
Virginia On-Farm Soybean Test Plots 2009

A Summary of Research and Demonstration Plots Conducted by
Virginia Cooperative Extension in Cooperation with Local Producers
and Agribusiness

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2009 VIRGINIA ON-FARM SOYBEAN TEST PLOTS

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Introduction

The demonstration and research plot results discussed are a cooperative effort of Virginia Cooperative Extension Agents and Specialists, area producers and agribusiness. The purpose of the publication is to provide research-based information to aid in the decision-making process for grain producers in Virginia. It provides an unbiased evaluation of certain varieties, management practices, and new technology through on-farm replicated research using producer equipment and time. The plot work and analyzed results enable those producers to make management decisions based on research and provides them a greater opportunity to improve yields and profits, which can improve the quality of life for them and their families. The success of these on-farm plots is very dependant on the cooperative effort of the producer and the assisting agribusiness. We are grateful for their cooperation. We hope that the information will be beneficial to you and your individual agribusiness operations.

This publication will be presented at numerous conferences and production meetings throughout Virginia. The information found inside reaches over 400 Virginia soybean and producers and agribusinesses impacting over 300,000 acres of soybeans valued at approximately \$85 million.

Field work and printing of this publication is supported by **Virginia Soybean Check-Off Funds**. The cooperators graciously wish to acknowledge this support. Any producer or agribusiness professional wishing to receive a copy of this publication should contact their local Extension Agent or go online to <http://pubs.ext.vt.edu/>

This is the thirteenth year of this regional cooperative effort and further work is planned for 2010.

The authors wish to thank the many producers who participated in this project. Appreciation is also extended to participating agencies and to seed, crop protection and fertilizer representatives who donated products and /or assisted with field work. Special thanks go to David Holshouser and Paige Hogge for their technical assistance in compiling this publication.

General Summary

- A. **VARIETY SELECTION:** Soybean variety selection remains one of the most important components of a successful soybean production system. Soybean yields fluctuate with variety, location and environment. One should not compare varieties of different maturity groups because weather conditions during pod and seed development is most responsible for whether those varieties yield well or poorly. Some years, timing of rainfall favors a MG 4 variety, and in other years, it favors a MG 5. Let the information contained herein help you select varieties that do well in your management system. It is always good to spread your risks. When viewing the variety information, look for plots that are similar to your location and soil type. When looking at overall variety performance, remember that the more locations a variety is in, the more reliable the yield information. Use this information along with Virginia Soybean Variety Evaluation Tests for 2009; VCE Pub 424-107
- B. **CONVENTIONAL AND LIBERTY LINK VARIETIES:** Seed costs continue to rise, as well as, concerns about glyphosate resistance. Industry is stepping up their programs to give producers more choices to use to reduce risks and in some cases increase profits. There are good conventional and Liberty Link varieties that yield as well as or better than glyphosate tolerant varieties. The down side is; producers must change their crop protection approach in order to use them.
- C. **“SOY-SOAP” EVALUATION:** New to the marketplace is a product called “soy-soap”. It is sold regionally under several names. The process by which it protects the plant and increases yield is colloidal chemistry. Plant parts are used in the process. It promotes plant health and increased root development. The product is applied with the first postemergent glyphosate application. In two tests in Caroline County, there was no benefit to using the product.
- D. **ROOT KNOT NEMATODE STUDY:** This test looked at the performance of resistant and non-resistant varieties in a known root-knot nematode (RKN) infested field. Numbers of RKN in this field were high in 2007 when field was last in soybeans. Due to unknown reasons, numbers were not high in 2009 and the varieties all yielded statistically the same.
- E. **DEEP TILLAGE STUDY PRIOR TO SOYBEAN PLANTING:** For several years in the late 1990’s and early 2000’s, deep tillage plots were evaluated prior to corn planting. In this test Taylor Clarke looked at this practice prior to soybean planting in southern Virginia where soils are sand and clay and tend to form hardpans regularly. In corn, tests showed that in more than 40 tests, the results were sporadic and yields were increased by an average of 4-6 bushels, which at the time (\$2.00-2.50 corn), did not pay for the procedure. In this test, there was no advantage to deep tillage.

2009 Overall MG 5 Soybean Comparison

Variety	VSU	Pr.Geo.	Ches.	Math	Green	Suffolk	Var. Avg.
Hubner H571NRR		38.1	58.7	44.4	58	60.5	51.9
Hubner H558NRR	31.4	41.3	62.4	48.1	55.1	61.7	50
Mid Atlantic MA5200RR	25.7	43.4	64.6	40.4	59.8	61.3	49.2
Asgrow 5605	24.8	42.2	61.9	46.8	59.2	59.5	49.1
SS RT5160N	27.9	44.5	58.3	41.9	57.5	59.9	48.3
Pioneer 95Y70	29.5	45.2	56.7	39.8	56.1	62.1	48.2
Pioneer 95M82	27.2	45.3	61.3	40.2	57.7	56.5	48
Progeny P5650RR	28	40.8	63.4	43.2	*	59.8	47
USG 75J32	27.6	41.5	61.4	42.8	51.3	56.6	46.9
Nk Seeds NK59-B8	27.1	40	57.7	39.1	56.4	60.5	46.8
Nk Seeds NK53-A1	24.4	41.1	57.8	39.5	53.7	62.5	46.5
USG 75Z98	23.1	39.3	55.9	45.8	57.1	57.6	46.5
Progeny P5218RR	26	42.5	58.3	42.3	*	62.4	46.3
Asgrow 5606	30.2	45.2	*	44	53.5	58.4	46.3
Asgrow/DP5335RR/STS	20.2	37.1	58.5	41.3	53.8	57.2	44.7
SS RT5450N	25.6	39.8	50.9	41.9	59.8	49.6	44.6
Location Avg.	26.58	41.7	59.2	42.4	56.4	59.1	

Discussion:

(* Not tested in that location) (** Yields not averaged) Maturity Group 5 varieties were tested in 6 locations in eastern Virginia.

Yields were very good with final averages in the 40's to low 50's. Use this and other Virginia Tech Maturity Group 5 yield information when making planting decisions for 2010.

