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2011

Virginia On-Farm Soybean Test Plots

A summary of replicated research conducted by

Virginia Cooperative Extension in cooperation with local producers and agribusiness

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Introduction

The demonstration and research plot results discussed are an effort of Virginia Cooperative Extension Agents and Specialists, area producers, and agribusiness. The purpose of this publication is to provide research-based information to aid in the decision-making process for soybean producers in Virginia. It provides an unbiased evaluation of varieties, management practices, and new technologies through on-farm replicated research using producer equipment and time. These experiments enable producers to make better management decisions based on research and provide greater opportunity to improve yields and profits, which improves quality of life for them and their families.

The success of these on-farm plots is very dependent on the cooperative effort of the producer and the assisting agribusinesses. We are grateful for that cooperation. We hope the information will be beneficial to you and your individual agribusiness operations. This publication is made available each year at the Virginia Grain and Soybean Conference and at regional production meetings throughout Virginia. This information reaches over 400 Virginia soybean and grain producers and agribusinesses impacting over 250,000 acres of soybeans valued at over $75 million.

The 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 who can request a copy from David Moore in Middlesex County at 804-758-4120 or contact **damoore3@vt.edu.**

This is the fifteenth year of this multi-county cooperative effort and further work is planned for 2012. The authors wish to thank the many producers who participated in this project. Appreciation is extended to seed, crop protection, and fertilizer representatives who donated products and/or assisted with the field work. Special thanks Paige Hogge, for her valuable technical assistance in compiling the book.

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General Summary

These replicated studies provide information that can be used by Virginia soybean producers to make better management decisions. Refer to individual plots for discussion of results.

As in the past, agents have compared maturity group 4, 5 and Liberty Link varieties across multiple locations. This information gives producers in a given area a better handle on how varieties perform "close to home". This work is performed in concert with the State trials conducted by Dr. Holshouser and offers producers even stronger yield comparison information that they can use when making planting decisions.

Maturity Group 4 and 5 varieties were compared at 7 and 6 locations, respectively, in Eastern Virginia. MG 4's and MG 3's were evaluated at the site of 2011 AG-EXPO in Fauquier County, Virginia (At this site, soybeans yields were compared with and without a fungicide application). Relative yields were calculated to provide information for varieties not included in all locations. Contact cooperating agents about results in individual test locations.

We have been evaluating Liberty Link (LL) varieties for a few years now. The purpose of this is to try and stay ahead of possible *glyphosate* resistant problems that have been seen in some areas in the State. The work not only looks at LL variety performance, but also evaluates the use of *glufosinate (Ignite)* herbicide as another tool for weed pest management.

Soybean nematodes are an ever-present problem for producers here in Eastern Virginia especially on sandy soils. Extensive testing has been conducted for several years now and we have continued to evaluate production strategies used to control/suppress nematode problems. New seed treatments, were compared in some known soybean nematode problem fields. The use of these seed treatments in some problem fields showed some advantage to untreated seed. The use of resistant varieties is still the best tool when trying to control/suppress nematode damage.

David Moore evaluated some root-knot resistant varieties in a known RKN problem field.

Folks in Eastern Virginia have expressed great interest in the use of starter fertilizer in full season soybeans planted in wide (30 inch) rows. This evaluation was conducted again in 2011 with no significant yield differences found between strips with and without starter.

Micro 581, a nutritional additive (nutritional), was evaluated in some double crop soybeans. The application of Micro 581 was applied at growth stage R2-R3-pod fill begins. The product, like so many others, could be applied at anytime during growth of soybean plant. This test was not done to bring attention to Micro 581, but to evaluate this type of product. There are a lot of these products on the market.

An evaluation of Domark™ fungicide was conducted on MG 5 double crop soybeans in Middlesex County.

2011 OVERALL MATURITY GROUP 4 COMPARISONS

2011 MG 4 Virginia Agent Soybean Comparisons

Brand/Variety	King Queen	VA Beach	Prince Geo	Suffolk	AG-EXPO*	VSU	W'moreland	Avg.	Avg. Rel. Yield
Asgrow AG4632	53.7	63.5	66.8	59.8	53.2	45.7	69.6	58.9	101
Asgrow AG4732	59.9	61.4	68.3	54.4	66	50	65.5	60.8	105
Channel 4500R2	66	64.6	66.6	38.9	56.6	53.8	70	59.5	102
Channel 4700R2	59.3	59.3	59.3	57.9	54.7	46.6	67.3	57.8	100
Doebler's RPM DB4510RR	57.9	56.2	65.1	63	49.1	45.2	64.5	57.3	99
Dyna-Gro 37RY47	65.8	63	66.9	54.5		49.7	67.1	61.2	105
Dyna-Gro 39D48	53.7	63.7	65.3	53.1		48.3		56.8	99
USG 74A79	50.6	67.7	64.1	58.4	73.9		57.1	62	104
USG 74E88	34.8	59.5	64.1	58.3	57.4	50	55.5	54.2	93
Mid-Atlantic MAS4605NRR	60.4	62.3	68.5	55.4	56	53.7	69.7	60.9	105
Mid-Atlantic MAS4666NRR	63.5	61.7	64.1	58.7	59.9	56.8		60.8	107
NK Seeds S44-K7	46.7	59.5	68.5	55.2	46.3	42.3	64.8	54.8	94
NK Seeds S46-A1	53.5	57.9	62.5	58.7	61.1	46.6	66.2	58.1	100
Pioneer 94Y70	52.7	60.6	63.9	51.9	61.2	48.7	57.6	56.7	98
Pioneer 94Y92	47.9	58.9	62.3	53.5	51.9	47.9	62	54.9	95
Seed Consultants SCS9421RR	62.7	63.4	68.3	64.9	56.9	48.3	68.6	61.9	107
Seed Consultants SCS9450RR	53.3	61.7	65.5	49.4	43.7	45.9	68.8	55.5	95
Southern States RT4996N	53.3	61	65.3	58.9	55.2		65.9	59.9	101
Southern States 4711NR2	53.3	60.9	65.5	56	61.3	46.1		57.2	100
TA Seeds TS4129R2	53.8	62	63.9	61.4	50.9	47.8	68.3	58.3	100
TA Seeds TS4299RS	57.3	55.1	59.5	46.1	47	55.8	64.1	55	95
Hubner H438NRR/STS	53.1		65.3	57.8		53.4	52.8	56.5	98
Hubner H48-12R2/STS	51.2			60.3		51.5	59.6	55.7	100
Average each location	**55.0**	**61.1**	**65.0**	**55.9**	**55.9**	**49.2**	**64.3**		

*average yield with and without fungicide

2011 KING & QUEEN GROUP 4 SOYBEAN VARIETY COMPARISONS

Cooperators:	Producer:	David Carlton, William Davis Carlton
	Extension:	David Moore, Keith Balderson VCE Middle Peninsula Micah Owens, Summer Intern
	Agribusiness:	Participating Companies
Previous Crop:		Barley
Soil Type:		Emporia Sandy Loam
Tillage:		No Till into Barley Stubble
Test/Plot Size:		17.5" x 325'
Planting Equipment:		Kinze 3500 series
Planting Date:		June 13, 2011
Row Spacing:		15 inches
Seeding Rate:		140,000
Crop Protection:		Glyphosate + Surfactant
Harvest Date:		November 14, 2011
Harvest Equipment:		John Deere 9560STS

Brand	**Variety**	**Moisture**	**Yield**	**Adjusted Yield[a]**
		(%)	(bu/A)	(bu/A)
Check-Dyna Gro	V47N8RR	11.0	59.0	54.6
Mid-Atlantic	MAS4666NRR	11.0	63.5	59.1
Mid-Atlantic	MAS4605NRR	11.0	60.4	56.6
TA Seeds	TS4129R2	11.3	53.8	50.7
TA Seeds	TS4299RS	11.2	57.3	54.3
Channel Bio	4500R2	11.0	66.0	63.0
Channel Bio	4700R2	11.3	59.3	56.9
RPM (Doebler's)	DB4510RR	11.7	57.9	55.9
Check		11.0	56.2	54.6
Dyna-Gro	37RY47	11.2	65.8	64.4
Dyna-Gro	39D48	11.1	53.7	52.9
Seed Consultants	SCS9421RR	11.3	62.7	62.2
Seed Consultants	SCS9450RR	11.0	53.3	53.3
NK Seeds	S46-A1	11.3	53.5	53.8
NK Seeds	S44-K7	10.6	46.7	47.3
Check		10.9	53.5	54.6
Southern States	RT4996N	11.0	53.3	54.8

Southern States	SS4711NR2	11.0	53.3	55.1
Asgrow	AG4632	11.0	53.7	55.9
Asgrow	AG4732	11.0	59.9	62.7
Pioneer	94Y70	10.6	52.7	55.6
Pioneer	94Y92	11.0	47.9	50.8
Hubner	H438NRR/STS	11.0	53.1	56.7
Hubner	H48-12R2/STS	10.5	51.2	55.0
USG	74A79	10.8	50.6	54.8
USG	74E88	11.1	34.8	37.9
Check		10.9	49.8	54.6
Average:			**54.9**	**55.1**

[a]Yields were adjusted by linear interpolation using checks (Adj. Yield = Yield/(Regressed Yield:Average Yield of Checks)

Discussion: Very good soybean year! These are DC soybeans after barley. The USG 74E88 had a poor stand due to early season mole and vole pressure. The quality of the soybeans was very good. The entire plot had some signs of Cercospora Blight and most varieties showed signs of "new" virus-Soybean Vein Necrosis Virus (SVNV). This virus is vectored by thrips. Many of the varieties had an insecticide seed treatment, but still had the virus symptoms, so if the thrips were present, they must have come in after the residual activity of the insecticide seed treatment had ended. Look later in the publication for a breakdown of seed treatments, presence of SVNV and final yields pertaining to this plot.

Use this and other Virginia Tech on farm soybean plot information when making planting decisions for 2012.

2011 GROUP 4 SOYBEAN VARIETY COMPARISONS: SEED TREATMENTS AND RESPONSE TO VEIN NECROSIS VIRUS SYMPTOMS

Cooperators:	Producer:	David Carlton, William Davis Carlton
	Extension:	David Moore, Keith Balderson VCE Middle Peninsula Micah Owens, Summer Intern
	Agribusiness:	Participating Companies
Previous Crop:		Barley
Soil Type:		Emporia Sandy Loam
Tillage:		No Till into Barley Stubble
Test/Plot Size:		17.5" x 325'
Planting Equipment:		Kinze 3500 series
Planting Date:		June 13, 2011
Row Spacing:		15 inches
Seeding Rate:		140,000
Crop Protection:		Glyphosate + Surfactant
Harvest Date:		November 14, 2011
Harvest Equipment:		John Deere 9560STS

Brand	Variety	Seed Treatment	SVNV Rating
		(%)	(bu/A)
Mid-Atlantic	MAS4666NRR	Acceleron	1
Mid-Atlantic	MAS4605NRR	Acceleron	1
TA Seeds	TS4129R2	Rancona, MetaStar, Macho, Excalibre	4
TA Seeds	TS4299RS	(Same)	3
Channel Bio	4500R2	Metalaxyl, Imidacloprid, Pyraclostrobin	3
Channel Bio	4700R2	(Same)	3
RPM (Doebler's)	DB4510RR	Trilex 2000, Gaucho	1
Dyna-Gro	37RY47	Fludioxinil, Mefanoxam, Imidacloprid	2
Dyna-Gro	39D48	(Same)	1
Seed Consultants	SCS9421RR	Allegiance, Gaucho, Trilex	2
Seed Consultants	SCS9450RR	(Same)	1
NK Seeds	S46-A1	Cruiser Maxx	1
NK Seeds	S44-K7	Untreated	2
Southern States	RT4996N	Trilex/Protinus	3
Southern States	SS4711NR2	Untreated	3
Asgrow	AG4632	Metalaxyl, Imidacloprid, Pyroclastrobin	3
Asgrow	AG4732	Metalaxyl, Imidacloprid, Pyraclostrobin	3

Pioneer	94Y70	Untreated	2
Pioneer	94Y92	Untreated	2
Hubner	H438NRR/STS	Acceleron-Excalibre	3
Hubner	H48-12R2/STS	Acceleron	4
USG	74A79	RenPro Plus	1
USG	74E88	RenPro Plus	2
Check (Dyna-Gro)	47N8	Fludioxinil, Mefanoxam, Imidacloprid	2-4

Discussion:
Rating for SVNV:
1 = No leaves with yellow splotches
2 = Upper leaves only with yellow splotches
3 = Upper leaves with splotches in addition to symptoms in mid canopy
4 = Upper and mid canopy with significant yellow splotches
5 = Leaves throughout the plant with yellow splotches

The purpose of this report is twofold: First, to inform readers of the various seed treatments used on soybeans in this year's tests; Secondly, I rated the plants in late August for the yellow splotches that have been related to Soybean Vein Necrosis Virus, a disease vectored by thrips that has been seen in the south, especially in Arkansas where the bulk of the research relating to this virus has taken place. It is not known whether this yellow splotching causes any yield loss. It is apparent with this experiment that seed treatments, containing insecticides, did not appear to reduce the virus symptoms. It appears that any insecticide in the seed treatment did not provide protection to the crop for very long after emergence.

