CORN HYBRIDS FOR GRAIN 2024

LSU AgCenter
Research · Extension · Teaching

INTRODUCTION

Corn hybrid performance is annually evaluated in official hybrid trials (OHTs) by LSU AgCenter researchers to provide Louisiana farmers, seedsmen, county agents and consultants with unbiased performance data for commercial corn hybrids submitted for evaluation by private companies. Selection of superior hybrids that are well adapted for a given region is essential for maximizing yield and profit.

HYBRID SELECTION

Hybrid selection is one of the most important decisions for producers, and there are many different hybrids available on the market. Soil conditions, irrigation practices and cultural practices vary among growers throughout the state; consequently, hybrid performance also varies based on soil type, irrigation, planting date, environmental conditions and location.

Grain yield is the primary trait considered by producers when selecting hybrids; however, maturity, lodging, shuck cover, ear placement and disease resistance also warrant consideration. Yield data from multiple locations can offer guidance as to hybrid performance consistency.

Hybrid maturity is categorized using relative maturity (RM) or growing degree day (GDD) rating systems. These two methods are based on the number of days or degree days required to reach physiological maturity. Louisiana producers grow early, mid- and full-season hybrids, with 112-day to 121-day hybrids producing optimal yield. Full-season hybrids do not consistently out-yield mid-season hybrids, and there is more variability in yield among hybrids within a given RM category than there is between maturity groups.

Hybrids that remain green later into maturity usually retain better stalk strength and have less lodging potential. Shuck cover is important for protecting the ear and kernels from weathering and fungi. When planted late during the recommended window, hybrids will grow taller because of higher day and night temperatures and resulting internode elongation. Therefore, ear placement will be higher when compared to earlier planting dates, which may increase lodging potential. Consider planting a hybrid that has a low ear placement late during the planting season.

Corn hybrids have different insect and herbicide traits conferred by biotechnology and should be chosen based on the best fit for your production system. More information regarding available transgenic traits for insect and weed control are available in the LSU AgCenter Insect Pest Management Guide and Suggested Chemical Weed Control Guide.

To assist producers with hybrid selection, the LSU AgCenter conducts annual corn OHTs at several locations across the state, providing unbiased information on hybrid performance across different soil types and environmental conditions. In 2023, 37 hybrids were evaluated in the OHTs. Locations of these trials included the LSU AgCenter Dean Lee Research and Extension Center, Alexandria; LSU AgCenter Red River Research Station, Bossier City; LSU AgCenter Northeast Research Station, St. Joseph; and LSU AgCenter Macon Ridge Research Station, Winnsboro (Tables 4-9). Agronomic details for each location are included in Table 1. Selection criteria abbreviations and descriptions are defined in Table 2.

In addition to the OHTs, 12 on-farm core block demonstrations were conducted throughout the corn-growing areas of Louisiana by farmers and LSU AgCenter extension agents (Tables 10-22). This information should be used to complement OHT results.

Table 1. Locations and agronomic milestones for the official corn hybrid trials, 2023.

Location	Soil Type	Previous Crop	Planting Date	Harvest Date	Row Spacing	Seeding Rate	Irrigated
Alexandria (DLRS)	Coushatta silt loam	Cotton	4/19/23	8/8/23	38”	36,000	No
Bossier City (RRRS)	Moreland silty clay loam	Soybean	3/30/23	8/23/23	40”	36,000	Yes
St. Joseph (NERS SL)	Commerce silt loam	Soybean	3/22/23	8/16/23	38”	36,000	Yes
St. Joseph (NERS C)	Sharkey clay	Soybean	3/22/23	8/18/23	38”	36,000	No
Winnsboro (MRRS)	Gigger-Gilbert complex	Soybean	3/24/23	8/17/23	40”	36,000	Yes
Winnsboro[1] (MRRS CC)	Gigger-Gilbert complex	Corn	3/16/23	8/9/23	40”	36,000	Yes

[1]Trial was conducted in a no-till/continuous corn production system to increase chances of foliar disease.
Abbreviations: DLRS=Dean Lee Research Station, RRRS=Red River Research Station, NERS SL=Northeast Research Station – silt loam, NERS C=Northeast Research Station – Sharkey clay, MRRS=Macon Ridge Research Station, MMRS CC=Macon Ridge Research Station – continuous corn.

