ****
CT-CK	*****	*****
CT-AA	*****	*****

NOTE:

CT = CONVENTIONAL-TILL

ST = STRIP-TILL

CK = GREEN FLAGS = SEEDLINGS UNTREATED

AA = ORANGE FLAGS = SEEDLINGS TREATED WITH ACTIGARD & ADMIRE

PREPARING STRIP TILL TOBACCO

FALL/WINTER: PREPARE 64 ROWS

- I. FUMIGATE AS NEEDED & BED
- II. BOARD OFF BEDS
- III. PLANT GRAIN
- IV. APPLY 20-30 lbs. NITROGEN/ACRE

JANUARY/FEBRUARY:

- I. SPRAY ROUND-UP: 8-12" BAND DOWN THE CENTER OF EACH STRIP-TILL BED
- II. SPRAY ROUND-UP ON CONVENTIONAL TILL BEDS TO KILL ALL GRAIN/WEEDS

MARCH/APRIL:

- Ia. SPRAY WEEDY GRAIN WITH ROUNDUP 14-21 DAYS PRE TRANSPLANT
- Ib. SPRAY DENSE GRAIN WITH GRAMOXONE 5-7 DAYS PRE TRANSPLANT
- II. APPLY TOBACCO HERBICIDES
- III. IRRIGATE OVER FIELD 48-24 hrs. BEFORE TRANSPLANT
- IV. USE ORTHENE IN TRANSPLANT WATER
- V. STRIP-TILL: LEAVE STUBBLE AS IS & PLANT DOWN THE CENTER HALLWAY
- VI. CONV. TILL: RENOVATE BEDS & PLANT; PLOW AS NORMAL (2-4 TIMES)

LAYBY: PLOW ALL TREATMENTS

TABLE 1. THE EFFECT OF TILLAGE ON PLANT STAND AT LAYBY (SIX WEEKS POST TRANSPLANT)

% PLANT STAND AT LAYBY

TILLAGE ¹	TREATMENT ²	ODOM	HUGHES	BOWEN	HENDERSON
CONVENTIONAL	CK	94.0	94.6	98.1	97.0
CONVENTIONAL	A+A	93.3	95.6	93.2	98.9
ST (WHEAT)	CK	94.7	92.7	94.7	93.3
ST (WHEAT)	A+A	92.8	95.2	91.8	93.3
ST (RYE)	CK	93.2	92.0	89.2	91.7
ST (RYE)	A+A	93.4	94.6	88.1	95.2
<i>LSD (0.005)</i>	---	<i>NS</i>	2.5	6.2	3.5

¹ Conventional-till: plowed 3 times ST = strip-till: plowed only at layby

² CK = Seedlings untreated

A+A = Seedlings treated with Actigard (1.0 oz/100,000) & Admire Pro (0.8 oz/1,000)

TABLE 2. THE EFFECT OF TILLAGE ON THE INCIDENCE OF SPOTTED WILT AT LAYBY (SIX WEEKS POST TRANSPLANT)

% SPOTTED WILT AT LAYBY

TILLAGE ¹	TREATMENT ²	ODOM	HUGHES	BOWEN	HENDERSON
CONVENTIONAL	CK	10.2	5.6	11.6	17.6
CONVENTIONAL	A+A	4.8	2.0	4.1	7.6
ST (WHEAT)	CK	4.3	2.6	11.9	10.0
ST (WHEAT)	A+A	2.4	0.9	3.5	3.0
ST (RYE)	CK	3.0	2.4	7.6	9.2
ST (RYE)	A+A	1.3	0.7	2.5	3.0
<i>LSD (0.005)</i>	---	2.5	1.2	3.8	2.9

¹ Conventional-till: plowed 3 times ST = strip-till: plowed only at layby

² CK = Seedlings untreated

A+A = Seedlings treated with Actigard (1.0 oz/100,000) & Admire Pro (0.8 oz/1,000)

2008 Tobacco Entomology Research Projects
Robert M. McPherson, Project Leader
Del Taylor and Neal Roberson, Agri. Res. Assist. III

Test 1. Worm, Thrips and Aphid Control

- 14 Foliar treatments
- Design: RCBD with 4 reps, plots 3 rows x 30 ft.

Test 2. Thrips and TSWV Supression with Tray Drench Insecticides

- 9 Tray drench trts, RCBD, 4 reps, plots 3 rows x 34 ft.
- Count thrips, aphids, and TSWV weekly.
- With and without Actigard (18 total trts.)

Test 3. TD and TPW Insecticides for TSWV Supression

- 9 Insecticide treatments
- Design: RCBD with 4 reps, plots 2 rows x 30 ft.

Test 4. Splitworm Ccntrol

- 12 Foliar sprays, 4 reps, plots 2 rows x 33 ft.

Test 5. Thrips in Plasticulture Tobacco Production

- 5 TD and foliar treatments, 4 reps, plots 2 rows x 32 ft.

Test 6. Thrips Survey in Tobacco Farmscape

- Collect thrips from weed hosts from Dec.-May.
- Collect thrips on tobacco April-June (adults & immatures)
- Collect thrips on sticky traps weekly from Jan.-Dec.

Test 7. Phytotoxicity and Worm Control with Novaluron Formulations

- 8 Foliar sprays, 4 reps, plots 3 rows x 30 ft
- Up to 6 applications

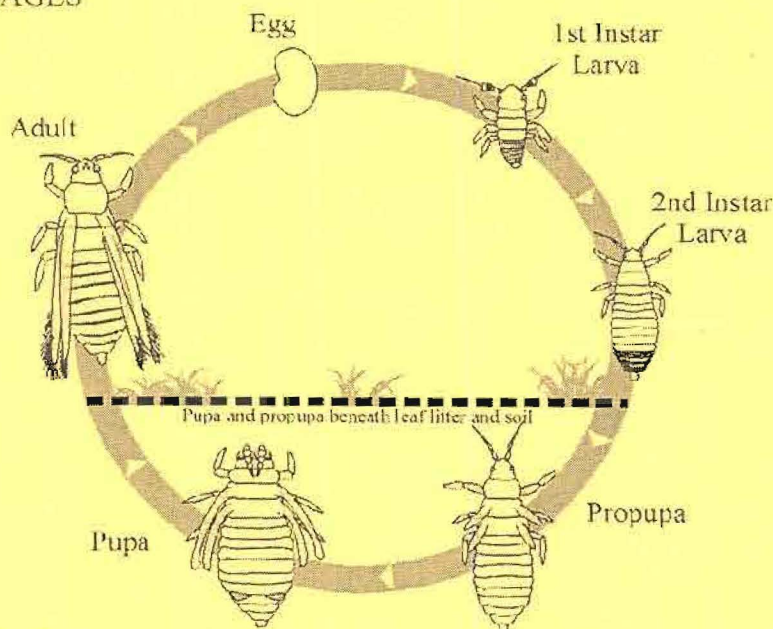
Entomology tests supported with funds received from The Georgia Agricultural Commodity Commission for Tobacco, Bayer, Dow AgroScience, DuPont, FMC Corporation, Sygenta, and Valent Agrichemical Companies

STUDIES ON THRIPS REPRODUCTION

ABSTRACT

Bioassay methods were developed to assess thrips reproduction and/or development on a food substrate under one of two treatments: with or without supplemental pollen. One method involves a sleeve cage taped over a container holding a leaf. Adult age-synchronized females are placed onto the leaf inside the cage and allowed to feed and oviposit for 2 weeks, after which they are collected. After an additional 2 weeks, the total number of thrips per leaf can be tallied and number of offspring per female calculated. A second method uses plastic vials containing small pepper buds. Age-synchronized female adults and a couple adult males are placed in each vial and moved once daily, for a total of twenty days. The number of and developmental stage of offspring in each vial are observed daily, after which mean developmental rates of offspring and reproductive rates of the adult females can be determined.

THRIPS LIFE STAGES



<http://www.discoverlife.org>

DEVELOPMENT TIME

Mean development time (in days) on peanut at 30°C (86°F):

	Egg	Larvae 1	Larvae 2	Prepupae	Pupae	Longevity
Western Flower Thrips	4.5 ¹	1 ¹	4.5 ¹	1.5 ¹	1.5 ¹	27.5 ¹
Tobacco Thrips	6 ²	1 ²	2.5 ²	1 ²	1.5 ²	33 ³

**Nutritional quality affects insect reproduction and development...
does pollen influence reproduction and/or development in thrips?**

1. Lublinkhof, J., Foster DE (1977). Development and reproductive capacity of *Frankliniella occidentalis* (Thysanoptera: Thripidae) reared at three temperatures. *Journal of the Kansas Entomological Society* 50: 313-316.
2. Lowry, V. K., Smith JW Jr, Mitchell FL (1992). Life-fertility tables for *Frankliniella fusca* (Hinds) and *F. occidentalis* (Pergande) (Thysanoptera: Thripidae) on peanut. *Annals of the Entomological Society of America* 85(6): 744-754.
3. Hagan, A., Weeks J. (1998). "Tomato Spotted Wilt Virus on Peanut." ACES Publication ANR-574. Retrieved June 5, 2008, from <http://www.aces.edu/pubs/docs/A/ANR-0574/>.