2009 Overall MG 4 Soybean Comparison

Variety	K&Q	Nor/Lan	Pr.Geo	Westmor	Ag-Expo	Suffolk	VSU	Var. Avg.
SS RT4996	57	58	40.3	63	78.5	62.4	22.3	54.5
Progeny P4807	58	56	32.6	61.9	77.6	64.1	24.1	53.5
Asgrow AG4907	54	58	40.6	67.4	74.4	57.5	20.7	53.2
NK Seeds NK48-C9	54	61	31.1	61.1	78.6	66.9	18.8	53.1
NK Seeds NK44-D5	55	55	33.3	72.4	67.4	69.5	18.8	53.1
SS RT4777N	56	54	39.2	69.9	74	58.2	19.4	53
Progeny P4606	56	55	33.1	72.6	71.2	59.4	21.8	52.7
Pioneer 94Y80	54	58	36.1	68.8	73	58.9	16.1	52.1
TA Seeds TS4299	52	57	34.7	66.9	70.2	61.8	16.6	51.3
Asgrow AG4605	54	63	36.4	67.5	64.8	53.1	19.5	51.2
Mid Atlantic MA4399	37	54	31.3	72.8	77.6	67.4	10.2	50
USG 74F96	34	*	42.5	64.9	75.1	58.2	24.9	50
Pioneer 94Y90	53	58	34.6	58.7	75.8	57.5	9.3	49.6
USG 74B58	49	57	34.2	62.1	78.1	*	16.5	49.5
Hubner H484RR	52	52	29	61.1	69.1	60.5	22.1	49.4
TA Seeds TS4499	49	54	34	58.8	70.2	58.1	19.8	49.1
Hubner H438RR	42	51	32.2	64.6	84.6	52.2	14.7	48.8
Mid Atlantic MA4666	49	*	*	62.1	75.2	62.9	*	**
Dyna-Gro V47N8	*	58	*	67.4	73.2	*	*	**
Dyna-Gro V49N6	*	56	*	65.5	75	*	*	**
Trisler T-4586	*	*	*	*	80	*	*	**
Trisler T-4760	*	*	*	*	75	*	*	**
Location Avg.	50.8	56.4	35	65.5	74.5	60.5	18.6	

Discussion:

* Not included in that location

** Yields not averaged

Maturity Group 4 soybeans were tested in 7 locations. Yields were very good to excellent! Use this and other Virginia Tech variety testing information when making planting decisions for 2010.

2009 VIRGINIA STATE UNIVERSITY (VSU) GROUP 4 SOYBEAN VARIETY COMPARISON

Cooperators: Producer: Ruddy Grammer & Mack West - VSU Randolph Farm
 Glenn F. Chappell, II – VSU
Previous Crop: Corn
Soil Type: Craven/Tetotum/Colfax complex
Tillage: Conventional tillage
Test/Plot Size: 1000ft x 15ft per variety
Planting Equipment: John Deere 1590 NT Drill
Planting Date: May 20, 2009
Row Spacing: 7 inches
Variety: Various
Seeding Rate: 140,000 seed/A
Fertilization: Broadcast: 12.5-25-75
 Sidedress: see treatments below
Crop Protection: 1.0 qt. Glyphosate/A on June 10, 2009
 1.0 qt. Glyphosate/A + 0.3 oz First Rate/A on July 15, 2009
Harvest Date: November 9, 2009
Harvest Equipment: John Deere 9560 STS

Brand	Variety	Moisture	Seed Damage**	Adj. Yield
		(%)	(0-10)	(bu/A)
Check	RT 4808	10.5	6	3.8*
Pioneer	94Y90	12.2	6	9.3*
Pioneer	94Y80	12.5	5	16.1*
MidAtlantic	MA4399	12.5	4	10.2*
S. States	RT 4777N	12.4	5	19.4
S. States	RT 4996N	12.7	4	22.3
NK	NK48C9	13.2	5	18.8
NK	NK44D5	13.1	5	18.8
T.A. Seed	TS 4299RS	12.2	6	16.6
T.A. Seed	TS 4499RS	13.2	5	19.8
Asgrow	AG4907	12.4	4	20.7
Asgrow	AG4605	12.4	4	19.5
USG	74B58	12.6	6	16.5
USG	74F96	12.2	4	24.9
Progeny	4606RR	12.1	6	21.8
Progeny	4807RR	11.4	5	24.1
Hubner	438NRR	11.7	7	14.7
Hubner	484NRR	11.6	5	22.1
Check	RT4808	10.6	4	24.5

*Excessive Canada geese damage.

**A visual infield seed damage/infection rating scale was developed to estimate the % of seed expressing symptoms/signs due to a complex of diseases caused by Diaporthe/Phomopsis complex and Purple Seed stain. Rating Scale: 0 = 0% damaged/infected seed and 10 = 100% damaged/infected seed.

Discussion: Rainfall totals by month were: May - 3.65", June – 5.3", July – 2.45", August - NA, September - NA . The plot was irrigated (1") August 17 - 19. Check Variety = S. States RT 4808. Seed disease and quality were so poor that an infield assessment method was developed to capture the differences in the varieties.

**2009 KING WILLIAM GROUP 3 AND 4 IRRIGATED SOYBEAN VARIETY COMPARISONS
(AG-EXPO SITE)**

Cooperators: Producer: J. N. Mills and Sons
 Extension: Keith Balderson, Middle Peninsula
 David Moore, Middle Peninsula
 Rose Bradshaw, Hanover
 Matt Lewis, Northumberland and Lancaster
 Paul Davis, New Kent and Charles City, retired
 David Holshouser, Extension Soybean Specialist
 Agribusiness: Participating Seed Companies

Previous Crop: Wheat Hay

Soil Type: Altavista loamy sand State loamy fine sand

Tillage: No-till, ripped with DMI ripper prior to planting

Test/Plot Size: 14 feet wide, length: 360 feet to 398 feet

Planting Equipment: John Deere no-till drill

Planting Date: May 21, 2009

Row Spacing: 7.5 inches

Variety: various

Seeding Rate: variable depending on seed size

Fertilization: Residual from wheat hay crop

Crop Protection: Glyphosate at 1 qt. per acre early and late post-emergence
 Domark Fungicide
 Karate Insecticide

Harvest Date: October 22, 2009

Harvest Equipment: John Deere 9570 with 22 foot header

Brand	Variety	Moisture	Yield	Adj. Yield¹
		(%)	(bu/A)	(bu/A)
Pioneer	93Y91	12.9	57.0	
USG	73F59	13.1	49.3	
Mid-Atlantic	3566	13.2	59.1	
T.A. Seeds	3989	13.2	63.1	
NK	39-A3	13.2	64.9	
Trisler	397	13.0	55.7	
Asgrow	3803	12.9	62.7	
Hubner	388	13.1	65.5	
Asgrow	4605	13.0	64.8	
Asgrow	4907	13.3	74.4	
Dyna-Gro	47N8	12.9	73.2	
Dyna-Gro	49N6	12.9	75.0	
Hubner	438	13.3	84.6	
Hubner	484	13.3	69.1	

