



## Virginia On-Farm Corn Test Plots 2020

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



The research and demonstration plots discussed in this publication are a cooperative effort by Virginia Cooperative Extension employees, Three Rivers Soil and Water Conservation Districts, the Natural Resources Conservation Service, numerous producers, and many members of the Virginia agribusiness community. The fieldwork and printing of this publication are mainly supported by the Virginia Corn Check-Off Fund through the Virginia Corn Board. This is the twenty-ninth year of this multi-county cooperative project. Further work is planned for 2021. Anyone who would like a copy of this publication should contact their local extension office, who can request a copy from the VCE Northumberland County Extension Office.



Producers interested in becoming involved with on-farm plot work, and those with research topic ideas that they would like to have investigated in future on-farm publications should contact their local extension office for further information.

The authors wish to thank the many producers and agribusinesses that participated in these research and demonstration plots. This publication is made possible by their continued support and cooperation.

*Disclaimer: Commercial products are named in this publication for informational purposes only. Virginia Cooperative Extension does not endorse these products and does not intend discrimination against other products, which also may be suitable.*



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## **General Summary**

These demonstrations and replicated studies provide information that can be used by Virginia corn growers to make better management decisions on their farm. These results should be used along with data from other replicated studies when making decisions. Refer to individual location results for additional detail.

### **Hybrid Comparisons**

Corn hybrid selection remains a challenge for Virginia producers. With more seed companies, and more GMO options and seed treatment packages than ever before, hybrid selection can be a difficult decision. We evaluated early maturity hybrids (107 day RM or less) at five locations, mid maturity hybrids (108-112 day RM) at seven locations, and full season hybrids (113 day RM or more) at nine locations. Hybrids from all three maturity groups were planted at both the 2020 Virginia Ag Expo site located in Northumberland County and Virginia State University. Farmers should use the results compiled from these studies to assist with future hybrid selection; however, they should continue to plant hybrids of multiple maturities to help spread production risk.

### **Cover Crop Evaluation**

We continue to evaluate legume and cover crop options in corn production. Our work continues to demonstrate that legume cover crop options can provide significant nitrogen to the subsequent corn crop. Hairy vetch and Austrian winter pea, in particular, show great promise in increasing Virginia corn yields.

## Early Maturity Hybrid Entries

107 Day RM or Less

Brand	Hybrid Entry	Relative Maturity	Seed Treatment	Genetic Traits
Hubner Seed	H05G716	105	Poncho 500	DroughtGard YGCB
Pioneer Brand DBA - CORTEVA Agriscience	P0339AM	103	Poncho 1250 + Votivo	AM
Dekalb	DKC55-85RIB	105	Acceleron 500	GENVT2PRIB
Channel	205-63 VT2PRIB	105	P250	VT2P
LG Seeds	LG 57C33	107	500	VT2RIB
DynaGro Seed	DG44vc36	104	Poncho + Votivo 500	Double Pro
Augusta Seed	1257	107	A500	3330GTEZ

## Summary of Early Maturity Hybrid Comparisons

107 Day RM or Less

Company	Hybrid	Maturity	Virginia Ag Expo	Caroline	Lancaster	Virginia State University	Chesapeake / Virginia Beach	Average
Hubner Seed	H05G716	105	162.9	127.1	164.2	114.4	88.0	131.3
Pioneer Brand DBA – CORTEVA Agriscience	P0339AM	103	182.8	129.0	166.6	110.9	57.1	129.3
Dekalb	DKC55-85RIB	105	188.4	116.0	172.9	91.7	110.1	135.8
DynaGro	DG44vc36	104	148.0	67.5	166.9	108.4	83.8	114.9
Augusta	1257	107	177.9	88.6	167.8	117.0	51.8	120.6
LG Seeds	LG 57C33	107	198.8	109.2	168.8	132.8	78.4	137.6
Channel	205-63 VT2PRIB	105	170.4					
	<b>Average</b>		175.6	106.2	167.9	112.5	78.2	

\*Overall yield averages were reported for hybrids entered at all locations.





## Caroline County Early Maturity Corn Hybrid Comparison

**Cooperators:** **Producer:** M.S. Terrell and Sons  
**Extension:** M. Broaddus, King George & Caroline

**Previous Crop:** Double Crop Soybean  
**Soil Type:** 24B Suffolk fine sandy loam  
**Tillage:** No-till  
**Planting Date:** May 12, 2020  
**Planting Equipment:** Kinzie 3600  
**Seeding Rate:** 31,034 Seed / Acre  
**Row Spacing:** 30”  
**Fertilizer:** **Preplant:** 20 gal. 24-0-0-3  
**Planting:** 40 lb. N, 1 qt. Boron, 1 qt. Zinc  
**Sidedress:** 35 gal. 28-0-0-5, 2 qt. Boron, 2 qt. Black label Zn  
**Crop Protection:** **Burndown:** 1.5 qt. Vizor ATZ, 1.5 qt. Devour, 8 oz. Salvo, 2 oz. Tombstone  
**Planting:** 1 qt. Glyphosate w/ surfactant, 1 qt. Harness Extra, 1 pt. Atrazine  
**Post** 40 oz. Makize, 3 oz. Status (dry), 3.25 oz. Zidua,  
**Emergence:** 1 qt. Atra v4l  
**Harvest Date:** October 1, 2020  
**Harvest Equipment:** John Deere S780, w/ 12 row corn head

Brand	Hybrid	Maturity (Days)	% Moisture	Yield (bu./A @15.5%)
(Check) Dekalb	DKC62-53RIB	112	20.7	103.3
Pioneer Brand DBA – CORTEVA Agriscience	P0339AM	103	19.7	129.0
Hubner Seed	H05G716	105	19.5	127.1
Dekalb	DKC55-85RIB	105	19.3	116.0
DynaGro	D44VC36RIB	104	20.7	67.5
Augusta	1257-3330GTEZ	107	13.9	88.6
LG Seed	LG57C33STXRIB	107	14.4	109.2

**Discussion:** This particular plot yielded well considering the record heat and very spotty and small rainstorms that mid-Virginia experienced in July and August of 2020.

