



## Virginia On-Farm Corn Test Plots

### 2021

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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, Virginia Tech and Virginia State University, 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 thirtieth year of this multi-county cooperative project. Further work is planned for 2022. 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 through 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 nine locations, and full season hybrids (113 day RM or more) at nine locations. Hybrids from all three maturity groups were planted at both the 2021 Virginia Ag Expo site located in Middlesex 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.

## Planting Population Comparison

Proper seeding rates and plant population continues to be an important aspect of corn production, particularly considering different soil types, management practices, hybrid flex potential, and input costs. This study evaluated a 114-day Hubner hybrid (H14G153) planted at three different target populations (26,500/28,500/30,500). Growers are encouraged to try different seeding rates in their own environments with their selected hybrids and use this technique to evaluate if changing plant populations will result in an increased or decreased net return, and to determine which seeding rates are most profitable for their farm.

## Y-Drop Nitrogen Application

Managing inputs to obtain the greatest return on investment has become increasingly important as costs continue to rise. In 2021 a protocol was developed and implemented at two on-farm locations to compare standard and Y-drop nitrogen application at varying application rates. The intention of this study is to determine if Y-drop application results in increased nitrogen use efficiency which would allow farmers to obtain yields comparable to corn crops produced using standard application methods while applying lower rates of nitrogen. The results of 2021 work will be released in 2022 when additional replications have been conducted.

## Pivot Bio Symbiotic Microbial Product Efficacy

Farmers rely primarily on the application of synthetic nitrogen to meet fertility needs of the corn crop. The symbiotic microbial product Pivot Bio advertises the ability to convert atmospheric nitrogen into a plant available form through a mutualistic relationship with the corn plant. If effective, the use of this product could result in the application of fewer pounds of synthetic nitrogen necessary to support a corn crop. In 2021 a protocol was developed and Pivot Bio was tested on-farm at one location. The results of this study will be released in 2022 when additional replications have been conducted.

# Early Maturity Hybrid Comparisons

## Early Maturity Hybrid Entries

### 107 Day RM or Less

Table 1. Corn hybrids entered in the early maturity group as well as the relative maturity, seed treatments, and genetic traits of each hybrid entered.

Brand	Hybrid	Relative Maturity	Seed Treatments	Genetic Traits
Local Seed Company	LC0707 DGVT2P	107	Radius Premium	DGVT2P
Hubner Seed	H05G716	105	Poncho 250	RR, YGCB, DroughtGard
Dekalb	DKC56-15	106	A500	Trecepta
Augusta Seed	A3657-3111	107	C250	GT
LG Seeds	LG57C33VT2RIB	107	C250	VT2RIB
DynaGro Seed	DG44VC36RIB	104	Acceleron 250	Double Pro / RR
Progeny Ag Products	2008VT2P	108	1250	VT2P
Pioneer Seed / Corteva Agriscience	P0339AM	103	Poncho 1250 + Votivo	AM (YGCB, HX1, LL, RR2)
Chemgro Seeds	6505RDP	105	Acceleron 250	VT2P, RIB



# Summary of Early Maturity Hybrid Comparisons

## 107 Day RM or Less

Table 2. A summary of yield results from corn hybrids entered in the early maturity group by plot location

Brand	Hybrid	Relative Maturity	Virginia Ag Expo	Virginia State University	Lancaster	King William	Virginia Beach	Average
Hubner Seed	H05G716	105	221.3	129.1	216.4	160.7	173.0	180.1
Pioneer Seed / Corteva Agriscience	P0339AM	103	210.4	97.9	199.3	186.8	155.4	170.0
Dekalb	DKC56-15	106	243.6	208.7	230.1	168.8	200.2	210.3
DynaGro	DG44VC36RIB	104	220.8	169.2	199.7	164.2	187.2	188.2
Augusta Seed	A3657-3111	107	199.3	207.2	198.0	170.6	165.8	188.2
LG Seeds	LG57C33VT2RIB	107	243.4	212.4	247.8	170.2	174.8	209.7
Local Seed Company	LC0707 DGVT2P	107	275.0	175.0	209.9	185.4	186.2	206.3
Chemgro Seeds	6505RDP	105	221.8	209.8	208.6	177.5	169.0	197.34
Progeny Ag Products	2008VT2P	108	254.7	208.9	221.5	179.1	164.1	205.66
		Average	232.3	179.8	214.6	173.7	175.1	

# Virginia Ag Expo Early Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Corbin Hall Farm, Evan Perry

**Extension:** Frank Long, VCE Middlesex, Trent Jones, VCE Northumberland and Lancaster, Robbie Longest, VCE Essex, Wade Thomason, Extension Grains Specialist

## Management Practices

**Previous Crop:** Soybean

**Soil Type:** Myatt loam

**Tillage:** No-till

**Planting Date:** April 7, 2021

**Planting Equipment:** Kinze 12-row planter, 30 inch spacing

**Preplant Fertilizer:** 60-30-120 broadcast

**Fertilizer at Planting:** 2x2 Starter – 18 gpa (22-11-0), In-furrow – 3 gpa Nachurs (3-18-18), 40 lbs. N behind planter

**Sidedress:** 120 lbs. N, Fertigated 50 gpa (0-0-10) + 75 lbs. N

**Burndown:** RoundUp (28 oz/ac), 2,4-D (16 oz/ac)

**Crop Protection at Planting:** In-furrow - Capture (5 oz/ac) + Xyway (15 oz/ac), Leadoff (1.5 oz/ac) + atrazine (32 oz/ac) behind planter

**Post Emergence Crop Protection:** RoundUp (22 oz/ac), Realm Q (4 oz/ac)

**Harvest Date:** September 24, 2021

# Virginia Ag Expo Early Maturity Corn Hybrid Comparison

Table 3. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the early maturity group planted at the Virginia Ag Expo location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (bu./A at 15.5%)
Pioneer (CHECK)	1870	118	17.7	60.2	275.9
Chemgro Seeds	6505RDP	105	15.3	58.5	221.8
Dekalb	DKC56-15	106	15.7	58.1	243.6
Pioneer Seed / Corteva Agriscience	P0339	103	15.4	56.3	210.4
LG Seeds	LG57C33VT2RIB	107	15.4	59.3	243.4
Local Seed Company	LC0707DGVT2P	107	16.0	58.4	275.0
DynaGro Seed	44VC36	104	15.1	56.6	220.8
Progeny Ag Products	2008VT2P	108	15.2	57.5	254.7
Augusta Seed	A3657-3111	107	15.8	57.8	199.3
Hubner Seed	H05G716	105	15.9	55.6	221.3
Pioneer (CHECK)	1870	118	17.1	57.9	266.4

**Discussion:** This was an excellent intensively managed early hybrid plot with great yields for the VA Ag Expo site at Corbin Hall Farm. Overall the location had a great growing season. This plot was also irrigated and fertigated with potassium and nitrogen in-season. Please use this data and other replicated on-farm hybrid plot results when selecting hybrids for the 2022 growing season.

# King William County Early Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Thomas H. Fox Jr.

**Extension:** Robbie Longest, VCE Essex

## Management Practices

**Previous Crop:** Soybean

**Soil Type:** Slagle Loam

**Tillage:** No-till (ripped and vertical tillage prior to planting)

**Planting Date:** April 13, 2021

**Planting Equipment:** Kinzie 8 row planter, 30 inch spacing

**Seeding Rate:** 27,000

**Preplant Fertilizer:** 50-40-120

**Sidedress Fertilizer:** 100 lbs. N

**Burndown:** RoundUp, Bicep, Princep, Tombstone, LI-700

**Post Emergence Crop Protection:** Halex GT, Trivapro, Atrazine, LI-700, Radiate

**Harvest Date:** October 4, 2021

**Harvest Equipment:** John Deere 9610 w/ 693 header

# King William County Early Maturity Corn Hybrid Comparison

Table 4. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the early maturity group planted at the King William County location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (bu./A at 15.5%)
DynaGro Seed	DG44VC36RIB	104	14.3	56.9	164.2
Augusta Seed (CHECK)	1259	109	14.5	56.4	154.3
Pioneer Seed / Corteva Agriscience	P0339AM	103	14.4	58.8	186.8
Hubner Seed	H05G716	105	13.8	57.6	160.7
Augusta Seed (CHECK)	1259	109	14.8	54.8	145.3
Chemgro Seeds	6505RDP	105	14.5	56.2	177.5
Dekalb	DKC 56-15	106	14.3	57.8	168.8
Augusta Seed	A3657-3111	107	14.9	53.9	170.6
Augusta Seed (CHECK)	1259	109	15.6	57.9	203.2
Progeny Ag Products	2008VT2P	108	13.9	57.0	179.1
LG Seeds	LG57C33VT2RIB	107	14.4	56.0	170.2
Local Seed Company	LC0707GVT2P	107	13.8	58.7	185.4
Augusta Seed (CHECK)	1259	109	15.3	56.9	163.4
		<b>Average</b>	<b>14.5</b>	<b>56.8</b>	<b>171.5</b>
		<b>Check Average</b>	<b>15.1</b>	<b>56.5</b>	<b>166.6</b>

## Discussion:

This plot experienced dry weather early in the growing season, but yielded very well overall. Augusta 1259 was used as a grower check and included throughout the plot, and overall averaged 166.6 bu./ac. As seen from the check yields, there was slight variability across the field, but hybrids should be compared to the closest check on both sides. The target seeding rate was 27,000 seeds per acre, and stand counts were taken on May 18, 2021, with a recorded field average stand of 28,000. Please use this data and other replicated yield data when making hybrid selections in 2022.