Mid-Atlantic	4399	12.9	77.6
Mid-Atlantic	4666	12.8	75.2
NK	44-D5	12.7	67.4
NK	48-C9	13.1	78.6
Pioneer	94Y80	13.0	73.0
Pioneer	94Y90	13.0	75.8
Progeny	4606	12.8	71.2
Progeny	4807	13.1	77.6
SS	4777	12.8	74.0
SS	4996	13.0	78.5
T.A. Seeds	4299	13.1	70.2
T.A. Seeds	4499	13.1	70.2
USG	74F96	12.8	78.1
USG	74B58	12.8	75.1
Trisler	T-4586	12.8	80.0
Trisler	T-4760	12.9	75.0
Cropping System	Variety		
DC Barley	Pioneer 94Y70		71.9
DC Wheat	Pioneer 94Y70		62.5

Discussion: Great Plot! Many thanks to the Mills Family. Yields were very good throughout the entire plot. Note that one strip of soybeans were planted at typical barley double crop planting date and typical wheat double crop planting date. There was a 9.4 bushel per acre yield difference in favor of the barley double crop planting date. Growers should evaluate this on their own farms to help them determine if barley double crop soybeans fits into their cropping systems. Use this with other replicated variety information to select high-yielding varieties in 2010.

2009 NORTHUMBERLAND GROUP 4 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Brann Farms – Craig & Dan Brann
 Extension: Matt Lewis, Northumberland/Lancaster
 Agribusiness: Participating Seed Companies
Previous Crop: Barley
Soil Type: Sassafras fine sandy loam
Tillage: No-Till
Test/Plot Size: 15' Strips Approximately 500' long
Planting Equipment: Great Plains 15' No-Till Drill
Planting Date: 6/9/2009
Row Spacing: 7.5 inches
Variety: Check = Pioneer 94Y90 w/ tram lines
Crop Protection: Glyphosate + AMS, post
Harvest Date: 11/6/2009
Harvest Equipment: John Deere 9550

Brand	Variety	Moisture	Yield	Adj. Yield ¹
		(%)	(bu/A)	(bu/A)
Dyna-Gro	V47N8	12.8	58	58.0
Check		12.1	59	58.8
Dyna-Gro	V49N6RR	12.7	56	54.4
Pioneer	94Y80	12.7	58	56.3
Pioneer	94Y90	12.9	58	56.3
Check		12.8	62	58.8
S. States	RT 4777N	12.8	54	52.4
S. States	RT 4996N	12.7	58	56.3
Asgrow	AG4907	12.5	58	56.3
Check		12.5	59	58.8
Asgrow	AG4605	12.5	63	62.8
NK Seeds	NK48-C9	12.4	61	60.8
NK Seeds	NK44-D5	12.6	55	54.8
Check		12.4	59	58.8
TA Seeds	TS4499R	12.6	54	54.8
TA Seeds	TS4299RS	12.3	57	57.8
Hubner	H484	12.4	52	52.7
Check		12.6	57	58.8
Hubner	H438	12.8	51	52.6
Progeny	P4807RR	12.9	56	57.8
Progeny	P4606RR	12.7	55	56.8

Check		12.7	57	58.8
USG	74B58	12.8	57	57.9
Mid-Atlantic	MA4399RR/STS	12.8	54	54.8
Avg. Check		12.5	58.8	
Avg. Variety		12.7	56.4	

Discussion: With a plot average of 57 bu/acre, yields were excellent. The Pioneer 94Y80's and Mid-Atlantic 4399's were lodged significantly, though not enough to prevent the header from getting them up. Use this with other variety information to select high-yielding varieties in 2010.

2009 WESTMORELAND COUNTY GROUP 4 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: F. F. Chandler, Jr.
 Extension: Keith Balderson, Middle Peninsula
 Sam Johnson, Westmoreland, retired
 Other: Sam Johnson, Northern Neck SWCD
 Agribusiness: Participating Seed Companies
Previous Crop: Corn
Soil Type: Timber Neck Farm site: Kempsville and Savannah loam
 Windsor Farm site: Kempsville loam
Tillage: No-till
Test/Plot Size: 35 feet wide
Planting Equipment: Case IH no-till planter
Planting Date: May 22, 2009
Row Spacing: 30 inches
Variety: various
Seeding Rate: variable depending on seed size
Fertilization: 13-40-60, 1qt. per acre Taskforce foliar feed
Crop Protection: Burndown: 2.5 pts. per acre Gramoxone Inteon and 1 pt. per acre
 2,4-D
 Pre-emergence: 2 oz. per acre Canopy Ex
 Post-emergence: 26 oz. per acre Roundup Powermax
Harvest Date: November 9, 2009
Harvest Equipment: John Deere 9400 with 18 foot header

Brand	Variety	Moisture	Yield
		(%)	(bu/A)
Timber Neck	Farm location		
Asgrow	4605	11.8	67.5
Dyna-Gro	47N8	11.9	67.4
Mid-Atlantic	4399	11.9	72.8
Northrop King	44-D5	11.6	72.4
Pioneer	94Y80	11.5	68.8
Progeny	4606	11.5	72.6
Southern States	4777	11.6	69.9
T. A Seeds	4299	11.6	66.9
USG	74F96	11.3	64.9
Hubner	438	11.3	64.6
Asgrow	4907	11.3	67.4
Dyna-Gro	49N6	11.3	65.5

Windsor Farm	location		
Hubner	484	11.9	61.1
Mid-Atlantic	4666	12.2	62.1
Northrop King	48-C9	12.2	61.1
Pioneer	94Y90	12.4	58.7
Progeny	4807	12.1	61.9
Southern States	4996	12.3	63.0
T. A. Seeds	4499	12.3	58.8
USG	74B58	12.2	62.1

Discussion: Great Plot! Many thanks to Ferdie Fax. Yields were very good throughout the entire plot. We ran short of space and had to use two locations to plant the varieties. Varieties in the Windsor location tended to yield lower. Varieties were replicated across several locations so be sure to look at results from the other locations. Use this with other replicated variety information to select high-yielding varieties in 2010.