It was obvious that fields with this disease (splotching) also had a lot of Cecospora blight, the same disease that causes purple seed stain. Let us be cautious with this new "disease" and how we spend money on trying to manage it. We are still unsure of a lot of things.

Seed Treatments:
Acceleron: Metalaxyl, imidacloprid, and biological yield enhancer, Pyraclostrobin
RenPro Plus: Cruiser (insecticide), Azoxystrobin (strobilurin), Molybdenum, Metalaxyl
Protinus: Seed-applied nutritional product
Imidacloprid, Macho, Gaucho: Insecticide
Metalaxyl, Allegience, MetaStar: Fungicide
Pyraclostrobin; Strobilurin fungicide
Mefanoxam: Fungicide
Excalibre: Inoculant
Fludioxinil: Fungicide
Trilex: A combination of metalaxyl and a strobilurin fungicide
Rancona: Triazole fungicide

2011 SUFFOLK GROUP 4 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Mike Ellis
Extension: David Holshouser
Agribusiness: Participating Seed Companies
Previous Crop: Corn
Soil Type: Rains fine sandy loam
Tillage: Disk 2X
Test/Plot Size: 15-30 ft. wide x 321-657 ft. long
Plant Equipment: John Deere 750 Drill
Planting Date: May 23
Row Spacing: 7.5 inches
Seeding Rate: 140,000
Crop Protection: Roundup PowerMaxx 26 oz/A 2X; Baythroid 3 oz + Headline 6 oz/A
Harvest Date: Nov. 10
Harvest Equipment: Case IH 1640

Brand	Variety	Moisture	Yield
		(%)	(bu/A)
Hubner	H48-12R2/STS	16.7	61.7
NK Seeds	S46-A1	17	58.7
Southern States	SS4711NR2	16.9	56.0
RPM (Doebler's)	DB4510RR	17.9	63.0
Mid-Atlantic	MAS4605NRR	16.5	55.4
NK Seeds	S44-K7	17.1	55.2
Pioneer	94Y92	16.4	53.5
Southern States	RT4996N	16.3	58.9
Pioneer	94Y70	16.1	51.9
TA Seeds	TS4129R2	16.1	61.4
Channel Bio	4500R2	16.8	38.9
TA Seeds	TS4299RS	15.9	46.1
Hubner	H48-12R2/STS	15.7	58.8
USG	74A79R	15.9	58.4
Seed Consultants	SCS9450RR	15.9	49.4
Asgrow	AG4632	15.6	59.8

Brand	Variety	Moisture	Yield
		(%)	(bu/A)
Seed Consultants	SCS9421RR	15.4	64.9
Dyna-Gro (CPS)	37RY47	14.8	54.5
Mid-Atlantic	MAS4666NRR	15.4	58.7
Channel Bio	4700R2	14.9	57.9
Dyna-Gro (CPS)	39D48	14.9	53.1
USG	74E88	14.9	58.3
Hubner	H438NRRSTS	15.5	57.8
Asgrow	AG4732	15.4	54.4
Average:		**16.0**	**56.1**

Discussion: In general, it was a very good year with only a short period of drought stress during early flower and pod development. Rainfall was over-abundant during September through October, which resulted in generally poor seed quality for MG 4 varieties. Use this and other replicated variety test information when selecting varieties for 2011.

2011 VIRGINIA BEACH GROUP 4 RR SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Jason & Arnold Dawley
Extension: Watson Lawrence
Previous Crop: Triticale hay
Soil Type: Augusta Loam
Tillage: No-till into small grain stubble
Test/Plot Size: 33 ft. plot width X 500 ft. plot length
Planting Equipment: JD7300 Planter
Planting Date: May 17, 2011
Row Spacing: 18 inch
Seeding Rate: 140,000 seed/acre
Crop Protection: Glyphosate 1.5 qt. + 6 oz. Headline at R3 + 8 oz. Steward/acre
Harvest Date: November 3, 2011
Harvest Equipment: Case International 2166 with 20 foot head

Brand	Variety	Moisture	TW	Yield
		(%)	(lbs.)	
Asgrow	AG4632	13.7	57	63.5
Asgrow	AG4732	14.0	57	61.4
Channel Bio	4500R2	13.7	58	64.6
Channel Bio	4700R2	13.6	58	59.3
RPM (Doebler's)	DB4510RR	14.2	57	56.2
Dyna-Gro/CPS	37RY47	14.0	58	63.0
Dyna-Gro/CPS	39D48	14.2	58	63.7
USG	74A79R	13.7	58	67.7
USG	74E88	14.0	57	59.5
Mid-Atlantic	MAS4605NRR	13.7	58	62.3
Mid-Atlantic	MAS4666NRR	13.7	58	61.7
NK Seeds	S44-K7	13.9	57	59.5
NK Seeds	S46-A1	13.7	57	57.9
Pioneer	94Y70	14.1	58	60.6
Pioneer	94Y92	14.0	58	58.9
Seed Consultants	SCS9421RR	14.0	57	63.4
Seed Consultants	SCS9450RR	13.7	58	61.7
Southern States	RT4996N	13.7	58	61.0
Southern States	SS4711NR2	14.4	58	60.9
TA Seeds	TS4129R2	14.2	57	62.0

TA Seeds	TS4299RS	14.2	57	55.1
Average:		**13.9**	**58**	**61.1**

Discussion: Field conditions were very dry after planting. Poor germination required a re-planting of entire plot. Soybeans were stressed during much of vegetative growth. Soil moisture improved in late August with Hurricane Irene just in time for pod set. Test weight and seed quality were aided by September rains. These conditions added credibility to the argument that in our area soybeans, even Group 4's, can be a forgiving crop if planted in time to utilize a full season. Yields were outstanding. An intense but short CEW season required only one spray. Seed quality was good for these group 4 soybeans, possibly aided by a fungicide spray at pod set. Weed control was excellent.

2011 VIRGINIA STATE UNIVERSITY GROUP 4 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Rudy Grammer & Mack West – VSU Randolph Far**m**
Glenn F. Chappell, II - VSU
Previous Crop: Barley
Soil Type: Norfolk Fine Sandy Loam & Tetotum loam
Tillage: Ripped under the row
Test/Plot Size: 8 30" rows x 300'
Planting Equipment: John Deere Max Emerge
Planting Date: June 14, 2011
Row Spacing: 30"
Seeding Rate: 157,000
Crop Protection: 1.5 qt. Gly4 + 0.23 oz. First Rate - June 24, 2011
1.5 qt. Gly4 + 0.3 oz. First Rate - August 4, 2011
Harvest Date: November 28, 2011
Harvest Equipment: John Deere 9560 STS

Brand	Variety	Moisture	Yield	% of Check*
		(%)	(bu/A)	(%)
Asgrow	4730 (check)	12.0	55.7	-----
Mid-Atlantic	MAS4666NRR	12.1	56.8	105.8
Mid-Atlantic	MAS4605NRR	12.3	53.7	99.9
TA Seeds	TS4129R2	11.9	47.8	89.0
TA Seeds	TS4299R2	11.9	55.8	103.8
Channel Bio	4500R2	12.1	53.8	100.1
Channel Bio	4700R2	11.9	46.6	86.7
RPM (Doebler's)	DB4510RR	10.9	45.2	84.2
Dyna-Grow/CPS	37RY47	11.7	49.7	92.6
Dyna-Grow/CPS	39D48	12.1	48.3	89.9
Seed Consultants	SCS9421RR	12.0	48.3	90.0
Seed Consultants	SCS9450RR	12.0	45.9	85.4
NK Seeds	S46-A1	11.8	46.6	86.8
NK Seeds	S44-K7	11.8	45.3	78.8
Southern States	SS4711NR2	11.6	46.1	85.8
Asgrow	AG4632	11.2	45.7	85.1
Asgrow	AG4732	11.3	50.0	93.0
Pioneer	94Y92	11.6	47.9	89.2
Pioneer	94Y70	11.3	48.7	90.7
Hubner	H4812R2/STS	11.8	51.5	95.9

Hubner	H438NRRSTS	11.8	53.4	99.3
USG	7488	11.2	50.0	93.1
Asgrow	4730 (check)	11.4	51.8	----
Average:			**49.6**	

Discussion: Rainfall totals by month: June – 5.55", July – 5.90", Aug. – 7.50" (Irene – 4.35"+)
* % of Check = (Variety yield/(Sum of check yields/2))*100 (Rounded to the nearest 1/10 %)

2011 WESTMORELAND COUNTY GROUP 4 SOYBEAN VARIETY COMPARISONS

Cooperators:	Producer:	F. F. Chandler, Jr.
	Extension:	Keith Balderson, VCE, Middle Peninsula Stephanie Romelczyk, VCE, Westmoreland County Livvy Gill, VCE Summer Intern
	Agribusiness:	Participating Seed Companies
Previous Crop:		Corn
Soil Type:		Kempsville and Savannah loam
Tillage:		No-till
Planting Equipment:		Case IH Air Planter
Planting Date:		May 26, 2011
Row Spacing:		30 inches
Seeding Rate:		50 pounds per acre
Crop Protection:		Burndown Herbicide: Gramoxone and 2,4-D Post-emergence: Glyphosate Fungicide: Headline @ R2-3 Growth Stage
Harvest Date:		November 8, 2011
Harvest Equipment:		John Deere 9400 with 918 header

Brand	Variety	Moisture	Yield
		(%)	(bu/A)
Mid-Atlantic	MAS4666NRR		inadvertently harvested without weighing
Mid-Atlantic	MAS4605NRR	13.5	69.7
T. A. Seeds	TS4129R2	13.4	68.3
T. A. Seeds	TS4299RS	13.0	64.1
Channel Bio	4500R2	13.3	70.0
Channel Bio	4700R2	13.3	67.3
Doebler's	DB4510RR	13.3	64.5
Dyna-Gro	37RY47	13.6	67.1
Dyna-Gro	47N8	13.4	66.0
Seed Consultants	SCS9421RR	13.4	68.6
Seed Consultants	SCS9450RR	13.5	68.8
NK Seeds	S46-A1	13.1	66.2
NK Seeds	S44-K7	13.4	64.8
Southern States	RT4996N	13.2	65.9
Southern States	SS4711NR2		not planted

Asgrow	A4632	13.2	69.6
Asgrow	A4732	12.9	65.5
Pioneer	94Y70	13.2	57.6
Pioneer	94Y92	13.0	62.0
Hubner	438NRR/STS	13.5	52.8
Hubner	48-12R2/STS	13.4	59.6
USG	74A79	13.0	57.1
USG	74E88	13.1	55.5
Average		13.27	64.3

Discussion:
2011 was a very good year for soybeans in Virginia. Yields in this plot were excellent. Use this and replicated plot data when selecting varieties for 2011.

