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Virginia On-Farm Soybean Research

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

2021

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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 550,000 acres of soybeans valued at approximately $200 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 producer or agribusiness professional wishing to receive a copy of this publication should contact their local Extension Agent who can request a copy from Stephanie Romelczyk in Westmoreland County at 804-493-8924 or sromelcz@vt.edu.

This is the 25th year of this multi-county cooperative effort and further work is planned for 2022. 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.

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PHOTOS: Courtesy of Lindy Fimon, Laura Siegle, Scott Reiter, Trent Jones, Robbie Longest, and Stephanie Romelczyk

GENERAL SUMMARY

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

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 dominate every crop year and 2021 was no different. Planting conditions were dry through May for most of the state. Rainfall near Memorial Day restored soil moisture and the rush to finish planting began. Many of these trials were planted in early June. Rainfall was adequate throughout the growing season for most locations. The Southern Piedmont was the exception as various levels of drought conditions were experienced at times. Overall yields were exceptional in 2021 though some locations were stressed and produced average yields in the 30s. Selecting varieties for your soil and climate conditions is imperative.

Maturity Group (MG) 4 & 5 varieties were compared across multiple locations in 2021. This work is performed in concert with the Official Variety Tests conducted by Dr. David Holshouser and offers producers even stronger yield comparison information that they can use when making planting decisions.

Roundup Ready 2 XtendFlex soybeans constituted the majority of varieties submitted for testing. Fourteen of 19 varieties carried the XtendFlex trait in the MG 4 tests; 8 of 16 in the MG 5 tests. The LibertyLink trials included LibertyLink GT27, Enlist E3, and XtendFlex varieties. For 2022, there appears to be adequate varieties to serve each grower's herbicide system needs. Weed control system, nematode resistance, and disease package should be considered when selecting varieties for 2022.

At the 2021 AG EXPO site, additional management trials were established. A trial comparing double crop seeding rates across two planting dates confirmed that later plantings should use higher seeding rates. This also shows that early wheat harvest and immediately planting soybeans is preferred over late plantings. An additional study looked at fungicide applications applied across the MG 4 & 5 variety studies. Timing fungicide applications is critical to protect yield potential. Read those discussions to see how MG 4 versus MG 5 varieties responded to the treatment applied on the same day.

In a throwback to the old days, two trials were planted in Essex County to evaluate conventional soybean varieties. Specialty marketing programs often pay a premium for non-GMO soybeans.

We hope you find this information useful. If you have ideas for 2022 on-farm research or would like to be a cooperator in 2022, please contact your local Virginia Cooperative Extension Agriculture Agent.

Trait Data for 2021 VCE On-farm Soybean Varieties
Roundup Ready 2 Xtend & XtendFlex

Company	Brand	Relative Maturity	Herbicide Traits	Soybean cyst nematode	Root knot nematode	Frogeye leafspot	Sudden death syndrome	Brown stem rot
Asgrow	AG47XF0	4.7	XF/SR	R3	S	F	F	
Asgrow	AG48XF0	4.8	XF/SR	R3	S	G	G	
Credenz	CZ 4202 XF	4.2	XF					
Credenz	CZ 4562 XF	4.5	XF					
DONMARIO Seeds	DM47X39	4.7	RR2X	S		VG	VG	
DONMARIO Seeds	DM48F61	4.8	XF	R		E	VG	
Dyna-Gro	S48XF61S	4.8	XF/STS	R3, MR14	S		F	
Dyna-Gro	S48XT90	4.8	RR2X	S	F	VG	VG	
Hubner	H47-30XF	4.7	XR/SR	R	S	VG	G	
Hubner	H48-31XF	4.8	XF/SR	R	S	G	G	
LG Seed	LGS4640XF	4.6	XF/SR	R3, MR14			VG	
LG Seed	LGS4808XF	4.8	XF/SR	R3, MR14			G	
Local Seed Company	LS4606XFS	4.6	XF/SR	R3, MR14	S		VG	
Local Seed Company	LS4806XS	4.8	RR2X/SR	R3, MR14	S	VG	E	
MorSoy	MS 4640 XF/STS	4.6	XF/STS	F	S	G	G	
MorSoy	MS 4850 XF/STS	4.8	XF/STS	G	S	F	F	
NK Seed	NK45-P9XF	4.5	XF	R3	G	VG	VG	G
NK Seed	S49-F5X	4.9	RR2X	MR3,14	S	VG	G	VG
Pioneer	P46A86X	4.6	RR2X	R	S	G	VG	MS
Pioneer	P48A60X	4.8	RR2X	R	S	F	VG	MS
Progeny	P 4821RX	4.8	RR2X	R3, MR14	S	MR	MR	
USG	7487XTS	4.8	RR2X/STS	R3, MR14		G	G	
USG	7480XT	4.8	RR2X	S	MS	G	G	
Asgrow	AG54XF0	5.4	XF/SR	S	MR-MS	F	G	
Asgrow	AG55XF0	5.5	XF	R1,3	R	VG	G	
DONMARIO Seeds	DM51X61	5.1	RR2X	S		VG	VG	
Dyna-Gro	S56XT99	5.6	RR2X	R1,3	VG	VG	G	
Dyna-Gro	S56XF01	5.6	XF	MR3	F			
Hubner	H51-22XF	5.1	XF/SR	R	R	G	G	
Local Seed Company	LS5009XS	5.0	RR2X/SR	R3, MR14	S	G	G	
Local Seed Company	LS5418XFS	5.4	XF/SR	S	R		G	
MorSoy	MS 5491 XF	5.4	XF	F	E		G	
MorSoy	MS 5640 XF	5.6	XF	F	E	VG		
NK Seed	S53-F7X	5.3	RR2X	MR3	F	VG	VG	VG
Pioneer	P52A05X	5.2	RR2X	R	E	G	G	MS
Pioneer	P55A49X	5.5	RR2X	R	E	G	G	MS
Progeny	P 5554RX	5.5	RR2X	R1,3	R	R	MR	
USG	7529XTS	5.2	RR2X/STS	S	S	VG	G	
USG	7562XF	5.6	XF	MR3	MS	G	G	

R = Resistant
S = Susceptible
MR = Moderately resistant
M = Moderate
MS = Moderately susceptible
RR2X = Roundup Ready 2 Xtend
XF = Roundup Ready 2 XtendFlex
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.

Trait Data for 2021 VCE On-farm Soybean Varieties
Enlist & LibertyLink

Company	Brand	Relative Maturity	Herbicide Traits	Soybean Cyst Nematode	Root Knot Nematode	Frogeye leafspot	Sudden death syndrome	Brown stem rot
Credenz	CZ 4241 GTLL	4.2	LLGT27	R3, MR14		VG	VG	
Credenz	CZ 4701 GTLL	4.7	LLGT27	R3, MR14		VG	VG	E
Dyna-Gro	S45ES10	4.5	E3/STS	R3, MR14	S	VG	G	
Dyna-Gro	S49EN79	4.9	E3	R3, MR14	S	VG	G	
Local Seed Company	IS4324E3	4.3	E3	R3, MR14	S	E	VG	
Local Seed Company	IS4684E3S	4.6	E3/SR	R3, MR14	S	G	VG	
Local Seed Company	IS5067E3S	5.0	E3/SR	R3, MR14	S	E	G	
Local Seed Company	IS5232E3	5.2	E3	R3, MR14	S	VG	VG	
MorSoy	MS 5461 E	5.4	E3	MR				
NK Seed	NK45-V9 E3	4.5	E3	R3	VG	VG	VG	VG
NK Seed	S51-E3	5.1	E3	MR3	G	VG	VG	VG
NK Seed	S50-E3S	5.0	E3/STS	MR		VG	G	
Pioneer	P45T88E	4.5	E3	R	S		G	
Pioneer	P49T62E	4.9	E3/STS	R	S	F	F	
Pioneer	P53T90E	5.3	E3	R	S		F	
Southern Harvest	SH 4820 E3	4.8	E3					
Southern Harvest	SH 5321 E3	5.3	E3					
USG	7491ETS	4.9	E3/STS	VG		VG	G	

R = Resistant
S = Susceptible
MR = Moderately resistant
M = Moderate
MS = Moderately susceptible
LL = Tolerant to glufosinate; Liberty, generics
GT = Tolerant to glyphosate
GT27 = Tolerant to glyphosate and HPPD inhibitor (Group 27) Alite 27
STS or SR = Tolerant to sulfonylurea herbicides; such as Synchrony XP or Classic
E3 = Tolerant to 2,4-D choline, glyphosate and glufosinate; Enlist One or Enlist Duo herbicide