## Chesapeake / Virginia Beach Early Maturity Corn Hybrid Comparison

**Cooperators:** **Producer:** Frank Brickhouse  
**Extension:** Watson Lawrence, City of Chesapeake & Roy Flanagan, City of Virginia Beach  
**Previous Crop:** Soybeans  
**Soil Type:** Acredale Silt Loam  
**Tillage:** Ridge Type Conventional Tillage  
**Planting Date:** May 15, 2020  
**Planting Equipment:** 7300 JD Maxi Merge Vacuum Planter  
**Seeding Rate:** 32,000 Seed / Acre  
**Row Spacing:** 30”  
**Fertilizer:** **Preplant:** 600 lbs. 15-8-15, 13.5 lbs. S  
**Side-dress:** 30 Gal. 32% (110 lbs. N), 4.8 oz. Excelis Max  
**Crop Protection:** **Burndown:** 1 qt. Roundup, ½ qt. 2,4-D, +1 pt./100 gal. Kingpin Surfactant  
**Post Emergence:** 16 oz. Roundup, 1 qt. Atrazine, 3 oz. Laudis, 1 pt./100 gal. Kingpin Surfactant.  
**Harvest Date:** October 23, 2020  
**Harvest Equipment:** John Deere 9860

Brand	Hybrid	Maturity (Days)	% Moisture	Yield (bu./A @15.5%)
Dekalb	DKC 55-85 RIB	105	16.6	110.1
Check	DKC 65-20	115	17.8	70.5
LG Seeds	LG 57C33STX RIB	107	17.2	78.4
DynaGro	D44VC36 RIB	104	17.2	83.8
Check	DKC 65-20	115	17.3	66.6
Augusta	1257-3330 GTEZ	107	16.7	51.8
Pioneer Brand DBA - CORTEVA Agriscience	P0339AM	103	16.7	57.1
Check	DKC 65-20	115	17.4	64.4
Hubner Seed	H05G716	105	16.2	88.0

**Discussion:** This conventional tilled plot experienced a dry spell in early June that caused very spotty performance among varieties. Varieties reacted very differently under these adverse weather conditions.





## Mid Maturity Hybrid Entries

108-112 Day RM

Brand	Hybrid Entry	Relative Maturity	Seed Treatment	Genetic Traits
Hubner Seed	H09G056	109	Poncho 500	DroughtGard YGCB
Pioneer Brand DBA / CORTEVA Agriscience	P1077AM	110	Poncho 1250 + Votivo	AM
SeedKoz - MorCorn	MC4255	112	Poncho 500	VT2P
Dekalb	DKC62-53RIB	112	Accelaron 500	GENVT2PRIB
Progeny Ag Products	2008	108	1250	VT2P
Channel	210-79 VT2PRIB	110	P250	DG, VT2P
LG Seeds	LG 5590	110	500	VT2RIB
Syngenta NK Seed	1082-5222A	110	Avicta Complete 500 + Vibrance	RR, CB, RW
DynaGro Seed	DG52vc63	112	Poncho + Votivo 500	Double Pro
Augusta Seed	7162	112	C1250	VT2ProRIB
Local Seed Company	LC1289 VT2P	112	Radius 500	VT2P

## Summary of Mid Maturity Hybrid Comparisons

108-112 Day RM

Company	Hybrid	Maturity	Virginia Ag Expo	Westmoreland	Chesapeake/ Virginia Beach	Virginia State University	Southampton	Mecklenburg	Middlesex	Average
Hubner Seed	H09G056	109	186.9	141	89.7	133.7	154.4	95.3	152.0	136.1
Pioneer Brand DBA / CORTEVA Agriscience	P1077AM	110	193.3	157	48.3	93.2	162.7	67.4	164.8	126.7
SeedKoz - MorCorn	MC4255	112	221.9	157	130.3	144.5	140.8	92.2	168.6	150.8
Dekalb	DKC62- 53RIB	112	196.6	100	92.7	144.8	152.5	74.1	161.9	131.8
Progeny Ag Products	2008	108	170.8	156	81.8	115.8	179.9	65.0	156.5	132.3
LG Seeds	LG 5590	110	187.2	154	78.4	120.4	162.0	57.5	190.1	135.7
Syngenta NK Seed	1082- 5222A	110	189.1	133	71.4	130.4	126.6	45.1	174.1	124.2
DynaGro Seed	DG52vc63	112	224.0	107*	98.9	133.1	167.6	70.5	164.7	138.0
Augusta Seed	7162	112	220.2	**	69.3	135.9	151.3	62.5	177.5	136.1
Local Seed Company	LC1289 VT2P	112	219.6	134	105.7	127.8	178.3	58.7	179.8	143.4
Channel	210-79 VT2PRIB	110	172.1							
	<b>Average</b>		198.3	137.7	86.7	128.0	157.6	68.8	169.0	

\*Planted at 50,000 seed / acre. All other hybrids in this plot planted at 30,000 seed / acre.

\*\*Overall yield averages were reported for hybrids entered at all locations. Error at harvest resulted in the loss of yield data for one hybrid at one location. This hybrid was still included in the overall yield average.





## Middlesex County Mid Maturity Corn Hybrid Comparison

<b>Cooperators:</b>	<b>Producer:</b> Crazy Clover Farm – Wayne Burch
	<b>Extension:</b> Robbie Longest, Essex Frank Long, Middlesex
<b>Previous Crop:</b>	Soybeans
<b>Soil Type:</b>	Slagle silt loam, Bethera and Daleville
<b>Tillage:</b>	No-till
<b>Planting Date:</b>	April 23, 2020
<b>Planting Equipment:</b>	John Deere 7200, 12 Row Planter
<b>Seeding Rate:</b>	30,000 Seed / Acre
<b>Row Spacing:</b>	30”
<b>Fertilizer:</b>	<b>Preplant:</b> <b>April 9:</b> 15-50-100 <b>April 17:</b> 30% N (70 lbs./ac)
	<b>Sidedress:</b> <b>June 5:</b> 130 lbs. N/ac
<b>Crop Protection:</b>	<b>Burndown:</b> <b>April 17:</b> 1.5 qt. Vizor ATZ (atrazine + metolachlor) 0.33 qt. Havoc LV Six (2,4-D), 1.25 qt. Devour (paraquat) 0.25 qt. Voyager 80/20
	<b>Post</b> <b>May 28:</b> <b>Emergence:</b> 1qt. Envy Six Max (glyphosate) 1.25 qt. Villain (metolachlor + mesotrione) 1.5 qt. Atra-V4L (atrazine) 1 oz. Vantage
<b>Harvest Date:</b>	September 16, 2020
<b>Harvest Equipment:</b>	Case IH 2588 with 6 Row Header