2011 PRINCE GEORGE GROUP 4 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Paul Cerny and Sean Finney
Extension: Scott Reiter, Prince George
Agribusiness: Participating Seed Companies
Previous Crop: Wheat with straw removed
Soil Type: Montross and Aycock silt loam
Tillage: No-till
Test/Plot Size: 13 feet x 200 feet
Planting Equipment: Great Plains 705 No-till Drill
Planting Date: June 10, 2011
Row Spacing: 7 inches
Seeding Rate: 250,000 seed/acre (210,000 expected final stand)
Crop Protection: Roundup @ 1 qt/A + FirstRate @ 0.3 oz/A
Harvest Date: November 14, 2011
Harvest Equipment: John Deere 9500 with 918 Flex head

Brand	Variety	Moisture	Test Weight	Yield @ 13% Moisture	Yield Ratio
		(%)	(lbs/bu)	(bu/A)	(% of average)
Asgrow	AG4632	10.7	56.4	66.8	103%
Asgrow	AG4732	10.6	57.1	68.3	105%
USG	74E88	10.4	56.0	64.1	99%
USG	74A79	10.4	56.4	64.1	99%
NK Seeds	S44-K7	10.4	56.4	68.5	105%
NK Seeds	S46-A1	10.6	56.0	62.5	96%
Mid-Atlantic	MAS4605NRR	10.4	55.3	68.5	105%
Mid-Atlantic	MAS4666NRR	10.4	55.3	64.1	99%
Seed Consultants	SCS9421RR	10.6	55.7	68.3	105%
Seed Consultants	SCS9450RR	10.4	56.0	65.5	101%
Southern States	RT4711NR2	10.4	57.1	65.5	101%
Southern States	RT4996N	10.7	56.4	65.3	101%
Dyna-Gro/CPS	37RY47	10.6	56.0	66.9	103%
Dyna-Gro/CPS	39D48	10.7	56.0	65.3	101%
TA Seeds	TS4129R2	10.6	55.7	63.9	98%
TA Seeds	TS4299RS	10.7	55.0	59.5	92%
Pioneer	94Y70	10.7	56.0	63.9	98%
Pioneer	94Y92	10.8	56.0	62.3	96%

Channel Bio	4500R2	10.9	56.7	66.6	103%
Channel Bio	4700R2	11.1	56.0	59.3	91%
Doebler's	RPM DB4510RR	11.0	56.4	65.1	100%
Hubner	H438NRRSTS	10.7	57.4	65.3	101%
Average:		10.6	56.1	65.0	

Discussion: These were some excellent double crop soybeans. Seed quality was very good with little seed stain or other damage. Varieties are listed in order of planting across the field. Test weight measurements were taken due to concerns of lighter test weights early in the harvest season. Use this data with statewide averages and other data for your 2012 seed selections.

2011 FAUQUIER COUNTY GROUP 4 SOYBEAN VARIETY COMPARISONS AND RESPONSE TO FOLIAR FUNGICIDE APPLICATION

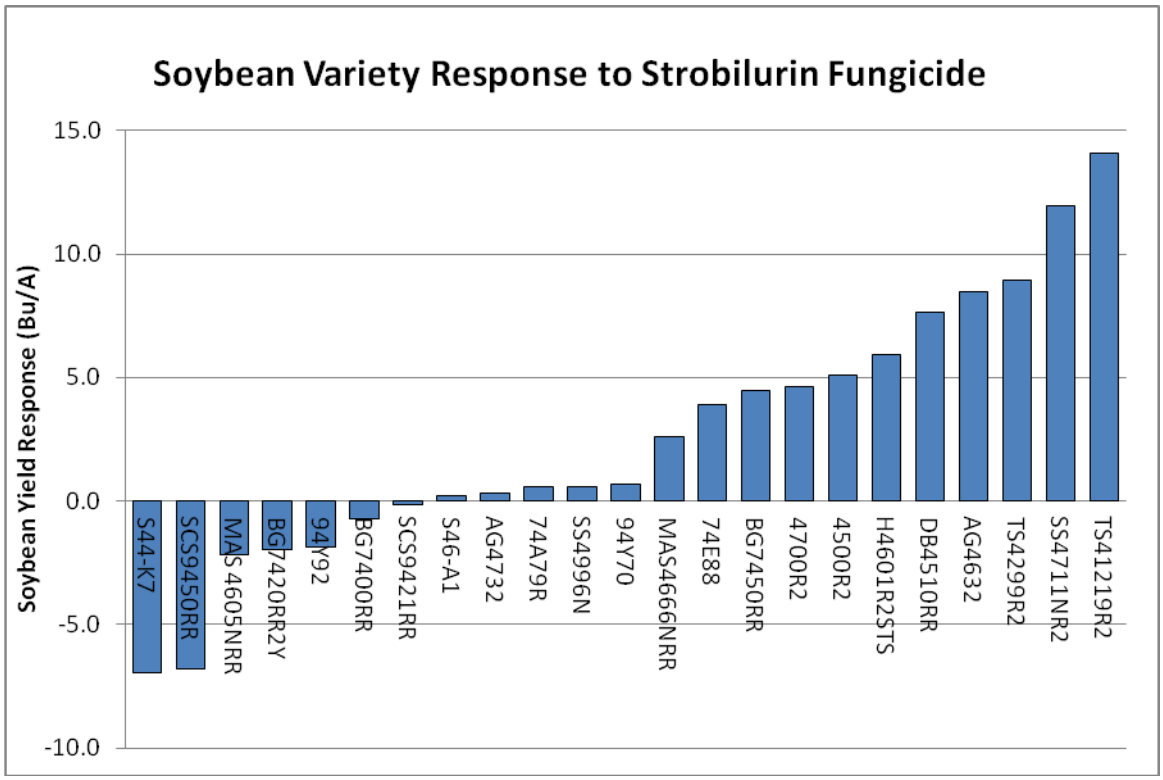
Cooperators: Producer: Bill Ritchie
Extension: Tim Mize, David Holshouser
Agribusiness: Participating Seed Companies
Previous Crop: Corn
Soil Type: Sycoline, Jackland, Haymarket, and Dulles silt loam
Tillage: Disk
Test/Plot Size: 4 rows x 100-150 ft.
Replications: 2 or 3
Plant Equipment: John Deere Max Emerge Plus
Planting Date: May 10
Row Spacing: 30 inches
Seeding Rate: 140,000 seed/acre
Crop Protection: glyphosate, Headline® fungicide at 6 oz/A on half of plots
Harvest Date: November 15
Harvest Equipment: Wintersteiger plot combine

Brand	Variety	Fungicide	Seed Quality [a]	Purple Seed Stain [b]	Seed Size	Yield
			(1-5)	(%)	(seed/lb)	(Bu/A)
Asgrow	AG4632	N	3.0	15	2794	48.9
Asgrow	AG4632	Y	3.3	5	2625	57.4
Asgrow	AG4732	N	4.0	19	2813	65.8
Asgrow	AG4732	Y	3.0	12	2617	66.1
Biogene	BG7400RR	N	4.0	7	2576	42.0
Biogene	BG7400RR	Y	4.0	3	2481	41.2
Biogene	BG7420RR2Y	N	4.5	23	2385	54.7
Biogene	BG7420RR2Y	Y	4.5	17	2282	52.7
Biogene	BG7450RR	N	3.5	23	2620	60.5
Biogene	BG7450RR	Y	3.5	14	2373	65.0
Channel	4500R2	N	2.3	22	2663	54.0
Channel	4500R2	Y	2.7	7	2537	59.1
Channel	4700R2	N	4.0	24	2546	52.4
Channel	4700R2	Y	4.0	10	2422	57.0
Hubner	H4601R2STS	N	3.6	16	2611	61.8
Hubner	H4601R2STS	Y	3.7	6	2479	67.7
Mid-Atlantic	MAS 4605NRR	N	4.0	11	2600	57.1
Mid-Atlantic	MAS 4605NRR	Y	4.3	4	2425	54.9
Mid-Atlantic	MAS4666NRR	N	3.7	10	2714	58.6

Mid-Atlantic	MAS4666NRR	Y	2.3	3	2615	61.1
NK	S44-K7	N	2.7	4	3205	49.7
NK	S44-K7	Y	4.0	5	2994	42.8
NK	S46-A1	N	2.3	21	2603	61.0
NK	S46-A1	Y	3.0	11	2373	61.2
Pioneer	94Y70	N	4.0	10	2736	60.8
Pioneer	94Y70	Y	4.0	3	2567	61.5
Pioneer	94Y92	N	2.7	14	2566	52.8
Pioneer	94Y92	Y	2.7	9	2337	51.0
RPM (Doebler's)	DB4510RR	N	3.5	30	2640	45.3
RPM (Doebler's)	DB4510RR	Y	4.0	10	2587	52.9
S. States	SS4711NR2	N	3.0	36	2883	55.3
S. States	SS4711NR2	Y	3.0	8	2603	67.2
S. States	SS4996N	N	2.0	10	2761	54.9
S. States	SS4996N	Y	2.0	3	2450	55.5
Seed Consultants	SCS9421RR	N	4.5	14	2271	57.0
Seed Consultants	SCS9421RR	Y	4.5	6	2183	56.8
Seed Consultants	SCS9450RR	N	3.5	24	2649	47.1
Seed Consultants	SCS9450RR	Y	4.0	13	2524	40.3
T.A. Seed	TS41219R2	N	4.0	15	2631	43.8
T.A. Seed	TS41219R2	Y	4.3	5	2464	57.9
T.A. Seed	TS4299R2	N	4.0	9	2418	42.5
T.A. Seed	TS4299R2	Y	4.0	1	2332	51.4
USG	74A79R	N	2.3	11	2552	73.6
USG	74A79R	Y	2.3	3	2390	74.1
USG	74E88	N	3.7	9	2936	55.4
USG	74E88	Y	3.0	3	2816	59.3
Average			**3.5**	**11**	**2580**	**57.6**

[a]Seed Quality: Ratings are represent overall seed quality, but are a good representation of *Phomopsis* seed decay. The following scale was used: 1.0 = very good; 2.0 = good; 3.0 = fair; 4.0 = poor; 5.0 = very poor.

bPurple seed stain is caused by *Cercospora* blight and leaf spot. Data represents the percentage of seed from a 100-seed sample that exceeds 5% stain.