Entomology Tobacco Test 1 - 2008
Aphid, thrips and worm control
Bowen Farm - Tift Co. GA

	402	411	403	413	
414	410	405	409	401	408
302	313	406	412	407	404
304	310	308	311	314	307
305	309	303	301	312	306
212	208	202	214	209	203
201	206	210	204	211	205
106	112	101	109	213	207
110	114	111	105	108	102
	103	113	107	104	
7 rows		Skip	7 rows	Skip	7 rows

Plots 3 rows x 30 ft. (32 plants) with a border row on each side and a 6 ft alley on each end. 'K-326' tobacco transplanted on March 28 .

Entomology Tobacco Test 1 - 2007
Tobacco aphids, flea beetles, thrips, worms

<u>TREATMENTS :</u>	<u>lbs. ai/acre</u>	<u>Amt. form./acre</u>
(01) HGW 86 0.83 lb/gal.	0.066	306 ml
(02) HGW 86 0.83 lb/gal.	0.088	408 ml
(03) HGW 86 0.83 lb/gal.	0.134	621 ml
(04) HGW 86 0.83 lb/gal + MSO	0.134 + 0.5% v/v	621 ml +
(05) Orthene 97PE	0.75	0.78 lbs/a
(06) Coragen 1.67S	0.065	150 ml
(07) Untreated	-----	-----
(08) Methomyl 2.4LV	0.45	720 ml
(09) Belt 480SC + NIS	0.09 + 0.25% v/v	90 ml +
(10) Belt 480SC + MSO	0.09 + 0.25% v/v	90 ml +
(11) Denium 0.16EC	0.0125	300 ml
(12) Tracer 4SC	0.0625	60 ml
(13) Capture LFR 1.5 EC	0.08	204 ml
(14) Brigadier 2 EC	0.10	204 ml

MSO = methylated seed oil , NIS = non-ionic surfactant

Entomology Tobacco Test 2 - 2008
Comparison of selected TD insecticide treatments
Bowen Farm - Tift Co. GA

NC71 B	NC-71	NC-71	NC-71	NC-71	NC-71	NC-71
NC71 B	426	424	428	421	430	420
NC71 B	417	415	419	429	432	431
NC71 B	425	422	418	427	416	423
NC71 B	319	323	318	316	317	325
NC71 B	328	324	315	327	330	329
NC71 B	321	320	322	332	326	331
NC71 B	218	226	230	216	223	215
NC71 B	228	227	232	222	220	219
NC71 B	217	229	231	221	224	225
NC71 B	120	131	127	116	132	128
NC71 B	123	118	122	125	124	115
NC71 B	126	117	130	119	129	121
7 rows			Skip	6 rows	Skip	6 rows

Plots 3 rows x 34 ft. with a 6 ft. alley on each end.

'NC-71' tobacco transplanted on April 21 . B= one border row of untreated 'NC-71'.

<u>TREATMENTS :</u>		<u>Form. / 1000 cells</u>
(15)	Untreated	-----
(16)	Untreated + Actigard 50 WG	-----
(17)	Admire Pro 4.6SC	0.8 oz
(18)	Admire Pro 4.6SC + Actigard 50 WG	0.8 oz
(19)	Alias 2F	1.8 oz
(20)	Alias 2F + Actigard 50 WG	
(21)	Couraze 2F	1.8 oz
(22)	Couraze 2F + Actigard 50 WG	1.8 oz
(23)	Imida E-AG 2F	1.8 oz
(24)	Imida E-AG 2F + Actigard 50 WG	1.8 oz
(25)	Macho 2F	1.8 oz
(26)	Macho 2F + Actigard 50 WG	1.8 oz
(27)	Nuprid 2F	1.8 oz
(28)	Nuprid 2F + Actigard 50 WG	1.8 oz
(29)	Torrent 2F	1.8 oz
(30)	Torrent 2F + Actigard 50 WG	1.8 oz
(31)	T-MOXX 2SC	1.3 oz
(32)	T-MOXX + Actigard 50 WG	1.3 oz

Actigard 50 WG applied at a rate of 0.5 oz /50,000 tray cells on 17 April and the insecticides were applied on 18 April. All tray drench treatments were applied at spray concentration rates of 10 gallons/ 100,000 cells. The 'NC-71' tobacco was transplanted on 21 April 2008.

Tobacco Test 3 : Bowen Farm 2008
Tray Drench and Transplant Water Evaluations

137	341					
134	236	340	333	138		
135	237	334	441	435	238	
141	233	336	335	434	436	
140	241	337	339	440	433	438
133	234	240	437	338		
136	239	235	439			
139						

Plots 2 rows x 30 ft. with an untreated border row on each side and a 3 ft. alley on each end.
'K-326' flue-cured tobacco transplanted on April 4, 2008.

TREATMENTS:

Rate

(33)	Untreated	-----
(34)	V-10170 2.13 SL TD	1.0 oz / 1000 cells
(35)	V-10170 2.13 SL TD	2.0 oz / 1000 cells
(36)	Admire Pro 4.6 SL TD	1.0 oz / 1000 cells
(37)	V-10170 2.13 SL TPW*	12.0 oz/acre
(38)	Admire Pro 4.6 SL TPW*	6.0 oz/acre
(39)	Platinum 2 SC TD	1.8 oz / 1000 cells
(40)	Regent 4 SC TD	0.72 oz / 1000 cells
(41)	Admire Pro 4.6 SL TPW*	12.0 oz/acre

* The transplant water treatments (TPW) were applied in 4 oz/plant (188 gpa) at transplanting.
The tray drench treatments (TD) were applied in 200 ml of water per 242 cell tray on
31 March, four days prior to transplanting.

Tobacco Test 3
BF - 2007

Date _____

_____ Flags

137	341					
134	236	340	333	138		
135	237	334	441	435	238	
141	233	336	335	434	436	
140	241	337	339	440	433	438
133	234	240	437	338		
136	239	235	439			
139						

Tobacco Test 4 : Bowen Farm 2008
Splitworm Control

449	447	445	450	443	446
452	444	448	451	453	442
342	350	346	349	351	344
345	353	343	347	352	348
251	245	250	243	253	247
248	252	246	244	249	242
143	149	147	142	150	145
146	151	153	148	144	152

Plots 2 rows x 33 ft. with a 6 ft alley. 'NC-71' tobacco transplanted on 25 April 08.

TREATMENTS :

Form/acre

(42)	Tracer 4 SC	2.5 oz	
(43)	Orthene 97PE	0.775 lb.	
(44)	Lannate 2.4LV	24 oz	
(45)	Coragen 1.675	5 oz	TPW
(46)	Coragen 1.675	5 oz	
(47)	Brigade 2E	4 oz	TPW
(48)	Brigade 2E	4 oz	
(49)	Assail 80 WP	3 oz	
(50)	Rimon 0.83EC	9-12 oz	
(51)	Warrior 1EC	3.9 oz	
(52)	Steward 1.25EC	10 oz	
(53)	Untreated	-----	

Foliar sprays applied with a CO₂-powered backpack sprayer delivering 24.8 gpa at 40 p.s.i. with 3 TX-12 nozzels per row. The transplant water treatments (TPW) were applied at transplanting in 100 gpa of water.

Test 6: Strip Till Tobacco Test
Bowen Farm - 2008

Rye Ut	Trt	Conv Trt	Ut	Conv Trt	Ut	Wht Ut	Trt	Rye Trt	Ut	Conv Ut	Trt	Wht Trt	Ut	Conv Ut	Trt
Wht Ut	Trt	Trt	Ut	Trt	Ut	Rye Ut	Trt	Wht Trt	Ut	Conv Ut	Trt	Rye Trt	Ut	Conv Ut	Trt

Rep 1

Rep 2

Rep 3

Rep 4

25

' _____ ' tobacco transplanted on 17 April . Treated plots Admire / Actigard _____ per _____ cells.

Tobacco Test 7 : Bowen Farm 2008
Phytotoxicity and Worm Control with Novaluron Formulations

					459	457
				461	460	455
		454	458	456	360	356
		358	357	355	359	354
		361	254	260	255	258
		261	257	259	256	159
			154	157	161	155
				158	156	160

Plots 3 rows x 30 ft. with a 3 ft. alley on each end.

'K-326' flue-cured tobacco transplanted on April 4, 2008.

<u>TREATMENTS:</u>		<u>Lb Ai/a</u>	<u>Form./a</u>
(54)	Untreated	-----	
(55)	Novaluron 0.83EC	0.039	6.0 oz/a
(56)	Novaluron 0.83EC	0.058	9.0 oz/a
(57)	Novaluron 0.83EC	0.078	12.0 oz/a
(58)	Novaluron 0.83EC <small>Phyto Only</small>	0.156	24.0 oz/a
(59)	Novaluron 0.83SC <small>Phyto Only</small>	0.078	12.0 oz/a
(60)	Novaluron 0.83SC <small>Phyto Only</small>	0.156	24.0 oz/a
(61)	Tracer	0.078	2.5 oz

2008 STRIP-TILL TOBACCO

UGA Bowen Farm, Tifton Campus, Tifton, GA
Paul Bertrand, Specialist Responsible

EACH ROW OF ***** = 4 ROWS OF TOBACCO (NC-297)

[<-----400-600'----->]

