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VIRGINIA STATE UNIVERSITY

2008
Virginia On-Farm Corn Test Plots

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

2008 Virginia Polytechnic Institute and State University 2812-1025

2008 Virginia On-Farm Corn Test Plots

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The research and demonstration plots discussed in this publication are a cooperative effort by ten Virginia Cooperative Extension Agents and Specialists, numerous producers, local soil and water conservation districts, and many members of the agribusiness community. The fieldwork and printing of this publication is mainly supported by the Virginia Corn Check-Off Fund through the Virginia Corn Board. Anyone who would like a copy should contact their local extension agent, who can request a copy from the Northumberland County Extension office.

This is the seventeenth year of this multi-county cooperative project. Further work is planned for 2009.

The authors wish to thank the many producers and agribusinesses that participated in these research and demonstration plots. Special thanks are due to Almeda McKenney in the Northumberland extension office for her efforts in putting this book together.

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General Summary

These replicated studies provide information that can be used by Virginia corn growers to make better management decisions on their farms. Refer to individual plots for discussion of results.

This is the third year of replicated tests for optimum plant populations. We saw positive or neutral results to increasing corn populations in the field, depending on site. From this and previous years' data, it seems that final stands around 26,000 plants per acre are able to make excellent yields where soil type, water and fertility allow for it. Where poor soils (or in the case of 2007, extreme drought) limit yield potential, lower populations around 20,000 – 22,000 plants per acre should be sufficient to optimize yield.

Corn hybrid selection is as tough as it has ever been. With more seed companies and more GMO options and seed treatment packages than ever before, it can be very difficult to decide which hybrids to plant. This year, dry weather at some locations gave us a good look at drought tolerance of specific hybrids, while some locations received timely moisture and gave us a look at top-end performance. Two plots were abandoned due to extreme weather.

High fertilizer prices have given renewed interest in maximizing fertilizer use efficiency. This was the second year evaluating dribbled vs. injected sidedress nitrogen. Where moisture was adequate for good yields, injecting the sidedress nitrogen led to optimum yields with less fertilizer. Whether this practice is economically feasible depends on the purchase price of the injector, maintenance costs, life of the equipment, and fertilizer prices. This was also the second year looking at Avail® phosphorus fertilizer additive in starter fertilizer. So far, no yield benefit has been observed.

Weed pressure and nitrogen deficiency are large concerns in organically-grown corn. A second year of study showed a large benefit to hand-weeding and increased rates of organic N sources. The higher fertilizer rates seemed economically feasible, but hand weeding required too many hours of labor per acre to show a return.

Many growers have been seeing yield losses in recent years due to nematodes. Options to alleviate this problem are very limited. In a second year of study, Counter® was evaluated as a possible solution. In both years of this study, no benefit to the use of Counter® was observed.

Cover crop selection and management has been a hot topic the past few years. Many growers have been using cover crops again, due to increased cost-share funding for this practice, as well as a way to build soil health. In a large study conducted in New Kent County, the use of vetch as a cover crop reduced the need for 120lbs N fertilizer/acre for the corn. At recent nitrogen fertilizer prices, the practice was worth over $100 per acre at that site. Another study is planned for 2009 to continue evaluating this practice.

2008 Corn Hybrid Comparison by Maturity – All Sites

Early-Maturing
Hybrids <108 RM

Company	Hybrid	Maturity	Genetic Traits	Northumberland	King & Queen	Essex	Dinnwiddie	Charles City	Average Yield*
Dekalb	52-59	102	VT3	218	156	188	141	95	**160**
TA Seeds	688-11	106	YGCB, LL	193	168	206	115	78	**152**
Trisler	T-5A01	106	VT3	202	151	193	120	89	**151**
Southern States	574	107	YG+, RR	204	148	190	128	75	**149**
Doeblers	660 BVR	106	YG+,RR	189	168	185	119	79	**148**
Pioneer	36V75	102	HX,RR,LL	195	159	189	128	65	**147**
Augusta	5160	105	YGCB, RR	178	161	173	120	89	**144**
Hubner	5243	106	VT3	177	141	172	117	85	**138**
Dyna-Gro	55B49	105	YG+,RR	160	139	172	116	80	**133**
Mycogen	2C596	107	HX, LL	193			115	67	-
Vigoro	35R86						102	80	-
Mycogen	2C597	107	HX, LL, RR		129	203			-
Mid-Atlantic	7096	106	VGCB BT	209	167	207		57	-

Mid-Maturing
Hybrids 108-112 RM

Company	Hybrid	Maturity	Genetic Traits	Northumberland	Middlesex	Essex	Dinnwiddie	Charles City	Westmoreland	Average Yield*
Mycogen	2C727	112	HXI	208	81	211	160	73	165	**150**
TA Seeds	780-01	112	YGCB	217	78	208	136	71	172	**147**
Trisler	T7N53	112	VT3	196	81	196	136	96	168	**145**
Pioneer	34F96	110	HX, LL, RR	190	87	208	121	82	169	**143**
Dekalb	61-19	111	VT3	190	79	188	140	82	178	**143**
Augusta	A06-06	111	YGCB, LL	189	87	190	126	73	153	**136**
Dyna-Gro	57V43	110	YG+, RR	165	78	196	138	68	171	**136**
Doeblers	634 BVR	110	YG+, RR	189	76	165	140	74	169	**136**
Mid-Atlantic	7150	112	YGCB	144	80	176	135	68	165	**128**
Southern States	647	111	YG+, RR	207	87	200		80	168	-
Hubner	5477PR	110	YB+, RR		81	192	139	87	177	-
Vigoro	5183	112	VT3		82	193	145	88		-

Full-Maturing
Hybrids >112 RM

Company	Hybrid	Maturity	Genetic Traits	Dinwiddie	Charles City	Virginia State†	Average Yield*
Pioneer	33M57	115	HX, LL, RR	146	96	15	**121**
Trisler	9J38	116	RRCB	151	90	21	**121**
Mycogen	2T780	114	HX1	165	75	38	**120**
Dyna Gro	57V21	114	YG, RR	156	80	41	**118**
Vigoro	5373	113	VT3	157	76	39	**117**
Hubner	H828	.	VT3	148	79	.	**114**
Southern States	SS777	116	VT3	154	67	23	**111**
TA Seeds	788-11	115	CB, LL	156	63	25	**110**
Augusta	A007Q	115	Conventional	142	76	14	**109**
Dekalb	63-42	113	VT3	148	68	10	**108**
Doeblers	735	117	VT3	128	71	20	**100**

* - Where data was available for hybrids in multiple, but not all locations, average yield was not calculated.
† - Due to extreme weather conditions that led to exceptionally low yields, the VSU site was not included in the overall average.

Charles City Corn Hybrid Comparison 2008

Cooperators: **Producer:** Archer & Tim Ruffin, Evelynton Farm
Extension: Paul Davis, New Kent/Charles City Counties
CWCD: Jim Wallace & Liz Nieves-Rivera, Colonial SWCD
Agribusiness: Participating Seed Suppliers

Previous Crop: Double Crop Soybeans
Soil Type: Pamunkey, fine sandy loam
Planting Date: April 16, 2008
Fertilizer: Broadcast: Biosolids in February 2008 @ 160 PAN per acre
Sidedress: 40 # N
Crop Protection: Herbicides: April 10, 2008 22 oz. Roundup Ultra
3 pts Atrazine
3 pts Princep
Check Hybrid: Pioneer 34F96
Harvest Date: September 4, 2008

Hybrid	Early	Mid	Late	Traits	Population	% Moisture	Yield
Trisler 9J38			X	RRCB	27,000	15.1	90
Trisler 7N53		X		VT3	27,000	16.1	96
Trisler 5A01	X			VT3	27,000	13.0	89
DynaGrow 57V21			X	YG, RR	27,000	13.4	80
DynaGrow 57V43		X		YG, RR	27,000	13.4	68
DynaGrow 55B49	X			YG, RR	27,000	13.0	80
Check					27,000	14.4	96
Augusta A007Q			X	Conventional	27,000	15.4	76
Augusta A0606		X		BTLL	27,000	13.5	73
Augusta A5160	X			RRCB	27,000	15.0	89
Hubner H828			X	VT3	27,000	15.3	79
Hubner 5477		X		YG Plus, RR	27,000	14.0	87
Hubner 5243	X			VT3	27,000	12.6	85
Check					27,000	13.9	84
Southern SS 777			X	VT3 RR YG+	27,000	14.0	67
Southern SS 647		X		VT3 RR YG+	27,000	13.7	80
Southern SS 574	X			VT3 RR YG+	27,000	12.1	75
USG GP 82C00				BT, LL	27,000	15.7	72
USG GX84C45				BT	27,000	14.6	80
Check					27,000	14.9	82
Mid Atlantic 7160			X	BTRR	27,000	15.2	60
Mid Atlantic 7150		X		BT	27,000	13.9	68
Mid Atlantic 7096	X			BT	27,000	12.4	57
TA Seeds 788-11				CB,LL	27,000	14.9	63
TA Seeds 780-01				YGCB	27,000	12.9	71
TA Seeds 688-11				CB, LL	27,000	14.3	78
Check					27,000	14.1	80
Pioneer 33M57			X	HX, LL, RR	27,000	15.8	96
Pioneer 34F96 (Check)		X		HX, RR, LL	27,000	14.1	82
Pioneer 36V75	X			HX, LL, RR	27,000	14.4	65
Doeblers 735			X	YGCB, RR, RW	27,000	13.6	71
Doeblers 634		X		YGCB, RR, RW	27,000	13.0	74
Doeblers 660	X			YGCB, RR, RW	27,000	13.7	79

Check					27,000	13.1	75
Mycogen 2T780			X	HXl	27,000	13.0	75
Mycogen 2C727		X		HXl	27,000	12.1	73
Mycogen 2C596	X			HXl	27,000	13.1	67
Vigoro 5373			X	VT3	27,000	14.4	76
Vigoro 5183		X		VT3	27,000	12.4	88
Vigoro 35R86	X			VT3	27,000	13.5	80
Check					27,000	12.4	75
Dekalb 63-42			X	VT3	27,000	13.1	68
Dekalb 61-19		X		VT3	27,000	12.1	82
Dekalb 52-59	X			VT3	27,000	11.8	95
AVERAGE:							**78**

Discussion: It was extremely dry at this location in Charles City from July 1 through August 20, 2008. Two years ago in this same field, the corn hybrid plot averaged 190 bu/ac, this year averaged only 78. The irrigated field across the road was yielding 230 bu/ac at the same population of 27,000. Please compare these yields with other locations before making your 2009 corn hybrid selections.

Northumberland / Lancaster Early & Mid Corn Hybrid Comparison

Cooperators: **Producer:** Monte Swann, Bearcroft Farms
Extension: Matt Lewis, Northumberland/Lancaster
SWCD: Craig Brann, Brandon Dilliston
Agribusiness: Participating Seed Suppliers
Previous Crop: Soybeans
Soil Type: Sassafras fine sandy loam
Planting Date: April 3, 2008 (26,500 seeds/acre)
Fertilizer: Broadcast: 50-0-100
Starter: 18gal 15-15-0 + micros
Sidedress: 80-0-0
Crop Protection: 5.5pt Lumax + 1qt Princep + 1.5pt Gramoxone + 2oz Mustang Max
Check Hybrid: Pioneer 34F96
Harvest Date: September 9, 2008

Hybrid	Early	Mid	Traits	Gross/acre*	% Moisture	Yield
Dekalb 52-59	X		VT3	$1,042	17.8	218
TA Seeds 780-01		X	YGCB	$967	21.1	217
Mid-Atlantic 7096	X		YGCB	$961	19.7	209
Mycogen 2C727		X	HXI	$947	20.2	208
Southern States 647		X	YG+, RR	$953	19.8	207
Pioneer 34F96 (check)		X	HX, RR, LL	$932	20.1	205
Southern States 574	X		YG+, RR	$956	18.7	204
Trisler T-5A01	X		VT3	$946	18.6	202
Vigoro V5173		X	VT3	$914	19.6	199
Check		X	HX, RR, LL	$904	19.9	196
Trisler T-7N53		X	VT3	$883	20.7	196
Pioneer 36V75	X		HX, RR, LL	$932	17.8	195
Mycogen 2C596	X		HXI	$895	19.1	193
TA Seeds 688-11	X		YGCB, LL	$886	19.6	193
Check		X	HX, RR, LL	$895	19.5	192
Vigoro V46R86	X		RR	$892	18.8	190
Dekalb 61-19		X	VT3	$884	19.4	190
Doeblers 660 BVR	X		YG+, RR	$869	19.7	189
Doeblers 634 BVR		X	YG+, RR	$869	19.7	189
Augusta A06-06		X	YGCB, LL	$870	19.8	189
Augusta 5160	X		YGCB, RR	$829	19.4	178
Hubner 5243	X		VT3	$830	18.7	177
Check		X	HX, RR, LL	$771	19.2	166
Dyna-Gro 57V43		X	YG+, RR	$758	19.6	165
Dyna-Gro 55B49	X		YG+, RR	$759	18.4	160
Mid-Atlantic 7150		X	YGCB	$616	23.4	144
AVERAGE:						**191**

* Based on $5.00/bu corn price and the moisture dockage schedule of a major area grain buyer. Early hybrids are 107 days or less, while mids have a 108-112 day maturity.