### Discussion:

Many thanks to Crazy Clover Farm for their cooperation in this On-Farm Corn Hybrid Plot in Middlesex County. Stand counts were taken on June 1, and ranged from 25,300 to 30,000 plants/acre, with an average plot population of 28,000. Growing conditions were cool and wet for this plot during the early season and affected stand uniformity, and drier weather coupled with high heat was experienced during July and August, and was believed to decrease grain yield potential some. This field has historically received cattle manure, and overall plant vigor across hybrids was excellent, and this could be supported at this location with an excellent silage harvest adjacent to the test plot. Test weights ranged from 52.0 – 56.5 lb./bu., and averaged 54.1 lb./bu. Lower test weights and some grain sprouting was observed. This was most likely a result of frequent rainfall during the harvest period, after grain had begun to dry down. Use these results and results from other replicated yield data when considering hybrid choice for 2021.

## Middlesex County Mid Maturity Corn Hybrid Comparison

Brand	Hybrid	Maturity (Days)	% Moisture	Yield (bu./A @15.5%)
<b>Check:</b> Pioneer Brand DBA / CORTEVA Agriscience	0843AM	108	19.8	140.5
Hubner Seed	H09G056	109	22.4	152.0
Pioneer Brand DBA / CORTEVA Agriscience	P1077AM	110	21.2	164.8
SeedKoz – MorCorn	MC4255	112	22.0	168.6
Dekalb	DKC62-53RIB	112	20.7	161.9
Progeny Ag Products	2008	108	19.6	156.5
<b>Check:</b> Pioneer Brand DBA / CORTEVA Agriscience	0843AM	108	19.6	150.6
LG Seeds	LG5590	110	20.7	190.1
Syngenta NK Seed	1082-5222A	110	22.5	174.1
DynaGro Seed	DG52vc63	112	21.9	164.7
Augusta Seed	7162	112	21.6	177.5
Local Seed Company	LC1289 VT2P	112	21.6	179.8
<b>Check:</b> Pioneer Brand DBA / CORTEVA Agriscience	0843AM	108	21.2	181.6
<b>AVERAGE</b>			<b>21.1</b>	<b>166.4</b>
AVERAGE CHECK			20.2	157.6

## Westmoreland County Mid Maturity Corn Hybrid Comparison

<b>Cooperators:</b>	<b>Producer:</b> F.F. Chandler, Jr. and Louis Chandler
	<b>Extension:</b> Stephanie Romelczyk, ANR – Westmoreland Trent Jones, ANR – Northumberland/Lancaster Robbie Longest, ANR - Essex Skylar Swann, VCE Intern
<b>Previous Crop:</b>	Soybeans
<b>Soil Type:</b>	Savannah loam and Kempsville loam
<b>Tillage:</b>	No-till
<b>Planting Date:</b>	April 22, 2020
<b>Planting Equipment:</b>	Case IH 950 Cyclo Planter
<b>Seeding Rate:</b>	30,000 (see note in discussion)
<b>Row Spacing:</b>	30”
<b>Fertilizer:</b>	<b>Preplant:</b> 40-25-70-5S broadcast
	<b>Planting:</b> 40-20-0 w/ S, B, and Zn
	<b>Sidedress:</b> 120-0-0-15S
<b>Crop Protection:</b>	<b>Preplant:</b> 1.5 qt. Acuron, 1.5 qt. Princep
	<b>Post</b> 3.6 pt. Halex, 1 qt. Atrazine, ½ gal. Black Label Zn,
	<b>Emergence:</b> 2 oz. Radiate
<b>Harvest Date:</b>	October 15, 2020
<b>Harvest Equipment:</b>	John Deere 9400

**Discussion:** Yields were good considering the year. The first four varieties were accidentally planted at a population of 50,000. There was enough seed to replant three of the four varieties at the farmer’s standard population of 30,000. Seed and ear quality improved as harvest continued across the field. A weigh wagon error caused the weight of Augusta 7162 to not be taken.

Total rainfall between planting date and harvest date was over 25.46 inches. Due to COVID-19 and Extension office closures, some weather data was not recorded. This has been demarcated by a +/- (April: rainfall not recorded, May: 0.91 in +/-, June: 3.26 in +/-, July: 1.21 in +/-, August: 11.13 in, September: 6.64 in, October: 2.31 in).

## Westmoreland County Mid Maturity Corn Hybrid Comparison

<b>Brand</b>	<b>Hybrid</b>	<b>Maturity (Days)</b>	<b>% Moisture</b>	<b>Yield (bu./A @15.5%)</b>
Dekalb	DKC62-53RIB*	112	23.3	57
Pioneer Brand DBA / CORTEVA Agriscience	P1077AM*	110	20.8	119
DynaGro	DG52vc63*	112	22.3	107
Hubner Seed	H09G056*	109	24.7	105
Dekalb	DKC62-53RIB	112	21.0	100
Pioneer Brand DBA / CORTEVA Agriscience	P1077AM	110	18.5	157
Hubner Seed	H09G056	109	18.7	141
Local Seed Company	LC1289 VT2P	112	18.9	134
Syngenta NK Seed	1082-5222A	110	18.7	133
Augusta Seed	7162	112	18.7	-
Progeny Ag Products	2008	108	16.4	156
LG Seeds	5590	110	17.4	154
SeedKoz - MorCorn	MC4255	112	18.7	157

\*Hybrid planted at higher seeding rate. See discussion above for detailed explanation.