Table 2. Performance attributes measured in the corn official hybrid trials, 2023.

Trait	Abbreviation	Description
Yield	YLD	Grain yield, bushels per acre (bu/a), adjusted to 15.5% moisture
Grain moisture	GM	Grain moisture at harvest (%)
Test weight	TW	Volume weight of grain (lb/bu)
Plant population	PP	Plant population (no./a)
Mid-silking date	MS	Silking date of 50% of plants, days after planting (DAP)
Plant height	PH	Height from ground to the flag leaf (inches)
Ear height	EH	Height from ground to where primary ear attaches to the plant (inches)
Husk cover	HC	Visual rating of how well kernels are covered; 1=closed and 3=open husk
Lodging	LOD	Plants that are lodged at harvest, 0-9, where 0=none and 9=all
Harvest Weight	HW	Core block harvest weight (lbs)
Plot Width	PW	Core block plot width (in)
Row Length	RL	Core block row/plot length (ft)
Dry Weight	DW	Core block harvest weight adjusted to 15.5% moisture
Curvularia leaf spot	CURV	0-9, where 0=no disease and 9=complete destruction
Gray leaf spot	GLS	0-9, where 0=no disease and 9=utter annihilation

For a better understanding of how corn hybrids performed in Louisiana, please refer to the OHT data first. Choose the hybrids that performed well overall and those that performed well in the region most representative of your growing area. Finally, cross reference on-farm core block data for consistency with the OHT data for your chosen hybrids to improve your capability of choosing hybrids that will perform well on your farm.

PROCEDURES

The OHTs were conducted using a randomized complete block experimental design with four replications. Analyses of variance and least significant differences (LSD) were calculated only if differences existed at the 90% confidence level. If differences were significant, an LSD at the 10% probability level was calculated. If the LSD (0.10) for yield in a trial is 10 bushels per acre, there is a 10% chance that two hybrids with a reported yield difference of 10 bushels per acre are genetically equal and a 90% probability they have differences in genetic potential in that particular environment. LSD values are influenced by how well soil fertility, stand establishment, plot length, harvest efficiency and other variables are controlled and by the number of replications for each hybrid. The letters NS are used in the tables to indicate lack of significance (not significantly different) at the 10% probability level. The coefficient of variation (CV) reflects the magnitude of experimental error (random variation not accounted for by hybrids and replications) in relation to the trial mean. A high CV means that relative differences among hybrids were not consistent among replications, which reduces the precision of the test. Yield data for 2023 across locations as well as 2022 data for repeated hybrids is summarized in Table 3. Individual location summaries are in Tables 4 through 9.

Table 3. Summary of yield performance of corn hybrids in the 2023 official trials.[1]