ST-CK	**** SHORT WHEAT/TRITICALE ****	***** TALL WHEAT/RYE *****
ST-AA	**** SHORT WHEAT/TRITICALE ****	***** TALL WHEAT/RYE *****
CT-AA	*****	*****
CT-CK	*****	*****
CT-AA	*****	*****
CT-CK	*****	*****
ST-CK	***** TALL WHEAT/RYE *****	**** SHORT WHEAT/TRITICALE ****
ST-AA	***** TALL WHEAT/RYE *****	**** SHORT WHEAT/TRITICALE ****
ST-AA	**** SHORT WHEAT/TRITICALE ****	***** TALL WHEAT/RYE *****
ST-CK	**** SHORT WHEAT/TRITICALE ****	***** TALL WHEAT/RYE *****
CT-CK	*****	*****
CT-AA	*****	*****
ST-AA	***** TALL WHEAT/RYE *****	**** SHORT WHEAT/TRITICALE ****
ST-CK	***** TALL WHEAT/RYE *****	**** SHORT WHEAT/TRITICALE ****
CT-CK	*****	*****
CT-AA	*****	*****

NOTE:

CT = CONVENTIONAL-TILL

ST = STRIP-TILL

CK = GREEN FLAGS = SEEDLINGS UNTREATED

AA = ORANGE FLAGS = SEEDLINGS TREATED WITH ACTIGARD & ADMIRE

PREPARING STRIP TILL TOBACCO

FALL/WINTER: PREPARE 64 ROWS

- I. FUMIGATE AS NEEDED & BED
- II. BOARD OFF BEDS
- III. PLANT GRAIN
- IV. APPLY 20-30 lbs. NITROGEN/ACRE

JANUARY/FEBRUARY:

- I. SPRAY ROUND-UP: 8-12" BAND DOWN THE CENTER OF EACH STRIP-TILL BED
- II. SPRAY ROUND-UP ON CONVENTIONAL TILL BEDS TO KILL ALL GRAIN/WEEDS

MARCH/APRIL:

- Ia. SPRAY WEEDY GRAIN WITH ROUNDUP 14-21 DAYS PRE TRANSPLANT
- Ib. SPRAY DENSE GRAIN WITH GRAMOXONE 5-7 DAYS PRE TRANSPLANT
- II. APPLY TOBACCO HERBICIDES
- III. IRRIGATE OVER FIELD 48-24 hrs. BEFORE TRANSPLANT
- IV. USE ORTHENE IN TRANSPLANT WATER
- V. STRIP-TILL: LEAVE STUBBLE AS IS & PLANT DOWN THE CENTER HALLWAY
- VI. CONV. TILL: RENOVATE BEDS & PLANT; PLOW AS NORMAL (2-4 TIMES)

LAYBY: PLOW ALL TREATMENTS

TABLE 1. THE EFFECT OF TILLAGE ON PLANT STAND AT LAYBY (SIX WEEKS POST TRANSPLANT)

% PLANT STAND AT LAYBY

TILLAGE ¹	TREATMENT ²	ODOM	HUGHES	BOWEN	HENDERSON
CONVENTIONAL	CK	94.0	94.6	98.1	97.0
CONVENTIONAL	A+A	93.3	95.6	93.2	98.9
ST (WHEAT)	CK	94.7	92.7	94.7	93.3
ST (WHEAT)	A+A	92.8	95.2	91.8	93.3
ST (RYE)	CK	93.2	92.0	89.2	91.7
ST (RYE)	A+A	93.4	94.6	88.1	95.2
<i>LSD (0.005)</i>	---	<i>NS</i>	2.5	6.2	3.5

¹ Conventional-till: plowed 3 times ST = strip-till: plowed only at layby

² CK = Seedlings untreated

A+A = Seedlings treated with Actigard (1.0 oz/100,000) & Admire Pro (0.8 oz/1,000)

TABLE 2. THE EFFECT OF TILLAGE ON THE INCIDENCE OF SPOTTED WILT AT LAYBY (SIX WEEKS POST TRANSPLANT)

% SPOTTED WILT AT LAYBY

TILLAGE ¹	TREATMENT ²	ODOM	HUGHES	BOWEN	HENDERSON
CONVENTIONAL	CK	10.2	5.6	11.6	17.6
CONVENTIONAL	A+A	4.8	2.0	4.1	7.6
ST (WHEAT)	CK	4.3	2.6	11.9	10.0
ST (WHEAT)	A+A	2.4	0.9	3.5	3.0
ST (RYE)	CK	3.0	2.4	7.6	9.2
ST (RYE)	A+A	1.3	0.7	2.5	3.0
<i>LSD (0.005)</i>	---	2.5	1.2	3.8	2.9

¹ Conventional-till: plowed 3 times ST = strip-till: plowed only at layby

² CK = Seedlings untreated

A+A = Seedlings treated with Actigard (1.0 oz/100,000) & Admire Pro (0.8 oz/1,000)

2008 Tobacco Variety Tests

Official Variety Test

1. K 346	2. NC 71
3. NC 72	4. NC 297
5. NC 55	6. NC 291
7. NC 196	8. NC 102
9. NC 299	10. CC 35
11. CC 13	12. CC 700
13. CC 27	14. CC 37
15. CC 65	16. Speight 210
17. Speight 220	18. Speight 225
19. Speight 227	20. Speight 234
21. Speight 168	22. Speight 236
23. PVH 1118	24. GF 52
25. NC 92	26. CH 1
27. CH 3	28. K 326

Regional Small Plot Test

1. NC 2326	2. NC 95
3. K 326	4. CU 109
5. RJR 225	6. CU 94
7. RJR 251	8. OX 2047
9. CC 507	10. NC EX 16
11. NC EX 15	12. NC EX 14
13. ULT 142	14. AOV 708
15. XP 275	16. NC EX 10
17. CU 61	18. RJR 25
19. XP 156	20. NC EX 13
21. CU 75	22. XP 274
23. EXP 806	24. XP 254
25. EXP 803	26. RJR 651
27. CU 90	28. XP 324

Regional Small Plot Test

29. EXP 305	30. RJR 62
31. ULT 112	32. LK 1
Regional Farm Test (2 row plots)	
1. NC 2326	2. NC 95
3. XP 596	4. RJR 75
5. GF 318	6. RJR 15
7. NC EX 08	8. CC 67
9. NC EX 09	10. CC 33
11. NC EX 07	12. K 326

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

Road

Actigard and Admire Pro Application Timing Study
Bowen Farm 2008- UGA Dept. Of Plant Pathology A.S. Csinos, Ph.D. P.O. Box 748 Tifton, Georgia 229-386-3373

611	606	617	614	601	608	616	603	610	619	604	615	609	620	618	607	613	602	612	605
507	504	519	512	516	503	513	520	506	518	502	511	515	505	510	501	517	509	514	508
410	413	401	406	414	402	411	409	417	415	403	418	407	416	404	412	408	419	405	420
305	309	318	315	304	312	308	316	303	310	307	314	311	302	320	317	319	306	313	301
203	212	220	204	213	209	219	205	214	201	217	206	210	215	207	211	218	208	216	202
101	108	114	102	111	116	103	113	118	104	109	119	105	112	117	106	115	120	110	107

Treatment in greenhouse float

Actigard Field application after transplanting

**Note: All Actigard 50 WP greenhouse @ 2gai/7000 plants;
all Admire Pro @ 1 oz/1000 plants. All field applications
made at 1/2 oz/A of Actigard 50 WP.
Spray trigger 1st symptom and % TSWV thereafter is on
non-treated control plants*

- | | |
|--------------------------------------|---|
| 1. Non Treated | No field treatment |
| 2. Actigard & Admire Pro Greenhouse | No field treatment |
| 3. Actigard & Admire Pro Greenhouse | + 7 days post transplant (DPT) |
| 4. Actigard & Admire Pro Greenhouse | + 14 DPT |
| 5. Actigard & Admire Pro Greenhouse | + 21 DPT |
| 6. Actigard & Admire Pro Greenhouse | + 28 DPT |
| 7. Actigard & Admire Pro Greenhouse | + 35 DPT |
| 8. Actigard & Admire Pro Greenhouse | + 42 DPT |
| 9. Actigard & Admire Pro Greenhouse | + 49 DPT |
| 10. Actigard & Admire Pro Greenhouse | + 1 st symptom |
| 11. Actigard & Admire Pro Greenhouse | + 1 st symptom + 2 weeks + 2 weeks |
| 12. Actigard & Admire Pro Greenhouse | + 1 st symptom-inject Actigard |
| 13. Actigard & Admire Pro Greenhouse | + 1 st symptom-inject Admire |
| 14. Actigard & Admire Pro Greenhouse | + 14 DPT + 2 weeks |
| 15. Actigard & Admire Pro Greenhouse | + 1 st symptom + 2 weeks |
| 16. Actigard & Admire Pro Greenhouse | + 28 DPT + 2 weeks |
| 17. Actigard & Admire Pro Greenhouse | + 1 st symptom + inject A+A (x2) |
| 18. Actigard & Admire Pro Greenhouse | + 1 st symptom + inject A+A |
| 19. Actigard & Admire Pro Greenhouse | + 21 DPT + 2 weeks |
| 20. K326T | No field treatment |

Data to be collected:

1. Stand counts, Infected plants (%)TSWV, dead plants (%)TSWV, TSWV+ plants flagged each week
2. ELISA sampling
3. Plant height at 6 weeks
4. Plant vigor
5. Yield (green weight, pounds)

Revised 3/5/08

Actigard and Admire Pro Application Timing Study
Bowen Farm 2008
UGA Dept. of Plant Pathology , Tifton, GA

The use of Actigard and Admire Pro in the float house prior to transplanting has become the standard for management of Tomato Spotted Wilt Virus (TSWV) on tobacco in Georgia. However, in many years TSWV appears late in the growing season, sometimes up to four to six weeks after transplanting. This study evaluates the use of field applications of Actigard for decreasing the incidence of TSWV, and increasing the total yield of tobacco.