## Brunswick County Mid Maturity Corn Hybrid Comparison

**Cooperators:**  
**Producer:** Ryan Parrish  
**Extension:** Lindy Fimon, Lunenburg & Taylor Clarke, Mecklenburg

**Previous Crop:** Soybeans  
**Soil Type:** Appling-Mattaponi Complex  
**Tillage:** No-Till  
**Planting Date:** April 17, 2020  
**Planting Equipment:** Kinze 8 Row Planter  
**Seeding Rate:** 28,000 Seed / Acre  
**Row Spacing:** 30”  
**Fertilizer:** **Preplant:** 60-50-100-15S, Titan and Wolf Trax Micro  
**Sidedress:** 375 lb. 40-0-0-7S  
**Crop Protection:** **Burndown:** 1 qt. Roundup, 2 qt. Bicep, 1 qt. Atrazine,  
 1 gal. Extract  
**Post** 2.5 oz. Laudis, 1qt. Roundup, 3 qt. Black Label Z  
**Emergence:**  
**Harvest Date:** October 9, 2020  
**Harvest Equipment:** John Deere S660 with 8 Row Head

Brand	Hybrid	Maturity (Days)	% Moisture	Yield (bu./A @15.5%)
CHECK	DK C70-27RIB	120	18.0	99.0
Hubner Seed	H09G056	109	16.2	95.3
Pioneer Brand DBA / CORTEVA Agriscience	P1077AM	110	17.0	67.4
SeedKoz - MorCorn	MC4255	112	18.1	92.2
Dekalb	DKC62-53RIB	112	17.0	74.1
Progeny Ag Products	Y2008	108	17.1	64.9
CHECK	DK C70-27RIB	120	17.2	60.7
LG Seeds	LG 5590	110	17.8	57.5
Syngenta NK Seeds	1082-5222A	110	18.2	45.1
DynaGro Seed	DG52vc63	112	18.0	70.5
Augusta Seed	7162	112	16.7	62.5
Local Seed Company	LC1289 VT2P	112	17.8	58.7
CHECK	DK C70-27RIB	120	17.6	30.9

**Discussion:** Dry period severely impacted the performance of this plot. Field is normally in a tobacco/small grain-soybean double crop rotation but was not needed for tobacco this year, therefore extremely challenging yield environment. Only second season since tillage.

## Southampton County Mid Maturity Corn Hybrid Comparison

**Cooperators:**                    **Producer:** D&J Farms, Dennis & Denton Spruill  
    **Extension:** Joshua Holland, Southampton

**Previous Crop:** Soybeans  
**Soil Type:** Slagle, Fine Sandy Loam  
**Tillage:** Strip-Till  
**Planting Date:** May 8, 2020  
**Planting Equipment:** KMC 8-Row Strip-Till Rig, John Deere 7730 Max Emerge Planter  
**Seeding Rate:** 28,000 Seed / Acre  
**Row Spacing:** 36”  
**Fertilizer:**                    **Preplant:**                    340 lb. 13-0-22  
    **Planting:**                    12 gal. 17-17-0 2x2 band  
    **Sidedress:**                    120 Units 30-0-0  
**Crop Protection:**            **Burndown:**                    32 oz. Roundup, 1 qt. 2,4-D, 2 oz. Valor  
    **Post Emergence:**            3.6 qt. Halex GT, 2 qt. Atrazine  
**Harvest Date:** September 28, 2020  
**Harvest Equipment:** John Deere 9760 Grain Combine

Brand	Hybrid	Maturity (Days)	% Moisture	Yield (bu./A @15.5%)
Hubner Seed	H09G056	109	18.8	154.4
Pioneer Brand DBA / CORTEVA Agriscience	P1077AM	110	19.1	162.7
SeedKoz - MorCorn	MC4255	112	19.2	140.8
Dekalb	DKC62-53RIB	112	18.6	152.5
Progeny Ag Products	2008	108	19.1	179.9
LG Seeds	LG 5590	110	19.5	162.0
Syngenta NK Seed	1082-5222A	110	18.7	126.6
DynaGro Seed	DG52VC63	112	18.4	167.6
Augusta Seed	7162	112	19.0	151.3
Local Seed Company	LC1289 VT2P	112	20.1	178.3

**Discussion:** Conditions in the field were favorable at planting and shortly thereafter. Planting was delayed into May due to cool/wet soil conditions and likely had an impact on top-end yield potential. July brought extremely hot/dry weather that had a significant effect on plant health and grain-fill. Given these conditions, yields remained favorable across all varieties.

## City of Chesapeake/Virginia Beach Mid Maturity Corn Hybrid Comparison

**Cooperators:**                   **Producer:** Frank Brickhouse  
**Extension:** Watson Lawrence, Chesapeake  
Roy Flanagan, Virginia Beech

**Previous Crop:** Soybeans  
**Soil Type:** Acredale Silt Loam  
**Tillage:** Ridge Type Conventional Tillage  
**Planting Date:** May 15, 2020  
**Planting Equipment:** 7300 JD Maxi Merge Vacuum Planter  
**Seeding Rate:** 32,000 Seeds / Acre  
**Row Spacing:** 30”  
**Fertilizer:**                   **Preplant:** 600 lbs. 15-8-15, 13.5 lbs. S  
**Side-dress:** 30 Gal. 32% (110 lbs. N), 4.8 oz. Excelis Max

**Crop Protection:**           **Burndown:** 1 qt. Roundup, ½ qt. 2, 4-D,  
1 pt. / 100 gal. Kingpin Surfactant  
**Post** 16 oz. Roundup, 1 qt. Atrazine, 3 oz Laudis,  
**Emergence:** 1 pt./100 gal. Kingpin Surfactant

**Harvest Date:** October 23, 2020  
**Harvest Equipment:** John Deere 9860

**Discussion:** This conventional tilled plot experienced a dry spell in early June that caused very spotty performance among varieties. Varieties reacted very differently under these adverse weather conditions.