Discussion: Timely rainfall in this part of Northumberland County, combined with good management, led to an outstanding average of 191 bu/acre. Note the addition of gross revenue per acre to these results, which should help clarify income differences due to both moisture dockage and yield. Overall, the earlies averaged a gross return of $900/acre, 192bu/a, and 18.9% moisture. Mids averaged $869/acre, 190 bu/a, and 20.1% moisture. Use these and other university results when selecting corn hybrids to plant in 2009.

Essex County Early & Mid Corn Hybrid Comparison

Cooperators: **Producer:** John M. Hundley and John M. Hundley, Jr., Hundley Bros. Farm
Extension: Keith Balderson, Essex and David Moore, Middlesex

Agribusiness: Participating Seed Suppliers
Previous Crop: Soybeans
Soil Type: State fine sandy loam and Tetotum loam
Planting Date: April 14, 2008 (26,500 seeds/acre)
Fertilizer: Broadcast: 70-0-60 per acre
Sidedress: 90-0-0-11 per acre
Crop Protection: Herbicides: Gramoxone Inteon, Harness Extra, Atrazine, and Princep
Insecticides: Liquid Furadan applied in-furrow
Check Hybrid: Augusta 5175 RRYGCB
Harvest Date: September 3, 2008

Hybrid	Early	Mid	Traits	Population	% Moisture	Yield	% of Check
Augusta 5160RRCBQ*	X		RRCB	22,500	19.0	173	100
Check*			RRCB	25,000	20.3	173	
Augusta 0606CBLLP*		X	BtLL	24,500	21.2	190	110
Dekalb 52-59*	X		VT3	25,500	18.3	188	102
Check*			RRCB	23,500	20.0	184	
Dekalb 61-19		X	VT3	25,500	20.0	188	102
Doebler's 660BVR	X		YGCB,RR,RW	24,000	18.1	185	97
Check			RRCB	24,500	20.9	190	
Doebler's 634BVR		X	YGCB,RR,RW	23,500	19.1	165	87
Dyna-Gro 55B49	X		YG+,RR	25,500	18.6	172	91
Check			RRCB	22,500	20.3	190	
Dyna-Gro 57V43		X	YG+,RR	23,500	20.9	196	103
Hubner H5243VT3	X		VT3	26,500	18.3	172	113
Check			RRCB	25,500	19.7	194	
Hubner 5477PR		X	YG Plus,RR	26,000	19.5	192	99
Mid-Atlantic 7096Bt	X		Bt	26,500	20.8	207	108
Check			RRCB	26,000	19.8	192	
Mid-Atlantic 7150Bt		X	Bt	20,000	22.8	176	92
Pioneer 36V75	X		Hx,LL,RR	23,500	18.2	189	97
Check			RRCB	23,500	20.2	195	
Pioneer 34F96		X	HX,LL,RR	25,500	20.5	208	107
SS 574VT3	X		RR YG Plus	25,000	19.0	190	
Check			RRCB	25,000	19.9	200	105
SS 647VT3		X	RR YG Plus	24,500	19.8	200	100
T.A. Seeds TA 688-11	X		CB,LL	27,000	21.0	206	106
Check			RRCB	22,500	19.4	195	
T.A. Seeds TA 780-01		X	YGCB	24,000	22.6	208	107
Trisler 5A01 VT3	X		VT3	23,500	18.9	193	95
Check			RRCB	25,000	19.6	203	
Trisler 7N53 VT3		X	VT3	25,000	19.8	196	97
Mycogen 2C597	X		Hx,LL,RR	26,500	18.8	203	
Check			RRCB	24,500	19.6	196	104
Mycogen 2C727		X	Hx	27,000	21.6	211	108
Vigoro 5183 VT3		X	VT3	24,000	20.5	193	102

Check		CBRR	24,000	20.1	190	
USGGX248MBS8814Bt	X	CB	27,500	22.3	209	110
CHECK AVERAGE:					192	
EARLY HYBRID AVE:					189	
MID HYBRID AVE:					195	

Discussion: This plot, located along the Rappahannock River in Essex County in a field with a very good soil type, received timely rains and produced excellent yields. Please note that no phosphorous was applied to this plot, and a soil sample submitted to the Virginia Tech Soil Testing Lab in November 2007 show the P soil test at 76 lbs./acre P (High). Hybrids with a * were vandalized with a four wheeler, which probably reduced yields by a couple bushels per acre. Use this and information from the Virginia Corn Hybrid and Management Trials when selecting hybrids for 2009.

Dinwiddie Hybrid Corn Variety Comparison, 2008 AG EXPO Site

Cooperators: **Producer:** Billy Bain
Extension: Mike Parrish-Dinwiddie, Wade Thomason-Extension Grains Specialist, Scott Reiter-Prince George, Kelvin Wells-Sussex
Agribusiness: Participating Seed Suppliers
Soil Type: Mattaponi, Sandy Loam
Planting Date: April 10, 2008 – Strip-Till
Fertilizer: Preplant: 450lbs 5-10-30
Starter: 15gal. 14-14-0 with 3% Sulfur
Sidedress: 40gal. 30% Nitrogen – 5/21/08
Plant Population: 28,000
Crop Protection: 1qt Roundup Original at planting
2.0qt Bicep II + 1.0qt Simazine + 1.0qt 24D + 3oz. Pounce – 4/10/08
Harvest Date: September 4, 2008

Hybrid	% Moisture	Yield	Hybrid	% Moisture	Yield
Check-Pioneer 36V75	15.5	115	Augusta 5160	17.7	120
Mid Atlantic 5160	16.2	121	T.A. Seed 688-11	18.1	115
Vigoro V35R86	15.0	102	Dynagro 55B49	14.7	116
Southern States 574	16.0	128	Dekalb 52-59	15.6	141
Trisler T5A01-VT3	16.0	120	Doedlers 660BVR	16.1	119
Hubner H5243-VT3	15.4	117	Mycogen 2C596	15.9	115
Check-Pioneer 36V75	15.6	110	Augusta 06-06CBLL	17.2	126
T.A. Seed 780-01	19.4	136	Pioneer 34F96	16.2	121
Southern States 674	16.2	147	Hubner H5477PR30	16.3	139
Vigoro V5183-VT3	16.7	145	Dynagro 57V43	16.4	138
Dekalb 61-19	18.8	140	Deoblers 634BVR	16.5	140
Mycogen 2C727	16.5	160	Mid Atlantic 7150 Bt	23.8	135
Trisler T7N53-VT3	19.9	136	Check-Pioneer36V75	15.9	142
Vigoro V5373-VT3	16.5	157	HubnerEX828BRPH30	16.5	148
T.A. Seed 788-11	16.8	156	Trisler T-9J 38RRCB	16.8	151
Dekalb 63-42	16.9	148	Southern States 777	20.1	154
Pioneer 33M57	19.3	146	Dynogro 57V21	19.0	156
Augusta 007	19.3	142	Deoblers 735BVR	17.5	128
Mycogen 2T780	17.0	165	Check-Pioneer 36V75	16.4	143
AVERAGE:				**17.10**	**135.21**

Discussion: This corn variety trial was part of the 2008 Ag Expo demo plots. The field received 1.3in of natural rainfall along with 5in. of additional water from irrigation. Compare this with other trials and other years when making selections for 2009. Note: The first 12 to 14 varieties in the plot were planted on a sandier soil type (Emporia Sandy Loam) than the rest.

King & Queen Early Corn Hybrid Comparison

Cooperators: **Producer:** David & William Davis Carlton
Extension: David Moore, Middlesex
Agribusiness: Participating Seed Suppliers
Previous Crop: Soybeans
Soil Type: Emporia Sandy Loam
Planting Date: March 31, 2008
Fertilizer: Broadcast: 0-0-120
50-0-0 with Pesticides
Starter: 10gal 11-37-0
Sidedress: 100-0-0
Crop Protection: 2.4 qts. Bicep, 1 pt. Atrazine, 1 qt. Simazine, 1.5oz. Resolve
Check Hybrid: Doebler's 656 XY (CB)
Harvest Date: August 27, 2008

Hybrid	RM	Traits	% Moisture	Yield
Mid-Atlantic MA7096	106	BT	20.5	167
Check			20.1	149
Dyna-Gro 55B49	105	RR, YG Plus	17.7	139
Check			19.7	149
Mycogen 2C597	107	HX, LL, RR	17.6	129
Check			19.9	143
Augusta A5160	105	RR, CB	20.9	161
Check			21.4	163
TA Seeds TA688-11	106	CB, LL	21.6	168
Check			21.4	157
Trisler T5A01	106	VT3	19.8	151
Check			21.3	154
Pioneer 36V75	104	HX, RR, LL	19.0	159
Check			21.5	169
Hubner H5243	106	VT3	20.0	141
Check			21.6	166
Doebler's 660BVR	106	YGCB, RR, RW	22.7	168
Check			21.5	155
Southern States 574	107	RR, YG Plus	19.4	148
Check			21.3	159
Monsanto DKC52-59	102	VT3	17.7	156
Check			21.7	164
AVERAGE:			**20.4**	**155.2**

Discussion: This year, early corn planted early seemed to yield better than expected and better than full season corn due to the prolonged drought in July and August. This will likely increase interest in early corn, but remember that not all years are alike. With corn, it is always a good idea to spread your risk by planting multiple maturity corns. Use this and other Virginia Tech corn hybrid information when making planting decisions for 2009.

Middlesex Mid Corn Hybrid Comparison

Cooperators: **Producer:** Jason Benton
Extension: David Moore, Middlesex
Agribusiness: Participating Seed Suppliers
Previous Crop: Soybeans
Soil Type: Suffolk fine sandy loam
Planting Date: April 11, 2008 (25,300 seeds/acre)
Fertilizer: Broadcast: 23-60-100 with Avail
50-0-0-5 with Pesticides
Sidedress: 80-0-0-9
Crop Protection: 2.5 qt. Lumax + 1qt Princep + 1 pt. Atrazine+ 2 pints Glyphosate
Check Hybrid: Southern States 604
Harvest Date: September 4, 2008

Hybrid	RM	Traits	% Moisture	Yield
Monsanto DKC 61-19	111	VT3	13.3	78.5
Check			13.3	82.8
Vigoro V5183VT3	112	VT3	14.2	81.5
Check			13.9	80.9
Mycogen 2C727	112	HX	13.9	80.7
Check			13.6	79.4
Doebler's 634BVR	110	YGCB, RR, RW	14.0	76.4
Check			14.1	85.0
Pioneer 34F96	110	HX, LL, RR	14.1	86.6
Check			13.7	79.5
TA Seeds TA780-01	112	YGCB	14.0	77.7
Check			13.8	81.3
Mid-Atlantic MA7150	112	BT	17.3	80.1
Check			14.3	90.2
Southern States 647	111	RR, YG Plus	14.5	87.3
Check			14.2	77.1
Hubner H5477PR	110	RR, YG Plus	13.8	80.9
Check			14.0	83.3
Augusta A06-06	111	BT, LL	14.6	87.2
Check			13.0	86.2
Dyna-Gro 57V43	110	RR, YG Plus	13.4	77.8
Check			14.0	84.0
Trisler 7N53	112	VT3	14.4	80.7
AVERAGE:			**13.5**	**82.0**

Discussion: A dry year in lower Middlesex. Surprised the yields are this good. Use this and other Virginia Tech corn hybrid information when making planting decisions for 2009.