# Lancaster County Early Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Jock Chilton, Jonathan Chilton

**Extension:** Trent Jones, VCE Northumberland and Lancaster

## Management

**Previous Crop:** Soybean

**Soil Type:** Suffolk fine sandy loam, Sassafras fine sandy loam

**Tillage:** No-till

**Planting Date:** April 26, 2021

**Planting Equipment:** Kinze 3200 12 row planter, 30 inch spacing

**Seeding Rate:** 29,000

**Preplant Fertilizer:** 100 lb. Potash, 40 lb. N

**Fertilizer at Planting:** (15-15-0) + Micro, (40 lb. N, 40 lb. P)

**Sidedress Fertilizer:** 100 lb. N

**Burndown:** 2.5 oz. Zidua SC, 1 qt. Atrazine

**Post Emergence Crop Protection:** 1 pt. Armezon Pro, 1 pt. Atrazine, 1 pt. Megafol, 1 qt. / 100 gal. Induce

**Harvest Date:** October 4, 2021

**Harvest Equipment:** John Deere S660

# Lancaster County Early Maturity Corn Hybrid Comparison

Table 5. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the early maturity group planted at the Lancaster County location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (bu./A at 15.5%)
DynaGro Seed	DG44VC36RIB	104	13.3	60.3	199.7
Augusta Seed	A3657-3111	107	13.8	55.9	198
Local Seed Company	LC0707 DGVT2P	107	13.9	56.4	209.9
Chemgro Seeds	6505RDP	105	14.4	57.3	208.6
Dekalb	DKC56-15	106	15	57.2	230.1
Progeny Ag Products	2008VT2P	108	14.2	58	221.5
Hubner Seed	H05G716	105	14.1	57	216.4
LG Seeds	LG57C33VT2RIB	107	14.3	56.9	247.8
Pioneer Seed / Corteva Agriscience	P0339AM	103	14.7	58.4	199.3
		<b>Average</b>	<b>14.2</b>	<b>57.5</b>	<b>214.6</b>

**Discussion:** This plot experienced a short period of drought conditions early in the season followed by adequate, timely precipitation up until harvest. Check replications were planted on both ends of the plot however equipment error at harvest resulted in the loss of one check so they were not included in the results. Overall, the field in which this plot was planted has very little variability.

# Cities of Chesapeake / Virginia Beach Early Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Frank Brickhouse

**Extension:** Watson Lawrence, VCE Chesapeake, Roy Flanagan, VCE Virginia Beach

## Management

**Previous Crop:** Soybean

**Soil Type:** Acredale Silt Loam

**Tillage:** Ridge Type Conventional Tillage

**Planting Date:** May 11, 2021

**Planting Equipment:** 7300 JD Maxi Merge Vacuum Planter 12 row, 30 inch spacing

**Seeding Rate:** 35,000

**Preplant Fertilizer:** Broadcast 600 lbs./A 15-8-15 + 13.5 lbs. S/A

**Fertilizer at Planting:** 30 Gal. 32% (110 lbs. N) + Excelis Max. 4.8 oz./acre

**Burndown:** 1qt. Roundup/A + 1 qt. 2,4-D/A + Kingtide Surfactant 1 pt./100 gal

**Post Emergence Crop Protection:** 32 oz. Roundup/A + 1 qt. Atrazine/A + 3 oz. Laudis/A + Kingtide Surfactant 1 pt./100 gal.

**Harvest Date:** September 26, 2021

**Harvest Equipment:** John Deere 9860



# Cities of Chesapeake / Virginia Beach Early Maturity Corn Hybrid Comparison

Table 6. The relative maturity, moisture percentage, and yield of hybrids entered in the early maturity group planted at the Chesapeake / Virginia Beach location

<b>Brand</b>	<b>Hybrid</b>	<b>Relative Maturity</b>	<b>% Moisture</b>	<b>Yield (bu./A at 15.5%)</b>
Dekalb	DKC56-15	106	15.1	200.2
Dekalb (Check)	DKC 65-99	115	15.4	194.7
DynaGro Seed	DG44VC36RIB	104	15.1	187.2
Local Seed Company	LC0707 DGVT2P	107	14.7	186.2
LG Seeds	LG57C33VT2RIB	107	14.6	174.8
Hubner Seed	H05G716	105	14.2	173.0
Chemgro Seed	6505RDP	105	14.5	169
Augusta Seed	A3657-3111	107	14.6	165.8
Progeny Ag Products	2008VT2P	108	15.1	164.1
Pioneer Seed / Corteva Agriscience	P0339AM	103	15.2	155.4

# Virginia State University Early Maturity Corn Hybrid Comparison

## Cooperators

**Virginia State University:** Robert Grammer, Landon West, and William Townsend, VSU-Randolph Farm, Glenn F. Chappell, II, Virginia State University

## Management

**Previous Crop:** Full season soybean

**Soil Type:** Tetotum

**Planting Date:** April 23, 2021

**Seeding Rate:** 29,000

**Preplant Fertilizer: Broadcast:** 25-50-150 Granular; April 22, 2021

**Pre-Emergence Fertilizer:** 65-0-0 UAN 30%, with herbicide; April 26, 2021

**Sidedress Fertilizer:** 130-0-0 UAN 30%; June 2, 2021

**Burndown:** 1 qt. Gramoxone SL; April 13, 2021

**Crop Protection at Planting:** 2 qt. Bicep II Mag. + 1 qt. Princep 4L; April 26, 2021

**Post Emergence Crop Protection:** 1 qt. Glyphosate; May 26, 2021

**Harvest Date:** October 18, 2021

**Harvest Equipment:** John Deere 9560 STS

# Virginia State University Early Maturity Corn Hybrid Comparison

Table 7. The relative maturity, moisture percentage, yield, and percent of check of hybrids entered in the early maturity group planted at the Virginia State University location

Brand	Hybrid	Relative Maturity	% Moisture	Yield (bu./A at 15.5%)	% of Check
Check - Hubner	H4763RC2P	114	16.2	226.9	-----
Local Seed Company	LC0707 DGVT2P	107	11.8	175.0	74.6
Hubner Seed	H05G716	105	11.8	129.1	55.1
Dekalb	DKC56-15	106	12.1	208.7	89.0
Augusta Seed	A3657-3111	107	11.9	207.2	88.4
LG Seeds	LG57C33VT2RIB	107	16.4	212.4	90.6
DynaGro Seed	DG44VC36RIB	104	15.9	169.2	72.2
Progeny Ag Products	2008VT2P	108	16.1	208.9	89.1
Pioneer Seed / Corteva Agriscience	P0339AM	103	15.9	97.5	41.6
Chemgro Seeds	6505RDP	105	10.0	209.8	89.5
Check - Hubner	H4763RC2P	114	16.9	241.9	-----

**Discussion:** Irrigation: May 24 – 0.50” & June 30 - 0.50”. Rainfall: April (23rd+) – 0.00”, May – 0.90”, June – 8.00”, July - 9.10”, & August – 8.05”. 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. Early Hybrids (103-108 RM) averaged – 179.8 Bu./A, Mid Hybrids (108 – 112 RM) averaged – 215.8 Bu./A, & Late Hybrids (113-118 RM) averaged – 206.4 Bu./A.