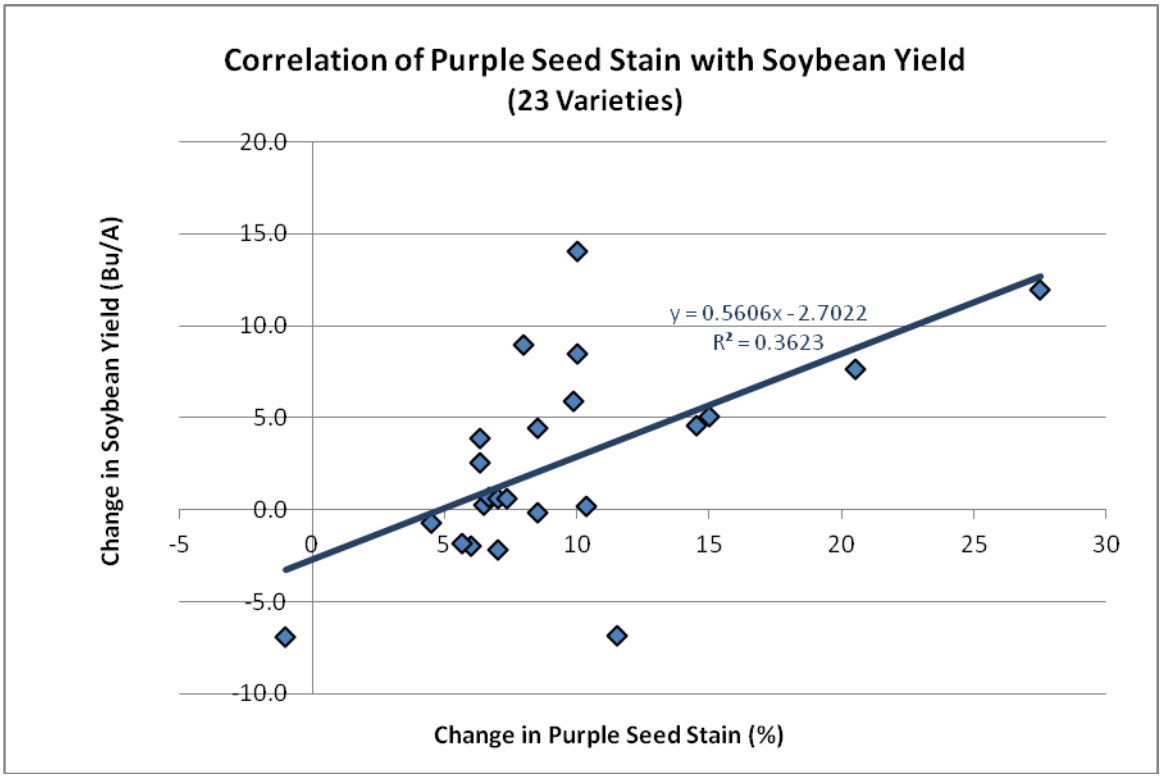


Discussion: These maturity group (MG) 4 varieties yielded very well in spite of a severe 3-week drought in August. Use this and other replicated variety test information when selecting varieties for 2011.

At the R3 stage (beginning pod), Headline® fungicide was applied across all varieties in 24-foot increments (no fungicide for 24 feet, fungicide for 24 feet, no fungicide, etc.). These strips were replicated either two or three times. Conditions at the time of application were good for disease development (full-canopy crop, moist soil conditions due to recent rains, high relative humidity), but no rain fell for the next three weeks. The average yield increase with the fungicide was 2.6 bushels per acre and some varieties responded better. Yields response from fungicide application ranged from -7 to 14 bushels. Averaged across all varieties, seed size was larger (161 less seed per lb) for fungicide-treated soybeans; differences were greater for some varieties (over 300 less seed per lb). Dry conditions after fungicide application were thought to have prevented or delayed disease formation, but the yield response to several varieties were very evident.

Rainfall relieved the crop from drought stress in late August. Rainy conditions prevailed throughout September and October, causing poor seed quality and lots of purple seed stain. Differences in seed quality or purple seed stain may indicate tolerance of those varieties to certain diseases. However, it must be noted that later-maturing varieties generally have better seed quality, which is unrelated to inherent resistance or tolerance to disease. Purple seed stain infection is not directly related to relative maturity. Fungicide application did not improve seed quality in most varieties, but lowered the amount of purple seed stain by 9% on average and more in some varieties (up to 28% less staining).

Cercospora blight, the disease causing purple seed stain, can lower soybean yield and is likely the main reason behind soybean response to fungicides in Virginia. There was some correlation between the change in soybean yield from fungicide application and change in purple seed stain. In varieties with greater than 20% purple seed stain infection, this correlation was very strong. Keep in mind that purple seed stain itself does not decrease yield, but the disease causing purple seed stain (Cercospora blight and leaf spot) does.



2011 OVERALL MATURITY GROUP 5 SOYBEAN COMPARISONS

2011 Virginia Agent MG 5 Soybean Comparisons

Brand/Variety	New Kent	Chesapeake	VSU	Surry	Suffolk	Prince Geo	Avg.	Avg. Rel. Yield
Asgrow AG5332	51.8	49.1	50.2	39.9	55.8	66.4	52.2	108
Asgrow AG5532	51.5	47.7	50.8	35.2	55.8	59.1	50	103
Doebler's RPM DB5711RS	48.3	45.8	45.5	33.9	51.1	57.6	47	97
Dyna-Gro 32A53	52	38.8	45.5	39.4	51	54.9	46.9	98
Dyna-Gro 32RY55	50.4	42.5	53.1	36.2	56	59.3	49.6	103
Hubner H52-12R2	51.4	40.2	48.7		56.7	57.9	51	101
NK Seeds S51-J3	55.3	51.3	40.7	37.5	62.1	66.5	52.2	108
NK Seeds S56-G6	45.6	48.5	52.5	29.5	55.9	59.4	48.6	100
Pioneer 95Y20	49.8	41.2	49.2	40	52.6	59.4	48.7	101
Pioneer 95Y71	32	45.3	51.2	43.6	57	54.9	47.3	99
Southern States RT5160	48.2	47.1	48.8	39.9	50.2	63.8	49.7	103
TA Seeds TS5029R2	42.5	35.3	44.3	41.7	45.2	50.7	43.3	91
USG 75M49	47.9	41.8	48.6	31.5	48.9	59.4	46.4	96
USG 75Z98	45.6	41.6	49.1	32.3	46	55.3	45	93
Average per location	**48.0**	**44.0**	**48.4**	**37.0**	**53.2**	**58.9**		

2011 CHESAPEAKE GROUP 5 RR SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Russell Temple
Extension: Watson Lawrence
Previous Crop: Corn grain
Soil Type: Tomotley-Nimmo complex-fine sandy loam
Tillage: Conventional with rows planted flat
Test/Plot Size: 32 ft. X 500 ft. plots
Planting Equipment: John Deere vacuum planter (8 rows)
Planting Date: May 25, 2011
Row Spacing: 24 inches
Seeding Rate: 50 lbs./acre
Crop Protection: 2-applications **(**Glyphosate @ 1 ¼ qts. + Flexstar @ 12 oz.) per acre post-emergence
Harvest Date: Nov. 7, 2011
Harvest Equipment: John Deere CTS

Brand	Variety	Moisture	TW	Yield
		(%)	(lbs.)	
Asgrow	AG5332	12.9	58	49.1
Asgrow	AG5532	13.7	57	47.7
RPM (Doebler's)	DB5711RS	14.0	58	45.8
Dyna-Gro/CPS	32A53	12.6	58	38.8
Dyna-Gro/CPS	32RY55	12.8	57	42.5
Hubner	H52-12R2-AC	12.9	58	40.2
NK Seeds	S51-J3	13.9	57	51.3
NK Seeds	S56-G6	13.5	59	48.5
Pioneer	95Y20	13.2	58	41.2
Pioneer	95Y71	13.4	57	45.3
Southern States	RT5160	13.4	58	47.1
TA Seeds	TS5029R2	13.2	57	35.3
USG	75M49	13.6	58	41.8
USG	75Z98	13.7	58	41.6
AVERAGE:		**13.3**	**58**	**44.0**

Discussion:
Varieties performed well. Minimal lodging damage from Hurricane Irene. Scouting revealed threshold for corn earworm was never reached, so no insecticide used. Pigweed was a predominate weed, but combination of Glyphosate + Flexstar herbicides eliminated the pigweed problem.

2011 SUFFOLK GROUP 5 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Mike Ellis
Extension: David Holshouser
Agribusiness: Participating Seed Companies
Previous Crop: Corn
Soil Type: Rains fine sandy loam
Tillage: Disk 2X
Test/Plot Size: 15 ft. wide x 564-662 long
Plant Equipment: John Deere 750 Drill
Planting Date: May 23
Row Spacing: 7.5 inches
Seeding Rate: 140,000
Crop Protection: Roundup PowerMaxx 26 oz/A 2X; Baythroid 3 oz + Headline 6 oz/A
Harvest Date: Nov. 10
Harvest Equipment: Case IH 1640

Brand	Variety	Moisture	Yield
		(%)	(bu/A)
NK Seeds	S51-J3	15.6	62.1
Dyna-Gro (CPS)	32RY55	15.3	56.0
Hubner	H52-12R2-AC	14.7	56.7
Dyna-Gro (CPS)	32A53	14.4	51.0
NK Seeds	S56-G6	14.9	55.9
Pioneer	95Y71	14.8	57.0
RPM (Doebler's)	DB5711RS	14.9	51.1
Pioneer	95Y20	14.8	52.6
Asgrow	AG5332	14.8	55.8
Asgrow	AG5532	14.4	55.8
USG	75Z98	15.1	46.0
Southern States	RT5160	15.2	50.2
TA Seeds	TS5029R2	15.1	45.2
USG	75M49	15.2	48.9
Pioneer	95M82	14.7	43.0
Averages		**14.9**	**52.5**

Discussion: In general, it was a very good year with only a short period of drought stress during early flower and pod development. Rainfall was over-abundant during September through October. Use this and other replicated variety test information when selecting varieties for 2011.

2011 NEW KENT GROUP 5 SOYBEAN VARIETY COMPARISONS

Cooperators:	Producer:	Davis Produce
	Extension:	David Moore, VCE Middle Peninsula
		Micah Owens, Summer Intern
	Agribusiness:	Participating Companies
Previous Crop:		Wheat
Soil Type:		Pamunkey & Altivista Fine Sandy Loams
Tillage:		No-Till into wheat stubble
Test/Plot Size:		14' x 760'
Planting Equipment:		John Deere 7000
Planting Date:		June 10, 2011
Row Spacing:		15 inches
Seeding Rate:		150,000 seeds
Crop Protection:		Roundup Max @ 1 Qt. per Acre (6-30-11)
Harvest Date:		November 10, 2011
Harvest Equipment:		AGCO R40

Brand	Variety	Moisture	Yield	Lodging[a]
		(%)	(bu/A)	
Dyna-Gro/CPS	32A53	15.9	52.0	4
Dyna-Gro/CPS	32RY55	15.6	50.4	2
RPM (Doebler's)	DB5711RS	15.0	48.3	3
TA Seeds	TS5029R2	15.5	42.5	2
NK Seeds	S51-J3	16.3	55.3	1
NK Seeds	S56-G6	15.1	45.6	3
USG	75M49	15.1	47.9	3
USG	75Z98	14.7	45.6	2
Southern States	RT5160	14.7	48.2	3
Asgrow	AG5332	14.5	51.8	1
Asgrow	AG5532	14.8	51.5	2
Pioneer	95Y20	14.8	49.8	3
Pioneer	95Y71	14.8	32.0	2
Hubner	H52-12R2	14.8	51.4	2
Averages			**48.0**	

[a]Lodging Scale: 1=All plants standing straight; 5=All plants flat.

Discussion: This year it is fun to see double crop soybeans after wheat yield in the high 40's to mid 50's. Use this and other Virginia Tech on-farm soybean information when making planting decisions for 2012.

