Virginia On-Farm Soybean Research

A summary of replicated research conducted by Virginia Cooperative Extension in cooperation with local producers and agribusiness

2025

by the following Extension Faculty:

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Introduction

These results are a collaborative effort of Virginia Cooperative Extension (VCE) 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 opportunities to improve yields and profits, which improves quality of life for them and their families.

The success of these on-farm experiments 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, at regional production meetings throughout Virginia, and on the VCE website (http://pubs.ext.vt.edu). This information reaches hundreds of Virginia soybean and grain producers plus agribusinesses, impacting over 620,000 acres of soybeans valued at approximately $350 million.

The field work and printing of this publication is supported by Virginia Soybean Board Check-Off Funds. The cooperators graciously wish to acknowledge this support. Any person, producer or agribusiness professional wishing to receive a copy of this publication or needing a more accessible version should contact their local Extension Agent who can make the request to Stephanie Romelczyk in Westmoreland County at 804-493-8924 or sromelcz@vt.edu.

This is the 29th year of this multi-county cooperative effort and further work is planned for 2026. 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.

DISCLAIMER: Commercial products are named in this publication for informational purposes only. Virginia Cooperative Extension does not endorse these products and does not intend discrimination against other products that also might be suitable.

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PHOTOS: Courtesy of Hélène Doughty, Frank Long, Stephanie Romelczyk, and Joseph Oakes

GENERAL SUMMARY

First, we would like to thank everyone that participated in on-farm plot work: seed and input suppliers for providing materials for the trials; our farmer-cooperators for supplying equipment, land, and patience to get these tests from planting to harvest; the Virginia Soybean Board for funding to assist with expenses; Extension Agents for securing locations, hauling seed, and sending in data; and you, the soybean grower, for showing interest in our work and taking time to review this publication.

Weather conditions took some wild swings in 2025. Early season conditions varied across the Commonwealth with late April providing good planting conditions. May was very wet in many locations with 6-8 inches of rain causing stand problems and replanting. June brought on some excessive heat with average to below rainfall. July brought considerable rains with some locations recording 10-12 inches. August through September was a period of sporadic rainfall and variable drought conditions. The US Drought Monitor showed drought conditions starting September 2, but rainfall was limited for 2-3 weeks prior. This was a good soybean harvest season with numerous rain-free days in October through early November.

Maturity Group (MG) 4 & 5 varieties were compared across multiple locations in 2025. This work is performed in concert with the Official Variety Tests and offers producers even stronger yield comparison information that they can use when making planting decisions. Unfortunately, several of our test locations were affected by too much rain. Some were abandoned and replanted, others had spots within the trial where wet conditions caused stand problems and lowered yields. Deer were also a persistent issue at some locations and across many farms production fields. We tried to make notes where appropriate and did not include some locations in the overall yield averages.

Roundup Ready XtendFlex soybean varieties were submitted for testing at seven locations. Enlist E3 varieties were tested at five locations this year. Additional traits for herbicide tolerance, nematodes, and disease tolerance can be found in the accompanying tables. Weed control system, nematode resistance, and disease package should be considered when selecting varieties for 2026.

In 2025, we initiated a tissue testing survey within our variety testing program. Four varieties were selected to be sampled at V4, R1, and R4 growth stages. The objective was to determine if new varieties at different locations across the state still fit into the published nutrient sufficiency ranges. Overall, the test data fit into the acceptable ranges. Some locations had low potassium levels which indicated late season potash application may have been warranted. Additional research on potassium levels is being carried out by Dr. Carrie Ortel.

Several additional trials were also conducted in 2025. Soybean response to potassium fertilization was evaluated at two locations. Strip tillage was evaluated at two locations to determine its influence on slug activity and fertilizer placement. A Surry County trial evaluated two plant growth regulators to determine the influence on soybean development and yield. Lastly, a study was conducted to examine the return on investment to variable rate fertilizer application in Virginia Beach. Check out those pages for details on treatments and results. Thank you to Drs. Carrie Ortel and Joseph Oakes for cooperating with Extension agents on these trials.

We hope you find this information useful. If you have ideas for 2026 on-farm research or would like to be a cooperator in 2026, please contact your local Virginia Cooperative Extension Agriculture Agent.

Trait Data for 2025 VCE On-farm Soybean Varieties
XtendFlex

Brand	Variety	Relative Maturity	Herbicide Traits	Soybean Cyst Nematode	Root Knot Nematode	Frogeye leafspot	Sudden death syndrome	Brown stem rot	Southern Stem Canker
Asgrow	AG48XF5	4.8	XF/SR	R3	S	F	G	-	VG
Asgrow	AG49XF3	4.9	XF	R3	S	G	G	-	VG
Channel	4721XF/SR	4.7	XF/SR	R	S	VG	G	-	VG
Channel	4821XF/SR	4.8	XF/SR	R	S	G	G	-	G
Dyna-Gro	S43XF85S	4.3	XF/STS	MR3,14	G	VG	VG	-	VG
Dyna-Gro	S49XF43S	4.9	XF/STS	MR3	F	VG	G	-	E
HiSOY	HS 46F50	4.6	XF/STS	VG	-	VG	VG	-	R
HiSOY	HS 48F40	4.8	XF/STS	VG	MR	G	G	-	R
NK Seed	NK47-U1XFS	4.7	XF/STS	R3, MR14	F	VG	VG	-	VG
NK Seed	NK49-N7XF	4.9	XF	MR3,14	P	VG	G	-	VG
Pioneer	P46A90LX	4.6	LL/X	R	F	G	G	MS	R
Pioneer	P48Z70BLX	4.8	LL/X/BOLT	R	S	F	G	HT	R
Revere	47-F77	4.7	XF/STS	R3, MR14	S	F	G	-	R
Revere	49-F36	4.9	XF/SR	R3, MR14	S	A	VG	-	R
USG	7487XFS	4.8	XF/SR	-	-	-	-	-	-
USG	7496XFS	4.9	XF/SR	-	-	-	-	-	-
Asgrow	AG53XF2	5.3	XF/SR	R3	S	G	G	-	VG
Asgrow	AG54XF0	5.4	XF/SR	S	MR-MS	F	G	-	VG
Dyna-Gro	S55XF95	5.5	XF	R1, R3 (Peking)	G	VG	G	-	E
Dyna-Gro	S58XF24	5.8	XF	R3	VG	-	G	-	E
HiSOY	HS 50F40	5.0	XF	VG	MR-MS	VG	VG	-	R
HiSOY	HS 54F50	5.4	XF	VG (Peking + PI88788)	R	VG	VG	-	R
Pioneer	P53Z60LX	5.3	LL/X	R	E	G	G	MT	R
Revere	53-F84	5.3	XF/SR	MR3	MS	E	F-G	-	R
Revere	X55F92	5.5	XF	-	-	-	-	-	-

R = Resistant
S = Susceptible
MR = Moderately resistant
P = Poor

M = Moderate
MS = Moderately susceptible
A = Average
F = Fair

XF = XtendFlex
X = Xtend
STS, SR, BOLT = Tolerant to sulfonylurea herbicides

E3 = Enlist E3
LL= LibertyLink

No entry for a particular trait means that no information was provided or trait has not been rated by the company.

All ratings were taken from company literature available in current catalogs or websites.

This information is meant to be a summary only. Consult your seedsman for additional details on diseases not listed or updated disease ratings.

Trait Data for 2025 VCE On-farm Soybean Varieties
Enlist E3

Brand	Variety	Relative Maturity	Herbicide Traits	Soybean Cyst Nematode	Root Knot Nematode	Frogeye leafspot	Sudden death syndrome	Brown stem rot	Southern Stem Canker
Alloy	A45E35	4.5	E3/SR	R	S	G	G	-	VG
Alloy	A47E35	4.7	E3/SR	R	S	G	G	-	VG
Connect (Channel)	CT4924E	4.9	E3/SR	R3, MR14	S	G	G	-	VG
ChemGro	C4554E	4.5	E3	R	-	-	VG	-	E
ChemGro	C4957ES	4.9	E3/STS	R	-	-	-	E	E
Dyna-Gro	S40EN54	4.0	E3	R3	S	VG	VG	-	E
Dyna-Gro	S48EN56	4.8	E3/STS	MR3	S	VG	VG	-	E
HiSOY	HS 45E50	4.5	E3	VG	-	VG	VG	E	R
HiSOY	HS 48E50	4.8	E3/STS	VG	MR	VG	VG	-	R
NK Seed	NK46-D2E3	4.6	E3	MR3,14	G	VG	-	-	E
NK Seed	NK47-G5E3S	4.7	E3/STS	MR3	G	VG	G	-	VG
Pioneer	P43Z44SE	4.3	E3/STS	R3,14	E	F	VG	HT	R
Pioneer	P48A14E	4.8	E3	R	F	F	G	HT	G
Revere	47-E74	4.7	E3	R3, MR14	S	G	G	-	R
Revere (Catalyst)	CT 4925E3S	4.9	E3/STS	R3, MR14	MR	MR	MR	-	MR
Southern Harvest	SH 4024 E3	4.0	E3	E	F	VG	G	-	R
Southern Harvest	SH 4825 E3	4.8	E3	E	F	VG	VG	-	R
USG	7486ETS	4.8	E3/STS	-	MR	R	-	-	R
USG	7494ETS	4.9	E3/STS	R3, MR14	S	G	G	-	R
Dyna-Gro	S51EN62	5.1	E3	S	P	VG	VG	-	E
Dyna-Gro	X25356EN	-	E3	-	-	-	-	-	-
HiSOY	HS 50E40	5.0	E3	VG	S	VG	VG	-	R
HiSOY	HS 54E10	5.4	E3	VG	-	VG	VG	-	
NK	NK50-W4E3S	5.0	E3/STS	MR3	VG	R	G	-	VG
Pioneer	P50Z95E	5.0	E3	R	F	F	G	MS	R
Pioneer	P56A71E	5.6	E3	R3,14	E	VG	F	MS	R
Revere (Catalyst)	CT 5293E3	5.2	E3	R3	MR	E	VG	-	R
Revere	5429E	5.4	E3	R3, MR14	MR	E	G	-	R
Southern Harvest	SH 5124 E3	5.1	E3	E	F	VG	-	-	R
Southern Harvest	SH 5523 E3	5.5	E3	E	F	VG	VG	-	R