## City of Chesapeake/Virginia Beach Mid Maturity Corn Hybrid Comparison

<b>Brand</b>	<b>Hybrid</b>	<b>Maturity (Days)</b>	<b>% Moisture</b>	<b>Yield (bu./A @15.5%)</b>
Progeny Ag Products	PGY 2008 VT2P	108	17.4	81.8
Check	DKC-65-20	115	17.4	88.2
Local Seed Company	LG5590ZT2 RIB	110	16.9	78.4
Dekalb	DKC 62-53 RIB	112	17.1	92.7
Check	DKC 65-20	115	18.1	66.3
Augusta Seed	7162 VT2PRO RIB	112	17.1	69.3
Hubner Seed	H09G056	109	16.6	89.7
Check	DKC 65-20	115	18.0	48.9
Syngenta NK Seed	NK1082-5222A	110	16.7	71.4
DynaGro Seed	D52VC63	112	16.7	98.9
Check	DKC 65-20	115	17.6	63.9
Local Seed Company	LC1289 VT2P	112	17.0	105.7
Pioneer Brand DBA / CORTEVA Agriscience	P1077 AM	110	16.6	48.3
Check	DKC 65-20	115	17.3	55.7
Dekalb	DKC 65-99	115	16.9	110.1
SeedKoz - MorCorn	MC 4255 VT2P	112	16.7	130.3

## Full Maturity Hybrid Entries

113 Day RM or More

Brand	Hybrid Entry	Relative Maturity	Seed Treatment	Genetic Traits
Hubner Seed	H4763RC2P	115	Poncho 500	YGCB
Pioneer Brand DBA / Corteva Agriscience	P1870AM	118	Poncho 1250 + Votivo	AM
SeedKoz - MorCorn	MC4725	117	Poncho 500	VT2P
Dekalb	DKC67-44RIB	117	Acceleron 500	GENVT2PRIB
Progeny Ag Products	2012	113	1250	VT2P
Channel	215-60 TRERIB	115	P250	TRECEPTA
LG Seeds	LG 66C32	116	500	VT2RIB
Syngenta NK Seed	1573-5222	115	Avicta Complete 500 + Vibrance	RR, CB, RW
DynaGro Seed	DG58vc65	118	Poncho + Votivo	Double Pro
Augusta Seed	4467	117	C1250	3220GT
Local Seed Company	LC1577 V2P	115	Radius 500	VT2P

## Summary of Full Maturity Hybrid Comparisons

113 Day RM or More

Company	Hybrid	Maturity	Virginia Ag Expo	Prince George	Culpeper	Virginia State University	Mecklenburg 1	Mecklenburg 2	Southampton	Dinwiddie	Essex	Average
Hubner Seed	H4763RC2P	115	234.3	183.9	219.0	156.0	147.5	27.7	166.4	107.8	171.7	157.1
Pioneer Brand DBA / CORTEVA Agriscience	P1870AM	118	188.7	177.4	210.1	101.4	122.7	14.8	148.7	82.5	177.0	135.9
SeedKoz - MorCorn	MC4725	117	188.9	191.6	203.0	137.2	137.7	28.0	157.0	89.6	178.7	145.7
Dekalb	DKC67-44RIB	117	228.0	194.1	207.0	120.7	135.2	48.7	159.8	93.0	180.1	151.8
Progeny Ag Products	2012	113	218.3	182.4	218.1	143.0	121.1	51.0	164.4	86.3	167.9	150.3
LG Seeds	LG 66C32	116	186.5	185.7	223.7	130.3	137.1	40.8	169.3	86.8	173.0	148.1
Syngenta NK Seed	1573-5222	115	168.4	172.5	197.5	104.0	115.6	24.0	162.9	76.8	146.5	129.8
DynaGro Seed	DG58vc65	118	217.4	188.1	198.8	120.1	135.1	42.0	177.7	83.6	164.9	147.5
Augusta Seed	4467	117	188.2	160.0	222.8	94.5	113.4	16.3	168.2	76.7	170.5	134.5
Local Seed Company	LC1577 V2P	115	190.3	180.8	196.8	124.1	128.4	62.7	171.9	89.9	197.0	149.1
Channel	215-60 TRERIB	115	193.5									
		<b>Average</b>	<b>200.2</b>	<b>181.7</b>	<b>209.7</b>	<b>123.1</b>	<b>129.4</b>	<b>35.6</b>	<b>164.6</b>	<b>87.3</b>	<b>172.7</b>	

\*Overall yield averages were reported for hybrids entered at all locations.



## Virginia State University Full Maturity Corn Hybrid Comparison

**Cooperators:**                      **Extension:** Ruddy Grammar & Mack West, VSU-Randolph Farm;  
Glenn F. Chappell, II, Virginia State University

**Previous Crop:**                      Full Season Soybeans  
**Soil Type:**                              Tetotum  
**Tillage:**                                Rip – Strip Tillage  
**Planting Date:**                      April 28, 2020  
**Seeding Rate:**                      24,625 Seeds / Acre  
**Row Spacing:**                        30”  
**Fertilizer:**                            **Preplant:**                      April 22 – 25-50-150 Granular (500 lb. 5-10-30)  
**Sidedress:**                            **June 10 - 175-0-0 30% UAN**  
**Crop Protection:**                    **Burndown:**                    April 17 - 1 qt. Graxomone SL  
**April 29 - 2 qt. Bicept II Mag., 1 qt. Princep 4L**  
**Harvest Date:**                        October 7, 2020  
**Harvest Equipment:**                John Deere 9560 STS

Brand	Hybrid	Maturity (Days)	Moisture %	Yield (bu./A @15.5%)	% of Check
Dekalb - check	67-44RIB	117	17.7	97.3	-----
Hubner Seed - Bayer	H4763RC2P	115	16.8	156.0	149.6
Pioneer Brand DBA - CORTEVA Agriscience	P1870AM	118	20.1	101.4	97.2
SeedKoz - MorCorn	MC4725	117	19.1	137.2	131.6
Progeny Ag Products	2012	113	16.1	143.0	137.1
LG Seeds	LG 66C32	116	18.3	130.3	124.9
Syngenta NK Seed	1573-5222	115	18.7	104.0	99.7
DynaGro Seed	DG58vc65	118	17.9	120.1	115.2
Augusta Seed	4467	117	18.9	94.5	90.6
Local Seed Company	LC1577 V2P	115	18.5	124.1	119.0
Dekalb - check	67-44RIB	117	18.9	111.3	-----

**Discussion:** No irrigation was applied. Site specific rainfall data was not available for the Virginia State University location but information available via Weather Underground.com from the Richmond Airport showed the following rainfall totals by month: May – 3.6”, June – 4.99”, July - 2.44”, and August – 15.90”. A majority of the July rainfall (1.28”) was in one event over July 1 and 2 with the rest of the month mostly hot and dry. The “% of Check” is calculated by dividing an individual hybrid's yield by the average of the two closest check hybrids and multiplying by 100.