2011 SURRY COUNTY GROUP 5 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: John Brock
Extension: Glenn Slade
Agribusiness: Various Seed Companies
Previous Crop: Wheat
Soil Type: Rumford Loamy Sand
Tillage: No-Till
Test/Plot Size: 200' x 5'
Planting Equipment: JD 1560 Grain Drill
Planting Date: July 13, 2011
Row Spacing: 7.5"
Seeding Rate: 140,000 seeds/acre
Crop Protection: 1 qt. Glyfos. 1 pt. Dual
Harvest Date: December 16, 2011
Harvest Equipment: Tidewater AREC Plot Harvester

Brand	Variety	Moisture	Yield
		(%)	(bu/A)
Asgrow	AG5332	13.2	39.92
Asgrow	AG5532	13.1	35.16
RPM (Doebler's)	DB5711RS	10.3	33.92
Dyna-Gro/CPS	32A53	13.5	39.37
Dyna-Gro/CPS	32RY55	13.2	36.17
Hubner	H52-12R2-AC		
NK Seeds	S51-J3	13.4	37.49
NK Seeds	S56-G6	13.6	29.46
Pioneer	95Y20	13.5	40.0
Pioneer	95Y71	13.4	43.56
Southern States	RT5160	13.2	39.92
TA Seeds	TS5029R2	13.2	41.74
USG	75M49	13.7	31.54
USG	75Z98	13.4	32.29
Averages			37.13

Discussion: Due to summer rains plot was planted late. Yields were still very respectable. Use this and other Virginia Tech soybean variety information to assist with soybean variety selection.

2011 VIRGINIA STATE UNIVERSITY GROUP 5 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Rudy Grammer & Mack West – VSU Randolph Farm
Glenn F. Chappell, II - VSU
Previous Crop: Barley
Soil Type: Norfolk Fine Sandy Loam & Tetotum Loam
Tillage: Ripped under the row
Test/Plot Size: 8 30" rows x 300'
Planting Equipment: John Deere Max Emerge
Planting Date: June 14, 2011
Row Spacing: 30"
Seeding Rate: 157,000
Crop Protection: 1.5 qt. Gly4 + 0.23 oz. First Rate - June 24, 2011
1.5 qt. Gly4 + 0.3 oz. First Rate - August 4, 2011
Harvest Date: November 28, 2011
Harvest Equipment: John Deere 9560 STS

Brand	Variety	Moisture	Yield	% of Check*
		(%)	(bu/A)	(%)
Asgrow	4730 (check)	11.4	51.7	-----
Dyna-Gro/CPS	32A53	11.6	45.5	91.2
Dyna-Gro/CPS	32RY55	11.2	53.1	106.5
RPM (Doebler's)	DB5711RS	11.6	45.5	91.2
TA Seeds	TS5029R2	11.5	44.3	88.9
NK Seeds	S51-J3	11.4	40.7	81.6
NK Seeds	S56-G6	11.1	52.5	105.4
USG	75M49	10.3	48.6	97.6
USG	75Z98	10.6	49.1	98.5
Southern States	RT5160	11.2	48.8	97.8
Asgrow	AG 5332	10.8	50.2	100.8
Asgrow	AG 5532	11.0	50.8	101.8
Pioneer	95Y71	11.2	51.2	102.8
Pioneer	95Y20	11.5	49.2	98.7
Hubner	H52-12R2-AC	11.3	48.7	97.7
Asgrow	4730 (check)	11.0	48.0	----
Average:			**48.4**	

Discussion: Rainfall totals by month: June – 5.55", July – 5.90", Aug. – 7.50" (Irene – 4.35"+)
* % of Check = (Variety yield/(Sum of check yields/2))*100 (Rounded to nearest 1/10 %)

2011 PRINCE GEORGE GROUP 5 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Paul Cerny and Sean Finney
Extension: Scott Reiter, Prince George
Agribusiness: Participating Seed Companies
Previous Crop: Wheat with straw removed
Soil Type: Montross and Aycock silt loam
Tillage: No-till
Test/Plot Size: 13 feet x 200 feet
Planting Equipment: Great Plains 705 No-till Drill
Planting Date: June 10, 2011
Row Spacing: 7 inches
Seeding Rate: 250,000 seed/acre (210,000 expected final stand)
Crop Protection: Roundup @ 1 qt/A + FirstRate @ 0.3 oz/A
Harvest Date: November 14, 2011
Harvest Equipment: John Deere 9500 with 918 Flex head

Brand	Variety	Moisture	Test Weight	Yield @ 13% Moisture	Yield Ratio
		(%)	(lbs/bu)	(bu/A)	(% of average)
Asgrow	AG5332	11.2	58.1	66.4	113%
Asgrow	AG5532	11.3	56.4	59.1	100%
USG	75M49	11.0	58.5	59.4	101%
USG	75Z98	10.6	58.9	55.3	94%
NK Seeds	S51-J3	11.1	57.8	66.5	113%
NK Seeds	S56-G6	10.8	58.5	59.4	101%
Southern States	RT5160	10.8	58.1	63.8	108%
Dyna-Gro/CPS	32A53	11.1	58.5	54.9	93%
Dyna-Gro/CPS	32RY55	11.1	59.2	59.3	101%
TA Seeds	TS5029R2	11.0	58.5	50.7	86%
Pioneer	95Y20	11.0	58.5	59.4	101%
Pioneer	95Y71	11.1	58.1	54.9	93%
RPM (Doebler's)	RPM DB5711RS	11.4	57.8	57.6	98%
Hubner	H52-12R2-AC	11.0	58.1	57.9	98%
Averages		11.0	58.2	58.9	

Discussion: These were some excellent double crop soybeans. Some of the lower yielding plots were heavily lodged from tremendous vine growth and hurricane or rain effects. Some varieties still had

leaves at the first frost of the season. Seed quality was very good with little seed stain or other damage. Varieties are listed in order of planting across the field. Test weight measurements were taken due to concerns of lighter test weights early in the harvest season. Use this data with statewide averages and other data for your 2012 seed selections.

2011 FAUQUIER COUNTY GROUP 3 SOYBEAN VARIETY COMPARISONS AND RESPONSE TO FOLIAR FUNGICIDE APPLICATION

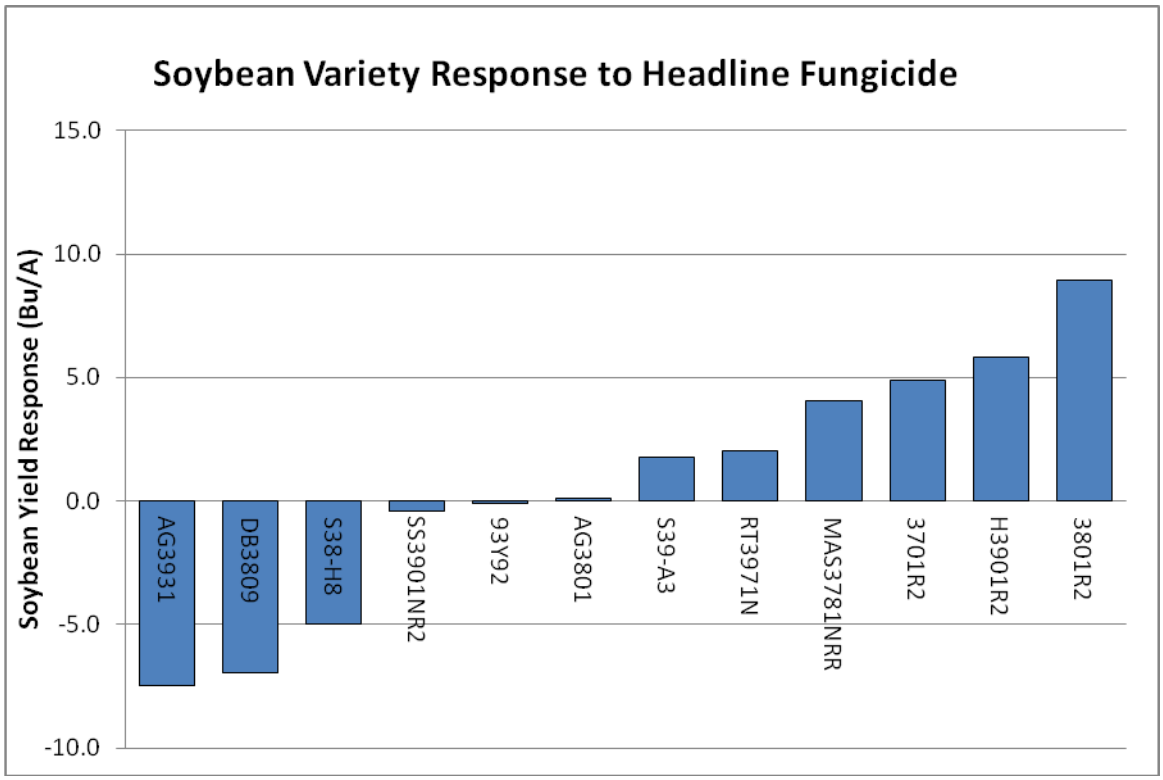
Cooperators: Producer: Bill Ritchie
Extension: Tim Mize, David Holshouser
Agribusiness: Participating Seed Companies
Previous Crop: Corn
Soil Type: Sycoline, Jackland, Haymarket, and Dulles silt loam
Tillage: Disk
Test/Plot Size: 4 rows x 100-150 ft.
Replications: 2 or 3
Plant Equipment: John Deere Max Emerge Plus
Planting Date: May 10
Row Spacing: 30 inches
Seeding Rate: 140,000 seed/acre
Crop Protection: glyphosate, Headline fungicide at 6 oz/A on half of plots
Harvest Date: November 15
Harvest Equipment: Wintersteiger plot combine

Brand	Variety	Fungicide	Seed Quality [a]	Purple Seed Stain [b]	Seed Size	Yield
			(1-5)	(%)	(seed/lb)	
Asgrow	AG3801	N	4.0	32	2596	37.8
Asgrow	AG3801	Y	4.5	11	2580	37.9
Asgrow	AG3931	N	3.5	30	2786	44.1
Asgrow	AG3931	Y	4.0	18	2861	36.6
Channel	3701R2	N	5.0	25	2760	34.1
Channel	3701R2	Y	4.0	7	2769	39.0
Channel	3801R2	N	4.0	16	2595	40.9
Channel	3801R2	Y	4.5	11	2569	49.8
Hubner	H3901R2	N	3.6	11	2810	40.4
Hubner	H3901R2	Y	3.4	6	2579	46.3
Mid-Atlantic	MAS3781NRR	N	5.0	22	2783	31.9
Mid-Atlantic	MAS3781NRR	Y	4.5	4	2544	35.9
NK	S38-H8	N	4.0	12	2902	47.2
NK	S38-H8	Y	4.5	6	2785	42.2
NK	S39-A3	N	4.5	21	2864	43.7
NK	S39-A3	Y	4.0	6	2743	45.5
Pioneer	93Y92	N	4.5	30	2532	39.9
Pioneer	93Y92	Y	4.5	21	2383	39.8
RPM	DB3809	N	4.5	16	3159	37.4

RPM	DB3809	Y	4.5	5	2822	30.5
S. States	RT3971N	N	4.0	15	2695	41.9
S. States	RT3971N	Y	2.5	2	2536	44.0
S. States	SS3901NR2	N	5.0	22	2456	48.4
S. States	SS3901NR2	Y	4.5	7	2368	48.0
Average:			4.1	14	2687	41.2

[a]Seed Quality: Ratings are represent overall seed quality, but are a good representation of *Phomopsis* seed decay. The following scale was used: 1.0 = very good; 2.0 = good; 3.0 = fair; 4.0 = poor; 5.0 = very poor.

bPurple seed stain is caused by *Cercospora* blight and leaf spot. Data represents the percentage of seed from a 100-seed sample that exceeds 5% stain.