Company	Hybrid	DLRS[2]	RRRS	NERS SL	NERS C	MRRS	MRRS CC	2023 Avg.	2022 Avg.	2-YEAR Avg.
Progeny	**PGY 2314TRE**	182.4	196.4	174.2	204.2	216.4	192.8	194.4	-	-
Dyna-Gro	**D55VC80**	175.1	195.2	173.8	186.7	208.7	209.1	191.4	173.5	182.5
Dyna-Gro	**D58VC74**	-[3]	-[3]	165.6	196.6	207.4	-[3]	189.9	-	-
Bayer	**DKC68-35 VT2P**	172.7	180.6	187.2	207.7	210.3	179.7	189.7	-	-
Pioneer	**P1511YHR**	156.5	182.4	179.1	199.5	227.7	193.1	189.7	-	-
Bayer	**DKC65-93**	153.5	210.5	180.6	178.7	219.1	192.4	189.1	165.5	177.3
WinField	**CP 5893 TRE**	175.2	203.4	171.2	190.5	222.5	170.4	188.8	-	-
Bayer	**DKC66-06 TRE**	168.8	186.7	182.9	196.7	207.1	187.5	188.3	-	-
BH Genetics	**X23001TRE**	170.7	180.4	178.5	180.7	225.0	192.3	187.9	-	-
Pioneer	**P1718VYHR**	164.7	187.9	177.4	200.4	202.9	193.8	187.8	170.6	179.2
Great Heart	**HT-7360VT2P**	168.0	169.2	162.2	198.8	214.2	208.6	186.8	-	-
Pioneer	**P17677YHR**	162.3	181.6	182.7	189.5	219.9	182.7	186.4	-	-
Great Heart	**HT-7500TRE**	165.3	168.8	182.3	207.5	215.5	178.5	186.3	-	-
BH Genetics	**BH 8721VT2P**	156.7	179.5	177.0	190.0	230.8	181.9	186.0	175.3	180.6
WinField	**CP 5208 VT2P**	171.6	176.9	169.0	184.0	220.1	188.9	185.1	-	-
Bayer	**DKC65-99 TRE**	150.4	191.0	169.5	195.3	212.1	191.0	184.9	176.5	180.7
Progeny	**PGY 9117VT2P**	153.3	156.1	194.7	179.0	226.7	188.2	183.0	171.9	177.4
Pioneer	**P17052YHR**	159.7	174.7	180.9	188.5	217.2	175.8	182.8	-	-
Dyna-Gro	**D56TC44**	177.2	178.0	182.9	194.9	210.9	152.2	182.7	-	-
BH Genetics	**BH 8566VT2P**	167.5	176.1	177.9	171.6	218.0	182.9	182.3	-	-
Progeny	**PGY 9114VT2P**	162.3	149.0	197.1	173.7	217.8	193.9	182.3	171.6	176.9
Progeny	**PGY 2118VT2P**	168.6	163.8	190.0	174.4	219.1	177.3	182.2	170.6	176.4
Pioneer	**P1608YHR**	159.4	190.6	171.4	177.5	205.1	176.9	180.1	-	-
Progeny	**PGY 2215TRE**	175.7	177.1	178.3	176.1	213.1	160.1	180.1	-	-
Pioneer	**P1759YHR**	161.2	181.7	175.9	193.0	204.4	163.6	180.0	-	-
Bayer	**DKC70-45 VT2P**	161.9	166.7	167.2	186.8	216.3	180.5	179.9	-	-
Dyna-Gro	**D57VC53**	171.5	169.9	172.1	169.2	221.8	170.1	179.1	172.1	175.6
Dyna-Gro	**D54VC14**	164.0	146.5	176.5	189.6	207.3	186.5	178.4	173.0	175.7
Bayer	**DKC64-22 VT2P**	154.0	167.1	173.5	188.1	197.7	183.3	177.3	-	-
Dyna-Gro	**D58VC65**	149.7	161.4	170.9	182.9	203.6	193.2	176.9	167.4	172.2
Great Heart	**HT-7499TRE**	150.4	170.7	159.7	182.8	211.2	183.4	176.4	-	-
Bayer	**DKC62-70 VT2P**	161.9	146.1	181.2	174.5	207.4	182.6	175.6	171.3	173.5
Dyna-Gro	**D57RR51**	161.2	163.5	173.1	187.7	204.5	162.8	175.5	177.3	176.4
WinField	**CP 5678 RR**	171.2	142.1	185.9	178.5	198.0	175.1	175.1	166.2	170.6
Pioneer	**P1289YHR**	147.8	168.5	169.7	175.7	215.0	172.7	174.9	-	-
Pioneer	**P1222YHR**	142.2	171.6	163.1	185.4	206.4	179.4	174.7	165.1	169.9
Pioneer	**P1870R**	147.3	161.3	153.2	182.5	204.2	191.3	173.3	166.9	170.1
	LSD (P=0.10)	17.3	22.9	17.2	18.9	18.3	36.6			
	CV (%)	9.0	11.2	8.3	8.6	7.3	13.8			
	Grand Mean	162.8	174.2	175.9	187.0	213.1	182.6			

[1]All yields expressed in bushels per acre and adjusted to 15.5% moisture.
[2]Please refer to Table 1 for specific location information.
[3]Trial was already planted prior to receiving seed for this hybrid.

Table 4. Official corn hybrid trial, Dean Lee Research and Extension Center, Alexandria, 2023.