## Southampton County Full Maturity Corn Hybrid Comparison

**Cooperators:**                    **Producer:** D&J Farms, Dennis & Denton Spruill  
**Extension:** Joshua Holland, Southampton

**Previous Crop:** Soybeans  
**Soil Type:** Slagle, Fine Sandy Loam  
**Tillage:** Strip-Till  
**Planting Date:** May 8, 2020  
**Planting Equipment:** KMC 8-Row Strip-Till Rig, John Deere 7300 MaxEmerge Planter  
**Seeding Rate:** 28,000 Seed / Acre  
**Row Spacing:** 36”  
**Fertilizer:**                    **Preplant:**                    340 lbs. 13-0-22  
    **Planting:**                    12 gal. 17-17-0 2x2 band  
    **Sidedress:**                120 units 30-0-0  
**Crop Protection:**        **Burndown:**                32 oz. Roundup, 1 qt. 2,4-D, 2 oz. Valor  
    **Post Emergence:**        3.6 qt. Halex GT, 2 qt. Atrazine  
**Harvest Date:**                September 28, 2020  
**Harvest Equipment:**        John Deere 9760 Grain Combine

Brand	Hybrid	Maturity (Days)	% Moisture	Yield (bu./A @15.5%)
Hubner Seed	H4763RC2P	115	20.1	166.4
Pioneer Brand DBA / CORTEVA Agriscience	P1870AM	118	20.6	148.7
SeedKoz - MorCorn	MC4725	117	20.1	157.0
Dekalb	DKC67-44RIB	117	21.2	159.8
Progeny Ag Products	2012	113	21.0	164.4
LG Seeds	LG 66C32	116	21.3	169.3
Syngenta NK Seed	1573-5222	115	21.2	162.9
DynaGro Seed	DG58VC65	118	20.7	177.7
Augusta Seed	4467	117	20.3	168.2
Local Seed Company	LC1577 VT2P	115	20.1	171.9

**Discussion:** Conditions in the field were favorable at planting and shortly thereafter. Planting was delayed into May due to cool/wet soil conditions and likely had an impact on top-end yield potential. July brought extremely hot/dry weather that had a significant effect on plant health and grain-fill. Given these conditions, yields remained favorable across all varieties.

## Essex County Full Maturity Corn Hybrid Comparison

<b>Cooperators:</b>	<b>Producer:</b> Brandon Farms
	<b>Extension:</b> Robbie Longest, VCE-Essex
	<b>Industry:</b> Participating seed companies
<b>Previous Crop:</b>	Soybeans
<b>Soil Type:</b>	Pamunkey loam 70%, Augusta 20%, Tetotum loam 10%
<b>Tillage:</b>	No-till
<b>Planting Date:</b>	April 22, 2020
<b>Planting Equipment:</b>	John Deere 8300 tractor and John Deere 1780 6 row planter
<b>Seeding Rate:</b>	29,500 Seed / Acre
<b>Row Spacing:</b>	30"
<b>Fertilizer:</b>	<b>Preplant:</b> 39-46-60
	<b>Planting:</b> 15-0-0
	<b>Sidedress:</b> Sidedress 1: 46-0-0 Sidedress 2: 75-0-0
<b>Crop Protection:</b>	<b>Burndown:</b> 1 qt. Roundup 6 Max, 1 qt. /100 gal. Traverse D, 1 qt. Atrazine, 1 qt. Princep 4L
	<b>Planting:</b> Ethos 6 oz (In-furrow)
	<b>Post Emergence:</b> 1 qt. Roundup 6 max, 1 qt. / 100 gal. Traverse D, 1.25 qt. Villain, 8 oz. Diablo 1 qt. Atrazine
<b>Harvest Date:</b>	October 7, 2020
<b>Harvest Equipment:</b>	John Deere S670 with 6 Row Header

**Discussion:** Many thanks to Brandon Farms for their cooperation in this On-Farm Corn Hybrid Plot in Essex County. Stand counts (taken May 21) ranged from 28,333 to 31,000, with a plot average population of 29,400 plants/ac. There was a late freeze (May 10<sup>th</sup>) that impacted this plot, but regrowth occurred. However, the crops development was pushed back several weeks. Total rainfall from planting to harvest was 38.38 inches (April: 2.92, May: 1.92, June: 4.52, July: 5.06, August: 15.75, September: 8.18, October: 0.03). This plot experienced a hot and dry spell during peak pollination and the days following in July and early August. The daytime high temperature was over 90°F every day in July with the exception of July 1 and 31, and there were 9 days in which the daytime high temperature exceeded 100°F. Nighttime temperatures were above 70°F many nights in the month of July at this location. Despite the heat and moisture stress during this period, yields in this plot were very good. Test weights ranged between 57.7 and 61.7 lb/bu, averaging 60.1 lb/bu. Use these results and results from other replicated yield data when considering hybrid choice for 2021.

\*This plot did have some nematode pressure, and nematode assay samples collected in-season (June 8) and at harvest (Oct. 20) found numbers of juvenile root knot, lesion, and stubby root nematode at high enough levels to cause yield loss. The attached yield map (Pg. 30) shows the diagonal section that spanned across all of the hybrid plots.