**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.

Seed Treatment Data for On-Farm Soybean Variety Comparisons

Company	Brand	Treatment Brand Name (Contents)	None	Insecticide	Fungicide	Nematicide	Inoculant	Biological
Asgrow	AG47XF0	Acceleron Standard-FI		X	X			
Asgrow	AG48XF0	Acceleron Standard-FI		X	X			
Credenz	CZ 4202 XF	Poncho/Votivo, Obvious Plus, ILEVO		X	X	X		
Credenz	CZ 4562 XF	Poncho/Votivo, Obvious Plus, ILEVO		X	X	X		
DONMARIO Seeds	DM47X39	*Seed treated but not specified on bag*						
DONMARIO Seeds	DM48F61	CruiserMaxx Beans, Vibrance		X	X			
Dyna-Gro	S48XF61S	Equity VIP, Saltro		X	X	X		
Dyna-Gro	S48XT90	Equity VIP, Saltro		X	X	X		
Hubner	H47-30XF	Acceleron Standard-FI		X	X			
Hubner	H48-31XF	Acceleron Standard-FI		X	X			
LG Seed	LGS4640XF	Agrishield Max w/ Saltro, innoculant, *Bradyrhizobia*, *Trichoderma*		X	X	X	X	X
LG Seed	LGS4808XF		X					
Local Seed Company	LS4606XFS	Radius Soybean Premium + Innoculant (Primo)		X	X		X	
Local Seed Company	LS4806XS	Radius Soybean Premium + Innoculant (Primo)		X	X		X	
MorSoy	MS 4640 XF/STS	Avicta Complete Beans + Innoculant (Preside Ultra)		X	X	X	X	
MorSoy	MS 4850 XF/STS	Avicta Complete Beans + Innoculant (Preside Ultra)		X	X	X	X	
NK Seed	NK45-P9XF	CruiserMaxx Beans, Vibrance, Saltro		X	X	X		
NK Seed	S49-F5X	CruiserMaxx Beans, Vibrance, Saltro		X	X	X		
Pioneer	P46A86X	LumiGEN Lumisena, *Bacillus amyloliquefaciens* MBI600 + *pumilis* BU F-33		X	X			X
Pioneer	P48A60X	LumiGEN Lumisena, *Bacillus amyloliquefaciens* MBI600 + *pumilis* BU F-33		X	X			X
Progeny	P 4821RX	Poncho/Votivo, Obvious Plus, Relenya		X	X	X		
USG	7487XTS	Inovate		X	X			
USG	7480XT	Inovate		X	X			
Asgrow	AG54XF0	Acceleron Standard-FI		X	X			
Asgrow	AG55XF0	Acceleron Standard-FI		X	X			
DONMARIO Seeds	DM51X61	*Seed treated but not specified on bag*						
Dyna-Gro	S56XT99	Equity VIP, Saltro		X	X	X		
Dyna-Gro	S56XF01	Equity VIP, Saltro		X	X	X		
Hubner	H51-22XF	Acceleron Standard-FI		X	X			
Local Seed Company	LS5009XS	Radius Soybean Premium + Innoculant (Primo)		X	X		X	
Local Seed Company	LS5418XFS	Radius Soybean Premium + Innoculant (Primo)		X	X		X	
MorSoy	MS 5491 XF	Avicta Complete Beans + Innoculant (Preside Ultra)		X	X	X	X	
MorSoy	MS 5640 XF	Avicta Complete Beans + Innoculant (Preside Ultra)		X	X	X	X	
NK Seed	S53-F7X	CruiserMaxx Beans, Vibrance, Saltro		X	X	X		
Pioneer	P52A05X	LumiGEN Lumisena, *Bacillus amyloliquefaciens* MBI600 + *pumilis* BU F-33		X	X			X
Pioneer	P55A49X	LumiGEN Lumisena, *Bacillus amyloliquefaciens* MBI600 + *pumilis* BU F-33		X	X			X
Progeny	P 5554RX	Poncho/Votivo, Obvious Plus, Relenya		X	X	X		
USG	7529XTS	Inovate		X	X			
USG	7562XF	Apron Maxx		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

2021 Overall Group 4 Comparison

Company	Brand	Halifax**	Caroline	Chesapeake/ Virginia Beach	Culpeper	Essex	Mecklenburg	Middlesex AG EXPO	Prince George	Southampton	Westmoreland	Average	Average Relative Yield
Pioneer	P46A86X	54.3	54.1	47.6	60.3	67.6	57.0	58.1	66.0	65.6	65.4	60.2	111
Local Seed Company	LS4606XFS	50.1	55.3	46.0	66.2		55.8	59.3	57.2	50.4	69.1	57.4	107
Hubner	H47-30XF	45.6	52.3	37.8	63.2	59.3	53.9	65.5	50.4	61.4	70.7	57.2	104
MorSoy	MS 4640 XF/STS	54.4		42.1	60.7	65.3	50.5	59.8	56.3	55.1	67.5	57.2	104
Local Seed Company	LS4806XS		52.6	30.5	62.2		51.5	58.4	55.5	56.6	73.1	55.1	101
Pioneer	P48A60X	50.0	54.6	38.7	60.9	53.1	52.5	59.3	54.7	52.6	69.2	55.1	101
Dyna-Gro	S48XT90	54.8	52.8	49.4	58.6	60.4	44.9	57.3	57.6	47.7	63.1	54.6	101
Hubner	H48-31XF	52.5	53.9	31.1	60.4	72.3	58.8	49.1	64.8	40.5	66.3	55.2	100
Asgrow	AG48XF0	37.3	54.3	31.0	59.2	55.1	52.4	59.8	63.3	53.8	65.4	54.9	100
Asgrow	AG47XF0	36.9	49.9	43.7	56.3	66.4	49.6	56.6	57.3	47.0	63.3	54.5	100
DONMARIO Seeds	DM47X39	52.0	47.8	45.7	56.2	71.8	50.5	56.0	57.9	41.2	61.8	54.3	100
NK Seed	S49-F5X		58.1	31.9	63.2	62.0	50.8	60.7	56.0	42.1	68.1	54.8	99
DONMARIO Seeds	DM48F61	48.7	49.6	48.2	57.5	64.5	46.0	50.2	56.0	50.1	61.0	53.7	99
Progeny	P 4821RX			42.4	61.3	63.3	46.9	59.2	54.7	44.7	61.0	54.2	99
USG	7480XT	49.6	51.8	35.7	57.5	58.9	41.2	57.7	62.0	56.0	66.5	54.1	99
NK Seed	NK45-P9XF	49.2	47.9		57.6	64.1	46.6	55.9	57.5	51.0	63.7	55.5	98
Dyna-Gro	S48XF61S	52.8	53.2	34.6	60.0	39.2*	46.3	59.5	36.8*	49.3	65.6	52.6	98
MorSoy	MS 4850 XF/STS	50.9		42.0	58.1	62.0	40.2	58.5	45.3	44.8	65.8	52.1	95
USG	7487XTS	43.7	52.2	40.0	64.1	49.5	45.9	48.6	60.8	34.5	67.1	51.4	94
Credenz	CZ 4202 XF							47.3					
Credenz	CZ 4562 XF							51.3					
LG Seed	LGS4640XF							58.1					
LG Seed	LGS4808XF							56.4					
	AVG	**48.9**	**52.5**	**39.9**	**60.2**	**60.9**	**49.5**	**57.3**	**56.3**	**49.7**	**66.0**		

NOTES:
--Varieties indicated with a * not included in the overall average or average relative yield due to noted issues with the plot.
--Missing plots at Caroline and Chesapeake/Virginia Beach due to not enough seed available.
--Credenz and LG Seed only entered at AG EXPO location.
--Relative yield ranks varieties based on their performance compared to the location average. It is a percentage above or below the location average. Average Relative Yield is the mean of all relative yields for that variety.

**Halifax was not included in the Average Yield or Average Relative Yield due to missing data and excessive deer damage to some plots.

Caroline County Maturity Group 4 Soybean Comparisons

Cooperators: **Producer:** Airy Hill Farm
Extension: Robbie Longest, VCE-Essex
Previous Crop: Soybeans
Soil Type: Kempsville – Emporia complex
Tillage: No-till
Planting Date: June 5, 2021
Seeding Rate/Row Spacing: 147,000 seed/acre; 30" rows
Fertilization: 10-40-60-6S
Crop Protection: May 15: Roundup 1.5 qt + Envive 2.8 oz
Post-emergence: 1.5 qt Roundup with sticker
Harvest Date: December 3, 2021
Harvest Equipment: Case/IH 2166 with 25' 1020 Flex head

Brand	Variety	Moisture%	Yield (bu/A)
Check	Pioneer P44A72BX	10.7	46.1
Local Seed Company	LS4606XFS	10.6	55.3
Local Seed Company	LS4806XS	10.6	52.6
Pioneer	P46A86X	10.9	54.1
Pioneer	P48A60X	10.6	54.6
Asgrow	AG47XF0	10.5	49.9
Asgrow	AG48XF0	10.5	54.3
Hubner	H47-30XF	10.5	52.3
Hubner	H48-31XF	10.4	53.9
NK Seed	NK45-P9XF	10.9	47.9
NK Seed	S49-F5X	10.5	58.1
Dyna-Gro	S48XT90	10.7	52.8
Dyna-Gro	S48XF61S	10.5	53.2
USG	7480XT	10.7	51.8
USG	7487XTS	10.2	52.2
DONMARIO Seeds	DM47X39	10.8	47.8
DONMARIO Seeds	DM48F61	10.5	49.6
Check	Pioneer P44A72BX	10.4	46.2
	AVERAGE	**10.6**	**51.8**

Discussion: Progeny P4821RSX, MorSoy MS 4640 XF/STS, and MorSoy MS 4850 XF/STS were not planted at this location due not enough seed being available.

Chesapeake/Virginia Beach Cities Maturity Group 4 Soybean Comparisons

Cooperators: **Producer:** Frank Brickhouse
Extension: Watson Lawrence & Roy Flanagan, VCE-Virginia Beach
Previous Crop: Corn
Soil Type: Acredale silt loam
Tillage: Ridge Type Conventional Tillage
Planting Date: July 14, 2021
Seeding Rate/Row Spacing: 180,000 seeds/acre in 30-inch rows
Crop Protection: 1 pint of Reflex and 1 quart of Roundup + 8 ounces *CE*LP and 8 ounces of *CE*LP 30 days later
Harvest Date: November 27, 2021
Harvest Equipment: JD 95 with 214 grain platform

Brand	Variety	Moisture%	Yield (bu/A)
Local Seed Company	LS4606XFS	10.4	46.0
MorSoy	MS 4640 XF/STS	10.8	42.1
Asgrow	AG47XF0	10.5	43.7
Hubner	H47-30XF	10.4	37.8
DONMARIO Seeds	DM47X39	11.0	45.7
Pioneer	P46A86X	10.9	47.6
Pioneer	P48A60X	10.9	38.7
Asgrow	AG48XF0	10.4	31.0
Hubner	H48-31XF	10.2	31.1
USG	7487XTS	10.5	40.0
USG	7480XT	10.8	35.7
Progeny	P 4821RX	10.8	42.4
Dyna-Gro	S48XT90	10.9	49.4
Dyna-Gro	S48XF61S	10.9	34.6
DONMARIO Seeds	DM48F61	11.1	48.2
MorSoy	MS 4850 XF/STS	11.0	42.0
Local Seed Company	LS4806XS	11.0	30.5
NK Seed	S49-F5X	11.1	31.9
	AVERAGE	**10.8**	**39.9**

Discussion: Late planting date affected yields at this location.