Applications of Actigard are made at weekly intervals to determine the application that provides both a reduction in incidence of TSWV and an increase in yield over the recommended standard.

2008 UNIVERSITY OF GEORGIA
COOPERATIVE EXTENSION SERVICE
TOBACCO ON-FARM DEMONSTRATIONS

Title: SIDEDRESS NITROGEN FERTILIZER SOURCE DEMONSTRATION

Farmer Name/Address: CPES - BOWEN FARM County: TIFT

Extension Specialist Responsible: J. MICHAEL MOORE

Plot Size: 2 (44") ROWS X 58.5', 10' Alleys

Variety: K 326 Soil Type: SL Date Transplanted: (4-3-08)

Crop History: 2006; Peanuts 2007; Fallow

Herbicide/Rate: PPI; PROWL 3.3: 2 pt Post Plant;
SPARTAN SURFACE APPLIED PRIOR TO TRANSPLANTING 8 OZ/A

Fungicides/Rate: Nematicides/Rate: Telone II, 10 gals

Soil Insecticide/Rate:

Foliar Insecticide/Rate:

Fertility Program: AS PER TREATMENTS Date: 4/25/8, 5/16/8

Rainfall: March; April; May; June; July; August;

Topping: Date; Average No. Leaves Per Plant;

Sucker Control:

Material; Rate/Acre; Date;

37 L	38 K	39 J	40 I	41 H	42 G	43 F	44 E	45 D	46 C	47 B	48 A	58.5'
25 J	26 D	27 E	28 L	29 I	30 C	31 H	32 B	33 G	34 A	35 F	36 K	58.5'
13 K	14 F	15 G	16 A	17 H	18 B	19 J	20 C	21 I	22 D	23 L	24 E	58.5'
1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	58.5'

Trt	Analysis	lb/A	lb/row	(N-P-K)	Analysis	lb/A	lb/row	(N-P-K)
A.	6-6-18	667	3.28	(40-40-120)	15.5-0-0	226	1.1	(75-40-180)
					0-0-22	272	1.3	
B.	6-6-18	667	3.28	(40-40-120)	13-0-44	269	1.3	(75-40-238)
C.	6-6-18	667	3.28	(40-40-120)	NH ₄ NO ₃	103	0.50	(75-40-180)
					0-0-22	272	1.3	
D.	15.5-0-0	156	0.77	(24.3-0-0)	15.5-0-0	226	1.1	(75-40-180)
	0-0-22	545	2.7	(0-0-120)	0-0-22	272	1.3	
	ME S15	121	0.6	(15.7-40-0)				
	(13-33-0-15S)			[40-40-120]				
E.	15.5-0-0	180	0.89	(28-0-0)	15.5-0-0	226	1.1	(75-40-180)
	0-0-22	545	2.7	(0-0-120)	0-0-22	272	1.3	
	ME SZ	100	0.49	(12-40-0)				
	(12-40-0-10S-1Zn)			[40-40-120]				
F.	15.5-0-0	186	0.92	(28.8-0-0)	15.5-0-0	226	1.1	(75-40-180)
	0-0-22	520	2.6	(0-0-114.4)		272	1.3	
	ACT 62E	117	0.57	(11.2-40-5.15)	0-0-22			
	(20% 0-0-22 + 80% 12-40-0)			[40-40-124.7]				
G.	6-6-18	667	3.28	(40-40-120)	15.5-0-0	226	1.1	(75-40-180)
	Nutri-Phite	1 qt (4 X	bnded		0-0-22	272	1.3	
	604ml in 4 gal of solution	foliar)						
H.	6-6-18	667	3.28	(40-40-120)	15.5-0-0	226	1.1	(75-40-180)
	Nutri-Phite	1 qt (4 X	brdcast		0-0-22	272	1.3	
	151ml in 4 gal of solution	foliar)						
I.	6-6-18	667	3.28	(40-40-120)	15.5-0-0	226	1.1	(75-40-180)
	Tricard Rescue	1 gal /100	bnded		0-0-22	272	1.3	
	151ml in 4 gal of solution	gal (4 X foliar)						
J.	13-0-44	307	1.5	(40-0-135)	14-0-14	250	1.23	(75-40-180)
					0-0-22	113	0.57	
K.	6-6-18	334	1.6	(20-20-180)	15.5-0-0	354	1.7	(75-20-180)
	0-0-22 Kmag	550	2.7					
L.	6-6-18	334	1.6	(20-20-180)	UCAN 17	27.5	519 ml	(75-20-180)
	0-0-22 Kmag	550	2.7		gal			

UCAN 17 = UAN-32 - 37%; CN-9 - 63% by volume

2008 UNIVERSITY OF GEORGIA
COOPERATIVE EXTENSION SERVICE
TOBACCO ON-FARM DEMONSTRATIONS

Title of Demonstration: TRANSPLANT WATER FERTILIZER DEMONSTRATION

Farmer Name/Address: CPES - BOWEN FARM

Extension Specialist Responsible: J. MICHAEL MOORE

Plot Size: 1 (44") ROWS X 58.5', 10' Alleys

Variety: K 326 Soil Type: SL Date Transplanted: (4/23/8)

Crop History: 2006: Fallow 2007: Peanuts

Herbicide/Rate: PPI; PROWL 3.3: 2 pt
SPARTAN SURFACE APPLIED w/ SHIELDS AFTER TRANSPLANTING 8 OZ/A

Fungicides/Rate: Nematicides/Rate: TELONE II 10GAL/A

Soil Insecticide/Rate: LORSBAN 1QT/A MARCH 1, 2008

Foliar Insecticide/Rate:

Date: MAY 3	Fertility Program: 6-6-18	1000 LBS/A
JUNE 1	15.5-0-0	120 LBS/A

Rainfall: March; April; May; June; July; August;

Topping: Date; Average No. Leaves Per Plant;

Sucker Control:

Material;	Rate/Acre;	Date;
Material;	Rate/Acre;	Date;
Material;	Rate/Acre;	Date;

49 P	50 O	51 N	52 M	53 L	54 K	55 J	56 I	57 H	58 G	59 F	60 E	61 D	62 C	63 B	64 A	
33 F	34 H	35 J	36 L	37 N	38 P	39 A	40 C	41 E	42 M	43 I	44 K	45 G	46 O	47 D	48 B	
17 N	18 L	19 G	20 A	21 C	22 E	23 I	24 K	25 M	26 O	27 P	28 B	29 J	30 F	31 H	32 D	
1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P	

Table 1. Transplant Water Fertilizer Demonstration on the
Bowen Farm of the Coastal Plain Experiment Station, Tift County, 2008.

Trt	Treatments	Rate /A	Amt /10 gal mix	rep 1	rep 2	rep 3	rep 4	Visual Rating (1-10) 5/17/8
A.	Check	----		1	20	39	64	2.5
B.	Ultrasol (9-45-15)	6 lbs/100 gal	273 g	2	28	48	63	6.25
C.	Ultrasol (10-52-8)	6 lbs/100 gal	273 g	3	21	40	62	7
D.	Agrilience (10-52-8)	5 lbs/100 gal	228 g	4	32	47	61	6
E.	Jump Start (8-31-4)	4 qts/A	166 ml	5	22	41	60	7.25
F.	Jump Start (8-31-4)	6 qts/A	249 ml	6	30	33	59	7.5
G.	PercPlus (12-48-8)	16 oz/A	95 ml	7	19	45	58	2.75
H.	ME S15 (13-33-0-15S)	121.2 lb/A		8	31	34	57	6.25
I.	ME SZ (12-40-0-10-S-1Zn)	100 lb/A		9	23	43	56	7.25
J.	ACT 62E	87.7 lb/A		10	29	35	55	5
K.	Capture LFR Ultrasol (9-45-15)	3.4 oz/A 6 lbs/100 gal	0.2-0.39 oz / 1000 linear row foot	11	24	44	54	7.25
L.	Capture LFR Ultrasol (9-45-15)	6.8 oz/A 6 lbs/100 gal		12	18	36	53	7.25
M.	14-0-14	100 lb/A		13	25	42	52	6.5
N.	Calcium Nitrate (soda flo)	90 lb/A	199 g/row	14	17	37	51	6
O.	34-0-0	41 lb/A		15	26	46	50	6
p.	Pop-Up (10-34-0)	12 gal/A	7.56 oz	16	27	38	49	6.5
10 gal mix = 178 gal /A								

Effect of Actigard and Admire Pro on TSWV and Plant Yield Bowen Farm, Tifton, GA 2008

Stephen W Mullis, Plant Pathology, UGA
Claudia Nischwitz, Plant Pathology, UGA
Alex Csinos, Plant Pathology, UGA
Lara Lee Hickman, Plant Pathology, UGA
Ron Gitaitis, Plant Pathology, UGA

Background

Plants are monitored individually for TSWV and their response to Actigard and Admire Pro treatments. This is a follow-up study from the 2007 growing season that exhibited significant differences between chemical treatments and controls, as well as significant harvest yield differences between TSWV infection categories. The effects of environmental factors, plant canopy compensation, and thrips densities are other variables to be observed and noted during this trial.