Discussion: Late maturity group (MG) 3 soybeans are commonly grown in the Northern Piedmont and Shenandoah Valley. Advantages may be earlier harvest and avoidance of late-season droughts. Due to drought in August during the pod and seed development stages, MG 3 soybean did not yield as well as MG 4 soybean. Use this and other replicated variety test information when selecting varieties for 2011.

At the R3-R4 stage (beginning to late pod), Headline fungicide was applied across all varieties in 24-foot increments (no fungicide for 24 feet, fungicide for 24 feet, no fungicide, etc.). These strips were replicated either two or three times. Conditions at the time of application were good for disease development (full-canopy crop, moist soil conditions due to recent rains, high relative humidity), but no rain fell for the next three weeks. The average yield increase with the fungicide was only 0.6 bushels per acre. Although the average yield response to fungicide was small, some varieties responded very well to application. Yields response from fungicide application ranged from -7 to 9 bushels. Averaged across all varieties, seed size was larger (105 less seed per lb) for fungicide-treated soybeans; differences were greater for some varieties. Dry conditions after fungicide application likely prevented or delayed disease formation and may have affected any yield response with the fungicide.

Rainfall relieved the crop from drought stress in late August. Rainy conditions prevailed throughout September and October, causing poor seed quality and lots of purple seed stain. Differences in seed quality or purple seed stain may indicate tolerance of those varieties to certain diseases. However, it must be noted that later-maturing varieties generally have better seed quality, which is unrelated to inherent resistance or tolerance to the disease. Purple seed stain infection is not related to relative maturity. Fungicide application did not improve seed quality in most varieties, but lowered the amount of purple seed stain by 13% on average and more in some varieties. Cercospora blight, the disease causing purple seed stain, can lower soybean yield and is likely the main reason behind soybean response to fungicides in Virginia. However, there appears to be little correlation between soybean yield response and purple seed stain infection.

2011 LIBERTY LINK SOYBEAN VARIETY COMPARISON

Cooperators: Producer: Lawrence Farms
Extension: Watson Lawrence, Chesapeake
Previous Crop: Soybeans
Soil Type: Craven fine sandy loam
Tillage: No-till
Test/Plot Size: 24 feet X 80 feet
Planting Equipment: John Deere Flex-71 planter (8 rows)
Planting Date: May 6, 2011
Row Spacing: 18 inch rows
Crop Protection: Herbicides: Glyphosate 1 qt./A burndown
1st spray Ignite 280 @ 22 oz./A at 3-weeks post-emergence
2nd spray Ignite 280 @ 22 oz./A at 5-weeks post-emergence
Both sprays with Ammonium Sulfate (AMS)
Harvest Date: December 6, 2011
Harvest Equipment: Small plot harvester

Brand	Variety	Moisture	TW	Yield
Rep. 1		(%)	(lbs.)	(bu/A)
Southern States	450N	19.3	52	42.7
Southern States	499N	18.5	56	46.5
Southern States	511N	17.6	55	39.2
Southern States	595	19.2	55	47.3
TA Seeds	4219L	19.7	54	36.9
TA Seeds	5129L	18.9	54	49.2
Rep. 2				
Southern States	450N	19.4	53	29.1
Southern States	499N	18.8	55	44.2
Southern States	511N	17.1	54	51.6
Southern States	595	18.1	53	35.6
TA Seeds	4219L	18.2	52	31.0
TA Seeds	5129L	18.2	55	43.8
Average				
Southern States	450N	19.4	53	35.9
Southern States	499N	18.7	56	45.4
Southern States	511N	17.3	55	45.4
Southern States	595	18.7	54	41.4
TA Seeds	4219L	19.0	53	33.9
TA Seeds	5129L	18.6	55	46.5

Discussion: This test compared yield of several varieties with the Liberty Link trait for post-emergence applications of Ignite 280 herbicide. The recommended double spray of 22 oz. at 3-weeks followed again at 5-weeks proved successful for weed control. Yields were good, even with a very dry September. This spray program is the only nonselective alternative to Glyphosate and should be considered especially if weed resistance becomes a problem.

2011 FAUQUIER GROUP 5 SOYBEAN VARIETY COMPARISONS

RESPONSE TO FOLIAR FUNGICIDE APPLICATION

Cooperators: Producer: Bill Ritchie
Extension: Tim Mize, David Holshouser
Agribusiness: Participating Seed Companies
Previous Crop: Corn
Soil Type: Sycoline, Jackland, Haymarket, and Dulles silt loam
Tillage: Disk
Test/Plot Size: 4 rows x 100-150 ft.
Replications: 2 or 3
Planting Equipment: John Deere Max Emerge Plus
Planting Date: May 10
Row Spacing: 30 inches
Seeding Rate: 140,000 seed/acre
Crop Protection: Ignite 29 oz/A
Harvest Date: November 15
Harvest Equipment: Wintersteiger plot combine

		Rep 1		Rep 2		Average	
Brand	**Variety**	**Moisture**	**Yield**	**Moisture**	**Yield**	**Moisture**	**Yield**
		(%)	(bu/A)	(%)	(bu/A)	(%)	(bu/A)
S. States	LL450	10.6	69.1	10.4	63.3	10.5	66.2
S. States	LL499	9.6	48.7	10.2	67.7	9.9	59.8
S. States	LL511N	10.6	63.4	9.9	54.5	10.2	59.0
S. States	LL595N	10.4	59.9	10.9	50.8	10.6	55.4
T.A. Seeds	TA4219LL	9.6	52.4	9.9	52.2	10.8	62.0
T.A. Seeds	TA5129LL	10.6	68.8	11.0	55.3	10.3	59.1
Averages						10.3	59.1
LSD (0.10)						NS	NS

Discussion: The Liberty-Link soybean varieties tested included maturity group (MG) IV and V. Therefore, care must be taken when comparing yields of varieties with such a wide of range of maturity. In spite of a severe 3-week drought in August, these varieties yielded very well. Weed control was good except for pigweed that exceeded the labeled height restriction at time of application. Use this and other information when selecting varieties for 2012.

2011 NEMATICIDE SEED TREATMENT STUDY 1

Cooperators:	Producer:	Davis Produce
	Extension:	David Moore, VCE Middle Peninsula, Micah Owens-Summer Intern
	Agribusiness:	Monsanto-Asgrow Seeds; Berry Lewis, Bayer CropScience
Previous Crop:	Barley	
Soil Type:	Pamunkey Fine Sandy Loam	
Tillage:	No-Till into barley stubble	
Test/Plot Size:	10' x 800'	
Planting Date:	June 3, 2011	
Row Spacing:	30 inches	
Variety:	Asgrow AG 4730 (treated with Acceleron or Acceleron-VOTiVO)	
Seeding Rate:	130,000 seeds	
Crop Protection:	Herbicides:	Burndown: 6-7-11 Roundup Max @1Qt. Post: 7-5-11 Roundup Max @ 1 Qt.
Harvest Date:	November 2, 2011	
Harvest Equipment:	AGCO R40	

Treatment	**Rep 1**	**Rep 2**	**Rep 3**	**Avg. Yield**
	(bu/A)	(bu/A)	(bu/A)	(bu/A)
Acceleron-VOTiVO	39.3	36.4	43.8	39.8
Acceleron	35.7	34.0	40.5	36.7
LSD (0.10)				1.1

Discussion:
Seed moisture in this experiment ranged from 15.4-15.8.

There is a lot of interest in available seed treatments for soybean. This experiment is one of four that examined a fungicide-insecticide-nematicide seed treatment in a known root-knot nematode field. Nematode samples taken early in the growth stages and again at pod fill showed root knot numbers throughout the field to be at levels that could cause yield damage and consistently graded a "B" or "C" (B on report means nematodes are possible problem and C on report means Nematodes are problem and control is recommended). In this experiment, the use of VOTiVO, a Bayer CropScience product, does show a yield advantage. This product, according to company website; "Seed-applied bacteria colonize around the plant root, creating a living barrier of protection".

Most companies are trying to get more protection and enhancement from seed treatments. Look for more experiments examining seed treatments later in this publication.

2011 NEMATICIDE SEED TREATMENT STUDY 2

Cooperators:	Producer:	Davis Produce
	Extension:	David Moore, VCE Middle Peninsula, Micah Owens-Summer Intern
	Agribusiness:	Monsanto-Asgrow Seeds; Berry Lewis, Bayer CropScience
Previous Crop:	Barley	
Soil Type:	Pamunkey Fine Sandy Loam	
Tillage:	No-Till into barley stubble	
Test/Plot Size:	10' x 800'	
Planting Date:	June 3, 2011	
Row Spacing:	30 inches	
Variety:	Asgrow AG 5605 (Untreated or treated with Poncho-VOTiVO)	
Seeding Rate:	130,000 seeds	
Crop Protection:	Herbicides:	Burndown: 6-7-11 Roundup Max @1Qt. Post: 7-5-11 Roundup Max @ 1 Qt.
Harvest Date:	November 6, 2011	
Harvest Equipment:	AGCO R40	

Treatment	**Rep 1**	**Rep 2**	**Rep 3**	**Avg. Yield**
	(bu/A)	(bu/A)	(bu/A)	(bu/A)
Poncho-VOTiVO	62.5	61.5	59.2	61.0
Untreated	57.3	61.6	58.7	59.3
LSD (0.10)				4.9

Discussion:
Seed moisture in this experiment ranged from 12.9-13.4.

There is a lot of interest in available seed treatments for soybean. This experiment is one of four that examined a fungicide-insecticide-nematicide seed treatment in a known root-knot nematode field. Nematode samples taken early in the growth stages and again at pod fill showed root knot numbers all over the field to be at levels that could cause yield damage and consistently graded a "B" or "C" (B on report means nematodes are possible problem and C on report means Nematodes are problem and control is recommended). In this experiment, the use of Poncho-VOTiVO, a Bayer CropScience product, did not show a significant yield advantage. I imagine that this combination will be available on many soybean varieties this coming year.

Most companies are trying to get more protection and enhancement from seed treatments. Look for more experiment examining seed treatments later in this publication.

2011 NEMATICIDE SEED TREATMENT STUDY 3

Cooperators:	Producer:	Davis Produce
	Extension:	David Moore, VCE Middle Peninsula, Micah Owens-Summer Intern
	Agribusiness:	NK Seeds
Previous Crop:	Barley	
Soil Type:	Pamunkey Fine Sandy Loam	
Tillage:	No-Till into barley stubble	
Test/Plot Size:	10' x 800'	
Planting Date:	June 3, 2011	
Row Spacing:	30 inches	
Variety:	NK S49-A5 (treated with CruiserMaxx Beans or Avicta Complete Beans)	
Seeding Rate:	130,000 seeds	
Crop Protection:	Herbicides:	Burndown: 6-7-11 Roundup Max @1Qt. Post: 7-5-11 Roundup Max @ 1 Qt.
Harvest Date:	November 6, 2011	
Harvest Equipment:	AGCO R40	

Treatment	**Rep 1**	**Rep 2**	**Rep 3**	**Avg. Yield**
	(bu/A)	(bu/A)	(bu/A)	(bu/A)
CruiserMaxx Beans	56.0	54.0	54.0	54.7
Avicta Complete Beans	55.2	54.5	51.5	53.6
LSD (0.10)				2.5

Discussion:
Seed moisture in this experiment ranged from 13.2-13.7.

There is a lot of interest in available seed treatments for soybean. This experiment is one of four that examined a fungicide-insecticide-nematicide seed treatment in a known root-knot nematode field. Nematode samples taken early in the growth stages and again at pod fill showed root knot numbers all over the field to be at levels that could cause yield damage and consistently graded a "B" or "C" (B on report means nematodes are possible problem and C on report means Nematodes are problem and control is recommended). In this experiment, the use of Avicta, a Syngenta product, did not show a significant yield advantage. This seed treatment combination boasts protection of insects and many nematode species.