R = Resistant
S = Susceptible
MR = Moderately resistant
M = Moderate
MS = Moderately susceptible
E3 = Enlist E3
STS or SR = Tolerant to sulfonylurea herbicides

No entry for a particular trait means that no information was provided or trait has not been rated by the company.

All ratings were taken from company literature available in current catalogs or websites.

This information is meant to be a summary only. Consult your seedsman for additional details on diseases not listed or updated disease ratings.

Seed Treatment Data for On-Farm Soybean Variety Comparisons
XtendFlex

Seed Treatments on Submitted XtendFlex Varieties

Company	Brand	Treatment Brand Name (Contents)	None	Insecticide	Fungicide	Nematicide	Inoculant	Biological
Asgrow	AG48XF5	Acceleron Seed Applied Solutions (Standard)		X	X			
Asgrow	AG49XF3	Acceleron Seed Applied Solutions (Standard)		X	X			
Channel	4821RXF/SR	Acceleron Seed Applied Solutions (Standard) + ILeVo		X	X	X		
Channel	4721RXF/SR	Acceleron Seed Applied Solutions (Standard) + ILeVo		X	X	X		
Dyna Gro	S43XF85S	Equity Vayo		X	X			
Dyna Gro	S49XF43S	Equity Vayo + Saltro		X	X	X		
HiSOY	HS 46F50	Acceleron Seed Applied Solutions (Standard) + Saltro + Novozymes Cue		X	X	X		X
HiSOY	HS 48F40	Acceleron Seed Applied Solutions (Standard) + Saltro + Novozymes Cue		X	X	X		X
NK Seed	NK49-N7XF	Cruiser MAXX APX + Saltro		X	X	X		
NK Seed	NK47-U1XFS	Cruiser MAXX APX + Saltro		X	X	X		
Pioneer	P46A90LX	LumiGen + LumiTreo (B. pumilis, amyloliquifaciens)		X	X			X
Pioneer	P48Z70BLX	LumiGen + LumiTreo (B. pumilis, amyloliquifaciens)		X	X			X
Revere Seed	47-F77	*Treated - no labeling*						
Revere Seed	49-F36	Radius Premium		X	X		X	
USG	7487XFS	*Treated - no labeling*						
USG	7496XFS	*Treated - no labeling*						
Asgrow	AG53XF2	Acceleron Seed Applied Solutions (Standard)		X	X			
Asgrow	AG54XF0	Acceleron Seed Applied Solutions (Standard)		X	X			
Dyna-Gro	S55XF95	Equity Vayo + Saltro		X	X	X		
Dyna-Gro	S58XF24	Equity Vayo + Saltro		X	X	X		
HiSOY	HS 50F40	Insecticide + Fungicide + Saltro		X	X	X		
HiSOY	HS 54F50		X					
Pioneer	P53Z60LX	LumiGen + LumiTreo (B. pumilis, amyloliquifaciens)		X	X			X
Revere Seed	53-F84	Radius Premium		X	X			
Revere Seed	X55F92	Radius Premium		X	X			

Seed Treatment Data for On-Farm Soybean Variety Comparisons
Enlist E3

Seed Treatments on Submitted Enlist E3 Varieties								
Company	**Brand**	**Treatment Brand Name (Contents)**	**None**	**Insecticide**	**Fungicide**	**Nematicide**	**Inoculant**	**Biological**
Alloy	A47E35	Acceleron Seed Applied Solutions (Standard)		X	X			
Alloy	A45E35	Acceleron Seed Applied Solutions (Standard)		X	X			
Channel	CT4924E	Acceleron Seed Applied Solutions (Standard)		X	X			
ChemGro	C4554E	GroTek IM		X	X			
ChemGro	C4957ES	GroTek IM		X	X			
Dyna-Gro	S40EN54	Equity Vayo + Saltro		X	X	X		
Dyna-Gro	S48EN56	Equity Vayo + Saltro		X	X	X		
HiSOY	HS 45E50	Acceleron Seed Applied Solutions (Standard) + Saltro + Novozymes Cue		X	X	X		X
HiSOY	HS 48E50	Acceleron Seed Applied Solutions (Standard) + Saltro + Novozymes Cue		X	X	X		X
NK Seed	NK46-D2E3	Cruiser MAXX APX + Saltro		X	X	X		
NK Seed	NK47-G5E3S	Cruiser MAXX APX + Saltro		X	X	X		
Pioneer	P48A14E	LumiGen + LumiTreo (B. pumilis, amyloliquifaciens)		X	X			X
Pioneer	P43Z44SE	LumiGen + LumiTreo (B. pumilis, amyloliquifaciens)		X	X			X
Revere	CT 4925E3S	*Treated but not listed*						
Revere	47-E74	*Treated but not listed*						
Southern Harvest	SH4024E3	Maximize 4F Germate Plus			X			X
Southern Harvest	SH4825E3	Maximize 4F Germate Plus			X			X
USG	7486ETS	Lumisena + thiamethoxam		X	X			
USG	7494ETS	*Fungicide + Insecticide*		X	X			
Dyna-Gro	S51EN62	DynaShield FM		X	X			
Dyna-Gro	SX25356EN	Equity Vayo + Saltro		X	X	X		
HiSOY	HS 50E40	I + F + Saltro + Novozymes Cue + Trichoderma + Bradyrhizobia (B. pumilis, amyloliquifaciens)		X	X		X	X
HiSOY	HS 54E10		X					
NK	NK50-W4E3S	Cruiser MAXX APX + Saltro		X	X	X		
Pioneer	P50Z95E	LumiGen + LumiTreo + (B. pumilis, amyloliquifaciens)		X	X			X
Pioneer	P56A71E	LumiGen + LumiTreo + (B. pumilis, amyloliquifaciens) + Bradyrhizobia		X	X		X	X
Revere	CT 5293E3	Radius Elite + Preside Ultra + Impact ST + Stabilize ST + Rapidity ST + Trizon ST + Heads Up + B. amyloliquifaciens		X	X		X	X
Revere	5429E3	Radius Elite + Preside Ultra + Impact ST + Stabilize ST + Rapidity ST + Trizon ST + Heads Up + B. amyloliquifaciens		X	X		X	X
Southern Harvest	SH 5124	Maxmize 4F Germate Plus			X			X
Southern Harvest	SH 5523	Maxmize 4F Germate Plus			X			X

Soybean Herbicide Systems and Herbicide Selection Chart

	Glyphosate (Group 9) EPSP Synthase Inhibitor	Glufosinate (Group 10) Glutamine Synthetase Inhibitor	Dicamba (Group 4) Synthetic Auxin - Benzoic acid	2,4-D choline (Group 4) Synthetic Auxin - Phenoxy	Sulfonylureas (Group 2) ALS Inhibitors	Isoxaflutole (Group 27) HPPD Inhibitors
	Roundup brands *Generics*	Liberty *Generics*	XtendiMax Engenia Tavium	Enlist One Enlist Duo *(premix)*	Synchrony XP Classic Harmony GT Permit Plus *Generics*	Alite 27[1]
Conventional						
STS, SR, and BOLT[2]					✓	
Roundup Ready	✓				3	
Roundup Ready 2 Yield	✓				3	
Glyphosate Tolerant	✓				3	
Roundup Ready Xtend	✓		✓		3	
Roundup Ready XtendFlex	✓	✓	✓		3	
GT27[4]	✓					✓
LibertyLink		✓			3	
LibertyLink GT27	✓	✓			3	✓
Enlist E3	✓	✓		✓	3	

[1] Alite 27 has a federal label but is not yet registered or available in VA. [2] STS, SR, and BOLT are non-GMO traits and may fit into non-GMO soybean programs. These varieties also have tolerance to Basis Blend, LeadOff, Classic, Crusher, Harmony Extra, Harmony GT, Permit Plus, Synchrony XP applied pre-emerge in soybean and Finesse, Outrider, Peak, Harmony Extra, Harmony GT applied to wheat. Generic versions of these herbicides may also be available. [3] STS, SR, and BOLT traits can be stacked with these systems - see variety information for details. [4] GT27 is not yet commercially available.