Company	Hybrid	PP (No./A)[1]	PH (in)	EH (in)	HC (1-3)	LOD (0-9)	GM (%)	TW (lb/bu)	YLD (bu/A)
Progeny	PGY 2314TRE	30,951	90.4	43.3	1.0	0.3	13.7	57.4	182.4[2]
Dyna-Gro	D56TC44	27,512	88.1	42.1	1.0	1.0	13.4	58.6	177.2
Progeny	PGY 2215TRE	36,797	92.6	42.2	1.0	0.3	13.8	59.5	175.7
WinField	CP 5893 TRE	30,435	86.9	44.2	1.0	0.3	15.1	59.5	175.2
Dyna-Gro	D55VC80	35,422	92.1	45.7	1.3	0.0	13.0	58.2	175.1
Bayer	DKC68-35 VT2P	36,110	85.9	38.2	1.0	0.0	14.8	58.9	172.7
WinField	CP 5208 VT2P	34,734	83.3	37.2	1.0	0.3	12.5	57.4	171.6
Dyna-Gro	D57VC53	27,684	87.9	43.6	1.3	0.0	16.1	59.7	171.5
WinField	CP 5678 RR	28,544	84.1	38.5	1.0	0.0	13.8	58.7	171.2
BH Genetics	X23001TRE	35,938	89.8	48.0	1.0	0.3	15.0	56.7	170.7
Bayer	DKC66-06 TRE	31,811	89.1	43.0	1.3	0.8	14.4	58.1	168.8
Progeny	PGY 2118VT2P	31,295	85.4	43.7	1.0	0.0	16.3	60.4	168.6
Great Heart	HT-7360VT2P	27,856	90.6	38.0	1.0	0.8	12.6	56.9	168.0
BH Genetics	BH 8566VT2P	26,824	90.2	44.4	1.0	0.3	13.4	58.0	167.5
Great Heart	HT-7500TRE	31,983	88.2	44.4	1.0	0.0	14.4	57.8	165.3
Pioneer	P1718VYHR	29,919	95.6	45.4	1.0	0.0	12.9	56.5	164.7
Dyna-Gro	D54VC14	29,919	83.4	39.0	1.5	1.0	13.0	57.8	164.0
Pioneer	P17677YHR	29,919	94.2	45.2	1.0	0.0	13.1	58.9	162.3
Progeny	PGY 9114VT2P	27,168	88.0	38.2	1.5	0.3	13.3	58.3	162.3
Bayer	DKC62-70 VT2P	25,793	85.2	41.9	1.8	0.0	13.6	59.2	161.9
Bayer	DKC70-45 VT2P	28,888	91.9	45.5	1.0	0.0	15.4	59.7	161.9
Dyna-Gro	D57RR51	32,671	83.1	40.0	1.0	0.3	13.9	57.7	161.2
Pioneer	P1759YHR	31,983	94.5	42.2	1.0	0.5	12.9	58.4	161.2
Pioneer	P17052YHR	32,499	89.6	42.7	1.0	0.0	13.3	58.0	159.7
Pioneer	P1608YHR	32,155	86.0	41.4	1.0	0.5	14.0	58.9	159.4
BH Genetics	BH 8721VT2P	30,263	86.2	39.4	1.3	0.5	15.0	59.4	156.7
Pioneer	P1511YHR	35,078	88.8	42.8	1.0	0.3	14.4	58.5	156.5
Bayer	DKC64-22 VT2P	28,888	83.6	38.7	1.0	0.0	13.7	59.2	154.0
Bayer	DKC65-93	33,874	84.9	41.7	1.3	0.3	14.5	58.9	153.5
Progeny	PGY 9117VT2P	37,313	86.8	36.7	1.0	0.8	14.7	59.6	153.3
Bayer	DKC65-99 TRE	34,734	79.4	37.7	1.0	0.3	13.8	58.7	150.4
Great Heart	HT-7499TRE	35,422	87.6	42.7	1.3	0.3	13.2	57.5	150.4
Dyna-Gro	D58VC65	29,403	82.3	37.9	1.0	0.0	13.9	57.6	149.7
Pioneer	P1289YHR	31,639	88.2	38.4	1.0	0.0	13.4	59.2	147.8
Pioneer	P1870R	29,403	86.9	33.2	1.0	0.5	14.0	59.7	147.3
Pioneer	P1222YHR	29,919	86.4	39.8	1.3	0.0	12.5	58.2	142.2
	LSD (P=0.10)	7,484	4.9	3.3	0.3	0.8	0.6	0.9	17.3
	CV	20.3	4.7	6.8	25.1	267.5	3.9	1.4	9.0
	Grand Mean	31,410	87.7	41.3	1.1	0.3	13.9	58.5	162.8

[1]*Please refer to Table 2 for column header definitions.*
[2]*Numbers shaded within a column are not significantly different from the numerically greatest value.*

Table 5. Official corn hybrid trial, Red River Research Station, Bossier City, 2023.