2009 SUFFOLK GROUP 4 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Mike Ellis
Extension: David Holshouser, TAREC
Previous Crop: Corn
Soil Type: Rains fine sandy loam
Tillage: Disk 2X; Test/Plot Size: 24 ft x 270 ft
Planting Equipment: KMC 8-row
Planting Date: May 23, 2008
Row Spacing: 18 inches Seeding Rate: 125,000 seed/A
Fertilization: 250# 3-9-30
Crop Protection: Herbicides: Touchdown 26 oz/A
Harvest Date: Oct. 20, 2009
Harvest Equipment: Case IH 1640

Brand	Variety	Moisture (%)	Yield (bu/A)
Asgrow	AG4605	11.5	53.1
Asgrow	AG4907	11.8	57.5
Hubner	H438NRR/STS	12.9	52.2
Hubner	H484NRR	11.8	60.5
Mid-Atlantic	MA4399RR/STS	11.3	67.4
Mid-Atlantic	MA4666NRR	11.3	62.9
NK Seeds	S44-35	11.8	69.5
NK Seeds	S48-C9	11.5	66.9
Pioneer	94Y80	11.5	58.9
Pioneer	94Y90	11.5	57.5
Progeny	P4606RR	11.4	59.4
Progeny	P4807RR	11.3	64.1
S. States	RT 4777N	11.7	58.2
S. States	RT 4996N	11.9	62.4
TA Seeds	TS4299RS	11.7	61.8
TA Seeds	TS4499R	11.5	58.1
USG	74F96	11.9	58.2

Discussion: Use this with other variety information to select high-yielding varieties in 2010.

2009 KING & QUEEN GROUP 4 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: William Davis and David Carlton
 Extension: David Moore, VCE-Middlesex,
 Keith Balderson, VCE-Essex,
 Eric Jochum, Summer Intern
 Agribusiness: Participating Suppliers
Previous Crop: Rye Cover Crop
Soil Type: State Fine Sandy Loam
Tillage: No-Till with Series 3000 Kinze Planter
Test/Plot Size: 17.5' X 1015'
Planting Date: May 19, 2009
Row Spacing: 15 inches
Seeding Rate: 140,000 seeds/A
Fertilization: None
Crop Protection: Glyphosate as Burndown and Post Treatment
Harvest Date: October 5, 2009
Harvest Equipment: John Deere 9650STS

Brand	Variety	Moisture	Yield	Adj. Yield ¹
		(%)	(bu/A)	(bu/A)
Asgrow	AG4605	11.9	54.0	54.7
Check	Pioneer 94M80	11.4	47.0	48.5
Asgrow	AG4907	11.8	54.0	57.0
Check		11.4	45.0	48.5
Hubner	H438	11.9	42.0	44.3
Check		11.3	47.0	48.5
Hubner	H484	11.1	52.0	52.5
Check		11.3	49.0	48.5
Mid Atlantic	MA4399RR/STS	11.2	37.0	38.2
Check		11.1	46.0	48.5
Mid-Atlantic	MA4666NRR	11.1	49.0	51.7
Check		11.2	46.0	48.5
NK Seeds	NK44-D5	10.8	55.0	56.1
Check		11.0	49.0	48.5
NK Seeds	NK48-C9	12.8	54.0	54.0
Check		11.3	48.0	48.5
Pioneer	94Y80	11.1	54.0	54.5
Check		10.9	48.0	48.5
Pioneer	94Y90	11.4	53.0	53.0

Check		10.9	49.0	48.5
Progeny	P4606RR	11.2	56.0	53.3
Check		10.7	53.0	48.5
Progeny	P4807RR	10.7	58.0	54.2
Check		10.9	51.0	48.5
Southern States	RT4777N	11.0	56.0	53.3
Check		10.7	51.0	48.5
Southern States	RT4996N	12.6	57.0	54.2
Check		10.8	51.0	48.5
TA Seeds	TS4299RS	10.9	52.0	50.0
Check		10.7	50.0	48.5
TA Seeds	TS4499R	11.4	49.0	48.0
Check		10.7	49.0	48.5
USG	74B58	11.1	49.0	50.0
Check		11.8	46.0	48.5
USG	74F96	23.2 (green)	34.0	34.9
Avg. Check		11.06	48.5	
Avg. Variety		12.07	50.8	

Discussion: Great Plot! Many thanks to William Davis and David. Yields were very good through the entire plot. These beans were planted on some very sandy soil and in normal years yield in the 20 to low 30's. Adequate rainfall makes a lot of difference. Look for overall comparison later in this publication. Use this with other variety information to select high-yielding varieties in 2010.

2009 PRINCE GEORGE GROUP 4 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Paul Cerny Jr. and Sean Finney
 Extension: Scott Reiter, Prince George
Previous Crop: Wheat with straw removed
Soil Type: Slagle sandy loam and Ackwater silt loam
Test/Plot Size: 460 feet x 22 feet
Planting Equipment: Great Plains 1205NT Drill (15 inch rows)
Planting Date: June 11, 2009
Seeding Rate: 200,000 seed/A
Fertilization: 130 lbs N, 50 lbs P₂O₅, and 120 lbs K₂O to wheat
Crop Protection: Herbicides: Roundup @ 1 qt/A + Classic @ 0.33 oz/A, Post
Harvest Date: November 9, 2009 **Harvest Equipment:** John Deere 9500

Brand	Variety	Moisture	Yield
		(%)	(bu/A)
Pioneer	94Y90	11.7	34.6
Pioneer	94Y80	11.6	36.1
Mid-Atlantic	MA4399RR/STS	11.7	31.3
S. States	RT 4777N	11.2	39.2
S. States	RT 4996N	11.2	40.3
NK Seeds	NK48-C9	11.3	31.1
NK Seeds	NK44-D5	11.2	33.3
TA Seeds	TS4299RS	11.5	34.7
TA Seeds	TS4499R	11.3	34.0
Asgrow	AG4907	11.2	40.6
Asgrow	AG4605	11.7	36.4
USG	74B58	11.8	34.2
USG	74F96	11.8	42.5
Progeny	P4606RR	11.8	33.1
Progeny	P4807RR	11.2	32.6
Hubner	H484	11.3	29.0
Hubner	H438	12.0	32.2
	AVERAGE	11.5	35.0

Discussion: This plot received rainfall the night after planting and had a good stand. This location also had decent rainfall throughout the season lending to good yields. However, the Group 5 plots in the adjoining field averaging 42 bu/A compared to 35 bu/A with the Group 4. The Group 4 test also had a higher level of damaged soybeans compared to the Group 5 test. Use this with other variety information to select high-yielding varieties in 2010.