Culpeper County Maturity Group 4 Soybean Comparisons

Cooperators: **Producer:** Beauregard Farms, Manager, Jamie Shenk
Extension: Carl Stafford, VCE-Culpeper
Previous Crop: Corn, 205 bu
Soil Type: Rapidan
Tillage: No-till
Planting Date: May 4, 2021
Seeding Rate/Row Spacing: 130,000 seed/acre, JD corn planter, 6 row plots, 30" rows
Fertilization: Variable rate, Tellus Agronomics mapping
Crop Protection: Burndown - Zidua Pro, glyphosate + MSO
Post – Engenia, glyphosate + DRA, Priaxor & Tombstone + adjuvant
Harvest Date: November 1, 2021
Harvest Equipment: JD 9870 Combine, 30’ head, guidance, mapping

Brand	Variety	Moisture%	Yield (bu/A)
Check Plot	Channel 4519R2X/SR	15.6	64.5
Asgrow	AG47XF0	16.2	56.3
NK Seed	S49-F5X	15.2	63.2
Asgrow	AG48XF0	15.0	59.2
MorSoy	MS4640XF	15.0	60.7
NK Seed	NK45-P9XF	15.3	57.6
USG	7480XT	15.2	57.5
Dyna-Gro	S48XT90	15.1	58.6
Local Seed Company	LS4806XS	14.6	62.2
Progeny	P 4821RX	15.1	61.3
MorSoy	MS4850XF	15.3	58.1
Check Plot	Channel 4519R2X/SR	14.8	59.8
DONMARIO Seeds	DM48F61	14.9	57.5
DONMARIO Seeds	DM47X39	14.6	56.2
Hubner	H48-31XF	14.5	60.4
Pioneer	P48A60X	14.0	60.9
Dyna-Gro	S48XF61S	14.3	60.0
USG	7487XTS	14.1	64.1
Pioneer	P46A86X	14.3	60.3
Local Seed Company	LS4606XFS	13.4	66.2
Hubner	H47-30XF	15.2	63.2
Check Plot	Channel 4519R2X/SR	13.5	63.5
	AVERAGE	**14.8**	**60.5**

Discussion: Harvest for this comparison was completed using a yield monitor.

Essex County Maturity Group 4 Soybean Comparisons

Cooperators: **Producer:** Shannon and Benjamin Ellis, Jr.
Extension: Robbie Longest, VCE - Essex
Stephanie Romelczyk, VCE - Westmoreland
Industry: Participating seed companies
Previous Crop: Corn
Soil Type: Augusta fine sandy loam
Tillage: No-till
Planting Date: July 7, 2021
Seeding Rate/Row Spacing: 163,000 seeds/acre – 15-inch rows
Fertilization: 100 lbs/A MAP (11-52-0), 100 lbs/A potash, Foliar feed - Trio
Crop Protection: Herbicide: Engenia, Roundup Max, Induce
Fungicide: Approach Prima
Harvest Date: December 2, 2021
Harvest Equipment: John Deere 9770

Brand	Variety	Moisture%	Yield (bu/A)
Dyna-Gro	S48XF61S	11.2	39.2
Dyna-Gro	S48XT90	11.2	60.4
Pioneer	P46A86X	11.2	67.6
Pioneer	P48A60X	11.0	53.1
Hubner	H48-31XF	11.0	72.3
Hubner	H47-30XF	10.9	59.3
NK Seed	NK45-P9XF	10.8	62.0
NK Seed	S49-F5X	10.8	64.1
Asgrow	AG47XF0	11.0	66.4
Asgrow	AG48XF0	10.9	55.1
USG	7487XTS	11.1	49.5
USG	7480XT	11.3	58.9
Credenz	CZ4600X	11.2	54.2
Credenz	CZ4770X	11.3	63.1
DONMARIO Seeds	DM47X39	11.4	71.8
Progeny	P 4821RX	11.5	63.3
MorSoy	MS 4850 XF/STS	11.2	62.0
MorSoy	MS 4640 XF/STS	11.0	65.3
DONMARIO Seeds	DM48F61	11.2	64.5
Credenz	CZ4570X	11.5	58.2
	AVERAGE	**11.1**	**60.5**

Discussion: Planting date was delayed in this location due to soil conditions, but overall yields and seed quality were very good. There was some in-field variability of stand impacted by weather following planting, however the most uniform portion of the plot was selected for harvest. The producer included several Credenz varieties as checks. Please use these data, as well as other replicated test plot results when making variety selections.

Halifax County Maturity Group 4 Soybean Comparisons

Cooperators:	**Producer:**	Brian Hall
	Extension:	Rebekah Slabach: VCE - Halifax
		Joanne Jones: VCE - Charlotte
		Bruce Jones: VCE - Appomattox
Previous Crop:		Full-season soybeans
Soil Type:		Clifford sandy loam
Tillage:		No-till
Planting Date:		May 15, 2021
Seeding Rate/Row Spacing:		11 row – 15-inch planter; 140,000 seeding rate
Fertilization:		Poultry litter
Crop Protection:		Burndown - glyphosate, Detonate and Envive
		Post - glyphosate and fungicide
Harvest Date:		December 1, 2021
Harvest Equipment:		Gleaner R65

Brand	Variety	Moisture%	Yield (bu/A)
DONMARIO Seeds	DM47X39	10.5	52.0
Dyna-Gro	S48XT90	10.3	54.8
Pioneer	P46A86X	9.8	54.3
DONMARIO Seeds	DM48F61	9.7	48.7
NK Seed	NK45-P9XF	9.7	49.2
USG	7487XTS	9.6	43.7
Dyna-Gro	S48XF61S	9.5	52.8
Hubner	H48-31XF	9.7	52.5
Pioneer	P48A60X	9.7	50.0
Hubner	H47-30XF	9.6	45.6
MorSoy	MS 4640 XF/STS	9.8	54.4
USG	7480XT	9.6	49.6
MorSoy	MS 4850 XF/STS	9.6	50.9
Local Seed Company	LS4606XFS	9.7	50.1
Asgrow	AG48XF0	9.5	37.3
Asgrow	AG47XF0	9.3	36.9
Local Seed Company	LS4806XS	Not harvested	
Progeny	P 4821RX	Not harvested	
NK Seed	S49-F5X	Not harvested	
	AVERAGE	**9.7**	**48.9**

Discussion: Soil conditions were very dry at planting. Significant deer damage on Local Seed Company LS4806XS, Progeny P4821RX and NK S49-F5X. Moderate deer damage on Asgrow AG47XF0 and Asgrow AG48XF0. Rainfall was very sparse during growing season.

Mecklenburg County Maturity Group 4 Soybean Comparisons

Cooperators:	**Producer:**	John Manning
	Extension:	Taylor Clarke, VCE-Mecklenburg
		Sara Rutherford, VCE-Greensville
	Industry:	Tyler Ashworth, Nutrien
Previous Crop:		Oat cover crop cut for hay following soybeans
Soil Type:		Appling-Mattaponi complex
Tillage:		No-till
Planting Date:		June 8, 2021
Seeding Rate/Row Spacing:		154,000 on 18" rows
Fertilization:		0-40-100
Crop Protection:		Burndown- Roundup, Envive, 2-4D
		Post-Roundup, Flexstar
Harvest Date:		November 12, 2021
Harvest Equipment:		JD 4420 with 215 head

Brand	Variety	Moisture%	Yield (bu/A)
CHECK – Dyna-Gro	S52RS86	13.8	51.2
Local Seed Company	LS4806XS	13.7	51.5
Dyna-Gro	S48XT90	14.2	44.9
Local Seed Company	LS4606XFS	13.9	55.8
NK Seed	NK45-P9XF	14.0	46.6
NK Seed	S49-F5X	13.8	50.8
USG	7480XT	14.1	41.2
Progeny	P 4821RX	13.5	46.9
USG	7487XTS	13.9	45.9
CHECK – Dyna-Gro	S52RS86	13.4	49.2
DONMARIO Seeds	DM48F61	13.9	46.0
DONMARIO Seeds	DM47X39	14.1	50.5
MorSoy	MS 4640 XF/STS	13.3	50.5
MorSoy	MS 4850 XF/STS	13.3	40.2
Dyna-Gro	S48XF61S	13.7	46.3
Pioneer	P48A60X	13.7	52.5
Hubner	H47-30XF	13.2	53.9
Hubner	H48-31XF	13.4	58.8
Pioneer	P46A86X	13.8	57.0
Asgrow	AG48XF0	13.1	52.4
Asgrow	AG47XF0	13.3	49.6
CHECK – Dyna-Gro	S52RS86	13.4	52.3
	AVERAGE	**13.7**	**49.7**

Discussion: Use these data, as well as other test plot results, when making variety selections.