Plot Plan

404	402	403	401
301	303	304	302
203	201	202	204
102	104	101	103

Plot Size: single row; 37 feet each with 10 foot alley

Replications: four; randomized complete block design

Plant Spacing: 22"

Tobacco Variety: NC71 and K-326

Treatments

1. Non treated NC71
2. A+A in float house
3. A+A in float house + Actigard field spray at first symptom
4. K326 control

Note: (A+A)= Actigard 2gai/7000 plants + Admire Pro 1 oz/1000plants

(AF)= Actigard 0.5 oz field spray; narrow band at 1st symptom in control

Data Collected

Weekly TSWV counts; Phyto ratings; Vigor ratings; harvest yield; post harvest root ELISA for TSWV; Thrips counts; soil temperature monitoring; and soil analysis.

Preliminary Data as of June 5, 2008

At eight weeks into the growing season, there has been 6.1% total TWSV symptomatic plants noted within the plot. There are no significant differences between the treatments thus far. There have been root ELISA testing conducted on guard rows within the crop area and they have consistently shown a higher percentage of infections. It is yet to be seen whether this higher percentage of infection will translate into higher percentages of diseased plants.

Update on the Survey of Weeds as Hosts of *Tomato spotted wilt virus* (TSWV) in the Farmscape of Southern Georgia

Stephen W. Mullis, Plant Pathology - UGA
Alex S. Csinos, Plant Pathology - UGA
Ronald D. Gitaitis, Plant Pathology - UGA
Claudia Nischwitz, Plant Pathology UGA

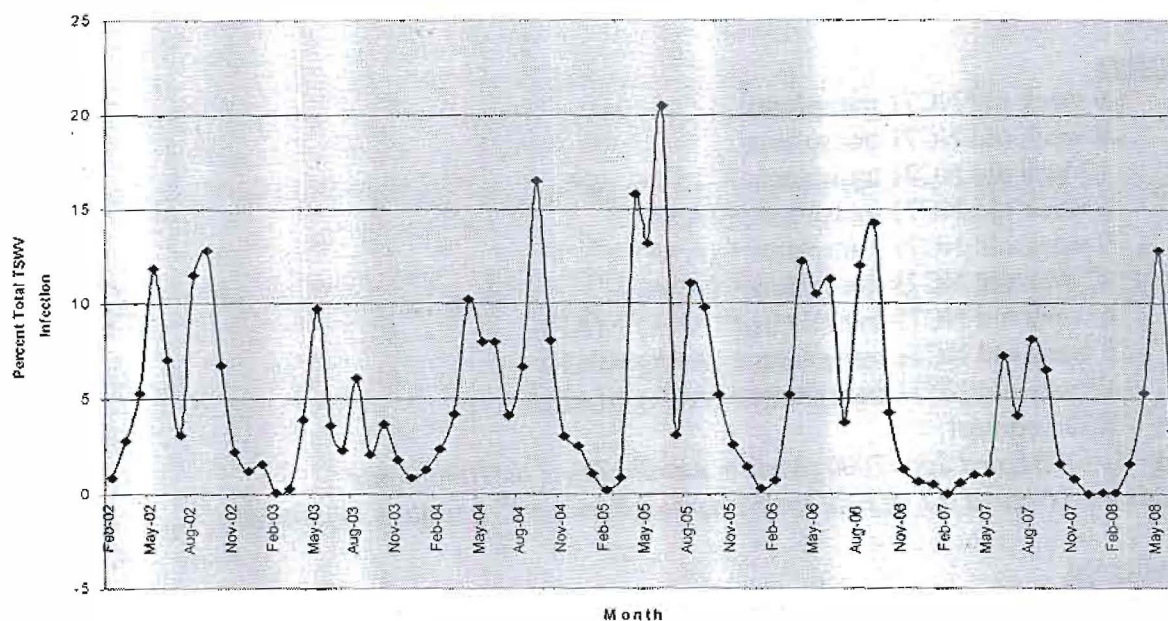
Introduction

Tomato spotted wilt virus has been one of the most devastating diseases in the Georgia agricultural community for the last two decades. This virus has been variable in its infection patterns and observations have indicated that wild plant hosts may play a vital role in TSWV disease epidemiology. These weeds may serve as reservoirs for the virus as well as reproductive hosts for the known thrips vectors of the disease. A study of the weeds surrounding tobacco fields was begun in 2002 with ten locations in southern Georgia being sampled on a monthly basis to determine levels of TSWV naturally occurring in the wild plants. More than 61 thousand plants have been sampled over the past six years of this study to garner an understanding of the general levels of the virus in the farmscape.

Materials and Methods

The areas that are samples are the Bowen Farm, Blackshank Farm, and Blackshank nurseries of the Tifton area. Atkinson, Berrien, Burke, Coffee, and Tattnall Counties are additional areas under study at this time. A total on 990 plants are screened on a monthly basis for TSWV using Double Antibody Sandwich-Enzyme Linked Immunosorbent Assay (DAS-ELISA using commercially available kits (Agdia, Elkhart, IN). The plants chosen are ones identified in the first three-year phase of the study as plants that were susceptible to the virus and ones that were commonly infected with TSWV.

Results to Date



Acknowledgments

The authors want to thank Philip Morris for their continuing support of this project.

Plant Age and Admire-Actigard Treatments Bowen Farm, Tifton, GA 2008

Claudia Nischwitz, Plant Pathology, UGA
Stephen W Mullis, Plant Pathology, UGA
Alex Csinos, Plant Pathology, UGA
Lara Lee Hickman, Plant Pathology, UGA

Background

Three different transplants ages (6 weeks, 9 weeks and 12 weeks) in combination with three Admire-Actigard treatments (no treatment; Admire-Actigard applied in greenhouse only; and Admire-Actigard applied in greenhouse with an additional field application of Actigard after the appearance of the first TSWV symptom in the field) are evaluated for the percentage of symptomatic plants, percentage of systemic infection and yield

Plot Plan

507	502	506	509	504	501	510	503	505	508
401	405	403	406	407	409	408	402	410	404
304	308	310	302	305	303	306	307	309	301
209	203	205	207	201	208	204	210	202	206
106	101	109	104	110	107	102	105	108	103

Plot Size: two rows; 37 feet each with 10 foot alley
Replications: five; randomized complete block design
Plant Spacing: 22"
Tobacco Variety: NC71 and K-326

Treatments

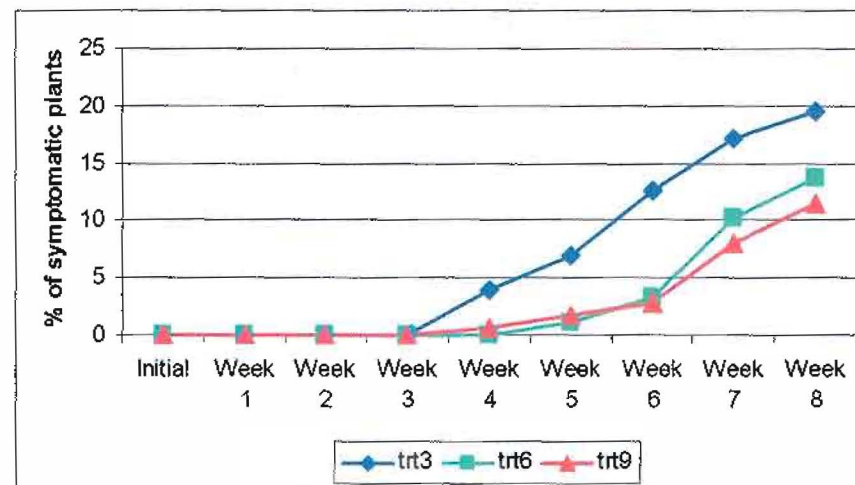
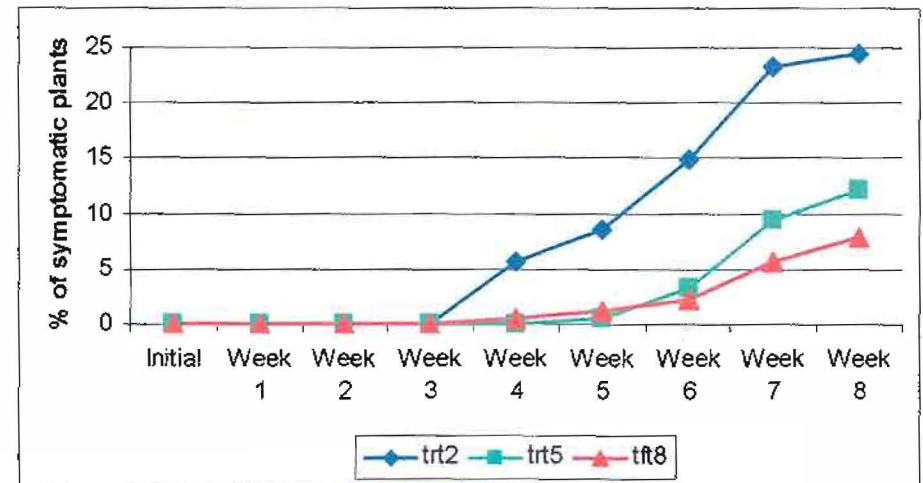
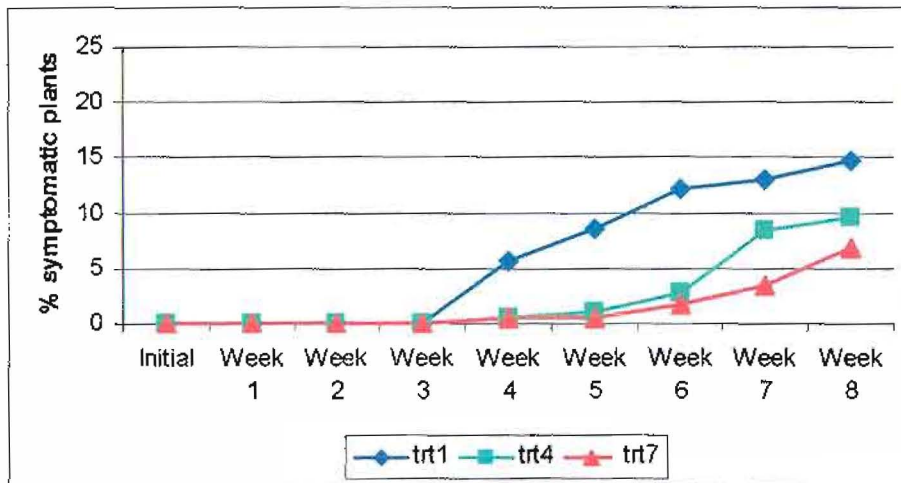
1. 6 week old NC71 transplants
2. 9 week old NC71 transplants
3. 12 week old NC71 transplants
4. 6 week old NC71 transplants + (A+A)
5. 9 week old NC71 transplants + (A+A)
6. 12 week old NC71 transplants + (A+A)
7. 6 week old NC71 transplants + (A+A) + (AF)
8. 9 week old NC71 transplants + (A+A) + (AF)
9. 12 week old NC71 transplants + (A+A) + (AF)
10. K326 control