Thank you to Dr. Michael Flessner, Extension Weed Specialist, for assistance with this chart.

MATURITY GROUP 4
VARIETY COMPARISONS – XtendFlex

2025 Overall Group 4 XtendFlex Comparison

Company	Brand	Appomattox	Charlotte	Prince George	Virginia Beach	Overall Average	Overall Average Relative Yield	Brunswick	Middlesex
Dyna-Gro	S49XF43S	70.8	44.7	64.1	58.5	59.5	105	34.2	41.0
HiSOY	HS 46F50	67.1	45.3	61.2	62.1	58.9	104	42.7	38.5
HiSOY	HS 48F40	64.5	43.9	64.0	62.4	58.7	103		
Revere	49-F36	69.1	43.9	61.9	55.3	57.6	101	27.3	38.9
Revere	47-F77	61.1	50.8	58.8	56.4	56.8	101	23.0	45.3
USG	7487XFS	63.5	41.1	64.7	60.3	57.4	101	40.6	42.1
Dyna-Gro	S43XF85S	66.7	45.3	56.6	57.5	56.5	100	24.1	
NK Seed	NK49-N7XF	66.9	45.2	53.3	56.6	55.5	98		40.7
Pioneer	P48Z70BLX	62.4	44.8	58.1	55.5	55.2	98	46.7	45.1
Asgrow	AG48XF5	66.6	43.1	53.9	55.1	54.7	96	40.4	37.1
Asgrow	AG49XF3	62.8	36.1	57.8	55.2	53.0	93	45.7	39.3
USG	7496XFS			61.7	54.8			40.2	33.9
Pioneer	P46A90LX			58.5					
NK Seed	NK47-U1XFS								44.0
		65.6	44.0	59.6	57.5			36.5	40.5

Brunswick and Middlesex data are not included in overall average due to missing varieties and damaged areas in plots. Virginia Ag Expo location not harvested due to variable plot growth. Average Relative Yield is the relationship of the yield to the location average. It is a percentage above or below the average yield for the location. Varieties are color-coded from dark green to red based on their performance compared to the average yield for that location. Those performing better than the location average are shades of green and yellow, while those varieties performing lower than the location average are shades of orange and red.

Appomattox County Maturity Group 4 XtendFlex Soybean Comparisons

Cooperators:	**Producer:**	Ben Cole
	Extension:	Bruce Jones, VCE-Appomattox
		Joanne Jones, VCE-Charlotte

Previous Crop: Corn
Soil Type: Appling gravelly sandy loam
Tillage: No-till
Planting Date: April 25, 2025
Seeding Rate/Row Spacing: 120,000 seed/acre; 15-inch rows
Fertilization: Variable rate fertilizer P and K
Crop Protection: Burndown: 36 oz Roundup PowerMAX + 1 oz Sharpen + 3 oz Zidua
Post: 26 oz Roundup PowerMAX + 16 oz Surmise 5 + 1.5 qt Warrant + 6 oz TapOut + 12.8 oz Megafol
R3: 6 oz TapOut + 5.5 oz Revytek
Harvest Date: October 24, 2025
Harvest Equipment: John Deere 9770 STS + Weigh Wagon

Brand	Variety	Moisture%	Yield (bu/A)
Asgrow	AG48XF5	12.5	66.6
Dyna-Gro	S49XF43S	13.2	70.8
Revere	49-F36	14.0	69.1
Asgrow	AG49XF3	14.2	62.8
HiSOY	HS 46F50	13.1	67.1
Dyna-Gro	S43XF85S	13.4	66.7
USG	7487XFS	13.4	63.5
Pioneer	P48Z70BLX	13.4	62.4
Revere	47-F77	13.2	61.1
HiSOY	HS 48F40	13.0	64.5
NK Seed	NK49-N7XF	13.1	66.9
	AVERAGE	**13.3**	**65.6**

Discussion: A great soybean trial for this season!

Brunswick County Maturity Group 4 XtendFlex Soybean Comparisons

Cooperators: **Producer:** K and W Farms
Extension: Taylor Clarke, VCE-Mecklenburg
Previous Crop: Wheat
Soil Type: Appling-Mattaponi complex
Tillage: No-till
Planting Date: June 23, 2025
Seeding Rate/Row Spacing: 190,000 seed/acre; 18-inch rows
Fertilization: P and K applied to wheat
Crop Protection: Burndown: 32 oz Roundup PowerMAX3 + 16 oz Brawl
Post: 32 oz Roundup PowerMAX3 + 32 oz Liberty
5 oz Intrepid Edge + 8 oz Boron
Harvest Date: November 17, 2025
Harvest Equipment: Gleaner R50 + weigh wagon

Brand	Variety	Moisture%	Yield (bu/A)
Revere	47-F77	9.9	23.0
Revere	49-F36	9.7	27.3
Dyna-Gro	S43XF85S	9.6	24.1
Dyna-Gro	S49XF43S	9.8	34.2
Asgrow	AG48XF5	9.3	40.4
Asgrow	AG49XF3	9.5	45.7
USG	7487XFS	9.3	40.6
USG	7496XFS	9.5	40.2
Pioneer	P48Z70BLX	9.7	46.7
HiSOY	HS 46F50	9.8	42.7
	AVERAGE	**9.6**	**36.5**

Discussion: The first four plots were affected by a wet area and 5 inches of rain a few days after planting. Overall production was good considering the drought in August and early September. This data will not be used in the overall average due to excess water damage to the first four plots.

Charlotte County Maturity Group 4 XtendFlex Soybean Comparisons

Cooperators: **Producer:** Grind-N-Stone Farms; The Poindexter Family
Extension: Joanne Jones, VCE-Charlotte
Bruce Jones, VCE-Appomattox
Previous Crop: Corn
Soil Type: Appling fine sandy loam
Tillage: No-till
Planting Date: April 30, 2025
Seeding Rate/Row Spacing: 120,000 seed/acre; 15-inch rows
Fertilization: 1.75 tons chicken litter
Crop Protection: Burndown: May 1 - 32 oz glyphosate + 3.25 oz Valor
June 29 - 32 oz glyphosate + 13.7 oz Miravis Neo
Harvest Date: October 16, 2025
Harvest Equipment: Gleaner R55

Brand	Variety	Moisture%	Yield (bu/A)
Asgrow	AG48XF5	13.0	43.1
NK Seed	NK49-N7XF	13.1	45.2
Dyna-Gro	S43XF85S	13.0	45.3
Revere	47-F77	12.7	50.8
Asgrow	AG49XF3	12.5	36.1
Dyna-Gro	S49XF43S	12.7	44.7
HiSOY	HS 46F50	12.7	45.3
Revere	49-F36	12.9	43.9
HiSOY	HS 48F40	12.7	43.9
Pioneer	P48Z70BLX	12.8	44.8
USG	7487XFS	12.2	41.1
	AVERAGE	**12.8**	**44.0**

Discussion: Solid yielding soybeans for the dry, late summer conditions. Use this and other university and company data to select your 2026 varieties.

Middlesex County Maturity Group 4 XtendFlex Soybean Comparisons

Cooperators: **Producer:** Wayne Burch, Crazy Clover Farms
Extension: Frank Long, VCE-Middlesex
Robbie Longest, VCE-Essex
Industry: Participating seed companies; Jason Dawson and JT Elliott, ChemGro Seeds
Previous Crop: Corn
Soil Type: Slagle silt loam
Tillage: No-till
Planting Date: June 25, 2025
Seeding Rate/Row Spacing: 30-inch rows
Fertilization: 60 lbs N, 7.5 lbs S (24-0-0-3) on oats prior (Apr. 3, 2025)
Crop Protection: Post Emergence: Roundup + FirstWatch + Radiate + LI700 + Brandt Smart Trio
Harvest Date: November 25, 2025
Harvest Equipment: Case IH 2588 w/ 20 ft header

Brand	Variety	Moisture%	Yield
Check 1 (ChemGro)	4957ES	16.9	53.9
USG	7496XFS	15.8	33.9
Revere	49-F36	16.5	38.9
HiSOY	HS 46F50	15.7	38.5
Asgrow	AG48XF5	16.8	37.1
Asgrow	AG49XF3	14.9	39.3
Pioneer	P48Z70BLX	17.7	45.1
Dyna-Gro	S49XF43S	15.7	41.0
NK Seed	NK47-U1XFS	16.0	44.0
Revere	47-F77XFS	14.6	45.3
USG	7487XFS	15.8	42.1
NK Seed	NK49-N7XF	14.8	40.7
Check 2 (ChemGro)	4957ES	16.4	43.3
	AVERAGE	**16.0**	**41.8**

Discussion: The yields of the first six varieties listed may be less than actual due to a slight combine adjustment made before the seventh variety was harvested. This data will not be used in the overall average due to potential combine issues with the first six plots.