2009 CHESAPEAKE GROUP 5 (RR) SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Arnold and Jason Dawley
 Extension: Watson Lawrence – VCE - Chesapeake
Previous Crop: Wheat/soybean double crop
Soil Type: Tetotum loam
Tillage: Disk + disk + field cultivator; Plot Size: (365 ft. - 420.5 ft.) L by 19.5 ft. W
Planting Equipment: John Deere 7300 planter (11 rows)
Planting Date: June 2, 2009
Row Spacing: 18 inch rows
Fertilization: 150 lbs. 10-20-20 with micronutrients
Crop Protection: Herbicides: Roundup @ 1 qt./A plus Resource @ 3 oz./A post-emergence
 Insecticide: Baythroid @ 2 oz./A late August
 Fungicide: Domark 230me @ 4 oz./A with insecticide combination
Harvest Date: November 21, 2009
Harvest Equipment: Case International 2166 with 20 ft. head

Brand	Variety	Moisture	TW	Actual Yield ¹
	Roundup Ready	(%)	(lbs.)	(bu/A)
USG	75B58	17.4	55	65.96
MidAtlantic	5200	17.5	56	64.63
Progeny	5650	17.2	55	63.41
Hubner	558N	18.0	56	62.37
Asgrow	5605	15.9	55	61.89
USG	75J32	16.6	55	61.41
Pioneer	95M82	17.0	57	61.34
Hubner	571N	16.6	57	58.65
Asgrow	5335	17.1	56	58.51
Progeny	5218	16.8	56	58.32
Southern States	5160	17.5	54	58.29
Northrup King	53A1	17.3	57	57.81
Northrup King	59B8	17.0	56	57.66
Pioneer	95Y70	16.7	55	56.67
USG	75Z98	16.8	56	55.89
Southern States	5450	18.1	55	50.91

Discussion: This single replicated plot test was planted on a very uniform field with good drainage and soil type. Varieties are listed here in descending order of yield. Excellent weed control and mild insect pressure in 2009. Fungicide applied to deter diseases and enhance seed quality. Use this with other variety information to select high-yielding varieties in 2010.

2009 VIRGINIA STATE UNIVERSITY (VSU) GROUP 5 SOYBEAN VARIETY COMPARISON

Cooperators: Producer: Ruddy Grammer & Mack West - VSU Randolph Farm
 Glenn F. Chappell, II – VSU
Previous Crop: Corn
Soil Type: Bourne fine sandy loam
Tillage: Conventional tillage
Test/Plot Size: 750 ft x 30 ft per variety
Planting Equipment: John Deere 1590 NT Drill
Planting Date: May 21, 2009
Row Spacing: 7 inches
Seeding Rate: 140,000 seed/A
Fertilization: Broadcast: 12.5-25-75
Crop Protection: 1.0 qt. Glyphosate/A on June 10, 2009
 1.0 qt. Glyphosate/A + 0.3 oz First Rate/A on July 15, 2009
Harvest Date: November 6, 2009
Harvest Equipment: John Deere 9560 STS

Brand	Variety	Moisture (%)	Seed Damage* (0-10)	Yield (bu/A)
Check	RT 4808	13.1	6	22.4
Pioneer	95Y70	13.4	2	29.5
Pioneer	95M82	13.2	4	27.2
MidAtlantic	MA5200	13.5	5	25.7
S. States	RT 5160N	13.6	4	27.9
S. States	RT 5450N	13.2	3	25.6
NK	NK59B8	12.9	2	27.1
NK	NK53A1	13.5	5	24.4
Asgrow	AG5605	12	3	24.8
Asgrow	AG5606	12.3	2	30.2
Asgrow/Delapine	DP5335RR/STS**	14	8	20.2
USG	75Z98	12.9	3	23.1
USG	75J32	12.5	4	27.6
Progeny	5218RR	12.4	4	26.0
Progeny	5650RR	11.8	4	28.0
Hubner	558NRR	12.3	3	31.4
Check	RT4808	12	5	23.2

*A visual infield seed damage/infection rating scale was developed to estimate the % of seed expressing symptoms/signs due to a complex of diseases caused by Diaporthe/Phomopsis complex and Purple Seed stain. Rating Scale: 0 = 0% damaged/infected and 10 = 100% damaged/infected seed.

**DP5335RR/STS was extremely late retaining most of its leaves at the November 6, 2009 harvest date.

Discussion: Rainfall totals by month were: May - 3.65", June – 5.3", July – 2.45", August - NA, September - NA . Check Variety = S. States RT 4808. Seed disease and quality were so poor that an infield assessment method was developed to capture the differences in the varieties.

2009 SUFFOLK GROUP 5 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Mike Ellis
 Extension: David Holshouser, TAREC
Previous Crop: Corn
Soil Type: Rains fine sandy loam
Tillage: Disk 2X Plot Size: 24 ft x 270 ft
Planting Equipment: KMC 8-row
Planting Date: May 23, 2008
Row Spacing: 18 inches
Seeding Rate: 125,000 seed/A
Fertilization: 250# 3-9-30
Crop Protection: Herbicides: Touchdown 26 oz/A
 Insecticides: Baythroid 2.8 oz/A
Harvest Date: Nov. 7, 2009
Harvest Equipment: Case IH 1640

Brand	Variety	Moisture (%)	Yield (bu/A)
Asgrow	AG5605	13.5	59.5
Asgrow	AG5606	13	58.4
Asgrow	DP5335RR/STS	13.2	57.2
Hubner	H558NRR	14.1	61.7
Hubner	H571NRR	14.2	60.5
Mid-Atlantic	MA5200RR	13.7	61.3
NK	S53-A1	13.1	62.5
NK	S59-B8	13.7	60.5
Pioneer	95M82	12.8	62.1
Pioneer	95Y70	13.4	56.5
Progeny	P5218RR	13.7	62.4
Progeny	P5650RR	13.5	59.8
Southern States	RT5160N	13.8	59.9
Southern States	RT5450N	13.8	49.6
USG	75J32	13.4	56.6
USG	75Z98	13.4	57.6

Discussion: Use this with other variety information to select high-yielding varieties in 2010.

2009 PRINCE GEORGE GROUP 5 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Paul Cerny Jr. and Sean Finney
 Extension: Scott Reiter, Prince George
Previous Crop: Wheat with straw removed
Soil Type: Montross and Aycock silt loam
Tillage: No-Till
Test/Plot Size: 875 feet x 22 feet
Planting Equipment: Great Plains 1205NT Drill
Planting Date: June 11, 2009
Row Spacing: 15 inches
Seeding Rate: 200,000 seed/A
Fertilization: 130 lbs N, 50 lbs P₂O₅, and 120 lbs K₂O to wheat
Crop Protection: Herbicides: Roundup @ 1 qt/A + Classic @ 0.33 oz/A, Post
Harvest Date: November 9, 2009
Harvest Equipment: John Deere 9500

Brand	Variety	Moisture (%)	Yield (bu/A)
Pioneer	95Y70	12.2	48.3
Pioneer	95M82	12.1	45.3
Mid-Atlantic	MA5200RR	12.2	43.4
Southern States	RT5160N	12.0	44.5
Southern States	RT5450N	12.2	39.8
NK Seeds	NK59-B8	11.6	40.0
NK Seeds	NK53-A1	11.5	41.1
Asgrow	AG5605	11.6	42.2
Asgrow	AG5606	11.0	45.2
Deltapine	DP5335RR/STS	11.7	37.1
USG	75Z98	11.6	39.3
USG	75J32	11.3	41.5
Progeny	P5218RR	11.6	42.5
Progeny	P5650RR	11.6	40.8
Hubner	H558NRR	11.6	41.3
Hubner	H571NRR	11.5	38.1
Pioneer	95Y70	11.5	42.0
	AVERAGE	11.7	41.9

Discussion: A good yielding field of double crop soybeans. The Group 5's beat the Group 4 test by 7 bu/A. Use this with other variety information to select high-yielding varieties in 2010.