2008 Virginia State University Corn Hybrid Plot

Cooperators: **Producer:** Virginia State University
VSU: Glenn F. Chappell, II
Rudy Grammer – Randolph Farm Manager
Previous Crop: Soybeans
Soil Type: Tetotum – fine sandy loam
Planting Date: April 18, 2008
Fertilizer: Preplant: 25-50-150
Sidedress: 97.2-0-0
Crop Protection: 1.5 quarts Bicep II Magnum - Preemergence
Seedbed Preparation: Conventional tillage and ripped under the row
Planting equipment: JD MaxEmerge
Plant Population: 28,300
Check Hybrid: Pioneer 33M57
Harvest Date: October 3, 2008

Hybrid	% of Check	% Moisture	Yield (bu/a 15.5%)
Check–Pioneer 33M57		19.2	15
Monsanto DKC 61-19	167.3	18.9	24
Monsanto DKC 63-42	73.0	19.1	10
Vigoro V5183VT3	177.6	19.0	25
Vigoro V5373VT3	273.3	18.5	39
Check–Pioneer 33M57		19.7	14
Mycogen 2C727	194.2	17.4	27
Mycogen 2T780	275.5	18.8	38
Doeblers 660BVR	215.4	17.8	30
Doeblers 634BVR	316.2	16.7	43
Check–Pioneer 33M57		19.4	13
Doeblers 735BVR	118.7	16.5	20
Pioneer 34F96	123.9	17.7	20
Pioneer 33M57	121.6	19.2	20
TA Seeds 780-01	192	19.0	32
Check–Pioneer 33M57		19.4	20
TA Seeds 788-11	133.8	18.1	25
Mid Atlantic Seeds 7150BT	90.3	18.9	17
Southern States 647VT3	165.1	15.6	31
Southern States 777VT3	121.3	19.7	23
Check–Pioneer 33M57		19.0	18
Hubner H5477PR	149.2	17.7	21
Hubner H5828VT3	137.4	18.3	19
Augusta A6-06CBLLP	121.2	18.3	17
Augusta A007Q	102.6	18.1	14
Check–Pioneer 33M57		19.3	10
DynaGrow 57V21	363.2	19	41
Trisler 7N53VT3	220.5	18.8	25
Trisler 9J38RRCB	186.4	20.5	21
Check–Pioneer 33M57		18.7	12
AVERAGE:			**23**

Discussion: Seven inches of rain fell in two events - the day of planting and the following week. Soil crusting was a problem resulting in spotty emergence. Following the early rains, the rest of the production season was extremely dry and growth was poor at best. Surrounding counties qualified for disaster assistance as a result of the dry conditions and poor crop yields.

Westmoreland County Mid-Maturity Corn Hybrid Comparison

Cooperators: **Producer:** Windsor Farm, F. F. Chandler, Jr.
Extension: Sam Johnson, Westmoreland (retired) and Keith Balderson, Essex

Agribusiness: Participating Seed Suppliers
Previous Crop: Soybeans
Soil Type: Suffolk sandy loam
Planting Date: April 15, 2008
Fertilizer: Broadcast: 40-50-60 per acre
Sidedress: 110-0-0-12 per acre
Crop Protection: Burndown Herbicides: Gramoxone Inteon
Pre-emergence Herbicides: Lumax and Atrazine
Check Hybrid: Pioneer 34F96
Harvest Date: October 10, 2008

Hybrid	Traits	% Moisture	Yield
Pioneer 34F96-Check	HX, LL, RR	16.2	155
Augusta 06-6	BtLL	17.0	153
T.A. Seeds 780-01	YGCB	18.2	172
Dekalb 61-19	VT3	15.8	178
Hubner 5477	YG Plus, RR	16.4	177
Mid-Atlantic 7150	Bt	17.2	165
Trisler 7N53	VT3	16.3	168
Check	HXLL, RR	16.5	162
Mycogen 2C727	HX	17.1	165
Campbell 6860		16.0	165
Southern States 647	VT3	15.9	168
Doeblers 634	YGCB, RR, RW	16.4	169
Dyna-Gro 57V43	YG Plus, RR	15.5	171
USG GX248MBS 8814	Bt	15.6	188
Check	HX, LL, RR	15.5	180
Vigoro 35R86-early		14.7	166
Hubner 5243-early	VT3	14.8	179
Check	HX, LL, RR	15.5	177
Check Average		15.9	169

Discussion:
This plot received timely rainfall, which resulted in excellent yields. Please use these results along with the Virginia Corn Hybrid and Management Trials when selecting hybrids for 2009.

Isle of Wight Corn Hybrid Comparison

Cooperators: **Producer:** Jimmy Oliver, Oliver Farms
Extension: Nathan O'Berry, Isle of Wight
SWCD: Chuck Griffin
Agribusiness: Wes Chappell, Bill Pritchett, and Mark Montgomery
Previous Crop: Soybeans
Soil Type: Myatt fine sandy loam & Yemassee fine sandy loam
Planting Date: April 17, 2008 (26,000 plants/acre)
Fertilizer: Broadcast: 60-0-120
Starter: 15-15-0
Sidedress: 24-0-0-3S
Crop Protection: 2 qts Bicep + 1 qt Simazine + 1.25 oz Baythroid
Check Hybrid: -----
Harvest Date: September 19, 2008

Hybrid	Maturity	Traits	Test Weight	Moisture, %	Yield
Vigoro 4683	106 Day	VT3	59.0	16.3	157
Vigoro 5186	111 Day	RR	57.0	17.7	137
Vigoro 5273	112 Day	VT3	56.9	17.5	153
Trisler 8A02	113 Day	RR, CB	58.1	16.6	158
Trisler 5337	113 Day	RR, CB	53.0	19.6	160
Dekalb 63-46	113 Day	RR2, YG, CB	55.8	17.2	160
Vigoro 5383	113 Day	VT3	57.5	17.5	162
Vigoro 5486	114 Day	RR	56.8	19.2	146
Pioneer 33M57	115 Day	HX1, LL, RR2	60.1	17.8	139
Vigoro 5782	117 Day	RR	53.8	19.4	154
Dekalb 67-23	117 Day	RR2, YG, CB	56.7	19.6	166
Pioneer 31G70	119 Day	HXX, LL, RR2	55.3	20.6	143
AVERAGE:					**153**

Discussion: Timely rainfall in this part of Isle of Wight County, led to an average of 153 bu/acre, which is well above normal in this part of the state. The mid-maturing varieties faired better compared to the late-maturing varieties as a whole with the 113 day varieties averaging 160 bu/acre. Use this in combination with other university results when selecting corn hybrids to plant in 2009.

Roundup Ready/YGCB vs. Roundup Ready Only Corn Hybrid

Cooperators: **Producer:** Keith Balderson
Extension: Keith Balderson, Essex
Agribusiness: Ginny Barnes, Pioneer Hi-Bred

Previous Crop: Soybeans
Soil Type: Rumford/Tetotum
Planting Date: April 11, 2008 (26,000 seeds/acre)
Hybrids: Pioneer 35P80RR vs. Pioneer 35P10RR/YGCB
Fertilizer: Broadcast: 50-60-60 per acre
Sidedress: 70-0-0-11 per acre
Wolf Trax Zinc Hopper Box Treatment
Crop Protection: Pre-emergence herbicides: Bullet, atrazine, and simazine
Burndown herbicide: Gramoxone Inteon
Seed Treatment: Poncho 250
Harvest Date: September 5, 2008

Hybrid	Traits	% Moisture	Yield
Pioneer 35P80	RR		156
Pioneer 35P10	YG+, RR		153
Pioneer 35P80	RR		138
Pioneer 35P10	YG+, RR		150
Pioneer 35P80	RR		142
Pioneer 35P10	YG+, RR		150
Pioneer 35P80 Average	RR	17.9	145
Pioneer 35P10 Average	YG+, RR	17.7	151

Discussion: Acreage of GMO corn in eastern Virginia continues to increase, and producers continue to ask how such hybrids should be used in eastern Virginia. This plot evaluated a Roundup Ready only hybrid to a Roundup Ready/Yield Guard Corn Borer hybrid. The RR/YGCB hybrid tended to yield higher, but the difference was not statistically significant. No official count was made, but the European Corn Borer (ECB) did not appear to be very high in this plot. The RR hybrid did exhibit more corn earworm damage than the RR/YGCB hybrid. Use this and information from the Virginia Corn Hybrid and Management Trials when selecting hybrids in 2009.

Corn Hybrid Challenge Plot
Augusta 06-06 vs. NK Seed 68-B8

Cooperators: **Producer:** Davis Produce, New Kent
Extension: Paul Davis, New Kent/Charles City & William Townsend, VA Tech Summer Intern
Agribusiness: Augusta and NK Seed

Previous Crop: Rye cover crop behind no-till pumpkins
Soil Type: Pamunkey fine sandy loam
Planting Date: May 5, 2008
Fertilizer: Broadcast: 20-40-60 on April 11, 2008
Starter: 40# UAN on May 5, 2008
Sidedress: 115# UAN on June 4, 2008
Plant Population: 26,000
Crop Protection: Herbicides: *Pre-emergence*: 1.8 qt Bicep + 1 qt Simazine + 1 qt Gramoxone + 1 pt 2,4-D on May 1, 2008
Post: 24 oz Liberty on June 15, 2008
Insecticides: *Pre-emergence*: 1.5 oz Karate on May 5, 2008
Hybrids: Augusta 06-06 and NK 68-B8
Harvest Date: October 9, 2008

Reps	Hybrids	% Moisture	Bu/Ac
Rep 1	NK 68-B8	19.1	140.3
Rep 1	Augusta 06-06	19.7	146.5
Rep 2	Augusta 06-06	19.6	140.9
Rep 2	NK 68-B8	18.9	139.9
Rep 3	NK 68-B8	19.6	139.4
Rep 3	Augusta 06-06	19.3	140.7
Rep 4	Augusta 06-06	19.7	134.5
Rep 4	NK 68-B8	20.1	139.7
Average	**NK 68-B8**	**19.4**	**139.8**
Average	**Augusta 06-06**	**19.6**	**140.6**

Discussion: Both hybrids performed good under the extreme dry growing conditions. Rainfall from June 1 to September 1, 2008 was less than 6 inches, but with a reel irrigation system an additional 5 inches was added between June 15 and August 5, 2008.

2008 New Kent Roundup Ready Corn Hybrid Trial

Cooperators:	**Producer:**	Robert Bland, New Kent County
	Extension:	Paul Davis, New Kent/Charles City Counties
	Agribusiness:	Participating Seed Suppliers
Previous Crop:	Double crop soybeans	
Soil Type:	Emporia, fine sandy loam	
Planting Date:	May 2, 2008	
Fertilizer:	Preplant: 26-40-75-12 Sulfur	
	Sidedress: 100 # N	
Crop Protection:	Herbicides: May 2, 2008	1 qt Roundup
		1 qt Atrazine
		1 qt Simazine
		1 pt 2, 4-D
Fungicides:	None	
Population:	24,000	
Check Hybrid:	Pioneer 33M57	
Harvest Date:	October 2, 2008	

Treatments	% Moisture	Yield
Check	20.9	152.26
DeKalb 61-19	18.9	145.31
Vigoro V5183	18.5	153.51
Doeblers 634BVR	18.9	150.52
Check	20.1	152.33
Pioneer 34F96	19.7	148.30
SS 574VT3	17.8	142.37
DynaGro 55B49	17.6	117.35
Trisler TN53VT3	19.0	144.38
Hubner H5477	18.8	143.62
Check	20.6	157.21
Averages	**19.2**	**146.11**

Discussion:
Under adequate rainfall, you can see there are many good Roundup Ready corn hybrids available. Please use this information along with other VA Tech hybrid trials when making your 2009 seed corn decisions.

Corn Hybrid Challenge Plot

Cooperators: **Producer:** Keith Balderson
Extension: Keith Balderson, Essex
Agribusiness: Dennis Rawley, Augusta Seed Company

Previous Crop: Soybeans
Soil Type: Kempsville sandy loam
Planting Date: April 12, 2008 (26,000 seeds/acre)
Hybrids: Augusta 06-06LLYGCB and Pioneer 33M54
Fertilizer: Broadcast: 50-60-60 per acre
Sidedress: 70-0-0-11 per acre
Wolf Trax Hopper Box Zinc Treatment
Crop Protection: Pre-emergence herbicides: Lumax, atrazine, and simazine
Burndown herbicide: Gramoxone Inteon
Seed Treatment: Poncho 250
Harvest Date: October 2, 2008

Hybrid	% Moisture	Yield
Augusta 06-06		178
Pioneer 33M54		201
Augusta 06-06		183
Pioneer 33M54		166
Augusta 06-06		176
Pioneer 33M54		157
Ave. Augusta 06-06	18.7	179
Ave. Pioneer 33M54	18.7	175

Discussion:
Yields overall were very good, especially with only 120 pounds of total Nitrogen applied to this crop. The yields of Pioneer 33M54 were much more variable than the Augusta 06-06, but there was no statistical difference in yield. One explanation for the variability in yield could be European corn borer (ECB) pressure as Augusta 06-06 is YGCB, and Pioneer 33M54 is not. However, ECB pressure did not stand out during plot harvest. Though plant stand counts were not taken, plant stands were good in all plots. Be sure to consult the Virginia Corn Hybrid and Management trials when making hybrid selections for 2009.