Prince George County Maturity Group 4 XtendFlex Soybean Comparisons

Cooperators:	**Producer:**	Sean Finney
	Extension:	Scott Reiter, VCE - Prince George
Previous Crop:		Wheat with straw removed
Soil Type:		Aycock very fine sandy loam, Slagle fine sandy loam
Tillage:		No-till
Planting Date:		June 20, 2025
Seeding Rate/Row Spacing:		200,000 seed/acre; 7.5-inch rows
Fertilization:		120-50-120-20S to wheat
Crop Protection:		July - 32 oz glyphosate + 32 oz Liberty
		August - 8 oz Besiege + 4 oz Stratego YLD + 2 lb BigSweetYield
Harvest Date:		November 17, 2025
Harvest Equipment:		John Deere 9500 + weigh wagon

Brand	Variety	Moisture%	Yield
Pioneer	P46A90LX	9.9	54.9
NK Seed	NK49-N7XF	9.7	53.3
HiSOY	HS 48F40	9.9	64.0
HiSOY	HS 46F50	10.0	61.2
USG	7487XFS	9.9	64.7
USG	7496XFS	9.7	61.7
Dyna-Gro	S43XF85S	10.0	56.6
Dyna-Gro	S49XF43S	9.8	64.1
Revere	47-F77	10.0	58.8
Revere	49-F36	9.7	61.9
Pioneer	P46A90LX	10.1	58.5
Pioneer	P48Z70BLX	9.9	58.1
Asgrow	AG48XF5	9.9	53.9
Asgrow	AG49XF3	9.7	57.8
Pioneer	P46A90LX	9.8	60.6
	AVERAGE	**9.9**	**59.3**

Discussion: Excellent double-crop soybeans for this season. Rainfall in July was over 10 inches followed by a very dry August and early September. All plots looked good with adequate growth. No significant issues were noted across the location.

City of Virginia Beach Maturity Group 4 XtendFlex Soybean Comparisons

Cooperators:	**Producer:**	NEXTGEN Farms-Ryan Dudley
	Extension:	Roy Flanagan, VCE-Virginia Beach Dr. Nathan Sedghi, VCE-Chesapeake
Previous Crop:		Soybean
Soil Type:		Bojac 49%, Dragston 30%, and Munden 21% fine sandy loam
Tillage:		Conventional tillage
Planting Date:		May 6, 2025
Seeding Rate/Row Spacing:		156,000 seed/acre; 15-inch rows
Fertilization:		Pre- 0-0-60 treated with Titan XC @ 165lbs Pop-up 6 gal. w/Nachurs Triple 1 gal, CarboMaxx 1 pt, Stabilize RZ 1 pt
Crop Protection:		5/6/2025- Pre-emerge Zidua 2 oz 6/20/2025- BigSweetYield 1 lb, Molly 2 oz, Drift-X 4 oz, AMS @ 2.5gal/100 gal, RoundUp 40 oz, Surmise 20 oz, Stratego 2 oz, N-Put 1 pt 8/5/2025- Miravis Top 13.7 oz., Intrepid Edge 6.4 oz., Bifenture 6.4 oz. Coastal Liquid Sugar 1 pt, Nutrien Trio 7-0-0 1 qt
Harvest Date:		October 23, 2025
Harvest Equipment:		JD 9660 w/MacDon FD75

Brand	Variety	Moisture%	Yield (bu/A)
HiSOY	HS 48F40	11.5	62.4
HiSOY	HS 46F50	11.9	62.1
Asgrow	AG49XF3	12.3	55.2
Asgrow	AG48XF5	12.5	55.1
USG	7496XFS	12.9	54.8
USG	7487XFS	12.9	60.3
Dyna-Gro	S49XF43S	12.3	58.5
Dyna-Gro	S43XF85S	12.2	57.5
Revere	49-F36	12.2	55.3
Revere	47-F77	12.2	56.4
NK Seed	NK49-N7XF	11.9	56.6
Pioneer	P48Z70BLX	11.8	55.5
	AVERAGE	**12.2**	**57.5**

Discussion: Thank you to NEXTGEN Farms. Use this and additional data to select your 2026 varieties.

MATURITY GROUP 5
VARIETY COMPARISONS – XtendFlex

2025 Overall Group 5 XtendFlex Comparisons

Company	Brand	Brunswick	Prince George	Virginia Beach	Overall Average	Overall Average Relative Yield
Revere	53-F84	52.1	63.4	53.8	56.4	104
Asgrow	AG53XF2	50.2	66.4	52.8	56.5	104
Pioneer	P53Z60LX	48.5	61.6	57.0	55.7	103
Dyna-Gro	S58XF24	49.5	55.5	60.4	55.2	102
Asgrow	AG54XF0	51.9	64.7	46.0	54.2	100
Dyna-Gro	S55XF95	48.7	57.2	56.2	54.0	100
Revere	X55F92	49.5	57.8	51.7	53.0	98
HiSOY	HS 50F40	45.7	62.1	51.4	53.1	98
HiSOY	HS 54F50	42.3	51.1	54.7	49.4	91
		48.7	60.0	53.8		

Average Relative Yield is the relationship of the yield to the location average. It is a percentage above or below the average yield for the location. Varieties are color-coded from dark green to red based on their performance compared to the average yield for that location. Those performing better than the location average are shades of green and yellow, while those varieties performing lower than the location average are shades of orange and red.

Brunswick County Maturity Group 5 XtendFlex Soybean Comparisons

Cooperators:	**Producer:**	K and W Farms
	Extension:	Taylor Clarke, VCE-Mecklenburg
Previous Crop:		Wheat
Soil Type:		Appling-Mattaponi complex
Tillage:		No-till
Planting Date:		June 23, 2025
Seeding Rate/Row Spacing:		190,000 seed/A; 18-inch rows
Fertilization:		P and K applied to wheat
Crop Protection:		Burndown: 32 oz Roundup PowerMAX3 + 16 oz Brawl Post - 32 oz Roundup PowerMAX3 + 32 oz Liberty 5 oz Intrepid Edge + 8 oz Boron
Harvest Date:		November 17, 2025
Harvest Equipment:		Gleaner R50 + weigh wagon

Brand	Variety	Moisture%	Yield (bu/A)
HiSOY	HS 50F40	9.2	45.7
HiSOY	HS 54F50	9.4	42.3
Dyna-Gro	S55XF95	9.5	48.7
Dyna-Gro	S58XF24	9.4	49.5
Pioneer	P53Z60LX	9.4	48.5
Asgrow	AG53XF2	9.5	50.2
Asgrow	AG54XF0	9.5	51.9
Revere	X55F92	9.6	49.5
Revere	53-F84	9.5	52.1
	AVERAGE	**9.4**	**48.7**

Discussion: Use this and other yield data for the most effective variety selection.

Prince George County Maturity Group 5 XtendFlex Soybean Comparisons

Cooperators:	**Producer:**	Sean Finney
	Extension:	Scott Reiter, VCE-Prince George
Previous Crop:		Wheat with straw removed
Soil Type:		Aycock very fine sandy loam, Slagle fine sandy loam
Tillage:		No-till
Planting Date:		June 20, 2025
Seeding Rate/Row Spacing:		200,000 seed/acre; 7.5-inch
Fertilization:		120-50-120-20S to wheat
Crop Protection:		July - 32 oz glyphosate + 32 oz Liberty
		August - 8 oz Besiege + 4 oz Stratego YLD + 2 lb BigSweetYield
Harvest Date:		November 7, 2025
Harvest Equipment:		John Deere 9500 + weigh wagon

Brand	Variety	Moisture%	Yield (bu/A)
Pioneer	P46A90LX	9.8	60.6
Asgrow	AG53XF2	9.6	66.4
Asgrow	AG54XF0	9.9	64.7
Pioneer	P53Z60LX	9.5	61.6
Revere	53-F84	9.3	63.4
Revere	X55F92	9.7	57.8
Dyna-Gro	S55XF95	9.8	57.2
Dyna-Gro	S58XF24	9.7	55.5
HiSOY	HS 50F40	9.4	62.1
HiSOY	HS 54F50	9.6	51.1
Pioneer	P46A90LX	9.7	55.7
	AVERAGE	**9.6**	**59.7**

Discussion: Excellent double-crop soybeans for this season. Rainfall in July was over 10 inches followed by a very dry August and early September. All plots looked good with adequate growth. No significant issues were noted across the location.

City of Virginia Beach Maturity Group 5 XtendFlex Soybean Comparisons

Cooperators:	**Producer:**	NEXTGEN Farms-Ryan Dudley
	Extension:	Roy Flanagan, VCE-Virginia Beach Dr. Nathan Sedghi, VCE-Chesapeake
Previous Crop:		Soybean
Soil Type:		Bojac 49%, Dragston 30%, and Munden 21% fine sandy loam
Tillage:		Conventional tillage
Planting Date:		May 6, 2025
Seeding Rate/Row Spacing:		156,000 seed/acre; 15-inch rows
Fertilization:		Pre- 0-0-60 treated with Titan XC @ 165lbs Pop-up 6 gal. with Nachurs Triple 1 gal, CarboMaxx 1 pt, Stabilize RZ 1 pt
Crop Protection:		5/6/2025- Pre-emerge Zidua 2 oz 6/20/2025- BigSweetYield 1 lb, Molly 2 oz, Drift-X 4 oz, AMS @ 2.5 gal/100 gal, RoundUp 40 oz, Surmise 20 oz, Stratego 2 oz, N-Put 1 pt 8/5/2025- Miravis Top 13.7 oz., Intrepid Edge 6.4 oz., Bifenture 6.4 oz. Coastal Liquid Sugar 1 pt, Nutrien Trio 7-0-0 1 qt
Harvest Date:		October 23, 2025
Harvest Equipment:		JD 9660 w/MacDon FD75

Brand	Variety	Moisture%	Yield (bu/A)
Pioneer	P53Z60LX	11.2	57.0
Dyna-Gro	S58XF24	11.1	60.4
Dyna-Gro	S55XF95	10.8	56.2
HiSOY	HS 50F40	11.3	51.4
HiSOY	HS 54F50	11.4	54.7
Revere	X55F92	10.8	51.7
Revere	53-F84	11.0	53.8
Asgrow	AG53XF2	10.8	52.8
Asgrow	AG54XF0	10.9	46.0
	AVERAGE	**11.0**	**53.8**

Discussion: Thank you to NEXTGEN Farms. Use this and additional data to select your 2026 varieties.