Middlesex County AG Expo Maturity Group 4 Soybean Comparisons

Cooperators: **Producer:** Corbin Hall Farm - Evan Perry & Ronnie Russell
Extension: Frank Long, VCE-Middlesex
David Holshouser, VCE-Soybean Agronomist
Industry: Various seed companies
Previous Crop: Corn
Soil Type: Emporia loam
Tillage: Turbo-till
Planting Date: May 6, 2021
Seeding Rate/Row Spacing: 140,000 seed/acre/30-inch
Fertilization: 16-52-60-6
Crop Protection: Burndown: Roundup + 2,4-D
Preemergence: Envive
Postemergence: Roundup + Synchrony XP
Revytek fungicide applied to ½ of each plot (see detail in "Other Research" section)
Harvest Date: November 16, 2021
Harvest Equipment: Wintersteiger plot combine

Brand	Variety	Moisture%	Yield (bu/A)
Dyna-Gro	S48XT90	14.5	57.3
Pioneer	P48A60X	12.8	59.3
Asgrow	AG47XF0	13.0	56.6
Asgrow	AG48XF0	13.2	59.8
Pioneer	P46A86X	13.8	58.1
USG	7487XTS	12.7	48.6
USG	7480XT	14.1	57.7
Hubner	H48-31XF	12.8	49.1
Hubner	H47-30XF	12.8	65.5
Dyna-Gro	S48XF61S	12.8	59.5
Pioneer	P48A60X (Check)	12.9	61.4
Progeny	P 4821RX	13.0	59.2
Local Seed Company	LS4606XFS	12.7	59.3
Local Seed Company	LS4806XS	12.8	58.4
NK Seed	S49-F5X	12.8	60.7
NK Seed	NK45-P9XF	12.9	55.9
MorSoy	MS 4640 XF/STS	12.7	59.8
MorSoy	MS 4850 XF/STS	12.2	58.5
DONMARIO Seeds	DM47X39	13.0	56.0
DONMARIO Seeds	DM48F61	12.8	50.2
Credenz	CZ 4202 XF	12.6	47.3
Credenz	CZ 4562 XF	12.1	51.3
LG Seed	LGS4640XF	12.5	58.1
LG Seed	LGS4808XF	12.0	56.4
Pioneer	P48A60X (Check)	12.2	57.6
	AVERAGE	**12.9**	**56.9**

Discussion: Yields were good at this location. Use this and other yield data for the most effective variety selection.

Prince George County Maturity Group 4 Soybean Comparisons

Cooperators: **Producer:** Sean Finney
Extension: Scott Reiter, VCE-Prince George
Previous Crop: Wheat with straw baled
Soil Type: Montross silt loam
Tillage: No-till
Planting Date: June 21, 2021
Seeding Rate/Row Spacing: 220,000 seed/acre; 7.5-inch rows
Fertilization: 120-40-100 to wheat crop
Crop Protection: Burndown - Roundup PowerMax @ 1 qt
Post - Roundup PowerMax @ 1 qt + XtendiMax @ 22 oz
Harvest Date: November 24, 2021
Harvest Equipment: John Deere 9500 + weigh wagon

Brand	Variety	Moisture%	Yield (bu/A)
CHECK – Asgrow	AG48XF0	14.3	65.0
Asgrow	AG48XF0	14.5	63.3
Asgrow	AG47XF0	15.2	57.3
Pioneer	P46A86X	15.4	66.0
Pioneer	P48A60X	14.7	54.7
USG	7487XTS	14.6	60.8
USG	7480XT	14.9	62.0
Hubner	H47-30XF	14.4	50.4
Hubner	H48-31XF	14.4	64.8
Dyna-Gro	S48XF61S	14.5	36.8
Dyna-Gro	S48XT90	14.7	57.6
Progeny	P 4821RX	14.6	54.7
Local Seed Company	LS4606XFS	14.5	57.2
Local Seed Company	LS4806XS	14.3	55.5
NK Seed	S49-F5X	14.8	56.0
NK Seed	NK45-P9XF	15.2	57.5
MorSoy	MS 4640 XF/STS	14.6	56.3
MorSoy	MS 4850 XF/STS	15.1	45.3
DONMARIO Seeds	DM47X39	14.9	57.9
DONMARIO Seeds	DM48F61	14.9	56.0
CHECK – Asgrow	AG48XF0	14.5	52.2
	AVERAGE	**14.7**	**56.5**

Discussion: A rainy start to the season delayed getting this plot planted by about a week. Moisture was adequate throughout the remainder of the season. At harvest it was noted that Dyna-Gro S48XF61S had a poor stand compared to adjoining plots. It was over the entire plot and not specific to any particular area. We do not have a conclusion for the poor plant population. Pioneer P48A60X also had less plant population compared to adjoining plots but was not severely impacted.

Southampton County Maturity Group 4 Soybean Comparisons

Cooperators: **Producer:** Exum Hill Farm, Chris Carr
Extension: Joshua Holland, VCE-Southampton
Previous Crop: Corn
Soil Type: Uchee loamy sand
Tillage: No-till
Planting Date: June 1, 2021
Seeding Rate/Row Spacing: 140,000/36" rows
Fertilization: 7-18-36 @ 100 lbs.
Crop Protection: Pre: Roundup @ 32 oz.
Harvest Date: November 30, 2021
Harvest Equipment: John Deere 4420 Combine

Brand	Variety	Moisture%	Yield (bu/A)
NK Seed	NK45-P9XF	13.2	51.0
Pioneer	P48A60X	13.4	52.6
MorSoy	MS 4850 XF/STS	13.1	44.8
DONMARIO Seeds	DM48F61	13.1	50.1
Progeny	P 4821RX	13.3	44.7
Hubner	H48-31XF	13.6	40.5
NK Seed	S49-F5X	13.1	42.1
DONMARIO Seeds	DM47X39	13.0	41.2
USG	7487XTS	13.1	34.5
Asgrow	AG47XF0	13.1	47.0
Local Seed Company	LS4606XFS	13.4	50.4
Local Seed Company	LS4806XS	13.5	56.6
MorSoy	MS 4640 XF/STS	13.1	55.1
Dyna-Gro	S48XF61S	13.0	49.3
Asgrow	AG48XF0	12.9	53.8
USG	7480XT	13.1	56.0
Dyna-Gro	S48XT90	13.5	47.7
Pioneer	P46A86X	13.4	65.6
Hubner	H47-30XF	13.0	61.4
	AVERAGE	**13.2**	**49.7**

Discussion: Growing conditions were favorable through most of the season. At planting, soil conditions were very dry and compacted which impacted emergence. The influence soil type had on plant emergence played a key role in overall yield in this trial.

Westmoreland County Maturity Group 4 Soybean Comparisons

Cooperators: **Producer:** F.F. Chandler, Jr. and Louis Chandler
Extension: Stephanie Romelczyk, VCE – Westmoreland
Trent Jones, VCE – Northumberland/Lancaster
Robbie Longest, VCE – Essex
Previous Crop: Corn
Soil Type: Suffolk sandy loam
Tillage: No-till
Planting Date: May 24, 2021
Seeding Rate/Row Spacing: 130,000 seed/acre; 30" spacing
Fertilization: 18N – 50P – 75K - 5S
Crop Protection: Burndown: Gramoxone 1 qt/A + Liberty 1 qt/A + Envive 3.5 oz/A + Liberate 3/4 pt/A
June 30: Makaze 1.5 qt/A + Weatherguard 1 qt/100 gal + Radiate 2 oz/A + Anthem Max 3 oz/A + Quick Ultra with Awaken 1 qt/A
August 3: Makaze 1qt/A + Franchise 3 oz/A + Miravis Top 13.7 oz/A + Brigade 6 oz/A + Smart Trio 2 qt/A
Harvest Date: November 30, 2021
Harvest Equipment: John Deere 9400

Brand	Variety	Moisture%	Yield (bu/A)
Local Seed Company	LS4806XS	11.3	73.1
Local Seed Company	LS4606XFS	11.3	69.1
NK Seed	NK45-P9XF	11.6	63.7
NK Seed	S49-F5X	11.4	68.1
Dyna-Gro	S48XT90	11.6	63.1
Dyna-Gro	S48XF61S	11.3	65.6
Asgrow	AG48XF0	11.5	65.4
Asgrow	AG47XF0	11.3	63.3
Pioneer	P48A60X	11.5	69.2
Pioneer	P46A86X	11.7	65.4
DONMARIO Seeds	DM47X39	11.7	61.8
DONMARIO Seeds	DM48F61	11.4	61.0
Progeny	P 4821RX	11.6	61.0
MorSoy	MS 4850 XF/STS	11.8	65.8
MorSoy	MS 4640 XF/STS	11.8	67.5
Hubner	H47-30XF	11.6	70.7
Hubner	H48-31XF	11.5	66.3
USG	7480XT	12.0	66.5
USG	7487XTS	11.5	67.1
	AVERAGE	**11.5**	**66.0**

Discussion: Overall a good soybean plot. There were sprayer wheel tracks in both DonMario varieties, Local Seed Company 4806XS, and Hubner H47-30XF which may have adversely affected yields.

MATURITY GROUP 5
VARIETY COMPARISONS

2021 Overall Group 5 Comparisons

Ompany	Brand	Charlotte**	Brunswick	Chesapeake/ Virginia Beach	Dinwiddie	Prince George Finney	Prince George Reiter	Mecklenburg	Middlesex AG EXPO	Southampton**	Average	Average Relative Yield
Pioneer	P55A49X	37.0	65.6	48.1	63.4	60.6	59.4	38.8	61.7	34.2	56.8	111
Pioneer	P52A05X	39.0	61.7	41.2	57.3	61.2	55.4	36.5	59.2	39.1	53.2	103
Local Seed Company	LS5418XFS	42.5	60.8	49.3	59.0	51.0	64.6	39.8	43.6	43.7	52.6	103
Asgrow	AG54XF0	20.9	64.9	36.8	63.3	64.4	53.4	39.2	49.1	43.6	53.0	103
Dyna-Gro	S56XT99	31.2	54.7	46.8	64.5	50.3	56.6	37.0	56.9	39.9	52.4	103
Asgrow	AG55XF0	39.6	59.5	41.1	65.3	57.8	53.1	38.2	53.3	21.2	52.6	102
NK Seed	S53-F7X	43.5	66.7	42.5	50.6	55.0	59.2	40.6	52.7	47.0	52.5	102
USG	7562XF	31.0	60.4	48.6	60.9	51.0	48.7	38.5	49.4	39.5	51.1	100
Progeny	P 5554RX	34.5	60.8	40.5	57.3	48.5	55.8	40.2	54.7		51.1	100
Local Seed Company	LS5009XS	36.3	57.3	34.5	53.1	57.3	62.6	41.1	52.5	42.3	51.2	100
Hubner	H51-22XF	38.0	62.2	42.4	55.5	53.2	57.5	35.0	52.6	23.8	51.2	100
MorSoy	MS 5640 XF	26.4	63.9	48.4	46.2	43.9		40.1	50.6	42.7	48.9	98
MorSoy	MS 5491 XF	30.1	61.7	46.6	47.0	42.7		39.1	53.1		48.4	97
DONMARIO Seeds	DM51X61	46.5	60.4	43.1	31.8*	46.2	56.1	35.8	51.1		48.8	97
USG	7529XTS	27.7	61.2	27.9	57.4	56.8	57.1	40.8	45.5	39.9	49.5	96
Dyna-Gro	S56XF01	33.9	49.2	31.1	56.9	50.9	57.5	34.2	46.9	35.6	46.7	91
	AVG	**34.9**	**60.7**	**41.8**	**57.2**	**53.2**	**56.9**	**38.4**	**52.1**	**37.9**		

NOTES:
-Data of varieties indicated with a * not included in the overall Average Yield or Average Relative Yield due to noted issues with the plot.
-Not enough MorSoy seed was available to include in Prince George-Reiter location.
-Relative yield ranks varieties based on their performance compared to the location average. It is a percentage above or below the location average. Average Relative Yield is the mean of all relative yields for that variety.