Corn Hybrid Technology Challenge

Cooperators: **Producer:** Robert Respess, Jr.
Extension: David Moore, VCE-Middlesex
Agribusiness: Dennis Rawley, Augusta Seed, Carter Borden-Doebler's
Previous Crop: Soybeans
Soil Type: Dragston Fine Sandy Loam
Planting Date: May 8, 2008 (27,000 seeds/acre)
Fertilizer: Broadcast: 70-0-150
Sidedress: 100-0-0
Crop Protection: 1 Qt. Atrazine, 3 oz. Laudis, 1Qt. Simazine, Glyphosate
Hybrids: Doebler's 735 (RR and YG), Augusta 007 (Conventional)
Harvest Date: October 21, 2008

Hybrid	Replication	TW	% Moisture	Yield
Doebler's 735	1	59	15.4	172.9
Augusta 007	1	60	15.5	157.1
Doebler's 735	2	59	15.5	168.3
Augusta 007	2	59	15.4	146.1
Doebler's 735	3	59	15.3	168.6
Augusta 007	3	60	15.2	140.1
Doebler's 735	4	61	15.2	158.1
Augusta 007	4	60	15.2	132.0
AVG: Doebler's 735		59.5	15.4	167.0
AVG: Augusta 007		59.8	15.3	143.8

Discussion: This plot was initiated to compare "traited" hybrid Doebler's 735 with RR and YG technology to non-"traited" conventional hybrid Augusta 007. Since this plot was planted in May, one would expect for YG technology to be a major factor and it seems that it could be. Both these hybrids are rated at 115 day maturity.

Technology is getting more expensive every year and it is also getting more difficult to find hybrids that are not "traited". Use this and other Virginia Tech on farm corn plot information when planning for 2009.

Middlesex Corn Challenge Plot

Cooperators: **Producer:** Jason Benton
Extension: David Moore, VCE-Middlesex
Agribusiness: Participating Seed Suppliers
Previous Crop: Soybeans
Soil Type: Suffolk Fine Sandy Loam
Planting Date: April 13, 2008 (25,300 seeds/acre)
Fertilizer: Broadcast: 25-65-100
50-0-0 with pesticides
Sidedress: 80-0-0
Crop Protection: 2.5 qt. Lumax + 1qt Princep + 1 pt. Atrazine+ 2 pints Glyphosate
Challenge Hybrids: Pioneer 33M57 (RR,Bt,P250)
Augusta A007 (P1250)
Harvest Date: September 18, 2008

Hybrid	Rep	TW	% Moisture	Yield
Pioneer 33M57	1	58.5	14.8	45.0
Augusta 007	1	56.5	14.9	38.5
Pioneer 33M57	2	59	14.9	50.5
Augusta 007	2	56	14.7	46.6
Pioneer 33M57	3	58	14.8	53.0
Augusta 007	3	56	15.1	48.8
Pioneer 33M57	4	59	15.0	58.9
Augusta 007	4	56.5	15.0	47.3
Average: Pioneer 33M57		58.6	14.9	51.9
Average: Augusta A007		56.3	14.9	45.3

Discussion: The lower Middle Peninsula suffered from dry weather this year as is seen in these yields. Very little rain fell in July when these hybrids needed help filling out. Both these hybrids are rated as 115 Day RM. The purpose of this plot was to compare two hybrids; Pioneer 33M57 with the Bt and RR genetic traits compared to Augusta A007, a conventional non-traited hybrid. Not sure what may have happened if weather had cooperated but advantage of 6.5 bushels went to the "traited" hybrid. At $5.00 corn, does that pay?

There was a visual advantage to the Augusta hybrid early on, it was greener and taller. We thought that possibly, the P1250 treatment may have made that difference. Hurricane Hanna came through in early September and blew the top half of the stalks over. There was no noticeable difference in lodging nor was there a difference in moisture at harvest.

I would hope to repeat this test in a year with better growing conditions.

Hybrid Challenge Plot

Cooperators:	**Producer:**	Midway Farms, Inc.
	Extension:	Keith Balderson, Essex
	Agribusiness:	Jim Oliver, Monsanto and Ginny Barnes, Pioneer Hi-Bred
Previous Crop:	Soybeans	
Soil Type:	sandy loam	
Planting Date:	April 18, 2008 at 26,200 plants per acre	
Fertilizer:	Starter: 20 gallons per acre 20-10-0 plus 6 pounds of Sulfur per acre	
	Broadcast: 50 pounds of Nitrogen per acre and 150 pounds of potash per acre for 3 crops	
	Sidedress: 80 pounds of Nitrogen per acre	
Crop Protection:	Burndown: 1 quart per acre generic glyphosate	
	Post-emergence: 1 quart per acre of generic glyphosate and 3 oz. per acre Callisto	
	Broadcast: 1.5 pts. per acre Lorsban	
Hybrids:	Dekalb 674 VT3, Dekalb 61-19, and Pioneer 34F96	
Harvest Date:	September 22, 2008	

Hybrid	Plot Length	Plot Width	Acreage	Harvested Wt.	% Moisture	Yield
Pioneer 34F96	550	15	.189	1950	16.3	182
Dekalb 674VT3	550	15	.189	1925	15.3	182
Pioneer 34F96	550	15	.189	2020	16.3	189
Dekalb 61-19	550	15	.189	2015	15.3	191
Pioneer 34F96	550	15	.189	2085	16.0	196
Dekalb 674-VT3	550	15	.189	2010	15.8	189
Pioneer 34F96	550	15	.189	1995	15.9	188
Dekalb 61-19	550	15	.189	1975	15.5	187

Averages:		
Pioneer 34F96	16.1	189
Dekalb 674VT3	15.6	186
Dekalb 61-19	15.4	189

Discussion:
All of these hybrids in the 110-112 day maturity range yielded very well. Weed control was excellent. Please use this and information from the Corn Hybrid and Management Trials when selecting hybrids for 2009.

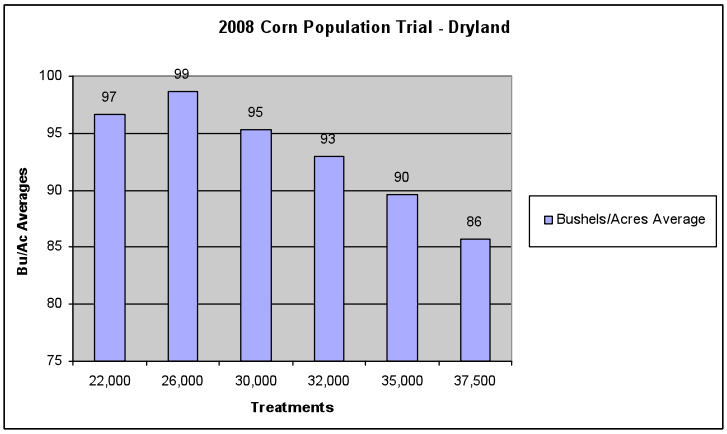
2008 Corn Population Trial - Dryland

Cooperators:	**Producer:**	Archer & Tim Ruffin, Evelynton Farm
	Extension:	Paul Davis, New Kent/Charles City Counties
	CWCD:	Jim Wallace & Liz Nieves-Rivera, Colonial SWCD
	Agribusiness:	Participating Seed Suppliers
Previous Crop:	Double Crop Soybeans	
Soil Type:	Pamunkey, fine sandy loam	
Planting Date:	April 16, 2008	
Fertilizer:	Broadcast: Biosolids in February 2008 @ 160 PAN per acre; 80# Potash	
	Starter: 50-0-0	
	Sidedress: 40 # N	
Crop Protection:	Herbicides: April 10, 2008 22 oz. Roundup Ultra	
	3 pts Atrazine	
	3 pts Princep	
Fungicides:	8 oz. Headline flown on @ silking	
Check Hybrid:	DeKalb C63-46	
Harvest Date:	September 19, 2008	

Yields Bu/Ac @ 15.5% Moisture

Treatments	Rep 1	Rep 2	Rep 3	Bu/Ac Avg.
22,000	107	93	90	97
26,000	107	101	88	99
30,000	101	95	90	95
32,000	97	100	82	93
35,000	91	92	86	90
37,500	82	89	86	86

Discussion: Last year the dryland corn population study top yield was 164 bu/ac at 28,000 plants, under great moisture conditions. This year's yields decreased significantly after topping out at 99 bu with a population of 26,000. This year the corn was under extreme moisture stress. Between the two totally different yields on similar soils, the bottom line is plant between 26,000 and 28,000 on dryland corn with today's hybrids.



2008 Corn Population Trial - Irrigated

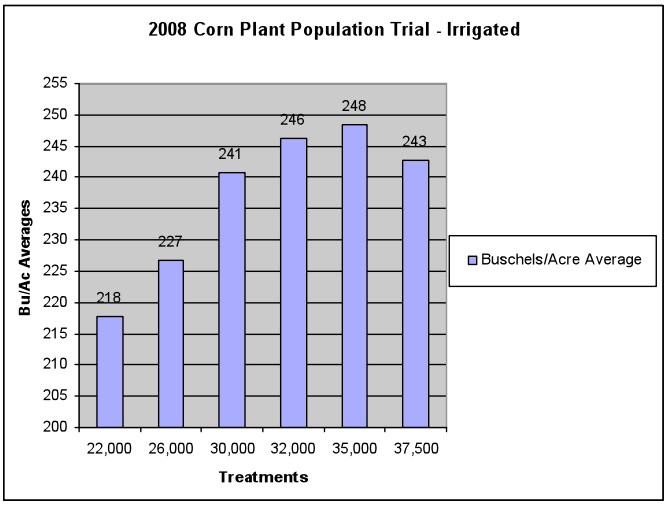
Cooperators: **Producer:** Archer & Tim Ruffin, Evelynton Farm
Extension: Paul Davis, New Kent/Charles City Counties
CWCD: Jim Wallace & Liz Nieves-Rivera, Colonial SWCD
Agribusiness: Participating Seed Suppliers

Previous Crop: Double Crop Soybeans
Soil Type: Pamunkey, fine sandy loam
Planting Date: April 16, 2008
Fertilizer: Broadcast: Biosolids in February 2008 @ 160 PAN per acre; 80# Potash
Starter: 50-0-0
Sidedress: 40 # N
Crop Protection: Herbicides: April 10, 2008 22 oz. Roundup Ultra
3 pts Atrazine
3 pts Princep
Fungicides: 8 oz. Headline flown on @ silking
Check Hybrid: DeKalb C63-46
Harvest Date: September 19, 2008

Yields Bu/Ac @ 15.5% Moisture

Treatments	Rep 1	Rep 2	Rep 3	Bu/Ac Avg.
22,000	220	218	215	218
26,000	231	227	222	227
30,000	233	247	242	241
32,000	244	240	255	246
35,000	235	251	259	248
37,500	253	234	241	243

Discussion: Under irrigation this year during a year of severe drought 35,000 plants per acre gave the highest yield of 248 bu/ac. There was a 21 bu increase in yield from the standard 26,000 plants to 35,000 plants/ac. Populations above 35,000 reduced yields this year.



2008 Corn Population Study-Bottomland

Cooperators: **Producer:** Clem & Keith Horsley
Extension: David Moore, VCE Middlesex
Agribusiness: Ginny Barnes, Pioneer, A DuPont Company
Previous Crop: Soybeans
Soil Type: Meggett Sandy Loam
Planting Date: May 5, 2008
Fertilizer: Broadcast: 30-45-110 preplant, 70-0-0 with pesticides
Sidedress: 100-0-0
Crop Protection: 5 pt Lumax + 1qt Princep + 1 pt. Atrazine
Check Hybrids: Pioneer 34F96 and Pioneer 34F88
Harvest Date: September 24, 2008

Hybrid	Plant Population	Final Population	% Moisture	Yield	Yield Advantage
Pioneer 34F96 (avg.)	20,500	19,100	16.5	149.6	
Pioneer 34F88 (avg.)	20,500	19,200	16.9	148.6	
Pioneer 34F96 (avg.)	24,200	22,900	16.6	151.1	1.5
Pioneer 34F88 (avg.)	24,200	23,000	17.1	162.9	14.3
Pioneer 34F96 (avg.)	28,700	26,500	16.6	156.2	5.1
Pioneer 34F88 (avg.)	28,700	26,700	17.1	159.0	-3.9
Pioneer 34F96 (avg.)	32,600	29,700	17.7	166.6	10.4
Pioneer 34F88 (avg.)	32,600	29,800	17.0	170.7	11.7
Pioneer 34F96 (avg.)	38,600	35,000	17.0	177.2	10.6
Pioneer 34F88 (avg.)	38,600	35,100	17.1	183.5	12.8
Pioneer 34F96 (avg.)	40,100	36,900	16.8	193.0	15.8
Pioneer 34F88 (avg.)	40,100	36,900	18.1	187.5	4.0

Discussion: Look for this test to be replicated across location. The push to increase plant populations is on. In this test it looks as though yields will continually increase as you increase populations, but there was some soil variability. P34F96 is a "flex" ear hybrid which means that the ears will "flex" according to population and soil moisture changes. P34F88 is a "fixed" ear hybrid and would not compensate, ear-wise, for population or moisture. Apparently moisture was adequate in this test, but the "fixed" hybrid was variable. The "flex" hybrid did what it should have as yields increased across the board as population increased. Look for other studies in this publication.