MATURITY GROUP 4 & 5 VARIETY COMPARISONS – Enlist E3

2025 Overall Group 4 Enlist Comparisons

Company	Brand	Virginia Beach	Northampton
Alloy	A45E35	62.2	70.7
Alloy	A47E35	62.0	68.1
ChemGro	C4957ES	65.4	
ChemGro	C4554E	61.0	
Dyna-Gro	S48EN56	55.7	69.6
Dyna-Gro	S40EN54	57.7	56.6
HiSOY	HS 48E50	58.8	72.6
HiSOY	HS 45E50	58.8	64.1
NK Seed	NK47-G5E3S	63.8	58.8
NK Seed	NK46-D2E3		51.1
Pioneer	P48A14E	62.3	62.7
Pioneer	P43Z44SE	57.9	51.3
Revere	CT 4925E3S	61.5	69.5
Revere	47-E74	58.2	69.2
Southern Harvest	SH 4825 E3	61.4	70.7
Southern Harvest	SH 4024 E3	54.7	66.0
USG	7494ETS	59.9	68.9
USG	7486ETS	56.8	61.8
		59.9	64.5

Varieties sorted by company name. Northampton location not included in overall average due to deer feeding and weak stands in some varieties. Westmoreland location had a stand failure due to heavy rain and was overplanted. Virginia Ag Expo location not harvested due to variable plot growth. Final location not harvested as of publication time. Varieties are color-coded from dark green to red based on their performance compared to the average yield for that location. Those performing better than the location average are shades of green and yellow, while those varieties performing lower than the location average are shades of orange and red.

2025 Overall Group 5 Enlist Comparisons

Company	Brand	Brunswick	Virginia Beach	Overall Average	Overall Average Relative Yield	Northampton
NK Seed	NK50-W4E3S	45.6	59.9	52.8	109	53.9
Dyna-Gro	X25356EN	46.0	55.9	50.9	106	60.2
Revere	CT 5293E3	45.1	55.6	50.4	105	
HiSOY	HS 54E10	41.0	59.0	50.0	103	71.3
Revere	5429E	43.4	55.4	49.4	103	
Southern Harvest	SH 5523 E3	44.1	53.9	49.0	102	69.6
HiSOY	HS 50E40	43.4	52.1	47.7	100	66.2
Dyna-Gro	S51EN62	39.5	56.9	48.2	99	65.9
Southern Harvest	SH 5124 E3	43.2	48.3	45.8	96	68.8
Pioneer	P50Z95E	38.6	49.3	43.9	91	57.0
Pioneer	P56A71E	36.3	46.0	41.2	86	57.1
		42.4	53.8			63.3

Northampton location not included in overall average due to deer feeding and weak stands in some varieties. Average Relative Yield is the relationship of the yield to the location average. It is a percentage above or below the average yield for the location. Varieties are color-coded from dark green to red based on their performance compared to the average yield for that location. Those performing better than the location average are shades of green and yellow, while those varieties performing lower than the location average are shades of orange and red.

Brunswick County Group 4 Enlist Soybean Comparisons

Cooperators:	**Producer:**	Roberts Farm
	Extension:	Taylor Clarke, VCE-Mecklenburg
Previous Crop:		Wheat grain after tobacco
Soil Type:		Emporia sandy loam
Tillage:		No-till
Planting Date:		June 29, 2025
Seeding Rate/Row Spacing:		190,000 seed/A; 15-inch row
Fertilization:		Residual from wheat and tobacco
Crop Protection:		Roundup 1 qt + Liberty 1 qt
Harvest Date:		November 14, 2025
Harvest Equipment:		John Deere 9670 + weigh wagon

Brand	**Variety**	**Moisture%**	**Yield (bu/A)**
USG	7494ETS	11.5	34.9
USG	7486ETS	11.2	41.7
Revere	47-E74	11.2	36.3
NK	NK47-G5E3S	11.0	43.3
ChemGro	C4957ES	11.4	40.8
Alloy	A47E35	11.3	40.8
Pioneer	P48A14E	12.1	38.6
	AVERAGE	**11.4**	**39.5**

Discussion: Good soybean crop with drought in August and early September.

Northampton County Group 4 Enlist Soybean Comparisons

Cooperators: **Producer:** Atkinson Farms
Extension: Hélène Doughty, VCE - Northampton County
Previous Crop: Corn
Soil Type: Nimmo sandy loam
Tillage: June 9, 2025
Planting Date: Conventional
Seeding Rate/Row Spacing: 140,000 seed/A; 30-inch row
Fertilization: Poultry litter in 2024; foliar feed 5-0-0 @ 1 qt/A
Crop Protection: Roundup 1 qt/A + Liberty 1 qt/A; Crusader 3 oz/A; Fanfare 6.4 oz/A; Alto 5.5 oz/A
Harvest Date: November 20, 2025
Harvest Equipment: John Deere S780 + weigh wagon

Brand	Variety	Moisture%	Yield (bu/A)
Pioneer	P48A14E	16.0	62.7
Pioneer	P43Z44SE	15.3	51.3
NK	NK47-G5E3S	15.7	58.8
NK Seed	NK46-D2E3	16.3	51.1
Dyna-Gro	S40EN54	15.1	56.6
Dyna-Gro	S48EN56	15.2	69.6
Revere	47-E74	15.1	69.2
Southern Harvest	SH 4825 E3	15.2	70.7
Southern Harvest	SH 4024 E3	15.1	66.0
HiSOY	HS 45E50	15.6	64.1
HiSOY	HS 48E50	14.8	72.6
Alloy	A47E35	15.1	68.1
Alloy	A45E35	15.1	70.7
Revere	CT 4925E3S	15.3	69.5
USG	7494ETS	15.4	68.9
USG	7486ETS	15.2	61.8
	AVERAGE	**15.3**	**64.5**

Discussion: Overall yields were well above the county average for 2025 due to drought conditions. The first 9 plots were lower yielding due to deer pressure and lower plant populations. Pioneer 43Z44-SE had significant deer damage at the beginning of the plot. The data will not be used in the overall rankings for varieties. Use this data with caution when selecting varieties for 2026.

City of Virginia Beach Group 4 Enlist Soybean Comparisons

Cooperators:	**Producer:**	NEXTGEN Farms-Ryan Dudley
	Extension:	Roy Flanagan, VCE-Virginia Beach Dr. Nathan Sedghi, VCE-Chesapeake
Previous Crop:		Soybean
Soil Type:		Bojac 49%, Dragston 30%, and Munden 21% fine sandy loam
Tillage:		Conventional tillage
Planting Date:		May 6, 2025
Seeding Rate/Row Spacing:		156,000 seed/acre; 15-inch rows
Fertilization:		Pre- 0-0-60 treated with Titan XC @ 165lbs Pop-up 6 gal. w/Nachurs Triple 1 gal, CarboMaxx 1 pt, Stabilize RZ 1 pt
Crop Protection:		5/6/2025- Pre-emerge Zidua 2 oz 6/20/2025- BigSweetYield 1 lb, Molly 2 oz, Drift-X 4 oz, AMS @ 2.5 gal/100 gal, RoundUp 40 oz, Surmise 20 oz, Stratego 2 oz, N-Put 1 pt 8/5/2025- Miravis Top 13.7 oz., Intrepid Edge 6.4 oz., Bifenture 6.4 oz. Coastal Liquid Sugar 1 pt, Nutrien Trio 7-0-0 1 qt
Harvest Date:		October 23, 2025
Harvest Equipment:		JD 9660 w/MacDon FD75

Brand	Variety	Moisture%	Yield (bu/A)
Alloy	A45E35	11.8	62.2
Alloy	A47E35	12.0	62.0
ChemGro	C4957ES	12.0	65.4
ChemGro	C4554E	11.9	61.0
HiSOY	HS 45E50	11.9	58.8
HiSOY	HS 48E50	11.9	58.8
Dyna-Gro	S40EN54	11.8	57.7
Dyna-Gro	S48EN56	11.6	55.7
USG	7486ETS	11.6	56.8
USG	7494ETS	11.9	59.9
Pioneer	P48A14E	11.6	62.3
Pioneer	P43Z44SE	11.5	57.9
Southern Harvest	SH 4825 E3	11.4	61.4
Southern Harvest	SH 4024 E3	11.4	54.7
Revere	CT 4925E3S	11.2	61.5
Revere	47-E74	11.1	58.2
NK	NK47-G5E3S	11.1	63.8
	AVERAGE	**11.6**	**59.9**

Discussion: Thank you to NEXTGEN Farms. Use this and additional data to select your 2026 varieties.