Most companies are trying to get more protection and enhancement from seed treatments. Look for more experiments examining seed treatments later in this publication.

2011 NEMATICIDE SEED TREATMENT STUDY 4

Cooperators:	Producer:	Davis Produce
	Extension:	David Moore, VCE Middle Peninsula, Micah Owens-Summer Intern
	Agribusiness:	Monsanto-Asgrow Seeds
Previous Crop:	Barley	
Soil Type:	Pamunkey Fine Sandy Loam	
Tillage:	No-Till into barley stubble	
Test/Plot Size:	10' x 800'	
Planting Date:	June 3, 2011	
Row Spacing:	30 inches	
Variety:	NK S57-K3 (treated with CruiserMaxx Beans or Avicta Complete Beans)	
Seeding Rate:	130,000 seeds	
Crop Protection:	Herbicides:	Burndown: 6-7-11 Roundup Max @1Qt. Post: 7-5-11 Roundup Max @ 1 Qt.
Harvest Date:	November 6, 2011	
Harvest Equipment:	AGCO R40	

Treatment	**Rep 1**	**Rep 2**	**Rep 3**	**Avg. Yield**
	(bu/A)	(bu/A)	(bu/A)	(bu/A)
Avicta Complete Beans	61.9	68.3	65.1	65.1
CruiserMaxx Beans	64.8	67.4	64.9	65.7
LSD (0.10)				3.4

Discussion:
Seed moisture in this plot ranged from 13.4-13.7.

There is a lot of interest in available seed treatments for soybean. This experiment is one of four that examined a fungicide-insecticide-nematicide seed treatment in a known root-knot nematode field. Nematode samples taken early in the growth stages and again at pod fill showed root knot numbers all over the field to be at levels that could cause yield damage and consistently graded a "B" or "C" (B on report means nematodes are possible problem and C on report means Nematodes are problem and control is recommended). In this experiments, the use of Avicta Complete Beans, a Syngenta product, did not show a yield advantage over CruiserMaxx. Avicta, combined with CruiserMaxx, provides insect protection and enhances protection against some nematode species.

Most all companies are trying to get more protection and enhancement from seed treatments. Look for more experiments examining seed treatments later in this publication. Use this and other Virginia Tech on-farm replicated research results when making planting decisions for 2012.

2011 ESSEX COUNTY NEMATICIDE SOYBEAN SEED TREATMENT PLOT

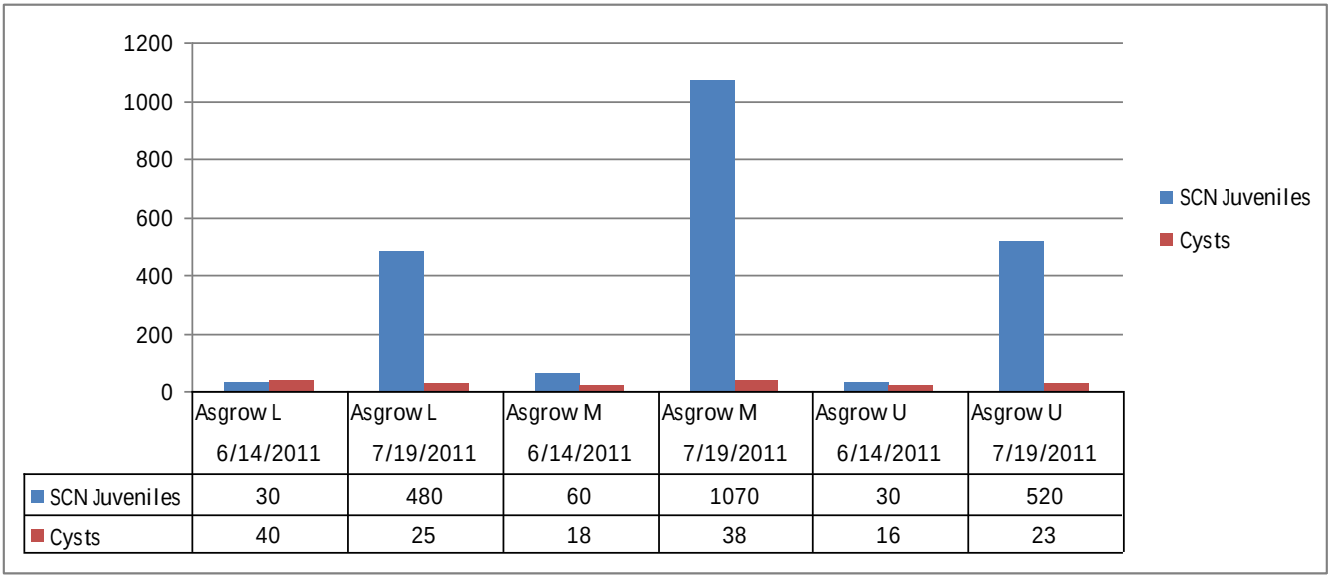
Cooperators: Producer: Cloverfield Enterprises
Extension: Keith Balderson, VCE, Middle Peninsula
Livvy Gill, VCE Summer Intern
Agribusiness: Berry Lewis, Bayer CropScience
Previous Crop: Barley
Soil Type: Molena loamy sand
Tillage: No-tillage
Test/Plot Size: 968 ft. x 35 ft.
Planting Date: June 3, 2011
Row Spacing: 15 inches
Variety: Asgrow AG5605 and Southern States 5511NR2
Seeding Rate: 140,000 seeds per acre
Crop Protection: Herbicides: Glyphosate post-emergence
Insecticides: Steward and Mustang Max for corn earworm and stink bug
Fungicide: Headline
Harvest Date: November 26, 2011
Harvest Equipment: Case IH 8120

Treatment	Rep 1	Rep 2	Rep 3	Rep 4	Avg. Yield
	(bu/A)	(bu/A)	(bu/A)	(bu/A)	(bu/A)
Asgrow AG5605 Untreated	37.7				37.7
Asgrow AG5605 with Poncho/Votivo	31.2	39.0			35.1
Southern States SS5511NR2 Untreated			40.3	40.2	40.25
Southern States SS5511NR2 w/ Trilex 2000/Poncho/VOTiVO			36.3	38.7	37.5
LSD (0.10)					7.8

Discussion: The purpose of the experiment was to evaluate Poncho®/VOTiVO® seed treatment for managing soybean cyst nematodes in a field with a long history of SCN. Introduced from Bayer CropScience, Poncho®/VOTiVO® is a new soybean seed treatment that protects early season seedlings and roots from numerous insect and nematode pests. It controls early season soybean aphids, over-wintering bean leaf beetles, seed corn maggot and other early season insect pests. Poncho/VOTiVO also contains a unique bacteria strain that provides nematode protection on the seed. The bacteria create a living barrier that keeps important soybean nematode species, including reniform, root knot and soybean cyst (SCN), from reaching the root.

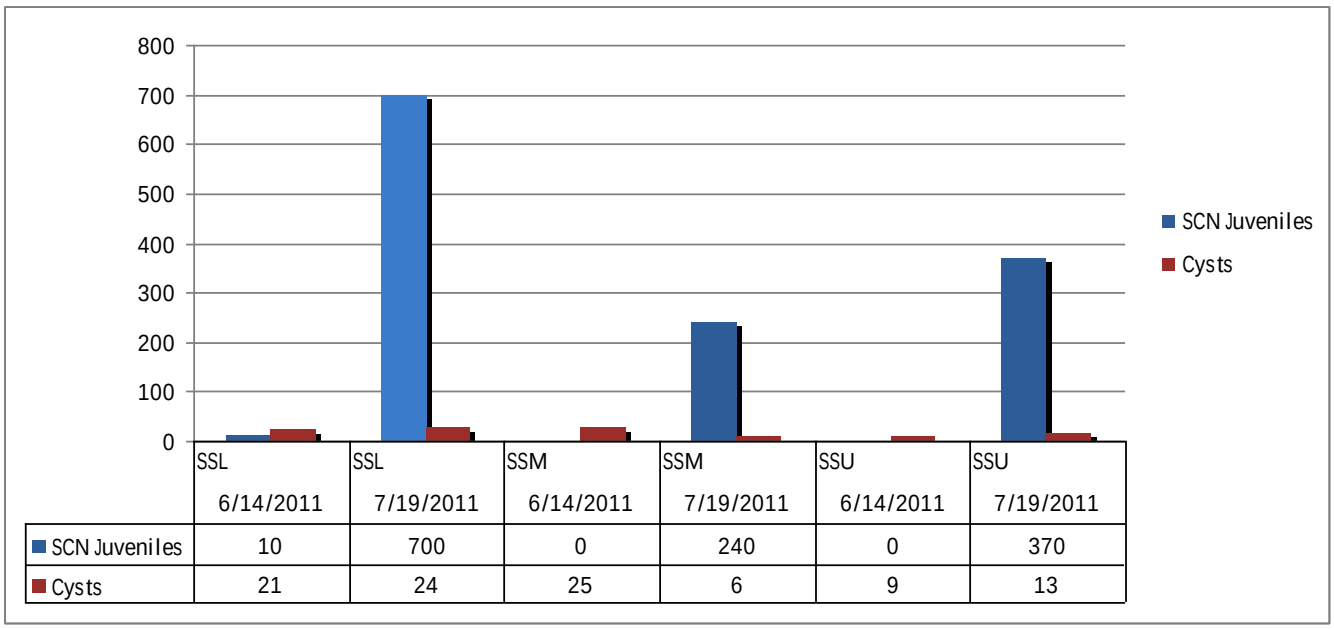
The most current SCN race test from this field showed that race 4 is the predominant race in the field. Asgrow AG5605 is rated as only having moderate resistance to races 3 and 14, while Southern States 5511NR2 is rated as resistant to race 3 and moderately resistant to race 14. In this experiment, the untreated plots tended to yield higher than the treated plots. The experiment was divided into 3 different areas by variety and sampled twice during the season for nematode assay. The tables below show how fast SCN populations can increase during the growing season.

Crop rotation and variety selection remain very important production practices in managing SCN.



	Asgrow L 6/14/2011	Asgrow L 7/19/2011	Asgrow M 6/14/2011	Asgrow M 7/19/2011	Asgrow U 6/14/2011	Asgrow U 7/19/2011
SCN Juveniles	30	480	60	1070	30	520
Cysts	40	25	18	38	16	23

Number of SCN in 500 cc of soil at two different sampling dates in the Asgrow AG5605 plot.



	SSL 6/14/2011	SSL 7/19/2011	SSM 6/14/2011	SSM 7/19/2011	SSU 6/14/2011	SSU 7/19/2011
SCN Juveniles	10	700	0	240	0	370
Cysts	21	24	25	6	9	13

Number of SCN in 500 cc of soil at two different sampling dates in the Southern States 5511NR2 Plot

Effects of soybean cyst nematode on a susceptible soybean variety. Rows to the right of the soil probe were treated Poncho and Votivo seed treatment. Rows on the left were untreated.