2008 Corn Population Study-Upland

Cooperators: **Producer:** Clem & Keith Horsley
Extension: David Moore, VCE Middlesex
Agribusiness: Ginny Barnes, Pioneer, A DuPont Company
Previous Crop: Soybeans
Soil Type: Wrightboro/Kempsville Fine Sandy Loam
Planting Date: May 1, 2008
Fertilizer: Broadcast: 30-45-110 preplant, 50-0-0 with pesticides
Sidedress: 90-0-0
Crop Protection: 5 pt Lumax + 1qt Princep + 1 pt. Atrazine + 2 pt. Glyphosate
Check Hybrids: Pioneer 34F96 and Pioneer 34F88
Harvest Date: September 23, 2008

Hybrid	Plant Population	Final Population	% Moisture	Yield	Yield Advantage
Pioneer 34F96 (avg.)	20,500	19,100	17.2	137.4	
Pioneer 34F88 (avg.)	20,500	19,200	19.3	53.0 (deer)	
Pioneer 34F96 (avg.)	24,200	22,900	16.6	143.9	6.5
Pioneer 34F88 (avg.)	24,200	23,000	17.1	68.9 (deer)	15.9
Pioneer 34F96 (avg.)	28,700	26,500	16.6	147.4	3.5
Pioneer 34F88 (avg.)	28,700	26,700	17.1	119.6 (deer)	50.7
Pioneer 34F96 (avg.)	32,600	29,700	17.7	152.2	4.8
Pioneer 34F88 (avg.)	32,600	29,800	17.0	132.7	13.1
Pioneer 34F96 (avg.)	38,600	35,000	17.0	142.8	-9.4
Pioneer 34F88 (avg.)	38,600	35,100	17.1	143.1	10.4

Discussion: Look for this test to be replicated across location. The push to increase plant populations is on. P34F96 is a "flex" ear hybrid which means that the ears will "flex" according to population and soil moisture changes. P34F88 is a "fixed" ear hybrid and would not compensate, ear-wise, for population or moisture. The "flex" hybrid did what it should have as yields increased across the board as population increased up to a point. Apparently, maximum population is around 30,000 plants at final stand as yields began to decrease as populations went higher.

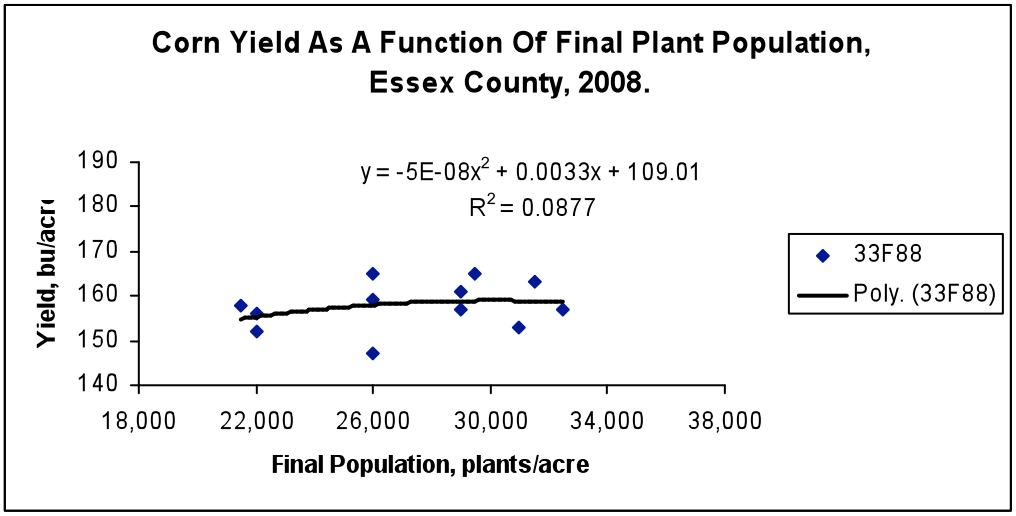
There was considerable deer damage to the P34F88. To the row, the deer would eat and trample the F88 and the F96 right by it was unharmed (as seen in the yield results). One thing that was interesting was that as population increased, deer damage decreased. Apparently, deer do not like to maneuver in corn that is planted thick, much the way that soybeans in narrow rows deter deer browsing in fields. Yields for the F88 increased considerably and damage was lessened when populations went above 24,000. Look for other population studies in this publication.

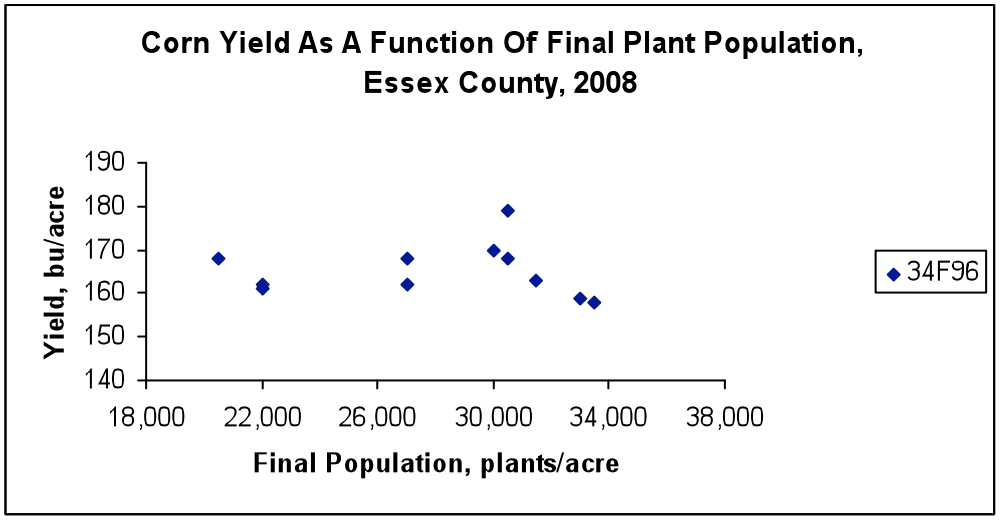
Essex County Corn Population Test

Cooperators: **Producer:** Midway Farms, Inc.
Extension: Keith Balderson, Essex
Agribusiness: Ginny Barnes, Pioneer Hi-Bred
Previous Crop: Soybeans
Soil Type: Suffolk sandy loam
Planting Date: April 24, 2008
Fertilizer: Starter: 20 gallons per acre 20-10-0 plus 6 pounds per acre Sulfur
Broadcast: 50 pounds of Nitrogen per acre and 150 pounds per acre potash for 3 crops
Sidedress: 70 pounds of Nitrogen per acre
Crop Protection: Burndown: Gramoxone Inteon
Pre-emergence Herbicides: Bicep and atrazine
Broadcast: 1.5 pts. per acre Lorsban
Hybrids: Pioneer 34F88 (P250, LL, RR, HXEXTRA--RW, CB)
Pioneer 34F96 (P250, LL, RR, HERCULEX-CB)
Harvest Date: September 17, 2008

Hybrid/Target Population	Monitor Population	Counted Population	% Moisture	Yield
Pioneer 34F96/26,000	**Not Harvested**			
Pioneer 33F88/26,000	26,700	26,000	19.7	147
Pioneer 33F88/22,000	22,300	22,000	19.7	152
Pioneer 34F96/22,000	22,300	22,000	18.7	162
Pioneer 34F96/30,000	30,600	30,500	18.6	168
Pioneer 33F88/30,000	30,600	29,000	19.5	161
Pioneer 33F88/34,000	33,800	32,500	19.0	157
Pioneer 34F96/34,000	33,800	33,000	18.3	159
Pioneer 34F96/34,000	34,100	31,500	19.0	163
Pioneer 33F88/34,000	34,100	31,500	18.3	163
Pioneer 33F88/22,000	22,200	21,500	19.8	158
Pioneer 34F96/22,000	22,200	22,000	19.0	161
Pioneer 34F96/26,000	26,800	27,000	18.9	168
Pioneer 33F88/26,000	26,800	26,000	19.2	165
Pioneer 33F88/30,000	30,500	29,000	19.3	157
Pioneer 34F96/30,000	30.500	30,500	18.9	179
Pioneer 34F96/30,000	30,500	30,000	19.1	170
Pioneer 33F88/30,000	30,500	29,500	19.3	165
Pioneer 33F88/22,000	21,800	22,000	18.9	156
Pioneer 34F96/22,000	21,800	20,500	18.6	168
Pioneer 34F96/26,000	26,800	27,000	19.0	162
Pioneer 33F88/26,000	26,800	26,000	19.2	159
Pioneer 33F88/34,000	33,800	31,000	19.1	153
Pioneer 34F96/34,000	33,800	33,500	19.0	158
Averages: 34F96/22,000				164
33F88/22,000				155
2 reps. 34F96/26,000				165
33F88/26,000				157
34F96/30,000				172
33F88/30,000				161
34F96/34,000				160
33F88/34,000				158

Discussion:
There is much interest in increasing corn seeding rates. In this plot on an average eastern Virginia soil, yields were very good, but there was no statistical difference in yields for either hybrid at 22,000, 26,000, 30,000, or 34,000 plants per acre planting populations. Planting populations over 26,000 plants per acre on such soil types will most likely not increase yields in most years. Producers should consider doing their own plot work evaluating planting populations with different hybrids.





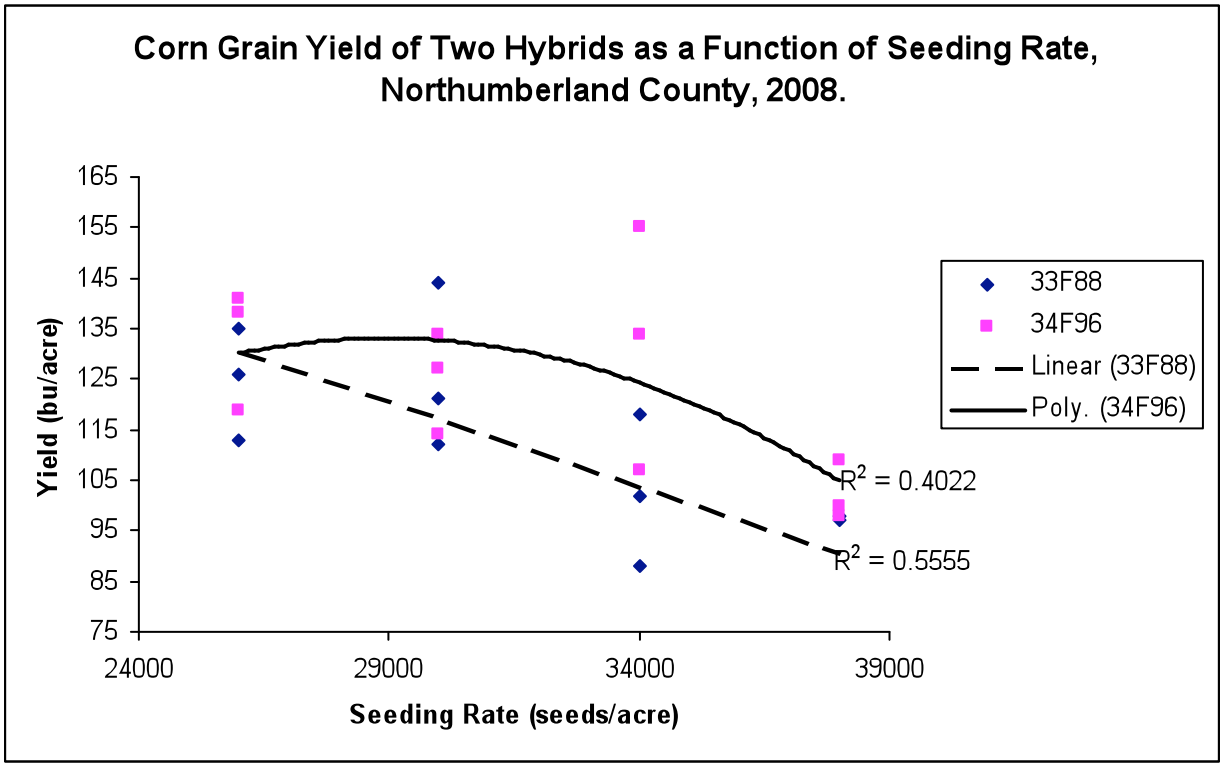
Northumberland Corn Population Study

Cooperators: **Producer:** Monte Swann, Bearcroft Farms
Extension: Matt Lewis, Northumberland/Lancaster
Agribusiness: Ginny Barnes & Glenn Rountree, Pioneer
Previous Crop: Soybeans
Soil Type: Matapeake and Mattapex silt loams
Planting Date: April 23, 2008
Fertilizer: Broadcast: 50-0-80
Starter: 18gal 15-15-0 + micros
Sidedress: 100-0-0
Crop Protection: 5.5pt Lumax + 1qt Princep + 1.5pt Gramoxone + 2oz Mustang Max
Hybrid: Pioneer 34F96 & 33F88
Harvest Date: September 24, 2008

Hybrid	Rep	Population	% Moisture	Yield
34F96	1	26000	16.9	119
33F88	1	26000	17.2	113
33F88	1	30000	17.4	112
34F96	1	30000	16.9	114
34F96	1	34000	16.9	107
33F88	1	34000	18.1	88
33F88	1	38000	18.8	69
34F96	1	38000	16.8	98
34F96	2	38000	16.8	100
33F88	2	38000	17.6	97
33F88	2	34000	17.3	102
34F96	2	34000	16.5	134
34F96	2	30000	16.3	134
33F88	2	30000	17.0	144
33F88	2	26000	17.2	126
34F96	2	26000	16.4	141
34F96	3	26000	16.5	138
33F88	3	26000	17.0	135
33F88	3	30000	17.2	121
34F96	3	30000	16.5	127
34F96	3	34000	16.5	155
33F88	3	34000	17.0	118
33F88	3	38000	17.0	98
34F96	3	38000	16.8	109

Discussion:

As shown on the graph (following page), yield steadily declined as seeding rates increased. This was likely due to drought conditions, which led to an overall plot average yield of 117bu/acre. Under these conditions, the lowest seeding rate produced the highest overall yields. Other studies have shown yield to increase with seeding rate under more optimum moisture conditions. Refer to this and other studies when choosing optimum seeding rates for 2009.