Note: (A+A) = Actigard 2gai/7000 plants + Admire Pro 1 oz/1000plants
(AF) = Actigard 0.5 oz field spray; narrow band at 1st symptom in control

Data Collected

Weekly TSWV counts; Phyto ratings; height measurements; Vigor ratings; harvest yield; post harvest root ELISA for TSWV; Thrips counts.

Transplant Age And Actigard + Admire 2008



Johnson Variety Evaluation 2008
(J)

Rep 5				10	15	28	24	3	8	6	26	12	27	20	1	17	13	
Rep 4		315	514	7	23	8	17	24	14	1	18	22	19	13	15	27	4	502
		323	522	12	26	28	2	9	6	21	16	25	10	5	3	20	11	509
Rep 3		305	516	4	17	11	24	20				22	1	8	26	18	6	525
		327	511	14	9	21	3	28				19	16	13	7	2	10	507
Rep 2		312	523	8	3	25	7	11	19	9	4	13	27	21	24	17	20	521
		325	518	12	18	6	16	15	1	10	26	23	2	14	28	22	5	504
Rep 1			505	28	27	26	25	24	23	22	21	20	19	18	17	16	15	519
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	

Entries:

1. CU 109	2. CU 94	3. CU 61	4. CU 75
5. CU 90	6. CU 100	7. CU 108	8. CU 95
9. CU 110	10. CU92	11. H 9	12. H 11
13. H 22	14. H 50	15. H 59	16. H 61
17. H 75	18. H 94	19. H 95	20. H 100
21. H 103	22. H 106	23. H 108	24. H 109
25. H 110	26. H 117	27. NC71	28. Transgenic K 326

Plot size – 2 row 12 plants per plot ; 44" row spacing; 20" in row space; 6ft alley

No actigard / admire applied to transplants or field plants in row 1

Actigard / Admire and Actigard field spray applied to transplants and field plants in row 2

PPI – Prowl, Ridomil, Lorsban at recommended rates.

Pre – T – Spartan (8 oz/acre max and watered in before transplant)

Transplanting – No insecticides in transplant water

Fertilization and cultivation - Standard

Irrigation – Standard (as needed)

Insect control – Lepidopt. insecticides only

Sucker control – None

Harvest – None

Data:

Initial plant stand

Weekly TSWV symptomatic beginning week 3 until topping

Flag symptomatic plants

2008 STRIP-TILL TOBACCO

Nathan Henderson, Grower, Coffee County
Eddie McGriff, Coffee County Extension Coordinator

EACH ROW OF ***** = 4 ROWS OF TOBACCO (NC-297)

[<----- 400-600' ----->]

ST-CK	**** SHORT WHEAT/TRITICALE ****	***** TALL WHEAT/RYE *****
ST-AA	**** SHORT WHEAT/TRITICALE ****	***** TALL WHEAT/RYE *****
CT-AA	*****	*****
CT-CK	*****	*****
CT-AA	*****	*****
CT-CK	*****	*****
ST-CK	***** TALL WHEAT/RYE *****	**** SHORT WHEAT/TRITICALE ****
ST-AA	***** TALL WHEAT/RYE *****	**** SHORT WHEAT/TRITICALE ****
ST-AA	**** SHORT WHEAT/TRITICALE ****	***** TALL WHEAT/RYE *****
ST-CK	**** SHORT WHEAT/TRITICALE ****	***** TALL WHEAT/RYE *****
CT-CK	*****	*****
CT-AA	*****	*****
ST-AA	***** TALL WHEAT/RYE *****	**** SHORT WHEAT/TRITICALE ****
ST-CK	***** TALL WHEAT/RYE *****	**** SHORT WHEAT/TRITICALE ****
CT-CK	*****	*****
CT-AA	*****	*****

NOTE:

CT = CONVENTIONAL-TILL

ST = STRIP-TILL

CK = GREEN FLAGS = SEEDLINGS UNTREATED

AA = ORANGE FLAGS = SEEDLINGS TREATED WITH ACTIGARD & ADMIRE

PREPARING STRIP TILL TOBACCO

FALL/WINTER: PREPARE 64 ROWS

- I. FUMIGATE AS NEEDED & BED
- II. BOARD OFF BEDS
- III. PLANT GRAIN
- IV. APPLY 20-30 lbs. NITROGEN/ACRE

JANUARY/FEBRUARY:

- I. SPRAY ROUND-UP: 8-12" BAND DOWN THE CENTER OF EACH STRIP-TILL BED
- II. SPRAY ROUND-UP ON CONVENTIONAL TILL BEDS TO KILL ALL GRAIN/WEEDS

MARCH/APRIL:

- la. SPRAY WEEDY GRAIN WITH ROUNDUP 14-21 DAYS PRE TRANSPLANT
- lb. SPRAY DENSE GRAIN WITH GRAMOXONE 5-7 DAYS PRE TRANSPLANT
- II. APPLY TOBACCO HERBICIDES
- III. IRRIGATE OVER FIELD 48-24 hrs. BEFORE TRANSPLANT
- IV. USE ORTHENE IN TRANSPLANT WATER
- V. STRIP-TILL: LEAVE STUBBLE AS IS & PLANT DOWN THE CENTER HALLWAY
- VI. CONV. TILL: RENOVATE BEDS & PLANT; PLOW AS NORMAL (2-4 TIMES)

LAYBY: PLOW ALL TREATMENTS

TABLE 1. THE EFFECT OF TILLAGE ON PLANT STAND AT LAYBY (SIX WEEKS POST TRANSPLANT)

% PLANT STAND AT LAYBY

TILLAGE ¹	TREATMENT ²	ODOM	HUGHES	BOWEN	HENDERSON
CONVENTIONAL	CK	94.0	94.6	98.1	97.0
CONVENTIONAL	A+A	93.3	95.6	93.2	98.9
ST (WHEAT)	CK	94.7	92.7	94.7	93.3
ST (WHEAT)	A+A	92.8	95.2	91.8	93.3
ST (RYE)	CK	93.2	92.0	89.2	91.7
ST (RYE)	A+A	93.4	94.6	88.1	95.2
LSD (0.005)	---	NS	2.5	6.2	3.5

¹ Conventional-till: plowed 3 times ST = strip-till: plowed only at layby

² CK = Seedlings untreated

A+A = Seedlings treated with Actigard (1.0 oz/100,000) & Admire Pro (0.8 oz/1,000)

TABLE 2. THE EFFECT OF TILLAGE ON THE INCIDENCE OF SPOTTED WILT AT LAYBY (SIX WEEKS POST TRANSPLANT)

% SPOTTED WILT AT LAYBY

TILLAGE ¹	TREATMENT ²	ODOM	HUGHES	BOWEN	HENDERSON
CONVENTIONAL	CK	10.2	5.6	11.6	17.6
CONVENTIONAL	A+A	4.8	2.0	4.1	7.6
ST (WHEAT)	CK	4.3	2.6	11.9	10.0
ST (WHEAT)	A+A	2.4	0.9	3.5	3.0
ST (RYE)	CK	3.0	2.4	7.6	9.2
ST (RYE)	A+A	1.3	0.7	2.5	3.0
LSD (0.005)	---	2.5	1.2	3.8	2.9

¹ Conventional-till: plowed 3 times ST = strip-till: plowed only at layby

² CK = Seedlings untreated

A+A = Seedlings treated with Actigard (1.0 oz/100,000) & Admire Pro (0.8 oz/1,000)

**UNIVERSITY OF GEORGIA
COOPERATIVE EXTENSION SERVICE
TOBACCO ON-FARM DEMONSTRATION
JEFF DAVIS COUNTY, GEORGIA – 2008**

Kenneth & Jason Williams, Farmer Cooperators
Tim Varnedore, County Extension Coordinator
J. Michael Moore, Extension Agronomist- Tobacco
David C. Jones, Extension Entomologist (Retired)
Ed Troxell, Research Extension Technician

**EVALUATION OF IMIDACLOPRID FORMULATIONS, THIAMETHOXAM, AND ACTIGARD IN
SUPPRESSION OF TOMATO SPOTTED WILT VIRUS IN FLUE-CURED TOBACCO**

MATERIALS AND METHODS

- Plots:** Four rows, 46 inches wide and 150 feet long. Approximately 400 plants per plot. Approximately 7,600 plants per acre. Randomized complete block design with 4 replications per treatment.
- Application:** Telone II(6 gals./acres) was applied to the plots. Actigard 50WG was applied to the plants in the greenhouse on April 16. The other greenhouse treatments were applied as a tray drench on April 17.
- Variety:** Tobacco cultivar NC 299 (greenhouse grown) transplanted April 23.