## Essex County Full Maturity Corn Hybrid Comparison

<b>Brand</b>	<b>Hybrid</b>	<b>Maturity (Days)</b>	<b>% Moisture</b>	<b>Yield (bu./A @15.5%)</b>
<b>Check:</b> Axis Seed	64B28RIB	114	17.0	185.6
Local Seed Company	LC1577 V2P	115	16.7	197.0
Augusta Seed	4467	117	19.4	170.5
DynaGro Seed	DG58vc65	118	18.0	164.9
Syngenta NK Seed	1573-5222	115	17.7	146.5
LG Seeds	LG66C32	116	18.0	173.0
<b>Check:</b> Axis Seed	64B28RIB	114	17.3	176.3
Progeny Ag Products	2012	113	17.8	167.9
Dekalb	DKC67-44RIB	117	17.5	180.1
SeedKoz-MorCorn	MC4725	117	18.5	178.7
Pioneer Brand DBA / CORTEVA Agriscience	P1870AM	118	18.9	177.0
Hubner Seed - Bayer	H4763RC2P	115	18.3	171.7
<b>Check:</b> Axis Seed	64B28RIB	114	17.2	190.1
<b>AVERAGE</b>			<b>17.9</b>	<b>175.3</b>
<b>AVERAGE CHECK</b>			<b>17.2</b>	<b>184.0</b>

## Essex County Full Maturity Corn Hybrid Comparison

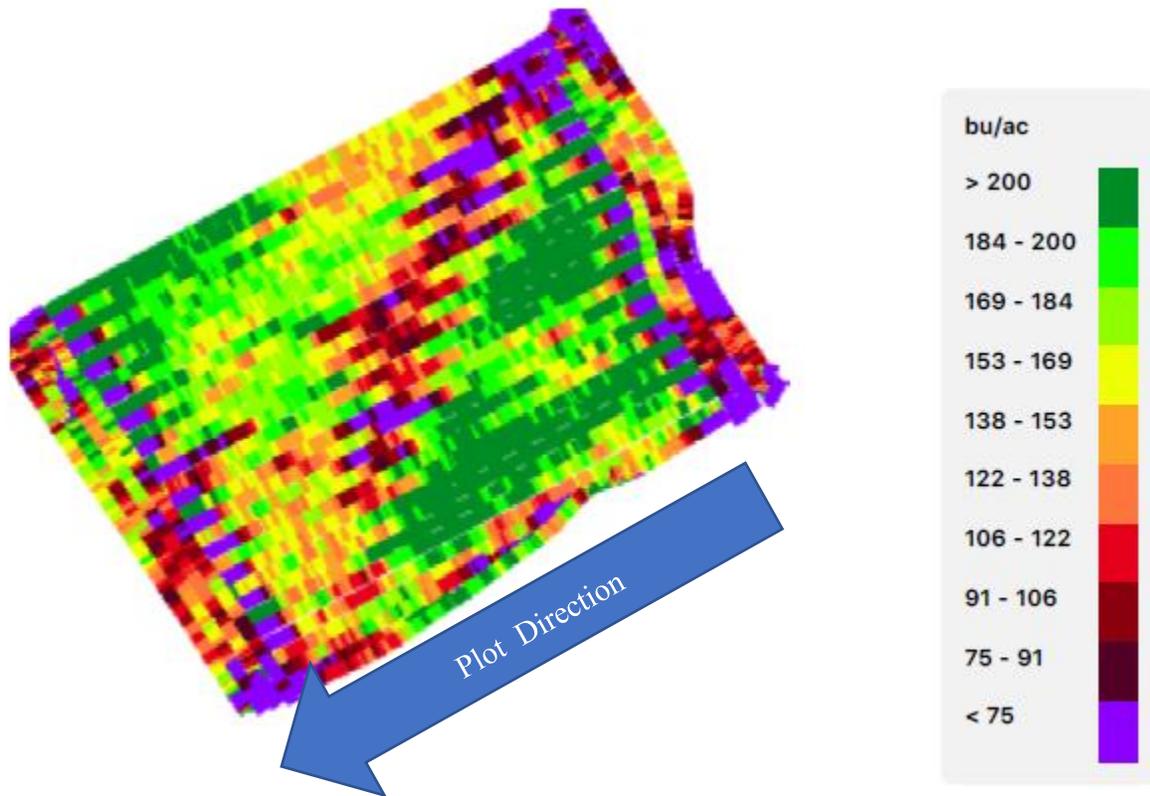


Figure 1: *Climate Fieldview* yield map of the Essex Full Maturity On-Farm Corn Hybrid Plot. Please note the diagonal area across the plots from top right to bottom left is where nematode populations were found in sampled soil at levels high enough to impact growth and development of the crop in these areas of the field.

## Brunswick County Full Maturity Corn Hybrid Comparison

**Cooperators:**                    **Producer:** Ryan Parrish  
    **Extension:** Lindy Fimon, Lunenburg,  
    Taylor Clarke, Mecklenburg

**Previous Crop:** Soybeans  
**Soil Type:** Appling-Mattaponi Complex  
**Tillage:** No-Till  
**Planting Date:** April 17, 2020  
**Planting Equipment:** Kinze 8 Row  
**Seeding Rate:** 28,000 Seed / Acre  
**Row Spacing:** 30”  
**Fertilizer:**                    **Preplant:** 60-50-100-15S, Titan and Wolf Trac Mirco  
    **Sidedress:** 375 lbs. 40-0-0-7S  
**Crop Protection:**            **Burndown:** 1qt. Roundup, 2qts. Bicep, 1 qt. Atrazine,  
    1gal. Extract  
    **Post Emergence:** 2.5oz Laudis, 1qt Roundup, 3qt Black Label Z  
**Harvest Date:** October 9, 2020  
**Harvest Equipment:** John Deere S660 with 8 row head

Brand	Hybrid	Maturity (Days)	% Moisture	Yield (bu./A @15.5%)
CHECK	DK C70-27RIB	120	17.6	30.9
Hubner Seed - Bayer	H4763RC2P	115	20.5	27.7
Pioneer Brand DBA/ Corteva Agriscience	P1870AM	118	25.1	14.8
SeedKoz - MorCorn	MC4725	117	21.0	28.0
Dekalb	DKC67-44RIB	117	20.3	48.6
Progeny Ag Products	Y2012	113	17.8	51.0
CHECK	DK C70-27RIB	120	17.8	39.4
LG Seeds	LG 66C32	116	17.7	40.8
Syngenta NK Seeds	1573-5222	115	18.4	24.0
DynaGro Seed	DG58vc65	118	17.0	42.0
Augusta Seed	4467	117	17.4	16.3
Local Seed Company	LC1577 V2P	115	17.4	62.7
CHECK	DK C70-27RIB	120	18.2	64.6

**Discussion:** Dry period severely impacted the performance of this plot. Field is normally in a tobacco/small grain-soybean double crop rotation but was not needed for tobacco this year, therefore extremely challenging yield environment. Only second season since tillage.