# Mid Maturity Hybrid Comparisons

## Mid Maturity Hybrid Entries

### 108 – 112 Day RM

Table 8. Corn hybrids entered in the mid maturity group as well as the relative maturity, seed treatments, and genetic traits of each hybrid entered.

Brand	Hybrid	Relative Maturity	Seed Treatments	Genetic Traits
Local Seed Company	LC1289 VT2P	112	Radius Premium	VT2P
Hubner Seed	H09G056	109	Poncho 250	RR, YGCB, DroughtGard
MorCorn	MC 4161	111	Acceleron 1250	DGVT2P
Dekalb	DKC61-41	111	A500 Elite	VT2P
Augusta Seed	A4462	112	C250	VT2P
LG Seed	LG61C48VT2RIB	111	C250	VT2RIB
DynaGro Seed	DG52VC63	112	Acceleron 250	Double Pro / RR
Syngenta NK	1082-5222	110	Avicta Complete 500	RR, Viptera, Duracade
Progeny Ag Products	2012VT2P	112	A1250	VT2P
Pioneer Seed / Corteva Agriscience	P1185AM	111	Poncho 1250 + Votivo	AM (YGCB, HX1, LL, RR2)
Chemgro Seeds	6815RDP	108	Acceleron 250	VT2P, RIB

# Summary of Mid Maturity Hybrid Comparisons

## 108 – 112 Day RM

Table 9. A summary of yield results from corn hybrids entered in the mid maturity group by plot location

<b>Average</b>		202.6	193.5	201.5	201.1	209.7	205.1	190.3	202.9	194.4	202.8	169.9	
<b>Virginia Ag Expo</b>		253.6	253.9	256.2	261.2	264.3	257.1	227.8	260.0	228.4	275.5	216.2	250.4
<b>Virginia State University</b>		236.6	194.9	225.5	212.5	231.9	212.9	223.0	218.2	198.1	233.2	186.9	215.8
<b>Southampton</b>		163.6	169.7	174.1	167.7	192.2	188.8	169.7	188.6	178.3	162.3	156.9	173.8
<b>Westmoreland</b>		235	236	228	227	237	240	212	231	227	225	219	228.8
<b>Suffolk</b>		233.6	232.5	241.0	243.6	243.2	230.1	225.8	236.4	237.4	225.3		234.9
<b>Mecklenburg</b>		203.5	207.4	200.4	180.4	204.1	197.7	208.1	201.3	188.6	219.1	148.2	196.3
<b>Caroline</b>		178.8	142.5	128.6	160.8	173.5	184.6	129.9	165.1	153.9	150.4	140.0	155.3
<b>Halifax</b>		143.1	129.3	158.8	154.6	139.4	147.8	140.4	144.6	158.7	132.6	130.9	143.7
<b>Virginia Beach</b>		176.0	175.1	201.2	202.5	201.3	186.9	175.8	181.2	178.8	201.9	160.7	185.6
<b>Relative Maturity</b>		109	111	111	111	112	111	110	112	112	112	108	Avg.
<b>Hybrid</b>		H09G056	P1185AM	MC 4161	DKC61-41	2012VT2P	LG61C48VT 2RIB	1082-5222A	DG52vc63	A4463	LC1289 VT2P	6815RDP	
<b>Company</b>		Hubner Seed	Pioneer Seed / Corteva Agriscience	MorCorn	Dekalb	Progeny Ag Products	LG Seeds	Syngenta NK Seed	DynaGro Seed	Augusta Seed	Local Seed Company	Chemgro Seeds	

# Virginia Ag Expo Mid Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Corbin Hall Farm, Evan Perry

**Extension:** Frank Long, VCE Middlesex, Trent Jones, VCE Northumberland and Lancaster, Robbie Longest, VCE Essex, Wade Thomason, Extension Grains Specialist

## Management Practices

**Previous Crop:** Soybean

**Soil Type:** Myatt loam

**Tillage:** No-till

**Planting Date:** April 7, 2021

**Planting Equipment:** Kinze 12-row planter, 30 inch spacing

**Preplant Fertilizer:** 60-30-120 broadcast

**Fertilizer at Planting:** 2x2 Starter – 18 gpa (22-11-0), In-furrow – 3 gpa Nachurs (3-18-18), 40 lbs. N behind planter

**Sidedress:** 120 lbs. N, Fertigated 50 gpa (0-0-10) + 75 lbs. N

**Burndown:** RoundUp (28 oz/ac), 2,4-D (16 oz/ac)

**Crop Protection at Planting:** In-furrow - Capture (5 oz/ac) + Xyway (15 oz/ac), Leadoff (1.5 oz/ac) + atrazine (32 oz/ac) behind planter

**Post Emergence Crop Protection:** RoundUp (22 oz/ac), Realm Q (4 oz/ac)

**Harvest Date:** September 24, 2021

## Virginia Ag Expo Mid Maturity Corn Hybrid Comparison

Table 10. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the mid maturity group planted at the Virginia Ag Expo location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (bu./A at 15.5%)
Pioneer (CHECK)	1870	118	17.1	57.9	266.4
Augusta Seed	A4462	112	15.7	57.8	228.4
DynaGro Seed	52VC63	112	16.1	58.6	260.0
Pioneer Seed / Corteva Agriscience	P1185AM	111	15.8	57.0	253.9
Syngenta NK Seed	1082-5222	110	16.1	57.2	227.8
Dekalb	DKC61-41	111	16.2	53.1	261.2
MorCorn	MC4161	111	16.2	57.7	256.2
Hubner Seed	H09G056	109	16.4	54.5	253.6
LG Seed Seeds	61C48VT2RIB	111	16.4	56.9	257.1
Progeny Ag Products	2012VT2P	112	16.5	58.5	264.3
Local Seed Company	LC1289VT2P	112	16.0	58.4	275.5
Chemgro Seeds	6815RDP	108	16.3	55.9	216.2
Pioneer (CHECK)	1870	118	17.9	58.6	278.1

### Discussion:

This was an excellent intensively managed mid hybrid plot with great yields for the VA Ag Expo site at Corbin Hall Farm. Overall the location had a great growing season. This plot was also irrigated and fertigated with potassium and nitrogen in-season. Please use this data and other replicated on-farm hybrid plot results when selecting hybrids for the 2022 growing season.

# Westmoreland County Mid Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** F.F. Chandler, Jr. and Louis Chandler

**Extension:** Stephanie Romelczyk, VCE Westmoreland, Trent Jones, VCE Northumberland and Lancaster, Clare Tallamy, VCE Intern

## Management

**Previous Crop:** Soybean

**Soil Type:** Kempsville loam

**Tillage:** No-till

**Planting Date:** April 22, 2021

**Planting Equipment:** Case IH 950 Cyclo Planter, 30 inch spacing

**Seeding Rate:** 32,000

**Preplant Fertilizer:** 70-60-80-10S

**Sidedress Fertilizer:** 110N, 9.5S

**Preplant Crop Protection:** Gramoxone 1 qt/A + Sticker + Acuron 1.5 qts/A + Atrazine 1 pt/A + Princep 1.5 pts/A + Tombstone 2 oz/A

**Post Emergence Crop Protection:** Halex 3.6 pts/A + Sticker + Atrazine 1 pt/A + Radiate 2 oz/A + Black Label 1 gal/A, Aerial: Miravis Neo 13.7 oz/A + Radiate 1 oz/A + Brigade 6 oz/A

**Harvest Date:** September 21, 2021

**Harvest Equipment:** John Deere 9400



# Westmoreland County Mid Maturity Corn Hybrid Comparison

Table 11. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the mid maturity group planted at the Westmoreland County location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (bu./A at 15.5%)
Pioneer Seed / Corteva Agriscience	P1185AM	111	17.4	59.3	236
Chemgro Seeds	6815RDP	108	16.1	56.4	219
Progeny Ag Products	2012VT2P	112	17.3	57.2	237
LG Seed	LG61C48VT2RIB	111	16.9	57.8	240
MorCorn	MC4161	111	17.0	57.9	228
DeKalb	DKC61-41	111	16.2	55.6	227
Hubner Seed	H09G056	109	15.9	56.6	235
Local Seed Company	LC1289 VT2P	112	16.8	57.9	225
Augusta Seed	A4463	112	17.1	56.9	227
DynaGro Seed	DG52VC63	112	17.2	57.7	231
Syngenta NK	1082-5222	110	17.7	54.8	212

**Discussion:** An excellent yielding corn variety trial. Total rainfall between planting date and harvest date was 27.41 inches. (April: 0.78 in, May: 3.56 in, June: 8.10 in, July: 5.18 in, August: 7.76 in, September: 2.03 in).