Brunswick County Group 5 Enlist Soybean Comparisons

Cooperators:	**Producer:**	Roberts Farms
	Extension:	Taylor Clarke, VCE - Mecklenburg
Previous Crop:		Wheat grain after tobacco
Soil Type:		Emporia sandy loam
Tillage:		No-till
Planting Date:		June 29, 2025
Seeding Rate/Row Spacing:		190,000 seed/A; 15-inch rows
Fertilization:		Residual from wheat and tobacco
Crop Protection:		Roundup 1 qt + Liberty 1 qt + AMS
Harvest Date:		November 14, 2025
Harvest Equipment:		John Deere 9670 + weigh wagon

Brand	Variety	Moisture%	Yield (bu/A)
Revere	CT 5293E3	11.7	45.1
Revere	5429E	12.4	43.4
Dyna-Gro	X25356EN	12.1	46.0
HiSOY	HS 54E10	12.0	41.0
HiSOY	HS 50E40	11.4	43.4
NK	NK50-W4E3S	11.2	45.6
Dyna-Gro	S51EN62	11.3	39.5
Southern Harvest	SH 5523 E3	11.3	44.1
Southern Harvest	SH 5124 E3	11.4	43.2
Pioneer	P50Z95E	11.3	38.6
Pioneer	P56A71E	11.2	36.3
	AVERAGE	**11.6**	**42.4**

Discussion: Use this and other yield data for the most effective variety selection.

Northampton County Group 5 Enlist Soybean Comparisons

Cooperators: **Producer:** Atkinson Farms
Extension: Hélène Doughty, VCE - Northampton County
Previous Crop: Corn
Soil Type: Nimmo sandy loam
Tillage: Conventional
Planting Date: June 9, 2025
Seeding Rate/Row Spacing: 140,000 seed/A; 30-inch rows
Fertilization: Poultry litter in 2024; foliar feed 5-0-0 @ 1 qt/A
Crop Protection: Roundup 1 qt/A + Liberty 1 qt/A; Crusader 3 oz/A; Fanfare 6.4 oz/A; Alto 5.5 oz/A
Harvest Date: November 20, 2025
Harvest Equipment: John Deere S780 + weigh wagon

Brand	Variety	Moisture%	Yield (bu/A)
Pioneer	P50Z95E	16.0	57.0
Pioneer	P56A71E	15.1	57.1
NK	NK50-W4E3S	15.2	53.9
Dyna-Gro	X25356EN	15.2	60.2
Dyna-Gro	S51EN62	15.2	65.9
Southern Harvest	SH 5523 E3	15.2	69.6
Southern Harvest	SH 5124 E3	15.6	68.8
HiSOY	HS 50E40	15.6	66.2
HiSOY	HS 54E10	15.1	71.3
	AVERAGE	**15.4**	**63.3**

Discussion: Overall yields were well above the county average for 2025 due to drought conditions. The first 9 plots were lower yielding due to deer pressure and lower plant populations. The data will not be used in the overall rankings for varieties. Use this data with caution when selecting varieties for 2026.

City of Virginia Beach Group 5 Enlist Soybean Comparisons

Cooperators:	**Producer:**	NEXTGEN Farms-Ryan Dudley
	Extension:	Roy Flanagan, VCE-Virginia Beach Dr. Nathan Sedghi, VCE-Chesapeake
Previous Crop:		Soybean
Soil Type:		Bojac 49%, Dragston 30%, and Munden 21% fine sandy loam
Tillage:		Conventional tillage
Planting Date:		May 6, 2025
Seeding Rate/Row Spacing:		156,000 seed/acre; 15-inch rows
Fertilization:		Pre- 0-0-60 treated with Titan XC @ 165lbs Pop-up 6 gal. w/Nachurs Triple 1 gal. CarboMaxx 1 pt, Stabilize RZ 1 pt
Crop Protection:		5/6/2025- Pre-emerge Zidua 2 oz 6/20/2025- BigSweetYield 1 lb, Molly 2 oz, Drift-X 4 oz, AMS @ 2.5 gal/100 gal, RoundUp 40 oz, Surmise 20 oz, Stratego 2 oz, N-Put 1 pt 8/5/2025- Miravis Top 13.7 oz., Intrepid Edge 6.4 oz., Bifenture 6.4 oz. Coastal Liquid Sugar 1 pt, Nutrien Trio 7-0-0 1 qt
Harvest Date:		October 23, 2025
Harvest Equipment:		JD 9660 w/MacDon FD75

Brand	Variety	Moisture%	Yield (bu/A)
Pioneer	P50Z95E	11.1	49.3
Pioneer	P56A71E	10.9	46.0
Southern Harvest	SH 5523 E3	10.8	53.9
Southern Harvest	SH 5124 E3	10.7	48.3
Dyna-Gro	X25356EN	11.2	55.9
Dyna-Gro	S51EN62	11.4	56.9
HiSOY	HS 54E10	11.6	59.0
HiSOY	HS 50E40	12.0	52.1
Revere	CT 5293E3	11.7	55.6
Revere	5429E	12.0	55.4
NK	NK50-W4E3S	11.9	59.9
	AVERAGE	**11.4**	**53.8**

Discussion: Thank you to NEXTGEN Farms. Use this and additional data to select your 2026 varieties.

Other Research

On-Farm Soybean Variety Trial Routine Tissue Testing Study

Cooperators: **Extension:** Scott Reiter, VCE - Prince George
Roy Flanagan, VCE - Virginia Beach
Hélène Doughty, VCE - Northampton
Frank Long, VCE - Middlesex
Dr. Carrie Ortel, Virginia Tech Extension Soybean Agronomist

Tissue testing can be an effective way of monitoring the crop's nutrient status during the growing season when done correctly. This involves collecting the correct sample in good conditions and proper interpretation of results. The threshold for sufficiency is listed below by growth stage.
Source: Sabbe, W.E., Lessman, G.M., & Bell, P.F. (2011). Soybean. In: Reference Sufficiency Ranges for Plant Analysis in the Southern Region of the US. Southern Cooperative Series Bulletin #394.

Early Growth

Macronutrients					
N	P	K	Ca	Mg	S
3.5 – 5.5%	0.3 – 0.60%	1.7 – 2.5%	1.1 – 2.2%	0.30 – 0.60%	--

Flowering

Macronutrients					
N	P	K	Ca	Mg	S
3.25 – 5.0%	0.3 – 0.60%	1.5 – 2.25%*	0.8 – 1.4%	0.25 – 0.70%	0.25 – 0.60%

* A dynamic critical concentration relies on specific days after R1 for a more precise threshold (Slaton et al., 2021). Research is ongoing to validate this for VA soybean.

Micronutrients				
Fe	Mn	Zn	Cu	B
25 – 300 ppm	17 – 100 ppm	21 – 80 ppm	4 – 30 ppm	20 – 60 ppm

Results:
Summary tables of the tissue test results of five varieties (Asgrow 49XF3, Dyna-Gro 55XF95, Revere 4925E, Revere 5293, Pioneer 50Z95E) sampled at four on-farm variety trial locations in 2025:

V4:

Macronutrients					
N	P	K	Ca	Mg	S
4.15%	0.37%	2.24%	1.29%	0.51%	0.25%

Micronutrients						
Fe	Mn	Zn	Cu	B	Al	Mo
308 ppm	119 ppm	72 ppm	12 ppm	43 ppm	70 ppm	0.64 ppm

R1:

Macronutrients					
N	P	K	Ca	Mg	S
4.94%	0.47%	2.47%	1.12%	0.49%	0.33%

Micronutrients						
Fe	Mn	Zn	Cu	B	Al	Mo
145 ppm	76 ppm	55 ppm	18 ppm	44 ppm	53 ppm	3.5 ppm

R4:

Macronutrients					
N	P	K	Ca	Mg	S
4.8%	0.30%	1.90%	1.49%	0.33%	0.30%

Micronutrients						
Fe	Mn	Zn	Cu	B	Al	Mo
104 ppm	88 ppm	59 ppm	26 ppm	38 ppm	39 ppm	0.5 ppm

Location	*Variety and Yield*	*Growth Stage and Date*	*Low*	*High*
Prince George	Asgrow AG49XF3 57.8 bu/A	V4 – 7/22	N, S	Zn, Mn, Fe
		R1 – 7/31		N
		R4 – 9/10	K	
	Dyna-Gro 55XF95 57.2 bu/A	V4 – 7/22	N, S, P, K	Mn, Fe
		R1 – 8/18		N, S, K
		R4 – 9/10	P, K	
Middlesex	Asgrow AG49XF3 58.9 bu/A	V4 – 7/23	N, S, P, Ca	
		R1 – 8/13		K, Ca, Zn, Mn, Cu
		R4 – 9/22	P	
Virginia Beach	Asgrow AG49XF3 55.2 bu/A	V4 – 7/3		K, Cu
		R4 – 8/18	P	Mn
	Dyna-Gro 55XF95 56.2 bu/A	V4 – 7/3	S	K
		R4 – 8/18	P	Mn
	Pioneer 50Z95E 49.3 bu/A	V4 – 7/3	S	
		R4 – 8/18	P	
	Revere 5293E 55.6 bu/A	V4 – 7/3	S, Ca	K
		R4 – 8/18	P	N
Northampton	Revere 4925E 69.5 bu/A	V4 – 7/16		K
		R1 – 8/1		N, K
		R4 – 8/28	Mg	
	Pioneer 50Z95E 57.0 bu/A	V4 – 7/16		K, Mg, B
		R1 – 8/1		N
		R4 – 8/28		B