Table 1. Treatments: Kenneth & Jason Williams Farm, Jeff Davis County GA - 2008

Treatment Number	Treatment Material	Tray Drench* Rate/1000 cells	Company
1	Untreated	-	
2	Untreated + Actigard 50WG	oz./ 50,000 cells	Syngenta Crop Protection
3	Admire Pro 4.6SC	0.8 oz.	Bayer Crop Science
4	Admire Pro 4.6SC + Actigard 50WG	0.8 oz + 0.5 oz./ 50,000 cells	
5	Alias 2F	1.8 oz.	MANA
6	Alias 2F + Actigard 50WG	1.8 oz + 0.5 oz./ 50,000 cells	
7	Couraze 2F	1.8 oz.	Cheminova
8	Couraze 2F + Actigard 50WG	1.8 oz + 0.5 oz./ 50,000 cells	
9	Imida E-AG 2F	1.8 oz.	Etigra
10	Imida E-AG 2F + Actigard 50WG	1.8 oz + 0.5 oz./ 50,000 cells	
11	Macho 2F	1.8 oz.	Albaugh
12	Macho 2F + Actigard 50WG	1.8 oz + 0.5 oz./ 50,000 cells	

Table 1 (Cont'd)

13	Nuprid 2F	1.8 oz.	NuFarm
14	Nuprid 2F + Actigard 50WG	1.8 oz + 0.5 oz./ 50,000 cells	
15	Torrent 2F	1.8 oz.	SipCam
16	Torrent 2F + Actigard 50WG	1.8 oz + 0.5 oz./ 50,000 cells	
17	T-MOXX 2SC	1.3 oz.	Fair Products
18	T-MOXX 2SC + Actigard 50WG	1.3 oz. + 0.5 oz./ 50,000 cells	

***Tray Drench = 10 gallons of solution/100,000 cells**

**EVALUATION OF IMIDACLOPRID FORMULATIONS,
THIAMETHOXAM, AND ACTIGARD IN FLUE-CURED TOBACCO
KENNETH & JASON WILLIAMS FARM – JEFF DAVIS COUNTY, GA – 2008**

Experimental Design:

Treatments:	9	11	15	7	4	12	17	13	16	2	14	5	18	6	3	8	1	10
Plots →	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418

Treatments:	3	6	17	10	2	16	8	11	5	18	13	1	15	14	7	12	9	4
Plots →	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318

Treatments:	7	5	14	11	1	13	12	3	16	4	9	15	17	18	2	10	6	8
Plots →	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218

Treatments:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Plots →	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118

Table 2. Suppression of Tomato Spotted Wilt Virus in Flue- Cured Tobacco.
Kenneth & Jason Williams Farm, Jeff Davis County, GA - 2008

Treatment Number	Treatment Material	Tray Drench ¹ Rate/1000 cells	TSWV (% Symptomatic Plants ²)			
			5/14	5/28	6/4	
1	Untreated	-	1.6	11.1	19.9	
2	Untreated + Actigard 50WG	0.8 oz.	0.4	10.4	19.3	
3	Admire Pro 4.6SC	0.8 oz.	0.2	6.6	12.9	
4	Admire Pro 4.6SC + Actigard 50WG	0.8 oz + 0.5 oz./ 50,000 cells	0.1	3.9	9.4	
5	Alias 2F	1.8 oz.	0.2	5.6	13.3	
6	Alias 2F + Actigard 50WG	1.8 oz + 0.5 oz./ 50,000 cells	0.1	3.4	9.8	
7	Couraze 2F	1.8 oz.	0.4	5.6	11.8	
8	Couraze 2F + Actigard 50WG	1.8 oz + 0.5 oz./ 50,000 cells	0.1	3.8	10.5	

Table 2. (Cont'd)

Treatment Number	Treatment Material	Tray Drench ¹ Rate/1000 cells	TSWV (Percentage Symptomatic Plants ²)			
			5/14	5/28	6/4	
9	Imida E- AG 2F	1.8 oz.	0.3	4.3	9.3	
10	Imida E- AG 2F + Actigard 50WG	1.8 oz. + 0.5 oz./ 50,000 cells	0.1	5.2	12.8	
11	Macho 2F	1.8 oz.	0.3	6.0	13.5	
12	Macho 2F + Actigard 50WG	1.8 oz. + 0.5 oz./ 50,000 cells	0	4.1	9.3	
13	Nuprid 2F	1.8 oz.	0.5	6.0	13.5	
14	Nuprid 2F + Actigard 50WG	1.8 oz. + 0.5 oz./ 50,000 cells	0	4.1	11.1	
15	Torrent 2F	1.8 oz.	0.4	6.4	13.1	
16	Torrent 2F + Actigard 50WG	1.8 oz. + 0.5 oz./ 50,000 cells	0	3.8	10.4	

Table 2. (Cont'd)

Treatment Number	Treatment Material	Tray Drench ¹	TSWV (Percentage Symptomatic Plants ²)			
			5/14	5/28	6/4	
17	T-MOXX 2SC	1.3 oz.	1.4	10.8	16.7	
18	T-MOXX 2SC + Actigard 50WG	1.3 oz. + 0.5 oz./ 50,000 cells	0.1	5.9	13.1	

¹Tray Drench = 10 gallons of solution /100,000 cells

²TSWV: % Symptomatic Plants – Examined all plants in each plot on each evaluation date.

**UNIVERSITY OF GEORGIA
COOPERATIVE EXTENSION SERVICE
TOBACCO ON-FARM DEMONSTRATION
JEFF DAVIS COUNTY, GEORGIA – 2008
Jerry Wooten & Sons, Farmer Cooperators
Tim Varnedore, County Extension Coordinator
David C. Jones, Extension Entomologist (Retired)
Herb Young, Bayer CropScience**

**EVALUATION OF SELECTED PESTICIDES FOR
SUPPRESSION OF TOBACCO PESTS IN FLUE-CURED TOBACCO**

MATERIALS AND METHODS

- Plots: Four rows, 46 inches wide and 80 feet long. Approximately 213 plants per plot. Approximately 7,600 plants per acre. Randomized complete block design with 4 replications per treatment.
- Application: Telone II (6.5 gals/acre) was injected into each row of all the #2 treatment plots on March 26. No Lorsban 4E was applied to any of the plots. The greenhouse treatments were applied on April 14.
- Variety: Tobacco cultivar K-394 (greenhouse grown) transplanted April 17.

Table 1. Treatments: Jerry Wooten & Sons Farm, Jeff Davis County GA - 2008

Treatment Number	Treatment Material	Tray Drench* Rate/1000 cells
1	Untreated +	
	Actigard 50WG	0.5 oz./50,000 cells
2	Admire Pro 4.6SC +	.8 oz.
	Actigard 50WG +	0.5 oz./50,000 cells
	Telone II	6 gal./acre
3	Admire Pro 4.6SC +	0.8 oz.
	Actigard 50WG	0.5 oz./50,000 cells
4	Admire Pro 4.6SC +	0.8 oz.
	Actigard 50WG +	0.5 oz./ 50,000 cells
	BioYield	30 gms.
5	Admire Pro 4.6SC +	1.2 oz.
	Actigard 50WG	0.5 oz./50,000 cells
6	Admire Pro 4.6SC +	0.8 oz.
	Actigard 50WG +	0.5 oz./ 50,000 cells
	Test Compound #1	
7	Admire Pro 4.6SC +	0.8 oz.
	Actigard 50WG +	0.5 oz./50,000 cells
	Test Compound #2	
8	Admire Pro 4.6SC +	0.8 oz.
	Actigard 50WG +	0.5 oz./ 50,000 cells
	Test Compound #3	

*Tray Drench = 10 gallons of solution/100,000 cells

Note: Treatment #5 was Tobacco cultivar K-326. Actigard 50WG was applied on April 11. Admire Pro 4.6SC was applied on April 13.