2011 SOYBEAN SEED TREATMENT DEMONSTRATION PLOT

Cooperators:	Producer:	Keith Balderson
	Extension:	Keith Balderson, VCE, Middle Peninsula
		Livvy Gill, VCE Summer Intern
	Agribusiness:	Brick Goldman, Syngenta, retired
Previous Crop:	Soybean	
Soil Type:	Suffolk fine sandy loam	
Tillage:	No-till	
Test/Plot Size:	.1771-.1793 acre	
Planting Equipment:	AC 600 no-till planter	
Planting Date:	May 13, 2011	
Row Spacing:	19 inches	
Variety:	See Plot Write UP	
Seeding Rate:	50 lbs. per acre	
Crop Protection:	Herbicides: 1 qt. per acre glyphosate and .5 pt. per acre 2,4-D one week prior to planting; PowerMax and Synchrony—post emergence, approximately 3 weeks post planting	
Harvest Date:	October 8, 2011	
Harvest Equipment:	John Deere 7720	

Brand	Variety	Seed Treatment	Moisture	Yield
			(%)	(bu/A)
Dyna-Gro	42N6	Untreated	13.4	62.7
Dyna-Gro	42N6	Latitude Hopper Box	13.4	60.1
NK	S44-K7	Avicta Complete Beans	14.0	64.5
Dyna-Gro	42N6	Latitude Hopper Box	13.5	61.4
NK	S44-K7	Cruiser Maxx Beans	13.5	61.9

Discussion: Interest in soybean seed treatments, especially for full-season soybeans, has increased greatly over the past few years. Latitude® is a dry seed treatment for insect and disease protection on corn, sweet corn, popcorn, sorghum and soybean. It contains imidacloprid for protection against broad-spectrum seed and early seedling sucking, rasping, and chewing insects, such as thrips and bean leaf beetles, and it also contains metalaxyl for protection against *Pythium* seed rot and damping-off, plus Vitavax® for protection against *Rhizoctonia* and other seed and seedling diseases. Cruiser®Maxx® Beans is a commercially applied promotional combination of two separately registered products, Cruiser® seed treatment insecticide and ApronMaxx® brand fungicide, while Avicta Complete Beans brand is a combination of separately registered products containing Avicta® 500 FS , plus one or more of the following products: CruiserMaxx® premix OR Cruiser® seed treatment insecticide + Apron XL seed treatment fungicide + Maxim® 4FS seed treatment fungicide OR Cruiser seed treatment insecticide

+ An ApronMaxx® brand seed treatment fungicide. In this demonstration plot, there was no yield difference in the Latitude treatment and the check plot. The Avicta Complete plot yielded 2.6 bushels per acre higher than the Cruiser Maxx plot, but a groundhog moved into the Cruiser Maxx plot late in the season. Visual observations of the plots early in the season indicated that all of the treated plots suffered from less thrips and bean leaf beetle feeding than the untreated plots. A soil sample for nematode analysis was taken in early July and no nematode problems were found.

2011 SURRY COUNTY SOYBEAN SEED TREATMENT COMPARISON

Cooperators:	Producer:	Glen Pierce
	Extension:	Glenn Slade, David Holshouser
	Agribusiness:	Monsanto: Bryan Dilliehay
Previous Crop:	Corn	
Soil Type:	Emporia Fine Sandy Loam	
Tillage:	No-Till into corn stalks	
Test/Plot Size:	No reps (side by side), 1.36 acres each trial	
Planting Equipment:	JD 1560 Grain Drill	
Planting Date:	May 27, 2011	
Row Spacing:	7.5"	
Variety:	NK 59 B8, Asgrow AG4703 (untreated vs treated with VOTiVO)	
Seeding Rate:	100,000 seeds/acre	
Crop Protection:	Herbicides: 1 qt. Roundup / acre Preemerge: 28 oz. Roundup 0.3 oz. Firstrate 3rd Trifoliate	
	Insecticides:	
	Fungicides:	
Harvest Date:	November 19, 2011	
Harvest Equipment:	John Deere 7720 Combine 18' Grain Head	

Treatment	**Yield**
	(bu/A)
NK S59-B8	43.62
Asgrow AG4730 w/o VOTiVO	42.45
Asgrow AG4730 with VOTiVO	51.24

Discussion:
These side by side plots compared the variety NK 59-B8 with Asgrow 4703 untreated and treated with VOTiVO treated. This was conducted on a field with a history of root-knot nematodes. Please take into consideration that this is one replication and NK S59-B8 is not the same maturity as the Asgrow 4703.

2011 ROOT-KNOT RESISTANT GROUP 5 SOYBEAN VARIETY COMPARISONS

Cooperators:	Producer:	Davis Produce
	Extension:	David Moore, VCE-Middle Peninsula
		Micah Owens, Summer Intern
	Agribusiness:	Rose Bradshaw, Dekalb & Asgrow Seeds
		David Hula-Renwood Farms
		Ginny Barnes-Pioneer, A DuPont Company
Previous Crop:		Barley
Soil Type:		Pamunkey Fine Sandy Loam
Tillage:		No-Till into Barley stubble
Test/Plot Size:		20'x 1500'
Planting Date:		June 3, 2011
Row Spacing:		30 inches
Seeding Rate:		130,000 seeds
Crop Protection:		Burndown: 6-7-11 Roundup Max @1 Qt./A
		Post: **7**-5-11 Roundup Max @ 1 Qt./A
Harvest Date:		November 6, 2011
Harvest Equipment:		AGCO R40

Brand	Variety	Moisture	Yield
		(%)	(bu/A)
USG	75J32	12.7	57.0
USG	75Z38	13.1	61.7
Asgrow	AG5732	12.7	61.8
Asgrow	AG 5831	12.8	63.0
Pioneer	95Y70	12.8	58.9
Averages			**60.5**

Discussion:
What a pleasure to cut 50 and 60-bushel double-crop soybeans! This was an experiment that included several root-knot resistant MG 5 soybean varieties. These soybeans were planted in the same field as the nematode seed treatment plots that are included in this publication. One thing to notice; as was the case throughout eastern Virginia, the later the planting date, and the later the maturity, the better the soybean yields. Not always the case, but a welcomed addition to one of the best soybean crops we've had in a long time.

These varieties seemed to do well in the presence of root-knot nematodes. Resistance is still one of the best defenses to pest problems. Use this and other Virginia Tech on-farm soybeans information when making planting decisions for 2012.

2011 STARTER FERTILIZER FOR 30-INCH ROW SOYBEANS STUDY

Cooperators: Producer: Chuck Hunt
Extension: David Moore, VCE Middle Peninsula

Previous Crop: Corn followed by Rye-Vetch Cover
Soil Type: Eunola Loam/Slagle Silt Loam
Tillage: No-Till
Test/Plot Size: 25 X 480
Planting Equipment: Kinze 3000 Series 8 row planter
Planting Date: May 19, 2011
Row Spacing: 30 inches
Variety: Dyna-Gro 35RY47
Seeding Rate: 150,000/A
Fertilization: 15-15-0 Blended Starter
Crop Protection: Burndown: Glyphosate, Extreme, 2,4-D
Fungicides: [Brand @ Rate, Timing]
Harvest Date: October 24, 2011
Harvest Equipment: John Deere 9650STS

Treatment	Pop (6/22)	M%	Yield@13%
15 Gallons	120,000	13.0	51.2
No Starter	105,000	12.9	60.7
18 Gallons Starter	160,000	12.9	60.6
15 Gallons Starter	147,000	12.9	62.1
No Starter	147,000	12.8	59.6
Average Starter		13.0	58.0
Average No Starter		12.9	60.2
LSD (0.10)			NS

Discussion: A lot of interest in using starter fertilizer in full season, 30-inch row soybeans. In this particular test, there was no advantage of using starter. 2011 was a very good soybean year. This experiment was on good soil that received average to above rainfall. This experiment was not replicated. Use this and other Virginia Tech soybean on farm plot information when making decisions for your 2012 crop.

2011 MIDDLESEX SOYBEAN MICRONUTRIENT EVALUATION

Cooperators: Producer: Jason Benton
Extension: David Moore
Previous Crop: Wheat
Soil Type: Suffolk Fine Sandy Loam
Tillage: No-Till
Test/Plot Size: 20' x 555'
Planting Equipment: Kinze 3000 series
Planting Date: June 18, 2011
Row Spacing: 7.5 inches
Variety: Asgrow 5405
Seeding Rate: 200,000 seeds/A
Crop Protection: Herbicides: Glyphosate at 3 week post-emergence
Insecticide**:** Steward 8 oz. /A-August
Fertilization: 2 Qt/A Nutrisol *MICRO 581* applied July 25, 2011
Harvest Date: November 15, 2011
Harvest Equipment: AGCO R52

Treatment	Rep 1	Rep 2	Rep 3	Rep 4	Avg. Yield
	(bu/A)	(bu/A)	(bu/A)	(bu/A)	(bu/A)
Without *MICRO 581*	53.5	55.2	51.6	49.3	52.4
With *MICRO 581*	52.0	54.8	54.6	47.9	52.3
LSD (0.10)					2.5

Discussion: This is a test to evaluate the use of one kind of nutritional product on the market among the numerous ones out there. It is not a test to single out *Micro 581*. Label of this product, states analysis is 0-0-0 (N-P-K) with micronutrient analysis of .20% Boron, .30%Iron, 3.20% Manganese, .01% Molybdenum and 2.10% Zinc. The product weighs 10 pounds per gallon, so 2 qts per acre of this product gives you 5 pounds of product containing plant food of .01 pounds Boron, .015 pounds of Iron, .16 pounds of Manganese, .05 pounds of Molybdenum, and .105 pounds of Zinc **per acre**.

In this test, we applied 2 quarts of product per acre. The cost of this product was about $35.00 per 2.5 gallon, so about $3.50 per quart making this treatment around $7.00. The label suggests applying this product with each trip over the field to get good benefit of nutrients, for example, with post herbicide, with insecticide and with fungicide. Again, this is not to single out this product, but to evaluate these nutritionals and make folks aware that their nutritional value is pretty low. A single application of this type of product will not cure nutrient deficiencies. Use this and other Virginia Tech on-farm test information when making soybean production decisions for 2012.

2011 MIDDLESEX FUNGICIDE STUDY ON MATURITY GROUP 5 SOYBEANS

Cooperators:	Producer:	Jason Benton
	Extension:	David Moore, VCE-Middle Peninsula
Previous Crop:		Wheat
Soil Type:		Suffolk fine sandy loam
Tillage:		No-Till in 7.5 inch rows
Test/Plot Size:		20' X 635'
Planting Equipment:		Great Plains 1590 NT Drill
Planting Date:		June 18, 2011
Variety:		Asgrow 5605
Seeding Rate:		220,000 seed/A
Crop Protection:		Herbicides: Glyphosate @ 1.5 qts/A
		Insecticides: Steward @ 8 ounces/A
		Fungicides: Domark @ 5 ounces/A
Harvest Date:		December 2, 2011
Harvest Equipment:		AGCO R62

Treatment	**Rep 1**	**Rep 2**	**Rep 3**	**Avg. Yield**
	(bu/A)	(bu/A)	(bu/A)	(bu/A)
Control	47.8	45.6	44.9	46.1
Treatment	49.0	47.1	45.4	47.2
LSD (0.10)				0.9

Discussion:
The purpose of this plot was to examine the use of fungicides on double crop soybeans. Using fungicides on full season soybeans has shown a significant increase in yields about 30-40% of the time. These DC soybeans had begun to show signs of yellow splotches and Jason wanted to try this to see if it would be beneficial. Domark contains tetraconazole, a curative fungicide that has activity against Soybean Rust, Cercospora Blight, Purple Seed Stain, Frogeye Leaf Spot, White Mold, Powdery Mildew, Brown Spot, and Anthracnose.

There was no visible evidence that the fungicide helped the soybean (Sometimes soybeans have an overall cleaner appearance following the use of fungicides). Test weights were not significantly different and were around 57-58 lbs with or without treatment. There was a 1.1 bushel advantage to using the fungicide. At $11.00 soybeans, that would make you about $12.00/A. The cost of the product per acre is right at $10.50/A, not including cost of application. Use this and other on-farm replicated research when making production decisions for 2012.

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