Corn Grain Yield of Two Hybrids as a Function of Seeding Rate, Northumberland County, 2008.
Yield (bu/acre)
165
155
145
135
125
115
105
95
85
75
24000
29000
34000
39000
Seeding Rate (seeds/acre)
33F88
34F96
Linear (33F88)
Poly. (34F96)
R2 = 0.4022
R2 = 0.5555

Evaluation of Poultry Litter Rates and Weed Control in Organic Corn

Cooperators:	**Producer:**	Hillsborough Farm, Todd and Kathy Henley and Family
	Extension:	Keith Balderson, Essex
	NRCS:	Chris Lawrence, State Agronomist

Previous Crop: Soybeans
Soil Type: State fine sandy loam and Tetotum sandy loam
Planting Date: May 7, 2008
Fertilizer: 6 tons vs. 3 tons of litter
Tillage: Pre-plant: Moldboard plow, 1 discing, 1 field cultivator and rolling basket
Weed control: 1 rotary hoeing and 3 cultivations
Hybrid: Great Harvest Organics 61K7
Harvest Date: September 16, 2008

Treatment	% Moisture	Yield
Single Rate Litter Weeded	21.5	139
Single Rate Litter Unweeded	22.0	115
Double Rate Litter Weeded	22.0	160
Double Rate Litter Unweeded	21.9	137
Single Rate Litter Weeded	21.4	138
Single Rate Litter Unweeded	21.8	126
Double Rate Litter Weeded	21.8	174
Double Rate Litter Unweeded	22.2	131
Single Rate Litter Weeded	22.3	144
Single Rate Litter Unweeded	21.3	128
Double Rate Litter Weeded	21.6	145
Double Rate Litter Unweeded	21.8	132
Single Rate Litter Weeded	21.8	128
Single Rate Litter Unweeded	21.7	120
Averages:		
Single Rate Litter Weeded	21.7	137
Single Rate Litter Unweeded	21.7	122
Double Rate Litter Weeded	21.8	160
Double Rate Litter Unweeded	22.0	133
LSD (0.05):	NS	6

Discussion:
Mr. Henley has been producing organic corn for several years. Weed pressure and nitrogen deficiency have been limitations to corn yields. The weeded plots were hand weeded on June 16th. Jimson weed and redroot pigweed were the predominant species in the field, and weed pressure within the rows was moderate. Cultivation did a good job of controlling weeds between the rows. We were surprised that we got such a yield response to weeding (about 20 bushels per acre.) However, in this plot, it took about 25 man hours per acre to weed so the practice probably would not have increased income. We also got a good response to the additional poultry litter, probably a response to the nitrogen more so than the additional phosphate or potash supplied by the extra litter. Addressing nitrogen deficiency in organic corn can be done so by increasing litter rates or growing legume cover crops, such as crimson clover. Addressing weed control issues is more difficult.

Evaluation of Sidedress N Rate and Application Method (Dribbled vs. Injected)

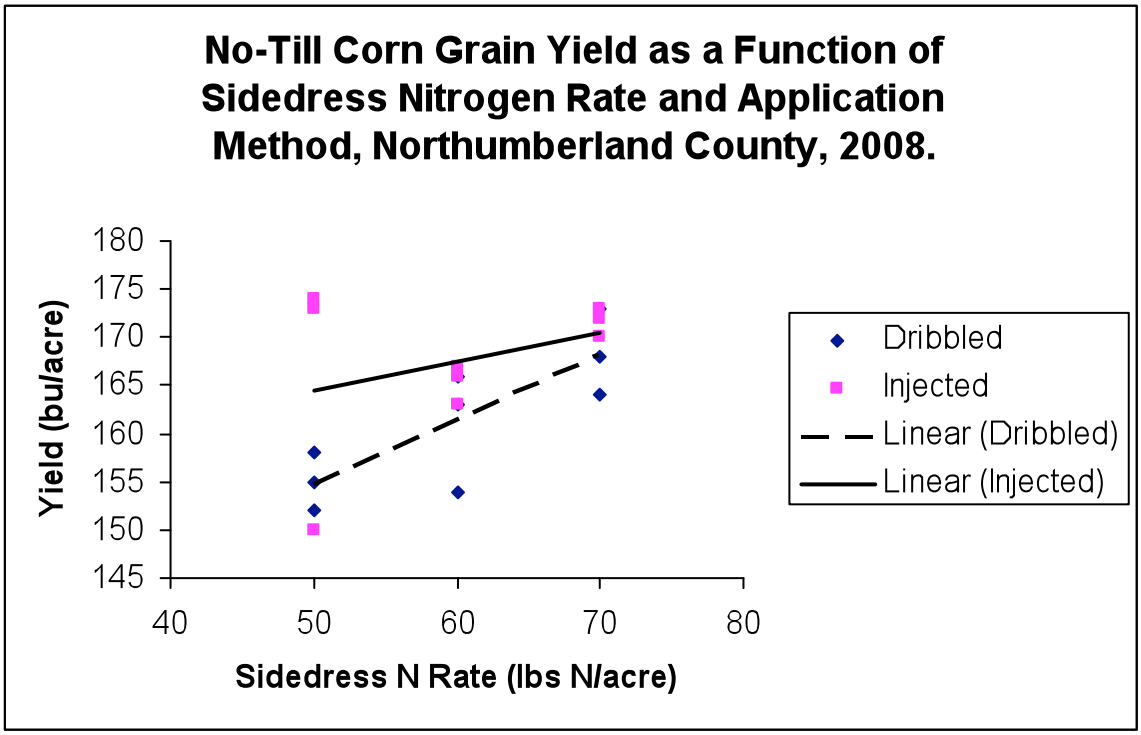
Cooperators: **Producer:** Alan Welch
Extension: Matt Lewis, Northumberland/Lancaster
Previous Crop: Soybeans
Soil Type: Dragston fine sandy loam & Woodstown fine sandy loam
Planting Date: April 19, 2008
Fertilizer: Broadcast: 25-60-80; 50-0-0 w/ burndown
Sidedress: see treatments below
Crop Protection: Bicep, Atrazine, Simazine, 2,4-D, Gramoxone
Hybrid: Rep 1 – Dekalb 61-73RR; Reps 2 & 3 – Hubner 5477RR
Harvest Date: September 19, 2008

Strip	Hybrid	Rep	N Rate	Application Method	Moisture	Yield
1	Dekalb 61-73RR	1	50	Dribble	13.8	158
2	Dekalb 61-73RR	1	50	Knife	13.7	150
3	Dekalb 61-73RR	1	60	Dribble	13.7	154
4	Dekalb 61-73RR	1	60	Knife	14.0	163
5	Dekalb 61-73RR	1	70	Dribble	14.4	168
6	Hubner 5477RR	1	70	Knife	14.2	170
7	Hubner 5477RR	2	60	Knife	14.2	167
8	Hubner 5477RR	2	60	Dribble	14.3	166
9	Hubner 5477RR	2	50	Knife	14.3	174
10	Hubner 5477RR	2	50	Dribble	14.1	155
11	Hubner 5477RR	2	70	Knife	14.1	173
12	Hubner 5477RR	2	70	Dribble	14.2	173
13	Hubner 5477RR	3	50	Knife	14.3	173
14	Hubner 5477RR	3	50	Dribble	14.1	152
15	Hubner 5477RR	3	60	Knife	14.2	166
16	Hubner 5477RR	3	60	Dribble	14.2	163
17	Hubner 5477RR	3	70	Knife	14.2	172
18	Hubner 5477RR	3	70	Dribble	14.3	164
		Average	50	Dribble		155
		Average	60	Dribble		161
		Average	70	Dribble		168
			Overall Average	**Dribble**		**161**
		Average	50	Knife		166
		Average	60	Knife		165
		Average	70	Knife		171
			Overall Average	**Knife**		**168**

Discussion:
As fertilizer prices have increased, interest in increasing nitrogen use efficiency has increased as well. Banding sidedress UAN fertilizer under residue and slightly below the soil surface can potentially reduce both N volatilization to air and immobilization by microorganisms. Several equipment companies make liquid applicators that will place fertilizer in this manner. In this case, a Redball model 1410 12-row applicator was used. Three different N rates were applied – 50lbs, 60lbs (the grower's chosen rate), and 70lbs per acre, both as surface-dribbled and subsurface-banded applications. Treatments were applied on May 30, 2008. For statistical purposes, the experiment was replicated three times.

At every N rate, corn yield was significantly higher where fertilizer was knifed below the soil surface. This is especially interesting because the preceding soybean crop left little residue on the soil surface due to severe drought conditions in 2007. In this experiment, the greatest yield difference between application methods was at the lowest N rate.

We plan to repeat this experiment in 2009 under heavier-residue conditions, so please stay tuned…

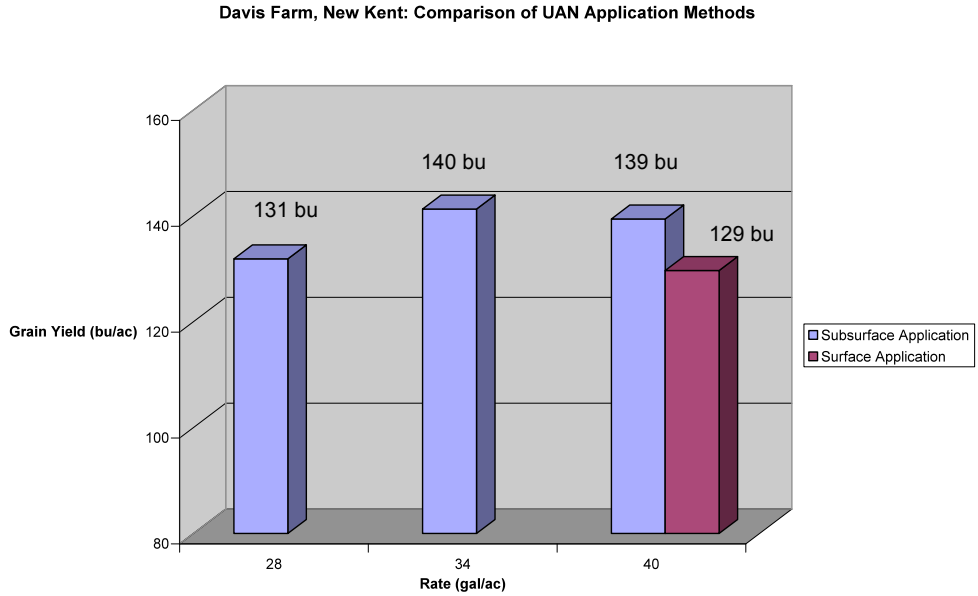


2008 Comparison of Sidedress UAN Application Methods On No-Till Corn
Davis Farm, New Kent

Cooperators:	**Producer:**	Davis Produce, Boogie Davis, New Kent
	Extension:	Paul Davis, New Kent/Charles City Wade Thomason, VA Tech Grain Specialist, Tim Woodward, VA Tech Graduate Student & William Townsend, VA Tech Summer Intern
	Agribusiness:	Colonial SWCD, Jim Wallace and Brian Noyes

Previous Crop: Rye cover crop behind no-till pumpkins
Soil Type: Pamunkey fine sandy loam
Planting Date: May 5, 2008
Fertilizer: Broadcast: 20-40-60 on April 11, 2008
Starter: 40# UAN on May 5, 2008
Sidedress: See treatments, June 4, 2008
Plant Population: 26,000
Crop Protection: *Herbicides:* *Pre-emergence*: 1.8 qt Bicep + 1 qt Simizine + 1 qt Gramoxone + 1 pt 2,4-D on May 1, 2008
Post: 24 oz Liberty on June 15, 2008
Insecticides: *Pre-emergence*: 1.5 oz Karate on May 5, 2008
Hybrids: NK 68-B8
Harvest Date: October 9, 2008

Data below represents four (4) replications per treatment.