**Charlotte and Southampton were not included in the Average Yield or Average Relative Yield due to missing data, excessive deer damage to some plots, and influence of field edge effects to some plots.

Brunswick County Maturity Group 5 Soybean Comparisons

Cooperators: **Producer:** TTP Farm Operations
Extension: Taylor Clarke, VCE-Mecklenburg
Sara Rutherford, VCE-Greensville
Joanne Jones, VCE-Charlotte
Previous Crop: Soybeans
Soil Type: Appling-Mattaponi complex
Tillage: No-till in a rye cover crop
Planting Date: June 14, 2021
Seeding Rate/Row Spacing: 180,000 in 15" rows
Fertilization: P and K spread by variable rate
Crop Protection: Burndown- Roundup Power Max III, 2-4D, Authority Edge;
Post - Roundup Power Max III, Warrant Ultra
Harvest Date: November 19, 2021
Harvest Equipment: JD 9500 with 918 head

Brand	Variety	Moisture%	Yield (bu/A)
CHECK – Asgrow	AG51XF0	11.7	41.8
Dyna-Gro	S56XF01	12.3	49.2
Dyna-Gro	S56XT99	12.1	54.7
Local Seed Company	LS5009XS	12.0	57.3
Local Seed Company	LS5418XFS	12.0	60.8
NK Seed	S53-F7X	11.8	66.7
Asgrow	AG55XF0	12.0	59.5
CHECK – Asgrow	AG51XF0	11.9	52.1
Pioneer	P55A49X	12.0	65.6
Asgrow	AG54XF0	11.8	64.9
Pioneer	P52A05X	11.5	61.7
MorSoy	MS 5491 XF	11.9	61.7
Hubner	H51-22XF	11.7	62.2
USG	7529XTS	11.8	61.2
USG	7562XF	11.3	59.6
MorSoy	MS 5640 XF	11.7	63.9
DONMARIO Seeds	DM51X61	11.5	60.4
USG	7562XF	11.2	61.1
Progeny	P 5554RX	11.4	60.8
CHECK – Asgrow	AG51XF0	11.5	57.0
	AVERAGE	**11.8**	**59.1**

Discussion: The first Asgrow AG51XF0 check and both Dyna-Gro varieties were affected adversely by deer feeding and were on the sandiest soil.

Charlotte County Maturity Group 5 Soybean Comparisons

Cooperators: **Producer:** Grind-N-Stone Farms - The Poindexter Family
Extension: Joanne Jones; VCE - Charlotte County
Bruce Jones; VCE - Appomattox County
Previous Crop: 2020 soybeans; Wheat cover crop harvested for hay
Soil Type: Cecil fine sandy loam
Tillage: No-till
Planting Date: May 17, 2021
Seeding Rate/Row Spacing: 11 row planter 15-inch spacing; 140,000 seed/acre
Fertilization: 160 lbs 0-30-60 per acre
Crop Protection: 1.5 qt glyphosate on 5/29; 1.3 qt glyphosate and 12.8 fl. oz Engenia on 6/25
Harvest Date: October 27, 2021
Harvest Equipment: Gleaner R52 with 15-foot head

Brand	Variety	Moisture%	Yield (bu/A)
Asgrow	AG54XF0	11.5	20.9
MorSoy	MS 5640 XF	10.5	26.4
USG	7529XTS	10.8	27.7
MorSoy	MS 5491 XF	10.7	30.1
Pioneer	P55A49X	10.7	37.0
Progeny	P 5554RX	10.2	34.5
USG	7562XF	10.6	31.0
Dyna-Gro	S56XF01	10.6	33.9
Dyna-Gro	S56XT99	10.6	31.2
Local Seed Company	LS5009XS	11.0	36.3
Pioneer	P52A05X	10.8	39.0
Local Seed Company	LS5418XFS	11.1	42.5
Hubner	H51-22XF	11.6	38.0
DONMARIO Seeds	DM51X61	11.4	46.5
Asgrow	AG55XF0	11.3	39.6
NK Seed	S53-F7X	11.3	43.5
	AVERAGE	**10.9**	**34.9**

Discussion: Deer damage was evident throughout field area. Asgrow AG54XF0, MorSoy MS 5640XF, and USG 7529XTS were affected the worst due to location in the field. Soil conditions at planting were extremely dry and rainfall was limited throughout the season.

Chesapeake/Virginia Beach Cities Maturity Group 5 Soybean Comparisons

Cooperators: **Producer:** Frank Brickhouse
Extension: Watson Lawrence & Roy Flanagan, VCE-Virginia Beach
Previous Crop: Corn
Soil Type: Acredale silt loam
Tillage: Ridge Type Conventional Tillage
Planting Date: July 14, 2021
Seeding Rate/Row Spacing: 180,000 seed/acre on 30 in. rows
Fertilization: None
Crop Protection: 1 pint of Reflex and 1 quart of Roundup + 8 ounces *CE*LP and 8 ounces of *CE*LP 30 days later
Harvest Date: November 27, 2021
Harvest Equipment: JD 95 with 213 grain platform

Brand	Variety	Moisture%	Yield (bu/A)
Local Seed Company	LS5009XS	11.2	34.5
DONMARIO Seeds	DM51X61	10.9	43.1
Hubner	H51-22XF	10.8	42.4
USG	7529XTS	11.0	27.9
Pioneer	P52A05X	11.0	41.2
NK Seed	S53-F7X	10.6	42.5
MorSoy	MS 5491 XF	10.6	46.6
Asgrow	AG54XF0	10.9	36.8
Progeny	P 5554RX	11.0	40.5
Local Seed Company	LS5418XFS	11.2	49.3
Pioneer	P55A49X	11.4	48.1
Asgrow	AG55XF0	11.3	41.1
USG	7562XF	11.0	48.6
MorSoy	MS 5640 XF	10.8	48.4
Dyna-Gro	S56XF01	11.2	31.1
Dyna-Gro	S56XT99	11.7	46.8
	AVERAGE	**11.0**	**41.8**

Discussion: Late planting date affected yields at this location.

Dinwiddie County Maturity Group 5 Soybean Comparisons

Cooperators: **Producer:** Double B Farms
Extension: Mike Parrish, ANR Agent, Dinwiddie Co.
Previous Crop: Corn
Soil Type: Mattaponi sandy loam
Tillage: No-till
Planting Date: June 2, 2021
Seeding Rate/Row Spacing: 140,000 seed/acre; 30" rows
Fertilization: 300 lbs 9-23-30
Crop Protection: Burn-down - 2,4-D, Roundup, Dual
Post-emerge - Roundup, Dual, Engenia
Stratego YLD
Harvest Date: November 19, 2021
Harvest Equipment: 9330 Case IH

Brand	Variety	Moisture%	Yield (bu/A)
CHECK	Dyna-Gro S56XT99	12.7	63.5
Asgrow	AG54XF0	11.9	63.3
Asgrow	AG55XF0	12.3	65.3
Pioneer	P52A05X	11.8	57.3
Pioneer	P55A49X	12.3	63.4
USG	7562XF	11.5	60.9
USG	7529XTS	12.2	57.4
Hubner	H51-22XF	12.2	55.5
Dyna-Gro	S56XT99	12.8	64.5
Dyna-Gro	S56XF01	12.4	56.9
Progeny	P 5554RX	12.3	57.3
Local Seed Company	LS5009XS	12.5	53.1
Local Seed Company	LS5418XFS	12.7	59.0
NK Seed	S53-F7X	12.2	50.6
MorSoy	MS 5491 XF	12.5	47.0
MorSoy	MS 5640 XF	12.6	46.2
DONMARIO Seeds	DM51X61	12.1	31.8
CHECK	Dyna-Gro S56XT99	12.2	29.5
	AVERAGE	12.3	54.6

Discussion: The last three varieties (MorSoy MS 5640 XF, DonMario DM51X61, and Dyna-Gro S56XT99 check) had some tree line influence at the edge of the field.