# Caroline County Mid Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Mike Broaddus

**Extension:** Mike Broaddus, VCE Caroline and King George, Trent Jones, VCE Northumberland and Lancaster

## Management

**Previous Crop:** Soybean

**Soil Type:** Suffolk fine sandy loam

**Tillage:** No-Till

**Planting Date:** May 12, 2021

**Planting Equipment:** Kinze 3600, 30 row spacing

**Seeding Rate:** 31,000

**Preplant Fertilizer:** 20 gal. 24-0-0-3

**Fertilizer at Planting:** 40 lb. N, 1 qt. Boron, 1 qt. Zinc

**Sidedress Fertilizer:** 35 gal. 28-0-0-5, 2 qt. Boron, 2 qt. Black Label Zn

**Burndown:** 1.5 qt. Vizer ATZ, 1.5 qt. Devour, 8oz. Salvo, 2 oz. Tombstone

**Crop Protection at Planting:** 1 qt. Glyphosate w/ Surfactant, 1 qt. Harness Extra, 1 pt. Atrazine

**Post Emergence Crop Protection:** 40 oz. Makize, 3 oz. Status (dry), 3.25 oz. Zidua, 1 qt. Atra v41

**Harvest Date:** October 14, 2021

**Harvest Equipment:** John Deere S780

## Caroline County Mid Maturity Corn Hybrid Comparison

Table 12. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the mid maturity group planted at the Caroline County location

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (bu./A at 15.5%)
Syngenta NK	1082-5222	110	16.4	53.7	129.9
Hubner Seed	H09G056	109	16.3	57	178.8
LG Seed	LG61C48VT2RIB	111	15.8	59.5	184.6
MorCorn	MC 4161	111	16.6	58.6	128.6
Progeny Ag Products	2012VT2P	112	17.2	56.6	173.5
Dekalb	DKC61-41	111	17.1	53.7	160.8
Pioneer Seed / Corteva Agriscience	P1185AM	111	16.3	59.8	142.5
Local Seed Company	LC1289 VT2P	112	16.2	56.9	150.4
Chemgro seeds	6815RDP	108	15.4	55.8	140.0
Augusta	A4462	112	16.1	58.1	153.9
DynaGro Seed	DG52VC63	112	16.9	56.7	165.1

# Halifax County Mid Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Lazy C Farms – Garland Comer

**Extension:** Rebecca Slabach, VCE Halifax, Joanne Jones, VCE Charlotte, Bruce Jones VCE Appomattox

## Management

**Previous Crop:** Wheat/Double Crop Soybean

**Soil Type:** Clifford Clay Loam

**Tillage:** No-till

**Planting Date:** April 26, 2021

**Planting Equipment:** Kinze 12 row, 30 inch spacing

**Seeding Rate:** 27,000

**Preplant Fertilizer:** 300 lbs. 9-23-30

**Fertilizer at Planting:** 20 gal. 28-0-0-5

**Sidedress Fertilizer:** 200 lbs. 34-0-0-11 dry

**Burndown:** Glyphosate and 2, 4-D, Anthem Max

**Post Emergence Crop Protection:** RelmQ

**Harvest Date:** November 3, 2021

**Harvest Equipment:** Gleaner R52; 6 row head

## Halifax County Mid Maturity Corn Hybrid Comparison

Table 13. The relative maturity, moisture percentage, test weight and yield of hybrids entered in the mid maturity group planted at the Halifax County location.

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (bu./A at 15.5%)
Local Seed Company	LC1289VT2P	112	14.8	60.1	132.6
Hubner Seed	H09G056	109	14.7	58.8	143.1
MorCorn	MC4161	111	14.7	59.9	158.8
Dekalb	DKC61-41	111	14.8	59.6	154.6
Augusta Seed	A4463	112	14.8	59.6	158.7
LG Seed	LG61C48VT2RIB	111	14.6	59.6	147.8
DynaGro Seed	DG52VC63	112	14.9	59.6	144.6
Syngenta NK	1082-5222	110	14.6	58.0	140.4
Progeny Ag Products	2012VT2P	112	14.4	57.9	139.4
Pioneer Seed / Corteva Agriscience	P1185AM	111	14.5	60.6	129.3
Chemgro Seeds	6815RDP	108	14.7	59.2	130.9

**Discussion:** This plot could be described as a very stressful situation. Yield was outstanding considering the dry conditions of the area for the entire season. The limited rainfall came at perfect timing throughout the season for this comparison.

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

## Cooperators

**Producer:** Frank Brickhouse

**Extension:** Watson Lawrence, VCE Chesapeake, Roy Flanagan, VCE Virginia Beach

## Management

**Previous Crop:** Soybean

**Soil Type:** Acredale Silt Loam

**Tillage:** Ridge Type Conventional Tillage

**Planting Date:** May 11, 2021

**Planting Equipment:** 7300 JD Maxi Merge Vacuum Planter 12 rows, 30 inch Spacing

**Seeding Rate:** 35,000

**Preplant Fertilizer:** Broadcast 600 lbs./A 15-8-15 + 13.5 lbs. S/A

**Fertilizer at Planting:** 30 Gal. 32% (110 lbs. N) + Excelis Max. 4.8 oz./acre

**Burndown:** 1qt. Roundup/A + 1 qt. 2,4-D/A + Kingtide Surfactant 1 pt./100 gal

**Post Emergence Crop Protection:** 32 oz. Roundup/A + 1 qt. Atrazine/A + 3 oz. Laudis/A + Kingtide Surfactant 1 pt./100 gal

**Harvest Date:** September 26, 2021

**Harvest Equipment:** John Deere 9860

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

Table 14. The relative maturity, moisture percentage, and yield of hybrids entered in the mid maturity group planted at the Chesapeake / Virginia Beach location.

Brand	Hybrid	Relative Maturity	% Moisture	Yield (bu./A at 15.5%)
Dekalb	DKC61-41	111	15.1	202.5
Local Seed Company	LC1289VT2P	112	15.0	201.9
Progeny Ag Products	2012VT2P	112	15.1	201.3
MorCorn	MC 4161	111	15.3	201.2
Dekalb	DKC 65-99 (Check)	114	15.3	194.3
LG Seed	LG61C48VT2RIB	111	14.9	186.9
DynaGro Seed	DG52VC63	112	15.1	181.2
Augusta Seed	A4462	112	15.0	178.8
Hubner Seed	H09G056	109	15.1	176
Syngenta NK	1082-5222	110	14.5	175.8
Pioneer Seed / Corteva Agriscience	P1185AM	111	15.0	175.1
Chemgro Seeds	6815RDP	108	16.3	160.7

# Mecklenburg / Brunswick County Mid Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Howard Wright

**Extension:** Taylor Clarke, VCE Mecklenburg, Sara Rutherford VCE Greenville and City of Emporia

## Management

**Previous Crop:** Wheat

**Soil Type:** Appling Mattaponi Complex

**Tillage:** Strip-till

**Planting Date:** April 21, 2021

**Planting Equipment:** 4 row JD Max-emerge, 36 inch spacing

**Seeding Rate:** 28,000

**Preplant Fertilizer:** 100-70-100

**Fertilizer at Planting:** 3 gal. Riser 17-17-3 + 2oz Radiant

**Sidedress Fertilizer:** 100 lbs. N

**Burndown:** Roundup PowderMax3 24oz., Brawl ATZ 2qts, Verdict 10oz

**Post Emergence Crop Protection:** Roundup PowerMax3 24oz., Laudis 3oz

**Harvest Date:** August 29, 2021

**Harvest Equipment:** Gleaner R50 with 4 row 36" head



## Mecklenburg / Brunswick County Mid Maturity Corn Hybrid Comparison

Table 15. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the mid maturity group planted at the Mecklenburg / Brunswick location.