Discussion:

With the increasing use of winter annual cover crops ahead of no-till corn planting along with high residue from years of continuous no-till crop production we have questions about how much of the sidedress dribbled nitrogen is being lost to the environment. Between the fresh cover crop absorbing the liquid nitrogen and both the old crop residue and new cover crop biomass needing nitrogen for the micro organisms to break down the residue, we assumed a significant amount is being tied up. On the other hand, we know the fields in long term continuous no-till cropping systems have a higher percentage of organic matter and more nitrogen available to the crops. This study was conducted on a 20 acre field which has not been tilled since 1997, and has had three (3) winter annual rye cover crops added to the rotation most recently. The corn was planted into a heavy rye cover crop residue no-till with 40# N in the starter. Sidedress nitrogen was injected 2" below the surface at 84#, 100# and 120# between the 30" row centers. A single sidedress rate of 120# N was dribbled on as the standard treatment.

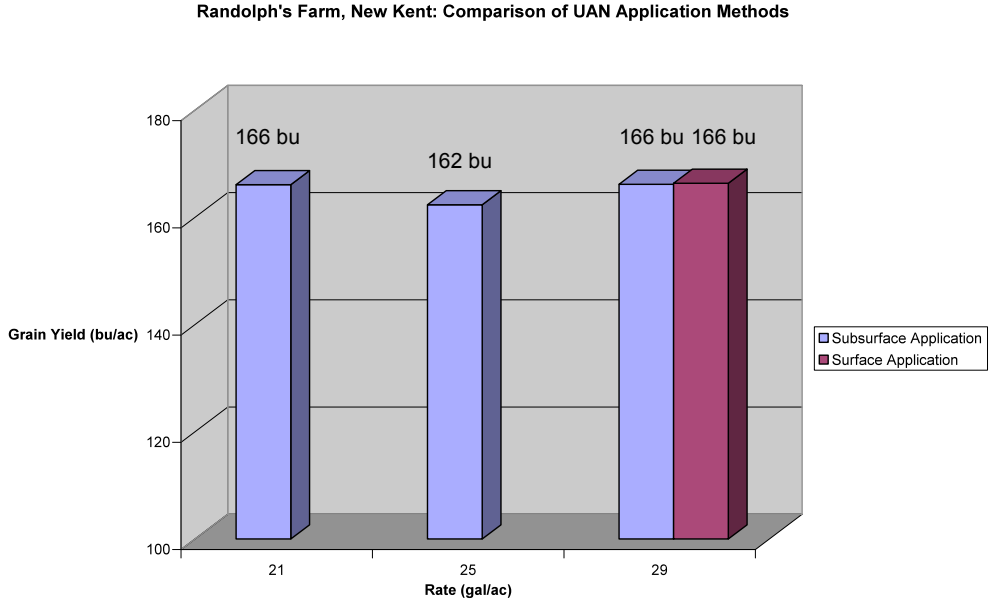
As you can see from the graph the 84# N injected yielded the same as 120# N dribbled (131 vs 129 bu/ac) while the 100# N and 120# N injected rates yielded 10 bushels better 141 and 140 bu/ac. At $0.65/lb nitrogen, the 84# N injection plot saved $23.40/ac (36# N x $0.65). With this type of savings one could pay for a nitrogen injection rig in 3 to 4 years, depending on corn acreage and nitrogen prices.

Please compare this study with other nitrogen injection plots in this publication and across the state. Remember that it takes longer to sidedress your crop with injection equipment because you will only be taking 12 to 16 rows at a time, but the injector tanks hold 1,000 to 1,600 gals. This work will be repeated several times this coming year in different locations.

2008 Comparison of Sidedress UAN Application Methods On No-Till Corn
Shimokin Farms, New Kent

Cooperators:	**Producer:**	Shimokin Farms, Ralph Randolph & Sons, New Kent,
	Extension:	Paul Davis, New Kent/Charles City
		Wade Thomason, VA Tech Grain Specialist,
		Tim Woodward, VA Tech Graduate Student
		& William Townsend, VA Tech Summer Intern
	CSWCD:	Colonial SWCD, Jim Wallace
Previous Crop:	Double crop soybeans	
Soil Type:	Altavista/Dogue, fine sandy loam	
Planting Date:	April 15, 2008	
Fertilizer:	Starter: 50-30-0 + preplant 20-0-80-5S	
	Sidedress: See treatments	
Plant Population:	25,000	
Crop Protection:	*Herbicides:* 22 oz Roundup Ultra + 1.8 qts Bicep + 1 pt 2, 4-D	
Hybrids:	Pioneer 34B99	
Harvest Date:	September 5, 2008	

Data below represents four (4) replications per treatment.

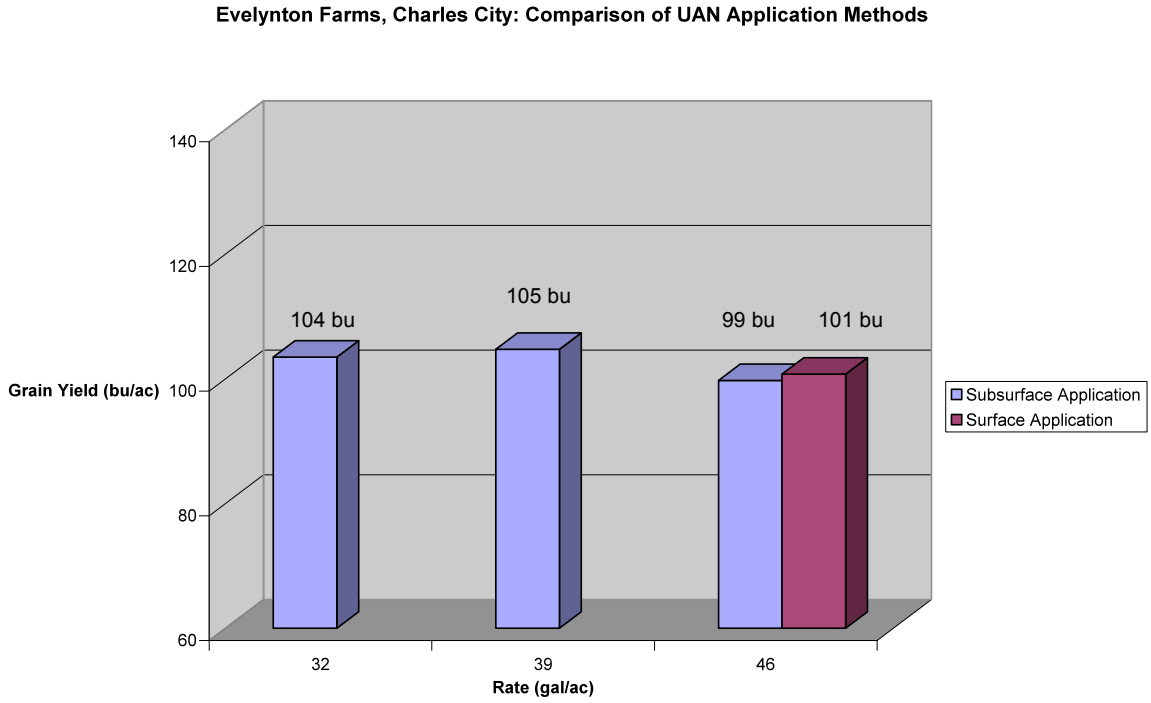


Discussion:
This field has been in continuous no-till production for 7 years with improving soil quality. The increased soil organic matter combined with adequate rainfall during the growing season lead to good corn yields regardless of sidedress nitrogen rate or method. As you see from the graph, 62# N (21 gal) injected yield the same as 88# N (29 gal) injected or dribbled at 166 bu/ac. The injection of nitrogen technology shows promise in improving nitrogen efficiency so please compare these results with other similar studies.

2008 Comparison of Sidedress UAN Application Methods On No-Till Corn
Evelynton Farm, Charles City

Cooperators:	**Producer:**	Archer & Tim Ruffin, Evelynton Farm
	Extension:	Paul Davis, New Kent/Charles City Counties Wade Thomason, VA Tech Grain Specialist, Tim Woodward, VA Tech Graduate Student & William Townsend, VA Tech Summer Intern
	CWCD:	Jim Wallace, Colonial SWCD
	Agribusiness:	
Previous Crop:	Double Crop Soybeans	
Soil Type:	Pamunkey, fine sandy loam	
Planting Date:	April 26, 2008	
Fertilizer:	Broadcast: 0-0-80 , Starter: 70-30-0-.5Zn Sidedress: See treatments below	
Crop Protection:	Herbicides: April 10, 2008 22 oz. Roundup Ultra 3 pts Atrazine 3 pts Princep	
Check Hybrid:	DKC61-73	
Harvest Date:	September 4, 2008	

Data below represents four (4) replications per treatment.



Discussion: As you see from the low yields, dry conditions were a major factor in limiting yields on this very productive corn soil. Under these conditions, we would have expected the 70# N injected to be equal to the higher dribble and injected N rates because of the plant's ability to utilize nitrogen under water stress. Compare with other similar studies in this publication.

Evaluation of Avail® in Starter Fertilizer on Irrigated Corn Plot

Cooperators: **Producer:** Cloverfield Enterprises
Extension: Keith Balderson, Essex

Previous Crop: Soybeans
Soil Type: Molena loamy sand
Planting Date: April 1, 2008
Fertilizer: Starter: 200 lbs. per acre 20-5-0 plus micros with and without Avail
Broadcast: 120 lbs. per acre potash
Broadcast: bio-solids

Treatment	% Moisture	Yield
Check	19.4	183
Avail	19.8	168
Check	19.6	171
Avail	19.8	170
Check	19.9	173
Avail	20.0	171
Check	20.1	177
Avail	20.2	173
Check	20.0	173
Avail	20.3	174
Average: Check	19.8	175
Average: Avail	20.0	171

Discussion:
With the increased cost of phosphate fertilizers, there is much interest in products that will improve phosphorous efficiency. This plot evaluated Avail® Phosphorous Fertilizer Enhancer applied in a starter fertilizer containing 5% phosphate where 10 pounds of phosphate per acre were applied. Bio-solids, which are high in phosphorous, were also applied prior to planting. In such a situation, we would probably not expect to get a yield response, and in this case there was no yield response. We need more data on the use of Avail® on low and/or medium P testing soils. Farmers are encouraged to set up there own test plots to evaluate Avail®.

Evaluation of Counter Insecticide/Nematicide on Irrigated Corn

Cooperators:	**Producer:**	John F. Davis and Tommy Hicks, Camden Farms
	Extension:	Keith Balderson, Essex
Previous Crop:	Soybeans	
Soil Type:	Bojac	
Planting Date:	April 11, 2008	
Fertilizer:	Starter: 40-30-0 plus 2 lbs. of S, .5 lb. Zn, and .25 lb. B per acre	
	Broadcast: 120 lbs. per acre potash	
	Sidedress: 170 lbs. of N and 12 lbs. of S split in 2 applications	
Crop Protection:	8.7 lbs. per acre of Counter in Counter strips	
	1.5 pts per acre Gramoxone Inteon	
	2.5 pts. per acre Lumax, 1 pt. per acre atrazine, 1qt. per acre simazine	
Hybrid:	Augusta 3387Bt with P250	
Harvest Date:	September 19, 2008	

Treatment	% Moisture	Yield
Upper Field – Camden Farms		
Check – Rep 1	18.1	165
Counter – Rep 1	17.3	167
Check – Rep 2	17.6	148
Counter – Rep 2	17.1	149
Check – Rep 3	17.6	165
Counter – Rep 3	17.1	153
Check – Rep 4	17.5	154
Counter – Rep 4	17.6	163
Averages:		
Check	17.7	158
Counter	17.3	158

Treatment	% Moisture	Yield
Lower Field – Camden Farms		
Check – Rep 1	17.1	161
Counter – Rep 1	17.3	166
Check – Rep 2	17.3	155
Counter – Rep 2	17.0	164
Check – Rep 3	17.1	164
Counter – Rep 3	17.0	149
Averages:		
Check	17.2	160
Counter	17.1	160

Discussion:
Mr. Davis has noted some nematode problems on this farm in the past. Nematode assays run from samples taken in late May indicated possible problems with lance nematodes. Due to cool temperatures in May, this corn was slow to grow off. Also, heavy rain in May and early June caused herbicide performance to break down, and tropic croton caused some yield loss. The use of Counter did not increase yields.