2009 GREENSVILLE GROUP 5 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Walnut Tree Farm; Tom Clements
 Extension: Cyndi Estienne – Greenville County
 Agribusiness: Participating Companies listed in table below
Previous Crop: Corn
Soil Type: Craven Clay Loam
Tillage: No-Till, ripped under rows
Test/Plot Size: 48' wide by 540' long
Planting Equipment: John Deere MaxEmerge2 vacuum planter
Planting Date: May 5, 2009
Row Spacing: 36 inches
Seeding Rate: 9.7 seed/row ft
Fertilization: P and K applied variably according to soil test grids
Crop Protection: Herbicides: Burndown: PowerMax 22 oz/A with 1 pint 2,4-D/A
Harvest Date: November 28, 2009
Harvest Equipment: John Deere 9650 STS with 625F Hydraflex head

Brand	Variety	Moisture (%)	Yield (bu/A)
Asgrow	AG5605	13.2	59.23
Asgrow	AG5606	14.1	53.54
Deltapine	DP5335RR/STS	14.4	53.79
Hubner	H558NRR	14.0	55.12
Hubner	H571NRR	14.1	58.04
Mid-Atlantic	MA5200RR	14.2	59.82
NK Seeds	NK53-A1	14.0	53.72
NK Seeds	NK59-B8	13.8	56.40
Pioneer	95Y70	14.1	56.14
Pioneer	95M82	13.8	57.74
Progeny	P5218RR	0	0
Progeny	P5650RR	0	0
Southern States	RT5160N	14.6	57.52
Southern States	RT5450N	14.2	59.82
USG	75J32	14.5	51.32
USG	75Z98	14.3	57.08

Discussion: Use this with other variety information to select high-yielding varieties in 2010.

2009 MATHEWS GROUP 5 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Robert Respass, Jr., B.J. Armstead
 Extension: David Moore
 Agribusiness: Participating Seed Dealers
Previous Crop: Corn
Soil Type: Lumbee Sandy Loam
Tillage: No-Till in 7.5 inch rows
Test/Plot Size: 15' X300
Planting Equipment: Great Plains 1500NT
Planting Date: July 8, 2009
Check Variety: Pioneer 95M50
Seeding Rate: 220,000 seed/A
Fertilization: None
Crop Protection: Burndown: Glyphosate, Valor, Prowl
 Post: Glyphosate
Harvest Date: January 7, 2010
Harvest Equipment: Case IH 2166

Brand	Variety	Moisture	Yield	Adj. Yield ¹
		(%)	(bu/A)	(bu/A)
Asgrow	AG5605	14.8	45.5	46.8
Check	Pioneer 95M50	15.0	40.1	42.4
Asgrow	AG5606	15.0	41.2	44.0
Check		15.0	39.3	42.4
Deltapine	DP5335RR/STS	15.0	38.9	41.3
Check		15.1	40.7	42.4
CPS/Dyna-Gro	DG49N6	12.8	33.8	39.4
Check		14.9	38.1	42.4
CPS/Dyna-Gro	DG51N7	12.8	39.3	42.7
Check		14.8	39.9	42.4
Hubner	H558NRR	12.6	46.1	48.1
Check		12.7	41.4	42.4
Hubner	H571NRR	16.4	44.4	44.4
Check		14.6	43.5	42.4
Mid-Atlantic	MA5200RR	15.0	41.6	40.4
Check		15.1	43.8	42.4
NK Seeds	NK53-A1	12.2	41.1	39.5
Check		12.2	44.3	42.4
NK Seeds	NK59-B8	12.2	40.7	39.1

Check		12.0	43.5	42.4
Pioneer	95Y70	12.3	40.6	39.8
Check		12.5	42.8	42.4
Pioneer	95M82	12.5	41.0	40.2
Check		12.7	43.7	42.4
Progeny	P5218RR	12.7	44.0	42.3
Check		12.6	44.9	42.4
Progeny	P5650RR	12.5	45.4	43.2
Check		12.4	43.9	42.4
Southern States	RT5160N	12.3	44.0	41.9
Check		12.4	45.0	42.4
Southern States	RT5450N	12.5	41.1	39.5
Check		12.5	42.8	42.4
USG	75J32	12.4	43.7	42.8
Check		12.8	43.9	42.4
USG	75Z98	13.0	46.7	45.8

Discussion: This plot was harvested on January 7, 2010. The 2009 soybean harvest season just would not end. Many thanks to Robert for his patience getting this plot planted and harvested. Yields were very good. Use this with other variety information to select high-yielding varieties in 2010.

2009 GREENSVILLE COUNTY CONVENTIONAL SOYBEAN VARIETY TEST

Cooperators: Producer: L and G Farms; Glenn Hawkins
 Extension: Cyndi Estienne, Greenville County
 Industry: Virginia Crop Improvement Association
Previous Crop: Peanut; wheat
Soil Type: Emporia loamy fine sand
Tillage: No-till
Test/Plot Size: 20' by approximately 300 '
Planting Equipment: John Deere MaxEmerge2
Planting Date: June 18, 2009
Row Spacing: 18 inches
Seeding Rate: 8.1 seed/foot
Crop Protection: Herbicides: Glyphos @ 1.5 qt/A + Prefix @ 1 qt/A burndown 6/19/2009; Flexstar 1.25 pt/A 8/3/2009
 Insecticides: Silencer 3.5 oz/A 8/26/2009
Harvest Date: December 16, 2009
Harvest Equipment: John Deere 9660 STS 20 ft head

Treatment	Rep 1	Rep 2	Rep 3	Rep 4	Avg. Yield
	(bu/A)	(bu/A)	(bu/A)	(bu/A)	(bu/A)
Glenn Treated	40.15	42.53	50.81	50.37	45.97
Glenn	39.78	42.91	50.19	49.29	45.54
USG5601T	26.77	41.55	38.05	43.32	37.42
Liberty Link 499	37.54	51.49	50.67	52.04	47.94
Hutcheson	34.16	43.27	30.41	48.04	38.97
LSD (0.05) = 6.8					0

Discussion: With the increasing variety of herbicide modes of action and timing available to producers, and presence of glyphosate- tolerant Palmer Amaranth, conventional and Liberty Link soybeans have a place on Greenville County farms. Glenn soybeans with and without seed treatment, and Liberty Link 499 yielded similarly in this study. These yields were greater than those of Hutcheson and USG 5601T. Yields of Hutcheson and USG5601T were not statistically different from each other.