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (bu./A at 15.5%)
Local Seed Company	LC1289 VT2P	112	29	55.2	219.1
Hubner Seed	H09G056	109	29.5	50.5	203.5
MorCorn	MC 4161	111	28.9	50.8	200.4
Dekalb	DKC61-41	111	28.4	52.1	180.4
Augusta Seed	A4462	112	27.7	53.4	188.6
LG Seed	LG61C48VT2RIB	111	27.7	54.1	197.7
DynaGro Seed	DG52VC63	112	25.5	55.2	201.3
Syngenta NK	1082-5222	110	27.4	52.8	208.1
Progeny Ag Products	2012VT2P	112	25.9	54.3	204.1
Pioneer Seed / Corteva Agriscience	P1185AM	111	26.5	56	207.4
Chemgro Seeds	6815RDP	108	27.4	51.1	148.2

# Southampton County Mid Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** D&J Farms, Dennis & Denton Spruill

**Extension:** Joshua Holland, VCE Southampton

## Management

**Previous Crop:** Soybean

**Soil Type:** Slagle fine sandy loam

**Tillage:** Strip-till

**Planting Date:** April 13, 2021

**Planting Equipment:** KMC 8-Row Strip-Till Rig, John Deere 7730 Max Emerge Planter, 36 inch spacing

**Seeding Rate:** 28,000

**Preplant Fertilizer:** 2.25 tons Poultry Litter

**Fertilizer at Planting:** 11 gal. 17-17-0 2x2 band

**Sidedress Fertilizer:** 120 units 30-0-0

**Burndown:** 32 oz. Roundup, 1 qt. 2,4-D, 2 oz. Valor

**Post Emergence Crop Protection:** 3.6 qt. Halex GT, 2 qt. Atrazine

**Harvest Date:** September 20, 2021

**Harvest Equipment:** John Deere 9760 Grain Combine

# Southampton County Mid Maturity Corn Hybrid Comparison

Table 16. The relative maturity, moisture percentage, and yield of hybrids entered in the mid maturity group planted at the Southampton County location.

Brand	Hybrid	Relative Maturity	% Moisture	Yield (bu./A at 15.5%)
Local Seed Company	LC1289 VT2P	112	14.5	162.3
Hubner Seed	H09G056	109	15.1	163.6
MorCorn	MC4161	111	13.7	174.1
Dekalb	DKC61-41	111	14.8	167.7
Augusta Seed	A4462	112	14.7	178.3
LG Seed	61C48VT2PRIB	111	14.9	188.8
DynaGro Seed	DG52VC63	112	15.0	188.6
Syngenta NK	1082-5222	110	15.1	169.7
Progeny Ag Products	2012VT2P	112	14.8	192.2
Pioneer Seed / Corteva Agriscience	P1185AM	111	15.0	169.7
Chemgro Seeds	6815RDP	108	14.6	156.9

**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.

# Virginia State University Mid Maturity Corn Hybrid Comparison

## Cooperators

**Virginia State University:** Robert Grammer, Landon West, and William Townsend, VSU-Randolph Farm, Glenn F. Chappell, II, Virginia State University

## Management

**Previous Crop:** Full season soybean

**Soil Type:** Tetotum

**Planting Date:** April 23, 2021

**Seeding Rate:** 29,000

**Preplant Fertilizer: Broadcast:** 25-50-150 Granular; April 22, 2021

**Pre-Emergence Fertilizer:** 65-0-0 UAN 30%, with herbicide; April 26, 2021

**Sidedress Fertilizer:** 130-0-0 UAN 30%; June 2, 2021

**Burndown:** 1 qt. Gramoxone SL; April 13, 2021

**Crop Protection at Planting:** 2 qt. Bicep II Mag. + 1 qt. Princep 4L; April 26, 2021

**Post Emergence Crop Protection:** 1 qt. Glyphosate; May 26, 2021

**Harvest Date:** October 18, 2021

**Harvest Equipment:** John Deere 9560 STS

# Virginia State University Mid Maturity Corn Hybrid Comparison

Table 17. The relative maturity, moisture percentage, yield, and percent of check of hybrids entered in the mid maturity group planted at the Virginia State University location

Brand	Hybrid	Relative Maturity	% Moisture	Yield (bu./A at 15.5%)	% of Check
Check – Hubner Seed	H4763RC2P	114	16.9	241.9	-----
Local Seed Company	LC1289 VT2P	112	16.2	233.2	101.2
Hubner Seed	H09G056	109	14.8	236.6	102.7
MorCorn	MC 4161	111	16.8	225.5	97.9
Dekalb	DKC61-41	111	15.0	212.5	92.2
Augusta Seed	A4462	112	15.5	198.1	86.0
LG Seed	LG61C48VT2RIB	111	14.9	212.9	92.4
DynaGro Seed	DG52VC63	112	15.3	218.2	94.7
Syngenta NK	1082-5222	110	14.4	223.0	96.8
Progeny Ag Products	2012VT2P	112	15.3	231.9	100.7
Pioneer Seed / Corteva AgriSciences.	P1185AM	111	15.7	194.9	84.6
Chemgro Seeds	6815RDP	108	15.4	186.9	81.1
Check - Hubner	H4763RC2P	114	16.0	218.8	-----

**Discussion:** Irrigation: May 24 – 0.50” & June 30 - 0.50”. Rainfall: April (23rd+) – 0.00”, May – 0.90”, June – 8.00”, July - 9.10”, & August – 8.05”. 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. Early Hybrids (103-108 RM) averaged – 179.8 Bu./A, Mid Hybrids (108 – 112 RM) averaged – 215.8 Bu./A, & Late Hybrids (113-118 RM) averaged – 206.4 Bu./A.

# City of Suffolk Mid Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Tidewater AREC

**Extension:** Elizabeth Pittman, VCE City of Suffolk, Tidewater AREC

## Management

**Previous Crop:** Cotton

**Soil Type:** Eunola Fine Sandy Loam; Dragston Fine Sandy Loam

**Tillage:** Strip-till

**Planting Date:** April 22, 2021

**Planting Equipment:** 4 row Kinze planter, 36 inch spacing

**Seeding Rate:** 29,000

**Preplant Fertilizer:** 430 lbs. 13-9-18

**Fertilizer at Planting:** 10 gal. 24-0-0-3

**Sidedress Fertilizer:** 52 gal. 24-0-0-3 52 gal

**Burndown:** 1qt. Roundup, 1.5 pt. 2,4-D

**Crop Protection at Planting:** 2 pt. Bicep, 1 pt. Simazine

**Post Emergence Crop Protection:** 24 oz. Impact corn, 1 qt. Roundup, 1.5 pt. Atrazine

**Harvest Date:** September 16, 2021

**Harvest Equipment:** John Deere 9450 combine

## City of Suffolk Mid Maturity Corn Hybrid Comparison

Table 18. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the mid maturity group planted at the City of Suffolk location.

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (bu./A at 15.5%)
Local Seed Company	LC1289 VT2P	112	16.4	56.9	225.3
Hubner Seed	H09G056	109	16.2	55.4	233.6
MorCorn	MC 4161	111	16.3	58	241
Dekalb	DKC61-41	111	16.3	54.6	243.6
Augusta Seed	A4462	112	16.5	57.6	237.4
LG Seed	LG61C48VT2RIB	111	17.6	57	230.1
DynaGro Seed	DG52VC63	112	17.9	54.8	236.4
Syngenta NK	NK 1082-5222	110	17.3	53.8	225.8
Progeny Ag Products	2012VT2P	112	17	55.9	243.2
Pioneer Seed / Corteva Agriscience	P1185AM	111	17.2	56.8	232.5
Dekalb	DKC62-89	112	16.7	57.1	243.2

**Discussion:** Planting conditions were fairly ideal and we saw great emergence across all of the varieties. Wet/cool conditions after emergence likely had some effect on top-end yield potential. There was hot/dry weather in July that also potentially impacted yield but overall all of the varieties kept good plant health and harvested well without issues. Chemgro Seeds 6815RDP was not included in this set of data due to the seed not being delivered along with the rest of the varieties.

# Full Maturity Hybrid Comparisons

## Full Maturity Hybrid Entries

### 113 Day RM or More

Table 19. Corn hybrids entered in the full maturity group as well as the relative maturity, seed treatments, and genetic traits of each hybrid entered.