Company	Hybrid	PP (No./A)[1]	MS (DAP)	PH (in)	EH (in)	HC (1-3)	LOD (0-9)	GM (%)	TW (lb/bu)	YLD (bu/A)
Bayer	**DKC65-93**	32,731	70.3	103.5	48.3[2]	2.3	0.1	12.2	57.4	210.5
WinField	**CP 5893 TRE**	34,354	72.5	104.8	47.5	1.0	0.1	12.7	58.6	203.4
Progeny	**PGY 2314TRE**	37,060	70.8	102.0	46.5	1.0	1.1	12.2	56.4	196.4
Dyna-Gro	**D55VC80**	34,895	75.5	104.0	45.3	1.0	0.1	11.9	55.9	195.2
Bayer	**DKC65-99 TRE**	34,236	70.3	92.8	41.0	1.0	0.0	12.5	56.7	191.0
Pioneer	**P1608YHR**	34,084	74.3	104.3	46.5	1.8	0.4	11.9	57.7	190.6
Pioneer	**P1718VYHR**	33,543	73.5	113.0	47.8	1.0	0.8	11.8	55.4	187.9
Bayer	**DKC66-06 TRE**	32,731	69.8	109.3	42.5	1.0	1.3	12.1	56.6	186.7
Pioneer	**P1511YHR**	33,002	72.8	105.3	47.0	1.3	0.1	11.8	56.1	182.4
Pioneer	**P1759YHR**	32,461	75.3	110.5	49.0	1.0	1.9	11.8	56.5	181.7
Pioneer	**P17677YHR**	31,108	75.0	107.8	49.5	1.8	0.4	12.2	56.4	181.6
Bayer	**DKC68-35 VT2P**	31,920	71.3	101.3	41.8	2.3	0.0	12.5	56.0	180.6
BH Genetics	**X23001TRE**	37,330	75.8	106.5	53.8	1.8	1.4	13.3	54.3	180.4
BH Genetics	**BH 8721VT2P**	31,920	73.3	112.8	49.8	1.5	0.1	12.0	56.0	179.5
Dyna-Gro	**D56TC44**	32,461	69.5	101.8	45.5	1.0	0.8	11.7	56.1	178.0
Progeny	**PGY 2215TRE**	35,166	72.3	104.3	41.3	1.0	0.1	12.2	56.3	177.1
WinField	**CP 5208 VT2P**	35,978	68.0	101.0	42.5	1.0	0.8	11.6	55.6	176.9
BH Genetics	**BH 8566VT2P**	29,215	70.8	111.0	47.0	1.3	1.4	12.5	55.4	176.1
Pioneer	**P17052YHR**	30,026	74.0	112.3	50.3	1.8	0.0	11.8	56.2	174.7
Pioneer	**P1222YHR**	39,224	75.3	102.8	43.3	2.3	0.3	11.9	56.8	171.6
Great Heart	**HT-7499TRE**	31,108	72.3	102.5	47.3	1.0	0.5	11.9	55.8	170.7
Dyna-Gro	**D57VC53**	33,272	70.8	106.8	49.5	1.0	1.0	13.8	56.3	169.9
Great Heart	**HT-7360VT2P**	31,920	71.8	102.8	43.3	1.3	0.0	11.6	55.2	169.2
Great Heart	**HT-7500TRE**	28,944	72.5	111.0	50.5	1.0	2.1	12.4	55.1	168.8
Pioneer	**P1289YHR**	38,683	73.5	106.0	41.8	1.3	1.5	11.8	56.9	168.5
Bayer	**DKC64-22 VT2P**	29,756	70.5	104.0	47.8	1.3	1.1	11.9	56.6	167.1
Bayer	**DKC70-45 VT2P**	31,649	74.5	105.5	48.0	1.0	0.0	12.4	57.1	166.7
Progeny	**PGY 2118VT2P**	33,543	71.0	99.3	46.5	1.0	0.0	13.4	54.4	163.8
Dyna-Gro	**D57RR51**	31,649	70.5	103.8	43.8	1.0	0.8	11.6	54.8	163.5
Dyna-Gro	**D58VC65**	30,297	68.3	107.8	45.0	1.5	0.4	12.1	56.3	161.4
Pioneer	**P1870R**	31,379	69.5	103.5	41.0	1.0	0.0	11.8	57.1	161.3
Progeny	**PGY 9117VT2P**	33,069	76.0	103.0	46.5	1.5	2.1	11.8	56.0	156.1
Progeny	**PGY 9114VT2P**	34,354	68.0	95.5	43.8	1.3	2.1	12.2	56.0	149.0
Dyna-Gro	**D54VC14**	33,069	69.8	96.5	41.5	1.3	2.3	12.1	56.5	146.5
Bayer	**DKC62-70 VT2P**	33,543	72.8	105.5	46.8	2.0	1.6	12.1	55.5	146.1
WinField	**CP 5678 RR**	30,838	66.0	97.3	39.8	1.0	1.1	11.7	54.7	142.1
	LSD (P=0.10)	4,062	3.6	7.5	5.7	0.7	1.5	0.4	1.4	22.9
	CV (%)	10.47	4.3	6.1	10.7	42.5	167.3	2.7	2.1	11.2
	Grand Mean	33,070	71.9	104.5	45.8	1.3	0.8	12.1	56.1	174.2