Discussion: The average yield was 57.4 bu/A across the five varieties in four locations. No visual nutrient deficiencies were observed at any location or sampling date. Most nutrients fell within the published sufficiency ranges for each variety and location. Phosphorus and sulfur were most often the nutrients to test below the minimum levels; however, values were just slightly below the minimums. Three of the 23 samples collected were below the dynamic critical K concentration value (Slaton et al., 2021), indicating a potential yield-limiting K deficiency. More nutrients tested higher than the sufficiency ranges, but none at toxicity levels. This could be due to in-season micro-nutrient applications. These results indicate that adequate potassium was available for most varieties and luxury uptake was likely at those eight locations. It is interesting to note that the Northampton site only had one low-testing nutrient (Mg) and that site received an application of poultry litter in 2024. Differences between growth stages did follow the expected pattern based on nutrient uptake and mobility, an important consideration when interpreting tissue test results. More work is planned to determine how tissue testing can be better utilized in soybean management

Essex County Soybean Strip Tillage Study - Ellis

Cooperators:	**Producer:**	Benjamin Ellis
	Extension:	Robbie Longest, VCE-Essex Dr. Carrie Ortel, Erin Myers, Chris Buck, Mike Wilson (Virginia Tech Soybean Agronomy)
Previous Crop:		Corn
Soil Type:		Tetotum loam
Tillage:		Treatments (no-till and strip till)
Variety:		Revere 4640E3
Planting Date:		May 7, 2025
Seeding Rate/Row Spacing:		100,000 seeds/acre; 15-inch rows
Fertilization:		100 lbs./A sulfate of potash for both treatments, banded or broadcast
Crop Protection:		<u>Burndown:</u> Roundup (1qt./A) + Liberty (1qt./A) + Zidua (3 oz./A) + Quadfire (1 qt./100 gal. of water) <u>Post:</u> Roundup (1 qt./A) + FirstWatch (0.3 oz./A) + AMASS PGR (6.2 oz./A) + Revylok (5.3 oz./A) + ROI Fortress (1 pt./A) + Brandt Smart Trio (1 qt./A)
Harvest Date:		October 16, 2025
Harvest Equipment:		John Deere S680

Treatment	Plants Damaged by Slugs at VC (%)	Yield (Bu/A)
No Till, Broadcast	32%	48.8
Strip Till, Broadcast	5%	47.3
Strip Till, Banded	4%	50.8
AVERAGE	**11%**	**49.4**

Discussion: This was one of two fields replicated to test the impact of strip tillage on slug populations and yield on-farm. There was no significant ($P < 0.10$) effect of either tillage (strip tillage or no tillage) or fertilizer placement (banded or broadcast) on the soybean yield. Strip tillage did have an impact ($P = 0.0762$) on plants damaged by slugs at VC (cotyledon stage) with 4% of plants damaged in the strip till plots and 32% damaged in the no-till plots. This was only one year of data and should be considered preliminary, as slug populations are heavily dependent on weather patterns.

Essex County Soybean Strip Tillage Study - Hundley

Cooperators:	**Producer:**	Jay Hundley
	Extension:	Robbie Longest, VCE-Essex Dr. Carrie Ortel, Erin Myers, Chris Buck, Mike Wilson (Virginia Tech Soybean Agronomy)
Previous Crop:		Corn
Soil Type:		State fine sandy loam
Tillage:		Treatments (no-till and strip till)
Variety:		Dyna-Gro S47XF23S
Planting Date:		June 21, 2025
Seeding Rate/Row Spacing:		145,000 seeds/acre; 30-inch rows
Fertilization:		60 lbs./A MAP + 120 lbs./A Muriate of Potash, banded or broadcast
Crop Protection:		Burndown: March 26, 2025 - Gramoxone (1.25 qt./A) + LV6 (0.3 qt./A) + Rifle (2.2 oz./A) + LI700 (7.4 oz./A) April 29, 2025 - Roundup (1 qt./A) + Zidua (2.5 oz./A) + Valkos (2.0 oz./A) + LI700 (7.4 oz./A) Post: July 3, 2025 - Amaze Gold (1.5 qt./A) + Noventa (36 oz./A) + Roundup (1 qt./A) August 14, 2025 - Besiege (8 oz./A) + Miravis Top (13.7 oz./A) + Brandt Smart KB (1 qt./A) + Brandt Smart Mn (1 qt./A) + Roundup (1 qt./A)
Harvest Date:		November 11, 2025
Harvest Equipment:		John Deere X9

Treatment	Yield (Bu/A)
No Till, Broadcast	54.4
Strip Till, Broadcast	53.3
Strip Till, Banded	53.9
AVERAGE	**53.8**

Discussion: This was one of two fields replicated to test the impact of strip tillage on slug populations and yield on-farm. There was no significant ($P < 0.10$) effect of either tillage (strip tillage or no tillage) or fertilizer placement (banded or broadcast) on the soybean yield. The wet weather patterns caused a delayed planting date beyond the time when we would be concerned about slug pressure and therefore no slug data was collected.

Mecklenburg County Soybean Potassium Response Study

Cooperators: **Producer:** Wilbourne Land and Timber - Adam Wilbourne
Extension: Taylor Clarke, VCE-Mecklenburg
Dr. Carrie Ortel, Erin Myers, Chris Buck, & Mike Wilson (Virginia Tech Soybean Agronomy)

Soil Type: Appling fine sandy loam
Tillage: No-till
Variety: AGS Woodruff (MG 7.8)
Planting Date: June 5, 2025
Seeding Rate/Row Spacing: 160,000 seeds per acre; 15-inch rows
Fertilization: Treatments of preplant and in-season MOP (0-0-60) and foliar potassium
Crop Protection: Burndown: Roundup, BroadAxe, Sharpen, Weather Gard
Early Post Emergence Application: Intensity, Flexstar, Weather Gard, Radiate
Late Post Emergence Application: Intensity, Quadris, Warrior
Harvest Date: November 13, 2025
Harvest Equipment: Wintersteiger plot combine

Rate (lb K2O/A)	Timing	R2 Tissue %K		Yield (bu/A)
		Leaf	Petiole	
UTC	UTC	1.67	3.67	48.7
60	Preplant	1.72	4.25	51.6
120	Preplant	1.90	4.45	47.2
150	Preplant	1.93	4.70	54.6
60	5 d after R1	1.74	4.29	40.7
120	5 d after R1	1.96	4.96	53.3
60	20 d after R1	1.76	4.06	58.9
120	20 d after R1	1.60	3.50	49.2
5qt (foliar)	20 d after R1	2.00	3.38	44.3
AVERAGE		**1.81**	**3.38**	**49.8**

Discussion: Treatments consisting of varying rates and application timings of potash were applied at planting or during the growing season to dryland soybean to evaluate alternative potassium management strategies. No significant differences in yield were observed ($P > 0.05$). Soil test potassium (K) levels were classified as Low+ in the 0–6 in. depth (38 ppm), Low– at 6–12 in. (7 ppm), and Low at 12–18 in. (14 ppm). Soil pH declined with depth (6.26, 5.35, and 4.68, respectively), and organic matter was low across depths (1.01%, 0.42%, and 0.83%), indicating a high potential for crop response to K fertilization. Leaf and petiole K concentrations measured 20 days after R1 were below established sufficiency thresholds; however, no visual deficiency symptoms were observed, suggesting the possibility of “hidden hunger” and subclinical yield limitations. The lack of a yield response may have been influenced by confounding factors, including deer damage. Additional site-years of research are needed to fully evaluate the effectiveness of these potassium management practices at this location.