Brand	Hybrid	Relative Maturity	Seed Treatments	Genetic Traits
Local Seed Company	LC1307 TCRIB	113	Radius Premium	Trecepta
Hubner Seed	H4763RC2P	114	Poncho 250	RR, YGCB
MorCorn	MC 4311	113	Acceleron 1250	Trecepta
Dekalb	DKC64-65	114	A500 Elite	VT2P
Augusta Seed	A7168	118	C250	VT2P
LG Seed	LG66C11VT2RIB	116	C250	VT2RIB
DynaGro Seed	DG54VC34	114	Acceleron 250	Double Pro / RR
Syngenta NK	1748-3110	117	Avicta complete 500	RR, Viptera
Pioneer Seed / Corteva Agriscience	P1506AM	115	Poncho 1250 + Votivo	AM (YGCB, HX1, LL, RR2)
Chemgro Seeds	7505RDP	115	Acceleron 250	VT2P, RIB



# Summary of Full Maturity Hybrid Comparisons

## 113 Day RM or More

Table 20. A summary of yield results from corn hybrids entered in the full maturity group by plot location.

<b>Average</b>		197.8	193.6	204.1	191.4	188.9	184.6	200.2	187.1	197.3	197.8	
<b>Mecklenburg</b>		189.1	165.0	212.2	209.7	197.3	188.1	178.4	224.3	198.6	193.5	195.6
<b>Charlotte</b>		188.6	183.7	185.5	173.2	168.1	183.7	186.0	169.7	187.8	174.2	180.1
<b>Campbell</b>		123.6	139.1	128.9	114.5	115.1	120.9	142.7	129.5	123.4	139.8	116.1
<b>Culpeper</b>		164.8		153.9	131.8	147.1	117.1	158.7	146.7	159.0		147.4
<b>Suffolk</b>		247.2	235.0	269.9	243.0	231.3	208.6	257.7	246.4	257.9	230.9	242.8
<b>Prince George</b>		194.0	197.4	200.0	201.7	193.2	185.9	200.1	195.9	199.7	189.9	195.8
<b>Southampton</b>		187.6	184.8	195.9	177.7	190.1	196.3	195.9	183.9	178.8	188.1	187.9
<b>Virginia State University</b>		219.4	186.0	218.5	205.4	222.8	187.0	214.6	230.0	187.6	205.8	207.7
<b>Virginia Ag Expo</b>		265.6	257.4	272.0	265.4	235.4	273.5	267.8	274.0	282.6	259.9	265.4
<b>Relative Maturity</b>		114	115	113	114	116	117	114	118	113	115	<b>Avg</b>
<b>Hybrid</b>		H4763RC2P	P1506AM	MC 4311	DKC64-65	LG66C11VT 2RIB	1748-3110	DG54VC34	A7168	LC1307 TCRIB	7505RDP	
<b>Company</b>		Hubner Seed	Pioneer Seed / Corteva Agriscience	MorCorn	Dekalb	LG Seeds	Syngenta NK	DynaGro Seed	Augusta Seed	Local Seed Company	Chemgro Seeds	

# Virginia Ag Expo Full Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Corbin Hall Farm, Evan Perry

**Extension:** Frank Long, VCE Middlesex, Trent Jones, VCE Northumberland and Lancaster, Robbie Longest, VCE Essex, Wade Thomason, Extension Grains Specialist

## Management Practices

**Previous Crop:** Soybean

**Soil Type:** Myatt loam

**Tillage:** No-till

**Planting Date:** April 7, 2021

**Planting Equipment:** Kinze 12-row planter, 30 inch spacing

**Preplant Fertilizer:** 60-30-120 broadcast

**Fertilizer at Planting:** 2x2 Starter – 18 gpa (22-11-0), In-furrow – 3 gpa Nachurs (3-18-18), 40 lbs. N behind planter

**Sidedress:** 120 lbs. N, Fertigated 50 gpa (0-0-10) + 75 lbs. N

**Burndown:** RoundUp (28 oz/ac), 2,4-D (16 oz/ac)

**Crop Protection at Planting:** In-furrow - Capture (5 oz/ac) + Xyway (15 oz/ac), Leadoff (1.5 oz/ac) + atrazine (32 oz/ac) behind planter

**Post Emergence Crop Protection:** RoundUp (22 oz/ac), Realm Q (4 oz/ac)

**Harvest Date:** September 24, 2021

## Virginia Ag Expo Full Maturity Corn Hybrid Comparison

Table 21. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the full maturity group planted at the Virginia Ag Expo location.

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (bu./A at 15.5%)
Pioneer (CHECK)	1870	118	17.9	58.6	278.1
Chemgro Seeds	7505RDP	115	16.3	59.5	259.9
MorCorn	MC4311	113	16.6	58.8	272.0
Local Seed Company	LC1307TCRIB	113	16.3	59.1	282.6
LG Seed	LG66C11VT2RIB	116	17.5	58.2	235.4
Hubner Seed	H4763RC2P	114	17.2	59.6	265.6
Syngenta NK	1748-3110	117	17.8	57.9	273.5
Dekalb	DKC64-65	114	17.1	59.7	265.4
Augusta Seed	A7168	118	17.8	60.4	274.0
DynaGro Seed	DG54VC34	114	17.6	58.8	267.8
Pioneer Seed / Corteva Agriscience	P1506AM	115	16.8	60.6	257.4
Pioneer (CHECK)	1870	118	18.5	58.2	265.3

**Discussion:** This was an excellent intensively managed full-season hybrid plot with great yields for the VA Ag Expo site at Corbin Hall Farm, with the plot averaging 266.4 bu./ac. Overall the location had a great growing season. This plot was also irrigated and fertigated with potassium and nitrogen in-season. Please use this data and other replicated on-farm hybrid plot results when selecting hybrids for the 2022 growing season.

# Culpeper County Full Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Glebe Farm, Ross Swan

**Extension:** Carl Stafford, VCE Culpeper County

**Industry:** Eric Scruggs, Nutrien

## Management

**Previous Crop:** Corn

**Soil Type:** Fauquier Silt Loam

**Tillage:** No-till

**Planting Date:** April 30, 2021

**Planting Equipment:** Kinze, 30 inch spacing

**Seeding Rate:** 30,000

**Preplant Fertilizer:** P&K by removal rates, variable

**Fertilizer at Planting:** 50 lbs. N

**Sidedress Fertilizer:** 120 lbs. N

**Burndown:** Bicep, Roundup, powermax, salvo

**Post Emergence Crop Protection:** Halax, Attrazine

**Harvest Date:** November 29, 2021

**Harvest Equipment:** Case IH 7230

## Culpeper County Full Maturity Corn Hybrid Comparison

Table 22. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the full maturity group planted at the Culpeper County location.

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (bu./A at 15.5%)
(Check) Hubner Seed	H4744	113	14.3	62.1	154.7
Augusta Seed	A7168	118	14.5	60.6	146.7
Dekalb	DKC64-64	114	14.5	59.6	131.8
DynaGro Seed	DG54VC34	114	14.4	60.9	158.7
Hubner Seed	H4763RC2P	114	14.4	60.9	164.8
(Check) Hubner Seed	H4744	113	14.2	60.5	167.1
LG Seed	LG66C11VT2RIB	116	15.8	59.1	147.1
Local Seed Company	LC1307TCRIB	113	14.6	59.2	159.0
MorCorn	MC4311	113	15	58.3	153.9
Syngenta NK	NK1748-3110	117	14.8	58.3	117.1
(Check) Hubner Seed	H4744	113	13.9	62.9	115.2

# Charlotte County Full Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Grind-N-Stone Farms – The Poindexter Family

**Extension:** Joanne Jones, VCE Charlotte, Bruce Jones, VCE Appomattox

## Management

**Previous Crop:** Small grain cover crop

**Soil Type:** Appling Fine Sandy Loam

**Tillage:** No-till

**Planting Date:** April 28, 2021

**Planting Equipment:** John Deere 7000 4 row, 26 inch spacing

**Seeding Rate:** 25,000

**Preplant Fertilizer:** 2 tons poultry litter per acre

**Fertilizer at Planting:** 160 lbs. 30-60-60 2X2

**Sidedress Fertilizer:** 93 units liquid on June 4, 2021

**Burndown:** April 15, 1.3 qt glyphosate, 1 oz Sharpen, 1.5 qt Brawl, 1 oz Faststrike

**Post Emergence Crop Protection:** May 3, 1.3 qt. glyphosate

**Harvest Date:** October 13, 2021

**Harvest Equipment:** Gleaner R62

## Charlotte County Full Maturity Corn Hybrid Comparison

Table 23. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the full maturity group planted at the Charlotte County location.