No-Till Corn Into Winter Annual Cover Crops

With Different Rates Of Nitrogen In Starter & Sidedress

Cooperators: **Producer:** Davis Produce, New Kent
Extension: Paul Davis, New Kent/Charles City
Wade Thomason, VA Tech Grain Specialist
Tim Woodward, VA Tech Graduate Student
Will Townsend, VA Tech Summer Intern
Agribusiness: Colonial SWCD, James Wallace & Brian Noyes

Previous Crop: Rye vs. Rye + Vetch vs. Vetch

Soil Type: Pamunkey fine sandy loam

Planting Date: May 5, 2008

Fertilizer: Broadcast: 20-40-60 on April 11, 2008
Starter: 0# N vs. 40# N from 30% UAN on May 5, 2008
Sidedress: Injected either 0, 40, 80, 120, 160 # N from 30% UAN on June 4, 2008

Plant Population: 26,000

Crop Protection: *Herbicides:* *Pre-emergence*: 1.8 qt Bicep + 1 qt Simizine + 1 qt Gramoxone + 1 pt 2,4-D on May 1, 2008
Post: 24 oz Liberty on June 15, 2008
Insecticides: *Pre-emergence*: 1.5 oz Karate on May 1, 2008

Hybrids: NK 68-B8

Harvest Date: October 9, 2008

Treatments All Cover Crops Planted November 1, 2007

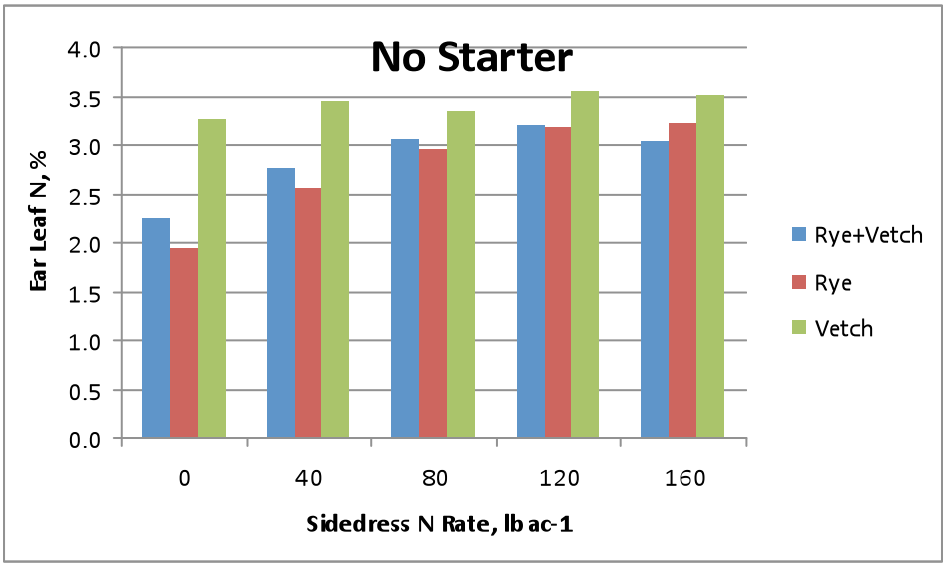
Rye 90#/ac
Rye 56#/ac + Hairy Vetch 10#/ac
Hairy Vetch 25#/ac

All cover crops killed on May 1, 2008 with herbicides, see Page 1

Starter : 40# N from 30% UAN 2" x 2"
No Starter: 0# N

Sidedress: Injected with RedBall 1460 2" below soil in middle of 30" rows on 18" tall corn.
0, 40, 80, 120, 160 # N from 30% UAN

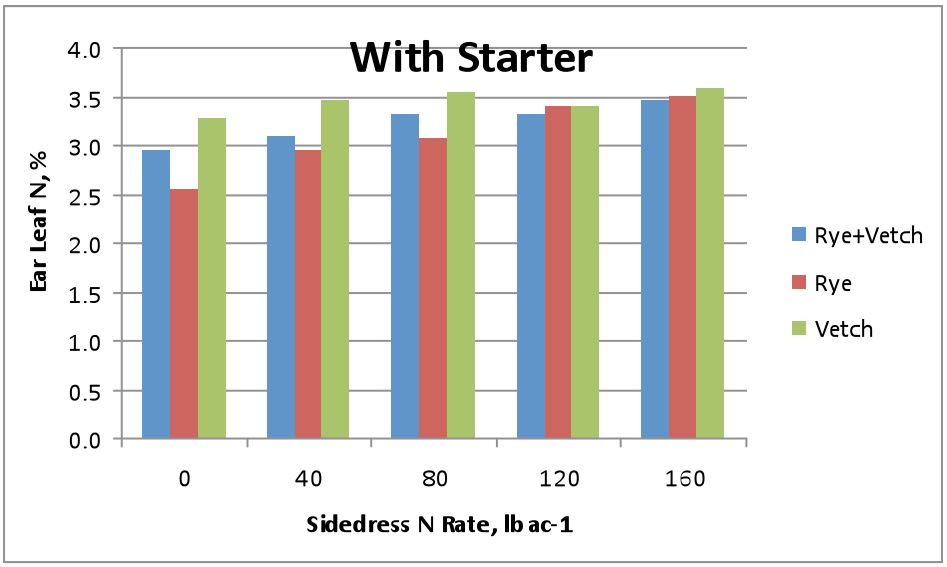
No Starter Ear Leaf % N Graph



Discussion:

The Rye and Rye + Vetch treatments showed nitrogen deficiencies at ear leaf sampling on the 0 and 40# N sidedress treatments. When sampling the Vetch plots, we could not tell by looking at the corn plants if we were in the 0# N or 160# N, all the corn was dark green. As you see from the graph above, the Vetch/Corn with no starter and no sidedress N was equal to 120# sidedress N on both the Rye and Rye + Vetch/Corn treatments.

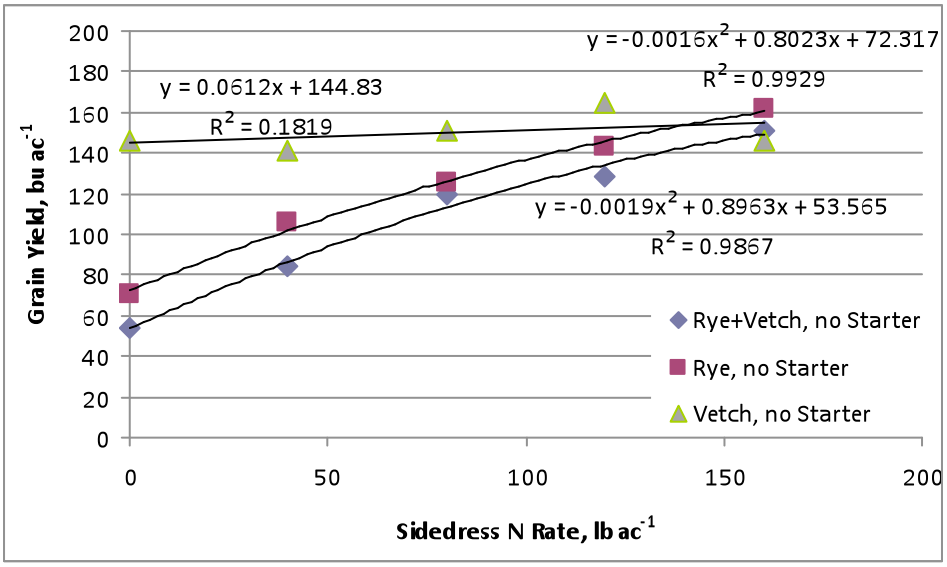
With Starter Ear Leaf % N Graph



Discussion:

The addition of 40# N in the starter significantly increased the % N in ear leaf tissue on the Rye and the Rye + Vetch/Corn at the 0 and 40# N sidedress rates compared to no starter. Whereas, with the Vetch plots there was not any difference between 40# N in starter vs. no starter in 0% N ear leaf tissue samples.

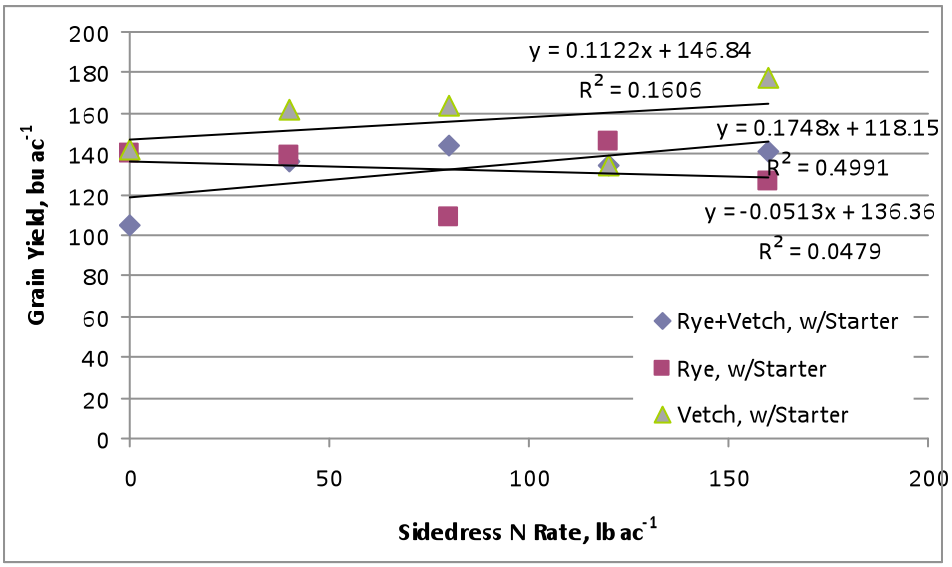
Grain Yield, Bu/Ac With No Starter



Discussion:

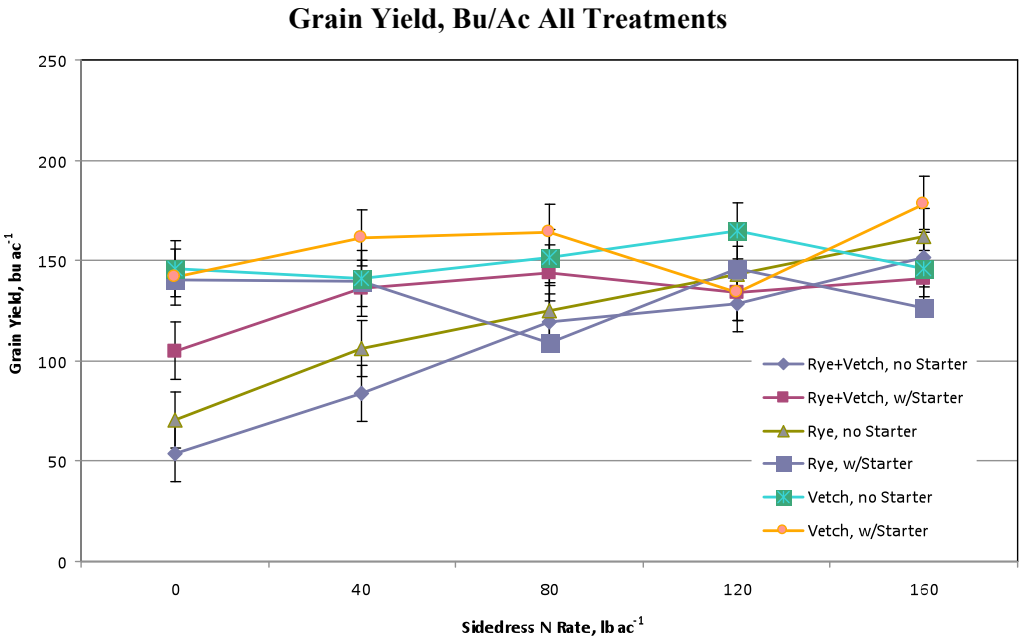
As we saw from the % N ear leaf graphs with no starter, as sidedress nitrogen rates increase so do yields on Rye and Rye + Vetch treatments, but the Vetch treatments start at 143 bu and go up to 160 bu/ac.

Grain Yield Bu/Ac With Starter



Discussion:

Yields were significantly increased at the 0 and 40# sidedress rates on the Rye and Rye + Vetch treatments over the no starter yields at the same sidedress rates.



Discussion:

The bottom line in this year's Cover Crop/No-Till Corn Study is that Vetch can provide enough nitrogen to equal 120# N sidedress in the Rye and Rye + Vetch without using nitrogen in your starter. At $0.85/lb Nitrogen, the Vetch was worth $102/ac, so is establishing, killing and planting into Vetch worth $102/ac?

The 40# N in the starter significantly increased yields in the Rye and Rye + Vetch treatments at the lower sidedress nitrogen rates.

If you are interested in following corn behind Vetch, I would be comfortable planting with 40-60# N in starter with no sidedress. If you are following Rye or Rye + Vetch plant using 40-60# N then following with enough nitrogen to equal 1 lb. N to 1 bu/ac yield expected (i.e., 120 bu expected yield = 40# N in sStarter + 80# N sidedress).

We are repeating this study for 2009.