Mecklenburg County Maturity Group 5 Soybean Comparisons

Cooperators: **Producer:** John Manning
Extension: Taylor Clarke, VCE-Mecklenburg
Scott Reiter, VCE-Prince George
Previous Crop: No-till wheat
Soil Type: Appling-Mattaponi complex
Tillage: No-till
Planting Date: June 30, 2021
Seeding Rate/Row Spacing: 210,000 on 15" rows
Fertilization: 0-40-60
Crop Protection: Burndown - Roundup, Envive, 2-4D
Post - Roundup, Flexstar
Harvest Date: November 12, 2021
Harvest Equipment: JD 4420 with 215 head

Brand	Variety	Moisture%	Yield (bu/A)
CHECK – Asgrow	AG51XF0	14.5	38.1
Dyna-Gro	S56XT99	13.8	37.0
Local Seed Company	LS5009XS	14.3	41.1
Asgrow	AG55XF0	14.0	38.2
Local Seed Company	LS5418XFS	14.1	39.8
Dyna-Gro	S56XF01	13.8	34.2
NK Seed	S53-F7X	13.2	40.6
Pioneer	P52A05X	12.9	36.5
Hubner	H51-22XF	14.1	35.0
CHECK – Asgrow	AG51XF0	14.1	32.8
Pioneer	P55A49X	13.8	38.8
MorSoy	MS 5491 XF	13.7	39.1
MorSoy	MS 5640 XF	13.4	40.1
Asgrow	AG54XF0	13.5	39.2
DONMARIO Seeds	DM51X61	13.8	35.8
USG	7529XTS	13.3	40.8
USG	7562XF	12.6	38.5
Progeny	P 5554RX	12.8	40.2
CHECK – Asgrow	AG51XF0	13.5	35.0
Asgrow	AG47XF0	14.1	37.6
Dyna-Gro	S48XF61S	14.0	37.4
Asgrow	AG48XF0	13.8	40.1
Hubner	H48-31XF	13.6	47.6
Hubner	H47-30XF	13.6	44.5
Local Seed Company	LS4606XFS	13.7	46.6
	AVERAGE	**13.7**	**39.1**

Discussion: Use these data, as well as other test plot results, when making variety selections.

Middlesex County AG EXPO Maturity Group 5 Soybean Comparisons

Cooperators:	**Producer:**	Corbin Hall Farm - Evan Perry & Ronnie Russell
	Extension:	Frank Long, VCE-Middlesex
		David Holshouser, VCE-Soybean Agronomist
	Industry:	Various seed companies
Previous Crop:		Corn
Soil Type:		Emporia loam
Tillage:		Turbo-till
Planting Date:		May 6, 2021
Seeding Rate/Row Spacing:		140,000 seed/acre/15-inch
Fertilization:		16-52-60-6
Crop Protection:		Burndown: Roundup + 2,4-D
		Preemergence: Envive
		Postemergence: Roundup + Synchrony XP
		Revytek fungicide applied to ½ of each plot
Harvest Date:		November 16, 2021
Harvest Equipment:		Wintersteiger plot combine

Brand	Variety	Moisture%	Yield (bu/A)
Pioneer	P48A60X (check)	12.2	57.6
Asgrow	AG54XF0	12.2	49.1
Asgrow	AG55XF0	11.7	53.3
Pioneer	P52A05X	11.8	59.2
Pioneer	P55A49X	12.4	61.7
USG	7562XF	11.8	49.4
USG	7529XTS	12.6	45.5
Hubner	H51-22XF	12.0	52.6
Dyna-Gro	S56XT99	12.2	56.9
Dyna-Gro	S56XF01	12.0	46.9
Progeny	P 5554RX	12.1	54.7
Local Seed Company	LS5009XS	12.4	52.5
Local Seed Company	LS5418XFS	12.1	43.6
NK Seed	S53-F7X	12.2	52.7
MorSoy	MS 5491 XF	12.6	53.1
MorSoy	MS 5640 XF	11.9	50.6
DONMARIO Seeds	DM51X61	12.7	51.1
Pioneer	P48A60X (check)	11.9	63.7
	AVERAGE	**12.2**	**53.0**

Discussion: Yields were good at this location. Use this and other yield data for the most effective variety selection.

Prince George County Maturity Group 5 Soybean Comparisons

Cooperators: **Producer:** Naomi Reiter and Family
Extension: Scott Reiter, VCE-Prince George
Previous Crop: Soybean
Soil Type: Mattaponi sandy loam
Tillage: No-till
Planting Date: June 8, 2021
Seeding Rate/Row Spacing: 200,000 seed/acre; 7.5-inch rows
Fertilization: 20-40-120-12S
Crop Protection: Burndown - Roundup PowerMax3 @ 1 qt + 2,4-D @ 1 pt + Brawl @ 1.3 pt
Postemerge - Roundup PowerMax3 @ 1 qt + Engenia @ 12.8 oz
September corn earworm - Besiege @ 6 oz
Harvest Date: November 14, 2021
Harvest Equipment: John Deere 9660 + weigh wagon

Brand	Variety	Moisture%	Yield (bu/A)
Local Seed Company	LS5588 (CHECK)	13.0	52.0
Asgrow	AG54XF0	13.3	53.4
Asgrow	AG55XF0	13.3	53.1
Pioneer	P52A05X	13.1	55.4
Pioneer	P55A49X	13.7	59.4
USG	7562XF	12.7	48.7
USG	7529XTS	13.8	57.1
Hubner	H51-22XF	13.7	57.5
Dyna-Gro	S56XT99	13.2	56.6
Dyna-Gro	S56XF01	13.2	57.5
Progeny	P 5554RX	13.4	55.8
Local Seed Company	LS5009XS	14.0	62.6
Local Seed Company	LS5418XFS	13.8	64.6
NK Seed	S53-F7X	13.9	59.2
DONMARIO Seeds	DM51X61	14.4	56.1
Asgrow	AG48XF0	14.2	58.7
Hubner	H48-13XF	14.2	63.7
Hubner	H47-30XF	14.0	59.2
Local Seed Company	LS5588 (CHECK)	13.6	54.8
	AVERAGE	**13.6**	**57.1**

Discussion: A very nice yielding location. No issues were noted at harvest.

Prince George County Maturity Group 5 Soybean Comparisons

Cooperators: **Producer:** Sean Finney
Extension: Scott Reiter, VCE-Prince George
Previous Crop: Wheat with straw baled
Soil Type: Montross silt loam
Tillage: No-till
Planting Date: June 21, 2021
Seeding Rate/Row Spacing: 220,000 seed/acre; 7.5-inch rows
Fertilization: 120-40-100 to wheat crop
Crop Protection: Burndown - Roundup PowerMax @ 1 qt
Post - Roundup PowerMax @ 1 qt + XtendiMax @ 22 oz
Harvest Date: November 24, 2021
Harvest Equipment: John Deere 9500 + weigh wagon

Brand	Variety	Moisture%	Yield (bu/A)
CHECK – Asgrow	AG48XF0	14.5	52.2
Asgrow	AG54XF0	14.3	64.4
Asgrow	AG55XF0	14.2	57.8
Pioneer	P52A05X	14.2	61.2
Pioneer	P55A49X	14.5	60.6
USG	7562XF	13.8	51.0
USG	7529XTS	14.6	56.8
Local Seed Company	LS5009XS	14.4	57.3
Local Seed Company	LS5418XFS	14.3	51.0
Hubner	H51-22XF	14.7	53.2
NK Seed	S53-F7X	14.1	55.0
Dyna-Gro	S56XT99	14.3	50.3
Dyna-Gro	S56XF01	14.1	50.9
Progeny	P 5554RX	14.1	48.5
MorSoy	MS 5491 XF	14.5	42.7
MorSoy	MS 5640 XF	14.3	43.9
DONMARIO Seeds	DM51X61	14.5	46.2
CHECK – Asgrow	AG48XF0	14.4	45.5
	AVERAGE	**14.3**	**52.7**

Discussion: A rainy start to the season delayed getting this plot planted by about a week. Moisture was adequate throughout the remainder of the season. At harvest, MorSoy MS5491XF, MorSoy MS5640XF, DonMario DM51X61, and the last check, Asgrow AG48XF0, had weaker stands when compared to other plots. There were no noticeable drowned spots but we feel excessive rains from some large storms within the 30 days after planting reduced the stand.

Southampton County Maturity Group 5 Soybean Comparisons

Cooperators: **Producer:** Exum Hill Farm, Chris Carr
Extension: Joshua Holland, VCE-Southampton
Previous Crop: Corn
Soil Type: Slagle fine sandy loam
Tillage: No-till
Planting Date: June 1, 2021
Seeding Rate/Row Spacing: 140,000/36" rows
Fertilization: 7-18-36 @ 100 lbs.
Crop Protection: Pre: Roundup @ 32 oz.
Harvest Date: November 30, 2021
Harvest Equipment: John Deere 4420 Combine

Brand	Variety	Moisture%	Yield (bu/A)
Asgrow	AG55XF0	14.4	21.2
Hubner	H51-22XF	14.2	23.8
Pioneer	P55A49X	13.6	34.2
USG	7562XF	13.9	39.5
NK Seed	S53-F7X	14.1	47.0
Asgrow	AG54XF0	14.6	43.6
Local Seed Company	LS5418XFS	13.7	43.7
Dyna-Gro	S56XF01	14.0	35.6
USG	7529XTS	14.3	39.9
MorSoy	MS 5640 XF	13.8	42.7
Local Seed Company	LS5009XS	14.1	42.3
Dyna-Gro	S56XT99	14.4	39.9
Pioneer	P52A05X	14.0	39.1
Progeny	P 5554RX	Scale problem	
DONMARIO Seeds	DM51X61	Scale problem	
MorSoy	MS 5491 XF	Scale problem	
	AVERAGE	**14.1**	**37.9**

Discussion: The soil type on this farm played a major role in the reduced yields that were seen in this trial. The last three varieties, Progeny P 5554RX, DonMario DM51X61 and MorSoy 5491 XF were omitted from the variety trial due to scale problems with the weigh wagon. The land where this trial was located stayed extremely dry for most of the growing season, preventing the varieties from having good plant height and yield.