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (bu./A at 15.5%)
Local Seed Company	LC1307 TCRIB	113	16.8	58.5	187.8
Hubner Seed	H4763RC2P	114	16.9	58.9	188.6
MorCorn	MC4311	113	16.3	58.6	185.5
Dekalb	DKC64-65	114	16.8	58.7	173.2
Augusta Seed	A7168	118	17.6	58.4	169.7
LG Seed	LG66C11VT2RIB	116	17.4	57.6	168.1
DynaGro Seed	DG54VC34	114	17.3	58.8	186.0
Syngenta NK	1748-3110	117	17.6	57.7	183.7
Pioneer Seed / Corteva Agriscience	P1506AM	115	17.4	57.8	183.7
Chemgro Seeds	7505RDP	115	16.6	59.4	174.2

# Campbell County Full Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Ben Cole

**Extension:** Bruce Jones, VCE Appomattox, Joanne Jones, VCE Charlotte

**Industry:** Michael Swisher, Local Seed Company

## Management

**Previous Crop:** Full season soybean

**Soil Type:** Appling fine sandy loam

**Tillage:** No-till

**Planting Date:** May 11, 2021

**Planting Equipment:** John Deere 7200, 30 inch spacing

**Seeding Rate:** 27,500

**Preplant Fertilizer:** Variable rate P and K according to soil test

**Fertilizer at Planting:** 10 gal. 28-0-0-5 and 5 gal. 11-37-0

**Sidedress Fertilizer:** 150 lbs. Amidas N

**Burndown:** 2 qt. paraquat, 1 pt. 2, 4-D, 1 qt. atrazine, 3 oz. Balance Flex

**Post Emergence Crop Protection:** 32 oz. glyphosate, 1 qt. atrazine, 3 oz. Capreno

**Harvest Date:** October 12, 2021

**Harvest Equipment:** John Deere 9770



# Campbell County Full Maturity Corn Hybrid Comparison

Table 24. The relative maturity, moisture percentage, and yield of hybrids entered in the full maturity group planted at the Campbell County location.

Brand	Hybrid	Relative Maturity	% Moisture	Yield (bu./A at 15.5%)
Local Seed Company	LC1307 TCRIB	113	16.8	123.4
Hubner Seed	H4763RC2P	114	16.9	123.6
MorCorn	MC4311	113	16.8	128.9
Dekalb	DKC64-65	114	17.5	114.5
Augusta Seed	A7168	118	18.3	129.5
LG Seed	LG66C11VT2RIB	116	18.5	115.1
DynaGro Seed	DG54VC34	114	17.4	142.7
Syngenta NK	1748-3110	117	17.9	120.9
Pioneer Seed / Corteva Agriscience	P1506AM	115	16.8	139.1
Chemgro Seeds	7505RDP	115	17.1	139.8

**Discussion:** Yield data collected using combine Ag Leader system due to weigh wagon logistics on harvest day. Samples not obtained for test weight determination.

# Prince George County Full Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Calvin W. Clements

**Extension:** Scott Reiter, VCE Prince George

## Management

**Previous Crop:** Soybean

**Soil Type:** Catpoint fine sand

**Tillage:** Strip-till subsoil under row

**Planting Date:** April 22, 2021

**Planting Equipment:** John Deere MaxEmerge XP, 30 inch spacing

**Seeding Rate:** 25,500

**Preplant Fertilizer:** 20-40-120-5S

**Fertilizer at Planting:** 25-25-0-3S-1Zn-0.5B

**Sidedress Fertilizer:** 80-0-0-10

**Harvest Date:** September 25, 2021

**Harvest Equipment:** John Deere S660 + 693 Header + Weigh wagon

# Prince George County Full Maturity Corn Hybrid Comparison

Table 25. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the full maturity group planted at the Prince George County location.

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (bu./A at 15.5%)
Axis (Check)	65H15 RIB	115	17.0	58.9	184.0
LG Seed	LG66C11VT2	116	17.7	57.4	193.2
Chemgro Seeds	7505RDP	115	16.6	58.6	189.9
MorCorn	MC 4311	113	16.8	57.7	200.0
Dekalb	DKC64-65	114	17.2	57.3	201.7
Pioneer Seed / Corteva Agriscience	P1506AM	115	17.8	58.3	197.4
Syngenta NK	1748-3110	117	18.6	56.3	185.9
DynaGro Seed	DG54VC34	114	17.4	58.7	200.1
Local Seed Company	LC1307	113	16.7	58.4	199.7
Augusta Seed	A7168	118	18.7	58.5	195.9
Hubner Seed	H4763RC2P	114	17.6	58.4	194.0
Axis (Check)	65H15 RIB	115	17.3	59.1	181.0
		AVERAGE	17.5	58.0	195.8

**Discussion:** Awesome yields on a sandy soil. Rainfall was limited in May but this area received timely rains throughout the summer. No problems with stalk strength or disease was observed with any hybrid while scouting during the season or at harvest.

# Mecklenburg County Full Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Horseshoe Farm

**Extension:** Taylor Clarke, VCE Mecklenburg, and Sara Rutherford, VCE Greensville and City of Emporia

**Industry:** Austin Puryear and Tyler Ashworth

## Management

**Previous Crop:** Soybeans

**Soil Type:** Cecil fine sandy loam

**Tillage:** No-till

**Planting Date:** April 26, 2021

**Planting Equipment:** Kinze 12 row planter, 30 inch spacing

**Seeding Rate:** 26,500

**Preplant Fertilizer:** 50-40-100

**Fertilizer at Planting:** 50 lb. N as UAN with burndown

**Sidedress Fertilizer:** 85-0-0-30S

**Burndown:** Gramoxone 1qt., Bicep 2qt.

**Post Emergence Crop Protection:** Makaze 1/qt., Impact 0.75oz.

**Harvest Date:** October 25, 2021

**Harvest Equipment:** S660 with 6row head

# Mecklenburg County Full Maturity Corn Hybrid Comparison

Table 26. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the full maturity group planted at the Mecklenburg County location.

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (bu./A at 15.5%)
Axis (Check)	65A28RIB		15.9	57.9	183.2
Local Seed Company	LC1307 TCRIB	113	16.1	56.3	198.6
Hubner Seed	H4763RC2P	114	16.3	57.4	189.1
MorCorn	MC 4311	113	16.1	57.6	212.2
Dekalb	DKC64-65	114	15.9	56.3	209.7
Augusta Seed	A7168	118	16.7	58.8	224.3
LG Seed	LG66C11VT2RIB	116	16.3	58.2	197.3
DynaGro Seed	DG54VC34	114	15.8	58.9	178.4
Syngenta NK	1748-3110	117	16.4	57.5	188.1
Pioneer Seed / Corteva Agriscience	P1506AM	115	15.8	58.3	165.0
Chemgro Seeds	7505RDP	115	15.7	60.5	193.5
Axis (Check)	65A28RIB		15.7	59.2	203.0

# Southampton County Full Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** D&J Farms, Dennis & Denton Spruill

**Extension:** Joshua Holland, VCE Southampton

## Management

**Previous Crop:** Soybean

**Soil Type:** Slagle fine sandy loam

**Tillage:** Strip-till

**Planting Date:** April 13, 2021

**Planting Equipment:** KMC 8-Row Strip-Till Rig, John Deere 7730 Max Emerge Planter, 36 inch spacing

**Seeding Rate:** 28,000

**Preplant Fertilizer:** 2.25 tons poultry pitter

**Fertilizer at Planting:** 11 gal. 17-17-0 2x2 band

**Sidedress Fertilizer:** 120 units 30-0-0

**Burndown:** 32 oz. Roundup, 1 qt. 2,4-D, 2 oz. Valor

**Post Emergence Crop Protection:** 3.6 qt. Halex GT, 2 qt. Atrazine

**Harvest Date:** September 20, 2021

**Harvest Equipment:** John Deere 9760 Grain Combine

# Southampton County Full Maturity Corn Hybrid Comparison

Table 27. The relative maturity, moisture percentage, and yield of hybrids entered in the full maturity group planted at the Southampton County location.