Jerry Wooten & Sons Farm
Jeff Davis County Georgia - 2008

Experimental Design:

Treatments:	3	8	4	7	2	5	1	6
Plots →	401	402	403	404	405	406	407	408

Treatments:	7	3	1	8	5	6	4	2
Plots →	301	302	303	304	305	306	307	308

Treatments:	2	8	5	7	4	3	6	1
Plots →	201	202	203	204	205	206	207	208

Treatments:	1	2	3	4	5	6	7	8
Plots →	101	102	103	104	105	106	107	108

Table 2. Suppression of Tomato Spotted Wilt Virus in Flue-cured Tobacco.
Jerry Wooten & Sons Farm - Jeff Davis County, Georgia - 2008

Treatment Number	Treatment	Tray Drench ¹ Rate/1000 cells	TSWV (% Symptomatic Plants ²)						
			5/27	6/3	6/9				
1	Untreated + Actigard 50WG	0.5 oz./50,000 cells	13.7	19.0	22.7				
2	Admire Pro 4.6SC + Actigard 50WG + Telone II	0.8 oz. + 0.5 oz./50,000 cells + 6.5 gal./acre	10.6	18.0	21.8				
3	Admire Pro 4.6SC + Actigard 50WG	0.8 oz. + 0.5 oz./50,000 cells	8.3	13.7	16.7				
4	Admire Pro 4.6SC + Actigard 50WG + BioYield	0.8 oz. + 0.5 oz./50,000 cells + 30 gms.	6.5	11.3	13.7				
5	Admire Pro 4.6SC + Actigard 50WG	1.2 oz. + 0.5 oz./50,000 cells	8.1	12.0	16.1				
6	Admire Pro 4.6SC + Actigard 50WG + Test Compound #1	0.8 oz. + 0.5 oz./50,000 cells	5.6	10.0	13.4				

Table 2 (Cont'd)

7	Admire Pro 4.6SC + Actigard 50WG + Test Compound #2	0.8 oz. + 0.5 oz./50,000 cells	8.7	12.3	14.8					
8	Admire Pro 4.6SC + Actigard 50WG + Test Compound #3	0.8 oz. + 0.5 oz./50,000 cells	6.1	10.8	14.8					

¹Tray Drench = 10 gallons of solution/100,000 cells

²TSWV: % Symptomatic Plants – Examined all plants in each plot on each evaluation date.

GEORGIA COUNTY ESTIMATES TOBACCO --2006-2007

USDA,NASS,
GEORGIA
FIELD OFFICE

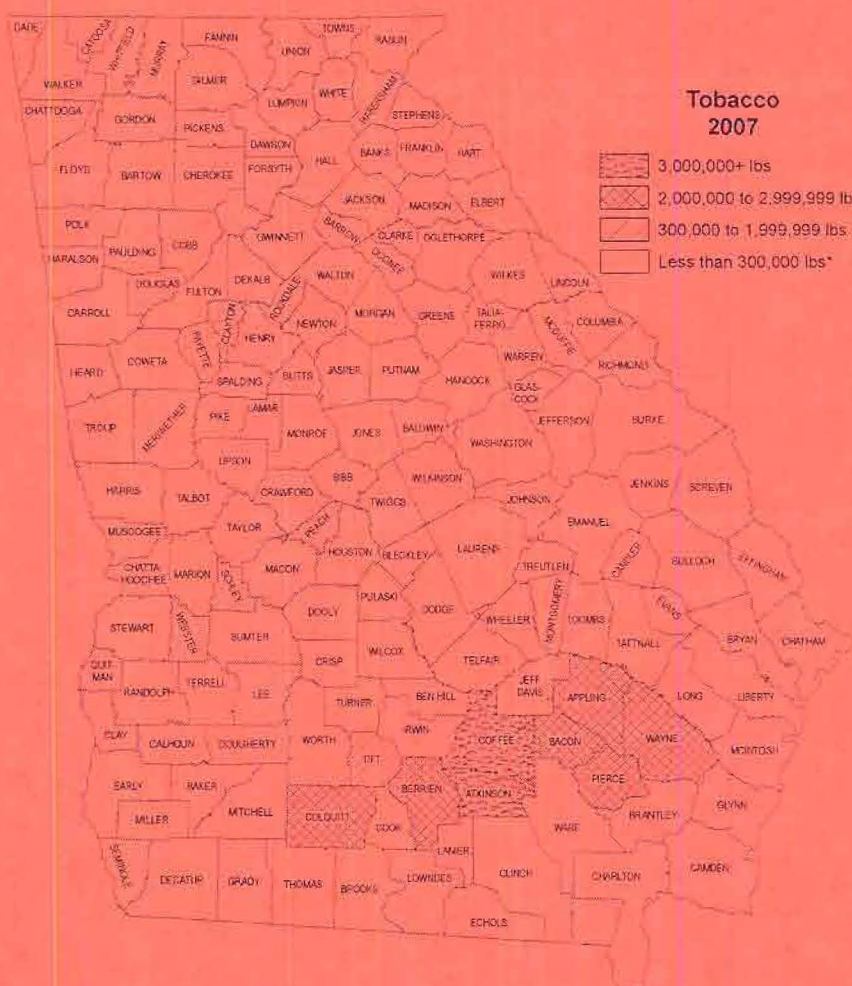


Stephens Federal Building, Suite 320
Athens, Georgia 30601
Phone: (706)546-2236
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Website: <http://www.nass.usda.gov/ga>

Released: June 2007

Tobacco Top Producing Counties 2007

Coffee	4,475,000 lbs
Atkinson	3,678,000 lbs
Colquitt	2,711,000 lbs
Wayne	2,646,000 lbs
Berrien	2,566,000 lbs
Bacon	2,452,000 lbs
Appling	2,338,000 lbs
Pierce	2,300,000 lbs
Tift	1,928,000 lbs
State Total	39,775,000 lbs



* Includes County data not published to avoid disclosing individual operations.

DOUGLAS G. KLEWENO
Director

S. RADLEY EDWARDS & JAMES E. BREWSTER
Agricultural Statisticians

**TOBACCO--Acreage, Yield and Production by County,
Georgia, 2006-2007^{1/}**

County	2006			2007		
	Harvested	Yield per Acre ^{2/}	Production	Harvested	Yield per Acre ^{2/}	Production
	--Acres--	--Pounds--		--Acres--	--Pounds--	
Appling	1,270	1.475	1,874,000	1,140	2.050	2,338,000
Atkinson	1,400	2.000	2,800,000	1,980	1.860	3,678,000
Bacon	770	890	686,000	960	2.555	2,452,000
Berrien	900	2.050	1,845,000	1,260	2.035	2,566,000
Coffee	2,100	1.900	3,990,000	2,140	2.090	4,475,000
Colquitt	960	1.500	1,440,000	1,010	2.685	2,711,000
Cook	900	1.900	1,710,000			
Pierce	1,070	1.500	1,605,000	1,020	2.255	2,300,000
Tift	720	1.840	1,324,000	840	2.295	1,928,000
Ware	560	780	437,000			
Wayne	1,120	1.840	2,061,000	1,290	2.050	2,646,000
Combined Counties	3,530	1.920	6,776,000	4,860	2.185	10,623,000

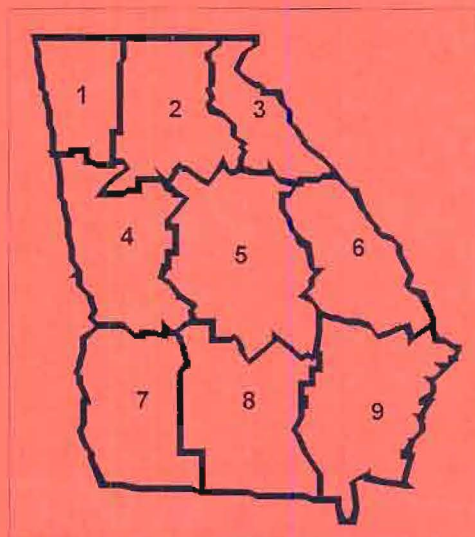
^{1/} County data that are not published to avoid disclosing individual operations are included in Combined Counties. ^{2/} Rounded to nearest 5 pounds.

**TOBACCO--Acreage, Yield and Production by Agricultural Statistics District and State Total,
Georgia, 2006-2007**

District	2006			2007		
	Harvested	Yield per Acre ^{2/}	Production	Harvested	Yield per Acre ^{2/}	Production
	--Acres--	--Pounds--		--Acres--	--Pounds--	
District 8	9,500	1.890	17,958,000	10,550	2.165	22,846,000
District 9	5,800	1.480	8,590,000	5,950	2.165	12,871,000
Combined Districts	1,700	2.085	3,542,000	2,000	2.030	4,058,000
State Total	17,000	1.770	30,090,000	18,500	2.150	39,775,000

^{1/} Districts 1, 2, 3, and 4, not reported. Districts 5, 6, and 7 included in Combined Districts to avoid disclosing individual operations. ^{2/} Rounded to the nearest 5 pounds.

Georgia Agricultural Statistics District Outline Map



**THANK YOU FOR YOUR INTEREST IN THE
2008 GEORGIA - FLORIDA TOBACCO TOUR**

**PLAN TO JOIN US FOR THE
2009 GEORGIA - FLORIDA TOBACCO TOUR**

JUNE 8 - 10, 2009



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advice and free publications
covering agriculture and natural
resources, home economics, 4-H and
youth development and resource
development.

ATTENTION! PESTICIDE PRECAUTIONS

1. Observe all directions, restrictions and precautions on pesticide labels. It is dangerous, wasteful and illegal to do otherwise.
2. Store all pesticides in original containers with labels intact and behind locked doors. "KEEP PESTICIDES OUT OF THE REACH OF CHILDREN."
3. Use pesticides at correct label dosage and intervals to avoid illegal residues or injury to plants and animals.
4. Apply pesticides carefully to avoid drift or contamination of non-target areas.
5. Surplus pesticides and containers should be disposed of in accordance with label instructions so that contamination of water and other hazards will not result.
6. Follow directions on the pesticide label regarding restrictions as required by State or Federal Laws and Regulations.
7. Avoid any action that may threaten an Endangered Species or its habitat. Your county Extension agent can inform you of Endangered Species in your area, help you identify them, and through the Fish and Wildlife Service Field Office identify actions that may threaten Endangered Species or their habitat.

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Crop & Soil Sciences

CSS-08-0808

June 2008

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and the U. S. Department of Agriculture cooperating.

Dr. Scott Angle, Dean and Director
The University of Georgia College of Agricultural and Environmental Sciences