Other
Soybean Weed Control System Tests

Brunswick County LibertyLink Soybean Comparisons

Cooperators: **Producer:** Edward, William and Howard Wright, Mallory Blackwell
Extension: Taylor Clarke, VCE-Mecklenburg
Sara Rutherford, VCE-Greensville
Previous Crop: Tobacco, Wheat for grain
Soil Type: Appling-Mattiponi complex
Tillage: No-till after conservation ripper
Planting Date: June 14, 2021
Seeding Rate/Row Spacing: 214,000 seed/acre; 18-inch
Fertilization: 30-70-100 before wheat
Crop Protection: Burndown- Roundup
Post- Roundup, Liberty, Warrant
Harvest Date: November 15, 2021
Harvest Equipment: Gleaner R50 with 15' head

Brand	Variety	Moisture%	Yield (bu/A)
Asgrow (Check)	AG51XF0	11.7	66.9
Southern Harvest	SH 5321 E3	11.7	58.3
MorSoy	MS 5461 E	11.8	65.1
Asgrow	AG55XF0	11.9	63.1
Asgrow	AG48XF0	11.6	73.8
Credenz	CZ 4241 GTLL	12.4	69.6
Credenz	CZ 4701 GTLL	11.8	75.3
MorSoy	MS 4640 XF	11.5	68.8
MorSoy	MS 4850 XF	12.0	65.8
Asgrow (Check)	AG51XF0	11.5	69.2
NK Seed	S51-E3	11.6	70.1
Pioneer	P53T90E	11.8	65.7
Pioneer	P49T62E	11.6	65.3
Pioneer	P45T88E	11.5	72.0
Asgrow	AG54XF0	11.5	75.4
Asgrow	AG47XF0	11.7	70.0
USG	7491ETS	11.4	70.8
NK Seed	S50-E3S	11.3	69.6
Asgrow (Check)	AG51XF0	11.5	67.3
NK Seed	S45-V9 E3	11.9	66.1
Dyna-Gro	S49EN79	11.4	68.8
Dyna-Gro	S45ES10	11.6	63.0
Southern Harvest	SH 4820 ES	11.8	65.2
Local Seed Company	IS4324ES	11.8	63.8
Local Seed Company	IS5232E3	11.7	66.4
Local Seed Company	IS5067E3S	11.9	70.3
	AVERAGE	**11.7**	**67.9**

Discussion: Use these data, as well as other test plot results, when making variety selections.

Other Research

Planting Date & Seeding Rate Effects on Double-Crop Soybean

Cooperators: **Producer:** Corbin Hall Farm
Extension: Frank Long, VCE-Middlesex
David Holshouser, VCE-Soybean Agronomist
Industry: Asgrow Seed
Previous Crop: Corn, Wheat
Soil Type: Slagle silt loam
Tillage: No-till
Planting Date: June 17 and 24
Variety: Asgrow AG55XF0
Seeding Rate/Row Spacing: 7.5-inch rows; 140,000 & 180,000
Fertilization: 25-59-75-14
Crop Protection: Roundup + FirstRate
Harvest Date: November 15, 2021
Harvest Equipment: Wintersteiger plot combine

Treatment	Replication	Moisture%	Yield (bu/A)
June 17 - 140K seed/acre	1	12.0	50.1
June 17 - 180K seed/acre	1	12.0	49.2
June 24 - 140K seed/acre	1	12.0	46.7
June 24 - 180K seed/acre	1	12.0	44.9
June 17 - 140K seed/acre	2	12.0	48.3
June 17 - 180K seed/acre	2	12.0	47.5
June 24 - 140K seed/acre	2	11.8	42.8
June 24 - 180K seed/acre	2	11.9	51.2
June 17 - 140K seed/acre	3	11.9	47.2
June 17 - 180K seed/acre	3	12.0	47.5
June 24 - 140K seed/acre	3	12.0	47.0
June 24 - 180K seed/acre	3	11.9	49.0
	AVERAGE June 17 - 140K seed/acre	**12.0**	**48.5**
	AVERAGE June 17 - 180K seed/acre	**12.0**	**48.0**
	AVERAGE June 24 - 140K seed/acre	**11.9**	**45.5**
	AVERAGE June 24 - 180K seed/acre	**11.9**	**48.4**
	LSD (0.10)	**0.1**	**3.9**

Discussion: Every delay in planting past mid-June results in an average 1/2 bushel per day yield loss. Harvesting wheat at high moisture can allow soybean planting much earlier. In this study, we tested two planting dates - June 17 and June 24. The recommended seeding rate for double-crop production is 180,000 plants per acre, but less seed may be possible if planted earlier. Therefore, this study tested an early planting date (June 17) after high-moisture wheat harvest at two seeding rates (180,000 vs. 140,000) versus a later planting date with the same seeding rates. The growing season was very good at this location but due to relatively high variability, yield differences were not significant. Still, there was little yield difference with planting date when 180,000 seed per acre were planted. But when the reduced seeding rate was used, the earlier planting date was able to maintain yield, while the lower seeding rate at this planting date resulted in 3 bushels per acre less. This study indicates the potential for increasing profits, either through greater yield or reduced cost, with high-moisture wheat harvest.

Middlesex MG 4 Soybean Variety Response to Revytek Foliar Fungicide

Cooperators: **Producer:** Corbin Hall Farm
Extension: Frank Long & David Holshouser
Industry: Chelsea Valenti and Shannon Ellis, BASF; Various Seed Companies
Previous Crop: Corn
Soil Type: Eunola loam
Tillage: Turbo-till
Planting Date: May 5, 2021
Seeding Rate/Row Spacing: 140,000 seed/acre/30-inch
Fertilization: 16-52-60-6
Crop Protection: Roundup + FirstRate
Revytek fungicide at 8 oz/acre was sprayed on half of the plot area at the R4/R5 stage
Harvest Date: November 15, 2021
Harvest Equipment: Wintersteiger plot combine

Brand	Variety	Fungicide	% Moisture	Yield (bu/A)
Dyna Gro	48XT90	Yes	14.50	58.63
Dyna Gro	48XT90	No	14.43	55.34
Dyna Gro	**48XT90**	**Average**	**14.47**	**56.98**
Pioneer	P48A60X	Yes	12.83	60.28
Pioneer	P48A60X	No	12.80	58.30
Pioneer	**P48A60X**	**Average**	**12.82**	**59.29**
Asgrow	AG47XF0	Yes	12.97	56.16
Asgrow	AG47XF0	No	12.93	56.84
Asgrow	**AG47XF0**	**Average**	**12.95**	**56.50**
Asgrow	AG48XF0	Yes	13.10	58.84
Asgrow	AG48XF0	No	13.23	60.49
Asgrow	**AG48XF0**	**Average**	**13.17**	**59.66**
Pioneer	P46A86X	Yes	13.67	56.55
Pioneer	P46A86X	No	13.83	59.33
Pioneer	**P46A86X**	**Average**	**13.75**	**57.94**
USG	7487XTS	Yes	12.57	48.21
USG	7487XTS	No	12.83	47.94
USG	**7487XTS**	**Average**	**12.70**	**48.07**
USG	7480XT	Yes	14.03	57.07
USG	7480XT	No	14.07	57.70
USG	**7480XT**	**Average**	**14.05**	**57.39**
Hubner	H48-31XF	Yes	12.80	51.95
Hubner	H48-31XF	No	12.77	45.75
Hubner	**H48-31XF**	**Average**	**12.78**	**48.85**
Hubner	H47-30XF	Yes	12.60	63.05
Hubner	H47-30XF	No	13.05	58.26
Hubner	**H47-30XF**	**Average**	**12.78**	**61.14**
Dyna Gro	48XF61	Yes	12.90	60.56
Dyna Gro	48XF61	No	12.77	57.32
Dyna Gro	**48XF61**	**Average**	**12.83**	**58.94**
Pioneer	P48A60X	Yes	12.77	62.02
Pioneer	P48A60X	No	13.00	60.02
Pioneer	**P48A60X**	**Average**	**12.88**	**61.02**
Progeny	4821RX	Yes	12.87	58.48
Progeny	4821RX	No	13.03	59.04
Progeny	**4821RX**	**Average**	**12.95**	**58.76**
Local Seed Company	LS4606XFS	Yes	12.60	58.29

Local Seed Company	LS4606XFS	No	12.70	59.63
Local Seed Company	**LS4606XFS**	**Average**	**12.65**	**58.96**
Local Seed Company	LS4806XS	Yes	12.70	58.79
Local Seed Company	LS4806XS	No	12.97	57.78
Local Seed Company	**LS4806XS**	**Average**	**12.83**	**58.29**
NK Seed	NK49-F5X	Yes	12.73	61.50
NK Seed	NK49-F5X	No	12.93	59.74
NK Seed	**NK49-F5X**	**Average**	**12.83**	**60.62**
NK Seed	NK45-P9XF	Yes	12.83	54.14
NK Seed	NK45-P9XF	No	13.00	57.66
NK Seed	**NK45-P9XF**	**Average**	**12.92**	**55.90**
MorSoy	MS 4640 XF	Yes	12.60	58.07
MorSoy	MS 4640 XF	No	12.80	61.42
MorSoy	**MS 4640 XF**	**Average**	**12.70**	**59.74**
MorSoy	MS 4850 XF	Yes	12.20	58.26
MorSoy	MS 4850 XF	No	12.27	58.57
MorSoy	**MS 4850 XF**	**Average**	**12.23**	**58.41**
DONMARIO Seeds	DM47X39	Yes	13.00	54.19
DONMARIO Seeds	DM47X39	No	13.03	57.52
DONMARIO Seeds	**DM47X39**	**Average**	**13.02**	**55.85**
DONMARIO Seeds	DM48F61	Yes	13.00	49.14
DONMARIO Seeds	DM48F61	No	12.67	50.67
DONMARIO Seeds	**DM48F61**	**Average**	**12.83**	**49.90**
Credenz	CZ 4202 XF	Yes	12.57	47.32
Credenz	CZ 4202 XF	No	12.70	46.38
Credenz	**CZ 4202 XF**	**Average**	**12.63**	**46.85**
Credenz	CZ 4562 XF	Yes	12.00	50.87
Credenz	CZ 4562 XF	No	12.10	51.06
Credenz	**CZ 4562 XF**	**Average**	**12.05**	**50.96**
LG Seed	LGS4640XF	Yes	12.37	56.80
LG Seed	LGS4640XF	No	12.53	59.36
LG Seed	**LGS4640XF**	**Average**	**12.45**	**58.08**
LG Seed	LGS4808XF	Yes	11.97	54.68
LG Seed	LGS4808XF	No	12.03	57.83
LG Seed	**LGS4808XF**	**Average**	**12.00**	**56.26**
Pioneer	P48A60X	Yes	12.20	57.70
Pioneer	P48A60X	No	12.27	57.52
Pioneer	**P48A60X**	**Average**	**12.23**	**57.61**
Average Fungicide Response		**Yes**		**56.46**
		No		**56.46**

Discussion: Foliar fungicides increase soybean yield about 1/3 of the time. In this test, Revytek fungicide was sprayed at 8 oz/acre at the R4/R5 (late-pod/early seed fill) stage across varieties in three strips, creating sprayed and unsprayed subplots. There was no yield response to the fungicide when averaged across all varieties, but this application was made later than recommended timing at the R3 (beginning pod) stage. If the application would have been timelier, a yield response may have been possible. Still, some varieties appeared to show a yield response. Therefore, these data may indicate that some varieties are more responsive to foliar fungicides when applied at this stage.