2009 PRINCE GEORGE LIBERTY LINK SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Charles Skalsky
Extension: Scott Reiter, Prince George

Previous Crop: Soybeans

Soil Type: Montross silt loam and Slagle sandy loam

Tillage: No-Till

Test/Plot Size: 1660 feet x 58 feet

Planting Equipment: Great Plains 1005NT Drill

Planting Date: May 20, 2009

Row Spacing: 15 inches

Seeding Rate: 150,000 seed/A

Fertilization: 10 lbs N, 0 lbs P₂O₅, 72 lbs K₂O, 12 lbs Sulfur

Crop Protection: Herbicides: Roundup @ 1 qt/A burndown, Ignite 280 @ 22 oz/A – 2 times, Post

Harvest Date: November 21, 2009

Harvest Equipment: John Deere 4420

Brand	Variety	Moisture	Yield
		(%)	(bu/A)
Progeny	4928LL	19.0	39.9
Southern States	LL499N	18.8	41.2
	AVERAGE	18.9	40.6

Discussion: Liberty Link soybeans were used by several growers this year. The wet season delayed harvest of these late Group 4s which caused considerable damage to seed quality. Yields were good for the season. Growers also commented that additional grass control herbicides may be needed when using Ignite 280. Broadleaf weed control was good. Yield is corrected to 13% moisture. Use this with other variety information to select high-yielding varieties in 2010.

2009 MATHEWS NON-RR SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Robert Respass, Jr., B,J, Armstead
Extension: David Moore, VCE-Middlesex
Agribusiness: Montague Farms, Inc., Progeny Seed,
Southern States

Previous Crop: Corn
Soil Type: Lumbee Sandy Loam
Tillage: No-Till
Test/Plot Size: 20' strips X 350' Long
Planting Equipment: Great Plains 15' No-Till Drill
Planting Date: July 7, 2009
Row Spacing: 7.5 inches
Crop Protection: Burndown: Glyphosate, Valor, Prowl
Post: Reflex, Pursuit
Harvest Date: January 11, 2010
Harvest Equipment: Case IH 2166

Brand	Variety	Moisture	Yield
		(%)	(bu/A)
Southern States	LL499N	12.7	51.8
Progeny	LL4928	12.8	51.8
Montague	MFS 581	13.0	45.2
Montague	MFS 541	13.1	40.2

Discussion:

Planted near the MG Roundup Ready plot was a strip trial looking at two Liberty-Link varieties, two Montague farms varieties and four conventional varieties. These trials were not all in the same field. Unfortunately, the conventional varieties experienced severe deer and geese pressure and yield were not calculated.

These non-RR varieties yielded as well as, or better, than the nearby RR varieties. Especially noticeable, were the yields of the Liberty Link varieties. It should be noted that the Liberty Link herbicide program was not followed for weed and grass control. Again, I want to thank Robert for his patience with these plots. My apologies for the unfortunate mishaps related to the conventional plot. Use this and other on-farm plot information when making planting decisions for 2010.

2009 NORTHUMBERLAND GROUP 4 STS / ROUNDUP READY SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Brann Farms – Craig & Dan Brann
 Extension: Matt Lewis, Northumberland/Lancaster
 Agribusiness: Participating Seed Companies
Previous Crop: Barley
Soil Type: Sassafras fine sandy loam
Tillage: No-Till
Test/Plot Size: 15' Strips Approximately 500' long
Planting Equipment: Great Plains 15' No-Till Drill
Planting Date: 6/9/2009
Row Spacing: 7.5 inches
Variety: Check = Pioneer 94Y90 w/ tram lines
Crop Protection: Glyphosate + AMS, post
Harvest Date: 11/6/2009
Harvest Equipment: John Deere 9550

Brand	Variety	Moisture	Yield	Adj. Yield ¹
		(%)	(bu/A)	(bu/A)
Check		12.7	63	62.0
Asgrow	AG4605	12.5	65	65.0
Asgrow	AG4606	12.6	57	57.0
TA Seeds	TS4299	12.5	57	57.0
Check		12.8	61	62.0
TA Seeds	TS3989	12.7	56	56.6
Dyna-Gro	42N9	12.6	59	59.6
Avg. Check		12.8	62	
Avg. Variety		12.6	58.8	

Discussion: Speedwell has become a significant weed pest of small grain fields in the Northern Neck and surrounding areas. Dan and Craig have had good results using Finesse herbicide to control speedwell, but use of this herbicide requires planting STS soybeans. For the second year, they have used this plot as an opportunity to select the most promising RR/STS soybean varieties for their farming operation. With a plot average of 60 bu/acre, yields were excellent. The RR/STS varieties averaged 59 bu/acre, compared to an average 57bu/acre of 31 RR varieties planted adjacent to this plot. Use this with other variety information to select high-yielding varieties in 2010.

2009 KING WILLIAM IRRIGATED SOYBEAN SEED TREATMENT PLOT

Cooperators: Producer: J. N. Mills and Sons
Extension: Keith Balderson, Middle Peninsula
David Moore, Middle Peninsula
Rose Bradshaw, Hanover
Matt Lewis, Northumberland and Lancaster
Paul Davis, New Kent and Charles City, retired
David Holshouser, Extension Soybean Specialist
Ames Herbert, Extension Entomologist
Agribusiness: Participating Seed Companies

Previous Crop: Wheat Hay

Soil Type: Altavista loamy sand

Tillage: No-till, ripped with DMI ripper prior to planting

Test/Plot Size: 14 feet wide

Planting Equipment: John Deere no-till drill

Planting Date: May 21, 2009

Row Spacing: 7.5 inches

Variety: Northrop King S48-C9

Fertilization: Residual from wheat hay crop

Crop Protection: Glyphosate at 1 qt. per acre early and late post-emergence
Domark Fungicide
Karate Insecticide

Harvest Date: October 22, 2009

Harvest Equipment: John Deere 9570 with 22 foot header

Treatment	Moisture	Yield
	(%)	(bu/A)
Gaucho 600	12.8	81.0
Nipsit Inside	12.7	80.5
Check	12.7	75.3
Cruiser	12.9	76.5
Nipsit Inside	13.0	74.7

Discussion: This is only one replication of this test, so the information here is of little value. There is increased interest in these seed treatments to protect against early season Bean Leaf Beetle, Aphids, and Thrips. All of these insects can vector soybean viruses. If you suspect that you have this problem, do some testing on your own farm.

Use this and other Virginia Tech pest management information when making production decisions for 2010.