New Kent County Nitrogen & Potassium Fertilizer Response Soybean Study

Cooperators:	**Producer:**	Davis Farms, Paul Davis
	Extension:	Dr. Carrie Ortel, Erin Myers, Chris Buck, & Mike Wilson (Virginia Tech Soybean Agronomy)
Previous Crop:		Corn followed by cover crop (Rye, ryegrass, crimson clover, turnip, radish)
Soil Type:		Tetotum loam
Tillage:		No-till
Planting Date:		May 19, 2025
Variety:		BASF 4522E
Seeding Rate/Row Spacing:		120,000; 30-inch rows
Fertilization:		Treatments
Crop Protection:		Burndown/Termination: (4/29) paraquat, Dual, metribuzin Post: (5/19) glyphosate; (6/27) glyphosate; (7/29) Veltyma
Harvest Date:		November 7, 2025

Fertilizer	Timing	R2 Tissue K (%)		R2 Tissue N (%)		Yield (Bu/A)
		Leaf	Petiole	Leaf	Petiole	
Untreated	at Plant	1.98	4.25	5.76	2.23	51.9
20 lb N	at Plant	2.13	4.29	5.71	2.24	46.9
60 lb K2O	at Plant	1.93	4.29	5.65	2.12	50.4
20 lb N & 60 lb K2O	at Plant	1.99	4.29	5.74	2.24	51.7
20 lb N	21 d after Plant	2.23	4.49	5.65	2.28	51.5
60 lb K2O	21 d after Plant	1.92	4.11	5.63	2.11	51.4
20 lb N & 60 lb K2O	21 d after Plant	1.88	4.20	5.71	2.20	52.7
Foliar	21 d after Plant	1.89	4.00	5.66	2.10	50.8
20 lb N	5 d after R1	2.06	4.73	5.72	2.26	49.3
60 lb K2O	5 d after R1	1.96	4.43	5.63	2.18	50.9
20 lb N & 60 lb K2O	5 d after R1	1.94	4.40	5.68	2.19	49.2
Foliar	5 d after R1	1.78	4.10	5.72	2.06	47.5
AVERAGE		**1.97**	**4.28**	**5.68**	**2.18**	**50.5**

Discussion: Soil samples collected at planting measured the top 6” as very high P (74 ppm P), medium K (43 ppm K), pH of 6.2 and 1.8% organic matter. Tissue samples were collected at V4, R2, R3, R4, and R5. Tissue-K was consistently higher in the petioles than the leaves, while tissue-N was consistently higher in the leaves than the petioles. No significant ($P < 0.05$) yield response was observed for the effects of application time, fertilizer source, or the interaction between application time and fertilizer source. This is likely because all treatments, including the untreated control, measured above the threshold for sufficiency throughout all sampled growth stages and were not yield limited by a nutrient deficiency.

Surry County Soybean Plant Growth Regulator Study

Cooperators:	**Producer:**	Itata Farms, Steven Pittman
	Extension:	Elizabeth Cooper, VCE - Sussex
		Dr. Carrie Ortel, Erin Myers, Chris Buck, Mike Wilson (Virginia Tech Soybean Agronomy)
Previous Crop:		Soybean
Soil Type:		Slagle fine sandy loam
Tillage:		Minimal tillage
Planting Date:		May 7, 2025
Variety:		Catalyst CT5293E3
Seeding Rate/Row Spacing:		115,000 on 15-inch rows
Fertilization:		28 lbs N, 40 lbs P, 90 lbs K, 12 lbs S per acre
Crop Protection:		Burndown: Brawl, Acumen, Roundup PowerMax, Pursuit
		Post: Liberty, Backdrop, Enlist, Roundup PowerMax, Black Max Choice Trio, LI 700
Harvest Date:		October 19, 2025
Harvest Equipment:		Case IH 2388

Two commercially available products marketed as plant growth regulators for soybeans were tested in replicated, large on-farm strips (80ft x 400ft) at the labeled rates, both applied at V4.

Treatment	R1		R6			Yield (bu/A)
	Height	Node	Height	Node	Pod	
Product X	13.1 b	10.4	38.9	19.0	91.8	65.2
Untreated Control	13.7 a	10.2	39.6	19.1	91.9	64.4
Average	13.4	10.3	39.2	19.0	91.8	64.8
P-value	**0.01405**	0.7884	0.3242	0.8709	0.9821	0.3214

Plots treated with product X were significantly shorter than the untreated plots at R1 but had no significant differences in the node count at R1, height at R6, node count at R6, pod count at R6, or yield ($P < 0.05$).

Treatment	R1		R6			Yield (bu/A)
	Height	Node	Height	Node	Pod	
Product Y	13.1	10.3	36.1 b	18.4 a	83.3 b	58.5 b
Untreated Control	13.6	10.1	41.0 a	16.0 b	94.7 a	58.8 a
Average	13.3	10.2	38.5	17.2	89.0	58.6
P-value	0.06914	0.7627	**<0.0001**	**0.03756**	**<0.0001**	**0.0007**

Plots treated with product Y measured no differences in height and node counts at R1 but did measure significantly shorter with more nodes and less pods per plant at R6 ($P < 0.05$). The treated plots yielded significantly less than the untreated control plots, but only by 0.3 bu/A.

Overall Discussion: Neither product provided a significant yield benefit, or a return on investment to cover the purchase of the product and application cost.

City of Virginia Beach Return on Investment of Variable Rate Technology in Soybean Study

Cooperators: **Producer:** Ryan Dudley, NextGen Farms
Extension: Dr. Joseph Oakes, Superintendent, Eastern Virginia AREC
Dr. Carrie Ortel, Extension Soybean Agronomist, Tidewater AREC
Roy Flanagan, VCE-Virginia Beach

Variety: Loyal (Great Heart) 4550ES
Planting Date: May 3, 2025
Seeding Rate: 156,000 seeds/A
Fertilization: Treatments of preplant MOP (0-0-60) – variable rate (173 lbs/A average) or uniform rate (150 lbs/A)
At planting: 6 gal/A Pop-up Starter, 1 gal/A Nachurs Triple, 1 pt/A CarboMaxx, 1 pt/A Stabilize RZ
Crop Protection: **5/3/25**: 2 oz/A Zidua
6/22/25: 1 lb/A Sugar, 2 oz/A Molly, 4 oz/A Drift-X, 2.5 gal/100 gal water AMS, 40 oz/A Roundup, 20 oz/A Surmise, 2 oz/A Stratego, 1 pt/A N-Put
Harvest Date: October 22, 2025

Discussion: The goal of this study was to evaluate the return on investment when implementing variable rate fertilizer applications of pre-plant dry products (lime, potassium, phosphorus) on a Virginia grain farm. A uniform rate of pre-plant fertility was applied adjacent to variable rate in the same field based on soil test reports. The soil test did not call for pre-plant lime or phosphorus; therefore, only potassium was applied as shown below and in Figure 1. (MOP = muriate of potash, 0-0-60)

Uniform Rate: 150 lbs MOP/A

Variable Rate: 173 lbs MOP/A average

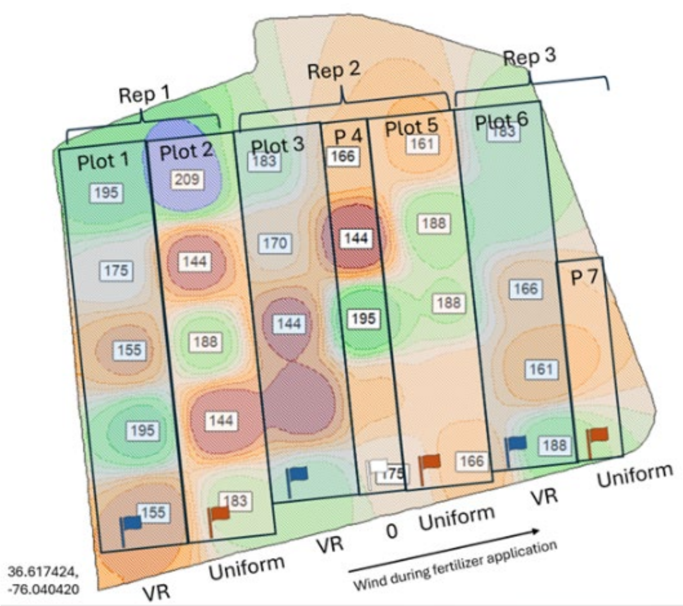

Figure 1: Map of field showing rates of pre-plant potassium applied.

Table 1: Potassium levels from tissue testing throughout the growing season. All potassium levels were sufficient.

	Potassium %	Potassium %	Potassium %
	6/5/25	7/3/25	7/28/25
Variable	3.07 A	2.14 A	2.13 A
Uniform	2.95 A	2.12 A	2.07 A

Cost to apply pre-plant potassium:

Uniform Rate: 150 lbs MOP/A x $0.26/lb = $39/acre

Variable Rate: average 173 lbs MOP/A x $0.26/lb = $45/ac

Yield Date and Return:

	Yield	$/bushel	Revenue $/A	Pre-Plant Fertility Cost/A	Soil Sample $/A	Return/A (minus fertilizer and sampling)
Variable Rate	59.1	$11	$649.88	$45	$1.88	$603.00
Uniform Rate	55.5	$11	$610.28	$39	$0.23	$571.05

The variable rate applications averaged 173 lbs/A MOP and cost $6 more per acre to apply than the uniform rate applications of 150 lbs/A MOP. While the variable rate applications did cost $6 more per acre to apply, this treatment yielded almost 4 bushels per acre higher than the uniform rate. For variable rate soil sampling, generally one soil sample is collected for every four acres, while for the uniform rate, one sample is collected for the entire field. This adds a cost of $1.65 per acre for variable rate intensive sampling. At $11/bushel, the variable rate application of MOP had a $31.95 higher return per acre than the plots that had the uniform rate of MOP applied. Soil Test Pro Software was used to make the prescriptions and its cost was $139.45. This is a flat rate cost and can be used for as many acres as needed, so it is not included in this cost analysis. A grower with more acres will incur a lower cost per acre than a grower with fewer acres. Note this is just one location in one growing season. More locations are planned for the 2026 growing season.

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