Middlesex MG 5 Soybean Variety Response to Revytek Foliar Fungicide

Cooperators: **Producer:** Corbin Hall Farm
Extension: Frank Long & David Holshouser
Industry: Chelsea Valenti and Shannon Ellis, BASF; Various Seed Companies
Previous Crop: Corn
Soil Type: Eunola loam
Tillage: Turbo-till
Planting Date: May 5, 2021
Seeding Rate/Row Spacing: 140,000 seed/acre/30-inch
Fertilization: 16-52-60-6
Crop Protection: Roundup + FirstRate
Revytek fungicide at 8 oz/acre was sprayed on half of the plot area at the R3/R4 stage
Harvest Date: November 15, 2021
Harvest Equipment: Wintersteiger plot combine

Brand	Variety	Fungicide	% Moisture	Yield (bu/A)
Pioneer	P48A60X	Yes	12.2	57.7
Pioneer	P48A60X	No	12.3	57.5
Pioneer	**P48A60X**	**Average**	**12.2**	**57.6**
Asgrow	AG54XF0	Yes	12.2	51.3
Asgrow	AG54XF0	No	12.3	46.5
Asgrow	**AG54XF0**	**Average**	**12.2**	**48.9**
Asgrow	AG55XF0	Yes	11.8	54.3
Asgrow	AG55XF0	No	11.7	52.1
Asgrow	**AG55XF0**	**Average**	**11.7**	**53.2**
Pioneer	P52A05X	Yes	11.8	59.6
Pioneer	P52A05X	No	11.7	58.7
Pioneer	**P52A05X**	**Average**	**11.8**	**59.2**
Pioneer	P55A49X	Yes	12.4	63.4
Pioneer	P55A49X	No	12.4	59.5
Pioneer	**P55A49X**	**Average**	**12.4**	**61.4**
USG	7562XF	Yes	11.8	50.8
USG	7562XF	No	11.8	48.0
USG	**7562XF**	**Average**	**11.8**	**49.4**
USG	7529XTS	Yes	12.5	45.7
USG	7529XTS	No	12.7	45.3
USG	**7529XTS**	**Average**	**12.6**	**45.5**
Hubner	H51-22XF	Yes	12.0	52.5
Hubner	H51-22XF	No	12.0	52.6
Hubner	**H51-22XF**	**Average**	**12.0**	**52.5**
Dyna Gro	56XT99	Yes	12.1	58.4
Dyna Gro	56XT99	No	12.2	55.2
Dyna Gro	**56XT99**	**Average**	**12.2**	**56.8**
Dyna Gro	56XF01	Yes	12.0	52.9
Dyna Gro	56XF01	No	11.9	41.2
Dyna Gro	**56XF01**	**Average**	**12.0**	**47.0**
Progeny	5554RX	Yes	12.2	57.1
Progeny	5554RX	No	12.1	52.3
Progeny	**5554RX**	**Average**	**12.1**	**54.7**
Local Seed Company	LS5009XS	Yes	12.4	56.1
Local Seed Company	LS5009XS	No	12.4	49.3
Local Seed Company	**LS5009XS**	**Average**	**12.4**	**52.7**

Local Seed Company	LS5418XFS	Yes	12.2	45.7
Local Seed Company	LS5418XFS	No	12.0	41.7
Local Seed Company	**LS5418XFS**	**Average**	**12.1**	**43.7**
NK Seed	NK53-F7X	Yes	12.3	54.3
NK Seed	NK53-F7X	No	12.1	50.6
NK Seed	**NK53-F7X**	**Average**	**12.2**	**52.5**
MorSoy	MS 5491 XF	Yes	12.6	54.2
MorSoy	MS 5491 XF	No	12.7	51.8
MorSoy	**MS 5491 XF**	**Average**	**12.6**	**53.0**
MorSoy	MS 5640 XF	Yes	11.9	51.9
MorSoy	MS 5640 XF	No	11.9	48.9
MorSoy	**MS 5640 XF**	**Average**	**11.9**	**50.4**
DONMARIO Seeds	DM51X61	Yes	12.7	51.7
DONMARIO Seeds	DM51X61	No	12.8	50.0
DONMARIO Seeds	**DM51X61**	**Average**	**12.7**	**50.8**
Pioneer	P48A60X	Yes	11.9	64.7
Pioneer	P48A60X	No	11.9	63.4
Pioneer	**P48A60X**	**Average**	**11.9**	**64.1**
Average Fungicide Response		**Yes**		**54.6**
		No		**51.4**

Discussion: Foliar fungicides increase soybean yield about 1/3 of the time. In this test, Revytek fungicide was sprayed at 8 oz/acre at the R3/R4 (early-/late-pod) stage across varieties in three strips, creating sprayed and unsprayed subplots. There was a 3.2 bushel/acre yield response to the fungicide when averaged over all varieties. But some varieties showed greater yield response while others showed very little yield response. This data may indicate that some varieties are more responsive to foliar fungicides when applied at this stage.

Essex Conventional Double-Cropped Soybean Variety Study

Cooperators:	**Producer:**	Montague Farms and MTG Partners
	Extension:	Robbie Longest, VCE - Essex Frank Long, VCE - Middlesex
	Industry:	Participating seed companies
Previous Crop:		Wheat
Soil Type:		Emporia sandy loam, Slagle fine sandy loam
Tillage:		No-till
Planting Date:		June 28, 2021
Seeding Rate/Row Spacing:		190,000; 15-inch rows
Fertilization:		350 lbs/A 5.9-27.8-25.7 before wheat
Crop Protection:		Burndown (6/24): 44 oz Roundup, 16 oz 2-4D, 6 oz Fierce, and 5oz Spectrum with 12.5 gallons of water Post (7/20): 24 oz FOMA (generic Flexstar), 12 oz Clethodim (generic Volunteer), 5 oz Spectrum 12.5 gallons water Fungicide and Insecticide (8/26): 4 oz. Stratego YLD, 5 oz Intrepid Edge, 2 oz. Syntact, 12.5 gallons water
Harvest Date:		October 28, 2021
Harvest Equipment:		John Deere S780 w/ 40' MacDon Draper Header

Treatment	Moisture%	Yield (bu/A)
Pioneer P39A82S	13.5	49.2
Asgrow A3956	13.8	58.3
Pioneer P40A40	13.0	57.9
Asgrow A4557	13.5	60.2
Virtue V4520S	13.7	61.6
Virtue V4720S	13.6	59.8
Virtue V4921S	13.6	67.6
Pioneer P49A10S	13.3	63.7
MFS 51P1	13.7	57.6
V16-1341 (check)	13.4	54.6
MFS 885	13.7	46.4
V16-1341 (check)	13.6	54.0
AVERAGE	**13.5**	**57.6**

Discussion: This study evaluated 11 conventional, non-GMO soybean varieties in a double-cropped environment. V16-1341 was used as a check. Overall, yields were very good and the plot averaged 57.6 bu/ac. Local data for conventional, non-GMO soybean varieties is useful to help producers make variety selections and incorporate this alternative market option for export non-GMO soybeans into their operation to take advantage of premiums that exist for such markets.

Essex Conventional Full-Season Soybean Variety Study

Cooperators:	**Producer:**	Montague Farms and MTG Partners
	Extension:	Robbie Longest, VCE - Essex
	Industry:	Participating seed companies
Previous Crop:		Corn
Soil Type:		Emporia sandy loam, Slagle fine sandy loam
Tillage:		No-till
Planting Date:		May 28, 2021
Seeding Rate/Row Spacing:		145,000; 15-inch rows
Fertilization:		275lbs/A 7.8-18.9-27.3-4.4S
Crop Protection:		Burndown (5/7): 44 oz Roundup, 16 oz 2-4D, 6 oz Fierce, and 5 oz Spectrum with 12.5 gallons of water Post (6/14): 24 oz FOMA (generic Flexstar), 12 oz Clethodim (generic Volunteer), 5 oz Spectrum 12.5 gallons water Foliar and Fungicide (8/4): 1 Qt Maxxgrow for Soybeans, 4 oz Stratego YLD, 2 oz. Syntact, 12.5 gallons water
Harvest Date:		October 21, 2021
Harvest Equipment:		John Deere S780 w/ 40' MacDon Draper Header

Treatment	Moisture%	Yield (bu/A)
Pioneer P39A82S	12.8	36.7
Asgrow A3956	12.4	56.4
Pioneer P40A40	11.9	68.1
Asgrow A4557	11.8	72.1
Virtue V4520S	12.1	55.4
Virtue V4720S	11.9	50.8
Virtue V4921S	11.8	69.9
Pioneer P49A10S	11.4	41.0
MFS 51P1	11.8	58.3
V16-1341 (check)	11.6	62.5
MFS 885	12.1	61.4
V16-1341 (check)	11.9	58.5
AVERAGE	**12.0**	**57.6**

Discussion: This study evaluated 11 conventional, non-GMO soybean varieties in a full-season environment. Overall, yields were very good and the plot averaged 57.6 bu/ac. V16-1341 was used a check. Local data for conventional, non-GMO soybean varieties is useful to help producers make variety selections and incorporate this alternative market option for export non-GMO soybeans into their operation to take advantage of premiums that exist for such markets.

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