2009 CAROLINE COUNTY DAVIS “SOY SOAP” TRIAL

Cooperators: Producer: John F. Davis
Extension: Mac Saphir-Caroline County

Previous Crop: Wheat

Soil Type: Bojac

Tillage: No-Till

Test/Plot Size: 770'X35' (.62 Acres), Three reps.

Planting Equipment: John Deere 1780 planter 23 row

Planting Date: June 24, 2009

Row Spacing: 15 inches

Variety: Northrup King S44-D5

Seeding Rate: 180,000/ac

Crop Protection: 2 Applications of Roundup @ 1qt./ac
1.5 oz ac Karate
6.2 oz ac. Quadris

Harvest Date: Nov. 20, 2009

Harvest Equipment: John Deere 9770STS 35' grain platform

Treatment	Rep 1	Rep 2	Rep 3	Avg. Yield
	(bu/A)	(bu/A)	(bu/A)	(bu/A)
Control	53.91	53.92	54.90	54.24
Treatment 1-8oz. soysoap/A At first trifoliolate stage	53.92	55.80	54.79	54.83
LSD (0.10)				0

Discussion:

In this on-farm test, there was no significant difference in yields with or without the use of “Soy Soap”. Use this and other Virginia tech on-farm test information when making production decisions for 2010.

2009 CAROLINE COUNTY TERRELL “SOY SOAP” TRIAL

Cooperators: Producer: Terrell and Son
Extension: Mac Saphir-Caroline County

Previous Crop: Wheat

Soil Type: Kempsville-Slagle-Sandy Loam

Tillage: No-Till

Test/Plot Size: 3 reps. 1/8 acre(30' Xc 181.5 ')

Planting Equipment: Case 1240

Planting Date: June 29, 2009

Row Spacing: 12 inches

Variety: Dyna-Gro 3481

Seeding Rate: 85-90,000 seeds/A

Crop Protection: 2 Applications of Roundup @ 1qt./ac
1.5 oz ac Karate
6.2 oz ac. Quadris

Harvest Date: November 8, 2009

Harvest Equipment: John Deere 9660

Treatment	Rep 1	Rep 2	Rep 3	Avg. Yield
	(bu/A)	(bu/A)	(bu/A)	(bu/A)
Control	55.6	53.7	54.9	54.73
Treatment 1-8 oz/A first trifoliolate stage	57.60	53.2	54.1	54.90

Discussion:

As in first test at Johnny Davis' Farm, there was no significant difference between control and treated plots. This test should be done at least a couple more times to adequately assess the efficacy of the Soy Soap product.

2009 MIDDLESEX ROOT KNOT NEMATODE STUDY

Cooperators: Producer: E.G. Fleet, John Fleet, Matt Fleet
 Robert M. Lewis
 Extension: David Moore, Middlesex
 Agribusiness: USG Soybeans-Featherstone Farms, Renwood Farms
Previous Crop: Corn-Barley Cover Crop
Soil Type: Suffolk Fine Sandy Loam
Tillage No-till following “Turbo-Till” in 7.5 inch rows
Test/Plot Size: 20’ X 600’
Planting Equipment: John Deere 1590 No-Till Drill/Planter
Planting Date: May 25, 2009
Seeding Rate: 140,000 seed/A
Crop Protection: 2 post-applications of Glyphosate
Harvest Date: November 9, 2009 with AGCO R52

Treatment/Variety	Rep	M%	Yield @ 13%
			(bu/A)
USG 75M16	1	14.1	48.7
USG 75J32	1	14.2	49.4
Pioneer 95M60	1	13.7	37.6
USG 75M16	2	14.3	46.7
USG 75J32	2	14.0	44.9
Pioneer 95M60	2	13.3	40.1
Average 75M16		14.2	47.7
Average 75J32		14.1	47.2
Pioneer 95M60		13.6	38.9

Discussion: This field was devastated in 2007 by high numbers of root-knot nematodes. Samples from 2007 showed numbers as high as 1800 nematodes per 500cc soil at harvest. Samples in 2009 at harvest showed numbers at levels under 50 nematodes per 500cc soil. This is quite a change possibly due to weather conditions and production practices.

USG 75J32 has moderate to high resistance to root-knot nematodes (RKN) while USG 75M16 has no stated resistance to RKN. Pioneer 95M60 was used because of its broad resistance package to soybean cyst nematodes (SCN) and also its medium resistance to RKN. In this test, there is no difference in the yields of the varieties with and without RKN resistance. There is still much to learn about nematode activity, especially RKN, and its relation to soil, production practices and weather.

2009 MECKLENBURG/BRUNSWICK EVALUATION OF RIPPER ON SOYBEAN YIELDS

Cooperators: Producer: Carlton Clarke
 Extension: Taylor Clarke, Mecklenburg County,
 Scott Reiter, Prince George
Previous Crop: Double-crop wheat/soybeans
Soil Type: Appling fine sandy loam
Tillage: No-Till planted in 15" rows across ripper treatments; treatments conducted with 3 shank John Deere 2100 conservation ripper with packing wheels; 10" low disturbance points; shanks spaced 28" apart; operated at 10-12", hardpan at approximately 8'; 4/24/2009
Test/Plot Size: plots 35 feet wide, length 92 to 137, yield taken on 15 ft header width; 2 treatments and 5 replications
Planting Equipment: John Deere 1560 10ft no-till drill planting on 15" with back gang
Planting Date: May 2, 2008
Row Spacing: 15 inches
Variety: USG 74F96
Seeding Rate: 140,000 seed/A
Crop Protection: Herbicides: Buccaneer 5 @ 24 oz plus Weedone LV4 @ 12 oz, pre, 4/25/2009; Buccaneer 5 @ 24 oz, post, 6/13/2009
Harvest Date: October 13, 2009
Harvest Equipment: John Deere 4400, 15ft rigid head

Treatment	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Avg. Yield
	(bu/A)	(bu/A)	(bu/A)	(bu/A)	(bu/A)	(bu/A)
Control	56.1	57.7	55.6	59.8	45.3	54.9
Ripped	52.8	59.1	51.0	54.9	50.1	53.6
LSD (0.10)						0

Discussion: No differences in yields were observed between ripping and not ripping. This is not surprising since moisture was adequate for most of the growing season and is evident by yields over 50 bushels. During several weeks of dry weather during July just at the beginning of flowering, ripped plots did show less drought stress than un-ripped plots. At harvest ripped plots were visually taller than un-ripped plots however the greater vegetative growth did not result in increased yield. Soil probing for compaction at harvest found little reduction of hard pan between ripper shank paths. This may be the result of ripping in the spring after the soil profile has had the opportunity to recharge reducing the amount of lateral shatter.