## Lunenburg/Mecklenburg County Full Maturity Corn Hybrid Comparison

**Cooperators:**                    **Producer:** Horseshoe Farm-Mark and Lindsay Warren  
**Extension:** Lindy Fimon, Lunenburg, &  
    Taylor Clarke, Mecklenburg

**Previous Crop:** Soybeans  
**Soil Type:** Appling Sandy Loam  
**Tillage:** No-Till  
**Planting Date:** April 23, 2020  
**Planting Equipment:** JD 1870 6 Row  
**Seeding Rate:** 28,000 Seed / Acre  
**Row Spacing:** 30”  
**Fertilizer:**                    **Preplant:**                    2 tons Chicken Litter, 50 Units N at Burndown  
    **Sidedress:**                    300 lbs. 21-0-0 24S  
**Crop Protection:**            **Burndown:**                    Roundup and Bicep  
    **Post Emergence:** None  
**Harvest Date:** October 21, 2020  
**Harvest Equipment:** John Deere S660 Six Row Head

Brand	Hybrid	Maturity (Days)	% Moisture	Yield (bu./A @15.5%)
Dekalb	DK70-27	120	18.2	143.4
Axis	65T29	115	17.4	142.8
Hubner Seed - Bayer	H4763RC2P	115	17.3	147.5
Pioneer Brand DBA/ Corteva Agriscience	P1870AM	118	18.2	122.7
SeedKoz - MorCorn	MC4725	117	17.4	137.7
Dekalb	DKC67-44RIB	117	17.4	135.2
Progeny Ag Products	Y2012	113	17.0	121.1
Axis	65T29	115	16.8	116.9
LG Seeds	LG 66C32	116	16.7	137.1
Syngenta NK Seeds	1573-5222	115	17.5	115.6
DynaGro Seed	DG58vc65	118	17.1	135.1
Augusta Seed	4467	117	18.0	113.4
Local Seed Company	LC1577 V2P	115	17.2	128.4
Axis	65T29	115	16.6	111.4
Dekalb	DK70-27	120	17.6	114.3

## Prince George County Full Maturity Corn Hybrid Comparison

**Cooperators:**                    **Producer:** Calvin W. Clements  
    **Extension:** Scott Reiter, Prince George

**Previous Crop:**                    Wheat-Double Crop Soybeans  
**Soil Type:**                            Slagle Sandy Loam  
**Tillage:**                              In-row Subsoil Strip Till  
**Planting Date:**                    April 22, 2020  
**Planting Equipment:**            Unverferth Strip-Till with John Deere MaxEmerge Plus Units  
**Seeding Rate:**                    26,000 Seed / Acre  
**Row Spacing:**                      30”  
**Fertilizer:**                         **Preplant:**                    20-40-120-17Ca-18S - broadcast  
    **Planting:**                    25-25-0-3S-0.75Zn-0.5B - starter  
                                       65-0-0 – UAN with herbicide  
    **Sidedress:**                76-0-0-10S-0.3B + Excelis Maxx

**Crop Protection:**                **Burndown:**                None  
    **Planting:**                    1.5 pts Helmquat, 2 qts. TrizMet  
    **Post Emergence:**        None

**Harvest Date:**                    September 28, 2020  
**Harvest Equipment:**            John Deere S660 and weigh wagon

Brand	Hybrid	Maturity (Days)	% Moisture	Yield (bu./A @15.5%)
CHECK	NK 1444-3111	114	20.6	171.2
Hubner Seed	H4763RC2P	115	19.4	183.9
Pioneer Brand DBA / CORTEVA Agriscience	P1870AM	118	21.0	177.4
SeedKoz - MorCorn	MC4725	117	20.7	191.6
Dekalb	DKC67-44	117	19.5	194.1
Progeny Ag Products	2012	113	19.3	182.4
LG Seeds	LG 66C32	116	20.2	185.7
Syngenta NK Seeds	NK1573-5222	115	21.7	172.5
DynaGro Seed	DG58VC65RIB	117	20.3	188.1
Augusta Seed	4467	117	22.6	160.0
Local Seed Company	LC1577 VT2P	115	19.8	180.8
Axis	65H25 RIB	115	20.2	179.8
CHECK	NK 1444-3111	114	20.0	176.8
	AVERAGE		20.5	181.7

**Discussion:** This was an excellent yielding plot for the area. Timely rains around July 4 carried this field before the hot and dry three weeks in late July. August rainfall was plentiful. No hybrids displayed any particular weaknesses to note at harvest.







## Westmoreland County Evaluation of Corn Following Legume Cover Crops

**Discussion:** The purpose of this plot was to evaluate corn grain performance following Austrian winter pea and hairy vetch cover crops. The cover crops were planted on October 15th. The cover crops were fertilized with 78 pounds of phosphate and 75 pounds of potash per acre in late March. Cover crop growth was very good. The Austrian winter pea appeared to suffer some disease pressure in the spring, but the severity was not enough to cause a significant reduction in bio-mass. Bio-mass samples were taken on April 10<sup>th</sup> and calculated to be 6,534 pounds per acre for the hairy vetch and 5,990 pounds per acre for the Austrian winter pea. Plant available nitrogen (PAN) was estimated at 98 pounds per acre from the hairy vetch and 90 pounds per acre from the Austrian winter pea. Corn was planted on April 17<sup>th</sup> into green cover crops (see picture below) and fertilized with 60 pounds of nitrogen and 7.5 pounds of sulfur broadcast as an herbicide carrier and a sidedress application with the same analysis was applied in late May. The plot received about 2 inches of rain on June 25<sup>th</sup> and looked very good. The plot received virtually no rain for the next 26 days coupled with many days of temperatures above 90 degrees. Given the hot and dry period during and following pollination, corn yields were respectable, and there was no statistical difference in yields between the two treatments.



Figure 2. Corn planted green into hairy vetch and Austrian winter pea cover crops, Westmoreland County, Va., April 17, 2020