Brand	Hybrid	Relative Maturity	% Moisture	Yield (bu./A at 15.5%)
Local Seed Company	LC1307TCRIB	115	13.8	178.8
Hubner Seed	H4763RC2P	118	16.4	187.6
MorCorn	MC4311	117	15.5	195.9
Dekalb	DKC64-65	117	15.0	177.7
Augusta Seed	A7168	113	16.3	183.9
LG Seed	66C11VT2PRIB	116	16.0	190.1
DynaGro Seed	DG54VC34	115	15.4	195.9
Syngenta NK	1748-3110	118	16.5	196.3
Pioneer Seed / Corteva Agriscience	P1506AM	117	15.6	184.8
Chemgro Seeds	7505RDP	115	15.4	188.1

**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.

# Virginia State University Full Maturity Corn Hybrid Comparison

## Cooperators

**Virginia State University:** Robert Grammer, Landon West, and William Townsend, VSU-Randolph Farm, Glenn F. Chappell, II, Virginia State University

## Management

**Previous Crop:** Full season soybean

**Soil Type:** Tetotum

**Planting Date:** April 23, 2021

**Seeding Rate:** 29,000

**Preplant Fertilizer: Broadcast:** 25-50-150 Granular; April 22, 2021

**Pre-Emergence Fertilizer:** 65-0-0 UAN 30%, with herbicide; April 26, 2021

**Sidedress Fertilizer:** 130-0-0 UAN 30%; June 2, 2021

**Burndown:** 1 qt. Gramoxone SL; April 13, 2021

**Crop Protection at Planting:** 2 qt. Bicep II Mag. + 1 qt. Princep 4L; April 26, 2021

**Post Emergence Crop Protection:** 1 qt. Glyphosate; May 26, 2021

**Harvest Date:** October 18, 2021

**Harvest Equipment:** John Deere 9560 STS



# Virginia State University Full Maturity Corn Hybrid Comparison

Table 28. The relative maturity, moisture percentage, yield and percent of check of hybrids entered in the full maturity group planted at the Virginia State University location.

Brand	Hybrid	Relative Maturity	% Moisture	Yield (bu./A at 15.5%)	% of Check
Check – Hubner Seed	H4763RC2P	114	16.0	218.8	-----
Local Seed Company	LC1307 TCRIB	113	15.3	187.6	85.5
MorCorn	MC 4311	113	15.4	218.5	99.6
Dekalb	DKC64-65	114	15.4	205.4	93.7
Augusta Seed	A7168	118	15.9	230.0	104.8
LG Seed	LG66C11VT2RIB	116	15.4	222.8	101.6
DynaGro Seed	DG54VC34	114	15.1	214.6	97.9
Syngenta NK	1748-3110	117	17.8	187.0	85.2
Pioneer Seed / Corteva AgriScience	P1506AM	115	16.0	186.0	84.8
Chemgro Seeds	7505RDP	115	14.8	205.8	93.8
Check – Hubner Seed	H4763RC2P	114	15.8	220.0	-----

**Discussion:** Irrigation: May 24 – 0.50” & June 30 - 0.50”. Rainfall: April (23rd+) – 0.00”, May – 0.90”, June – 8.00”, July - 9.10”, & August – 8.05”. 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. Early Hybrids (103-108 RM) averaged – 179.8 Bu./A, Mid Hybrids (108 – 112 RM) averaged – 215.8 Bu./A, & Late Hybrids (113-118 RM) averaged – 206.4 Bu./A.

# City of Suffolk Full Maturity Corn Hybrid Comparison

## Cooperators

**Producer:** Tidewater AREC

**Extension:** Elizabeth Pittman, VCE City of Suffolk, Tidewater AREC

## Management

**Previous Crop:** Cotton

**Soil Type:** Eunola fine sandy loam; Dragston fine sandy loam

**Tillage:** Strip-till

**Planting Date:** April 22, 2021

**Planting Equipment:** 4 row Kinze planter, 36 inch spacing

**Seeding Rate:** 29,000

**Preplant Fertilizer:** 430 lbs. 13-9-18

**Fertilizer at Planting:** 10 gal. 24-0-0-3

**Sidedress Fertilizer:** 52 gal. 24-0-0-3 52 gal

**Burndown:** 1qt. Roundup, 1.5 pt. 2,4-D

**Crop Protection at Planting:** 2 pt. Bicep, 1 pt. Simazine

**Post Emergence Crop Protection:** 24 oz. Impact corn, 1 qt. Roundup, 1.5 pt. Atrazine

**Harvest Date:** September 16, 2021

**Harvest Equipment:** John Deere 9450 combine

## City of Suffolk Mid Maturity Corn Hybrid Comparison

Table 29. The relative maturity, moisture percentage, test weight, and yield of hybrids entered in the full maturity group planted at the Suffolk location.

Brand	Hybrid	Relative Maturity	% Moisture	Test Weight	Yield (bu./A at 15.5%)
Local Seed Company	LC1307 TCRIB	113	17.6	56.5	257.9
Hubner Seed	H4763RC2P	114	18.5	57.1	247.2
MorCorn	MC 4311	113	17.4	55.3	269.9
Dekalb	DKC64-65	114	17.5	56.6	243.0
Augusta Seed	A7168	118	19.7	56.3	246.4
LG Seed	LG66C11VT2RIB	116	19.1	56.0	231.3
DynaGro Seed	DG54VC34	114	17.8	56.4	257.7
Syngenta NK	NK 1748-3110	117	19.4	53.1	208.6
Pioneer Seed / Corteva Agriscience	P1506AM	115	17.8	57.5	235.0
Chemgro Seeds	7505RDP	115	17.0	56.9	230.9

**Discussion:** Planting conditions were fairly ideal and we saw great emergence across all of the varieties. Wet/cool conditions after emergence likely had some effect on top-end yield potential. There was hot/dry weather in July that also potentially impacted yield but overall all of the varieties kept good plant health and harvested well without issues.

# King William County Corn Planting Population Demonstration Plot

## Cooperators

**Producer:** Old Place Farm- Owen Johnson

**Extension:** Robbie Longest, VCE Essex

## Management

**Previous Crop:** Soybean

**Soil Type:** Emporia fine sandy loam, Kempsville sandy loam

**Tillage:** No-till

**Planting Date:** April 20, 2021

**Planting Equipment:** John Deere 7200 (6 Row), 30 inch spacing

**Preplant Fertilizer:** 8.47-40-60 Dry Fertilizer

**Fertilizer at Planting:** 40-20-0 Liquid Starter Fertilizer

**Sidedress Fertilizer:** 24-0-0-3, 160 lbs. N / Acre

**Burndown:** Atrazine, Simazine, Dual Magnum, Glyphosate, 2-4D LV6, Grizzly II Insecticide

**Crop Protection at Planting:** Fanfare Insecticide

**Harvest Date:** September 30, 2021

**Harvest Equipment:** John Deere 8820 Titan II, 693 Corn Head

# King William County Corn Planting Population Demonstration Plot

Table 30. The stand average, moisture percentage, test weight, and yield of three planting population treatments (30,500, 28,500, 26,500) replicated twice.

Population	Rep	Stand Avg.	% Moisture	Test Weight	Yield (bu./A @15.5%)
30,500	1	30,600	16.8	56.0	218.8
28,500	1	27,600	16.1	56.2	215.3
26,500	1	26,300	15.6	56.7	210.5
30,500	2	30,300	15.6	56.3	221.3
28,500	2	27,300	15.5	56.7	214.6
26,500	2	26,300	15.3	56.7	212.7
<b>AVERAGE</b>					
30,500		30,500	16.2	56.2	220.1
28,500		27,500	15.8	56.5	215.0
26,500		26,333	15.5	56.7	211.6

## Discussion:

Proper seeding rates and plant population continues to be an important aspect of corn production, particularly considering different soil types, management practices, hybrid flex potential, and input costs. This study evaluated a 114-day Hubner hybrid (H14G153) planted at three different target populations (26,500/28,500/30,500). In this situation, hypothetically considering a market price of \$5.25/bu., and an average seed corn cost of \$250/bag (80,000 seeds), and everything else constant, the average increase in yield from the 26,500 population to the 30,500 of 8.5 bu./ac was profitable since the increase in seed cost per acre would have been roughly \$12.50 ( $\$250/\text{bag} \div 80,000 \text{ seeds} = \$0.0031 \text{ per seed} \times 4,000 = \$12.50$ ), and the average return in yield and profit would have been (8.5 bu. x \$5.25/bu. = \$44.63), with a total return of roughly \$32 per acre more at the 30,500 population than at the 26,500 population on average. The average increase in return going from the 26,500 population to the 28,500 population in this situation was \$11.60 per acre. Please note that this is not a linear relationship, and will vary across scenarios. Prices of seed corn and the market price of grain corn fluctuate, and directly impact the outcome. Growers are encouraged to try different seeding rates in their own environments with their selected hybrids and use this technique to evaluate if changing plant populations will result in an increased or decreased net return (and to what point), and to determine which seeding rates are most profitable for their farm.