[1]*Please refer to Table 2 for column header definitions.*
[2]*Numbers shaded within a column are not significantly different from the numerically greatest value.*

Table 6. Official corn hybrid trial, Northeast Research Station, St. Joseph (silt loam soil), 2023.

Company	Hybrid	PP (No./A)[1]	PH (in)	EH (in)	HC (in)	LOD (0-9)	GM (%)	TW (lb/bu)	YLD (bu/A)
Progeny	**PGY 9114VT2P**	32,520	78.8	36.1	1.0	0.0	12.7	55.7	197.1[2]
Progeny	**PGY 9117VT2P**	30,799	85.7	37.7	1.3	0.0	13.0	57.1	194.7
Progeny	**PGY 2118VT2P**	29,423	80.9	34.8	1.0	0.0	16.1	57.3	190.0
Bayer	**DKC68-35 VT2P**	31,660	81.5	33.8	1.0	0.3	14.3	56.7	187.2
WinField	**CP 5678 RR**	30,111	81.3	36.0	1.0	0.3	13.1	56.3	185.9
Dyna-Gro	**D56TC44**	30,627	82.9	39.0	1.0	1.5	12.9	55.8	182.9
Bayer	**DKC66-06 TRE**	27,874	84.9	35.4	1.0	0.3	13.7	55.9	182.9
Pioneer	**P17677YHR**	31,143	89.6	41.8	1.0	0.3	12.2	56.2	182.7
Great Heart	**HT-7500TRE**	33,380	83.4	38.6	1.0	0.0	15.9	54.4	182.3
Bayer	**DKC62-70 VT2P**	30,627	85.1	36.9	1.5	0.0	13.4	56.1	181.2
Pioneer	**P17052YHR**	27,530	90.5	41.8	1.3	0.0	14.4	56.1	180.9
Bayer	**DKC65-93**	33,380	84.4	37.5	1.3	0.3	15.0	54.6	180.6
Pioneer	**P1511YHR**	33,036	86.8	39.9	1.0	0.0	14.4	56.3	179.1
BH Genetics	**X23001TRE**	29,767	87.7	44.0	1.0	0.0	16.2	54.4	178.5
Progeny	**PGY 2215TRE**	31,143	85.7	34.9	1.0	0.0	13.9	56.8	178.3
BH Genetics	**BH 8566VT2P**	30,283	88.7	42.4	1.0	0.3	14.6	55.5	177.9
Pioneer	**P1718VYHR**	33,724	87.5	38.4	1.0	0.0	13.1	55.9	177.4
BH Genetics	**BH 8721VT2P**	31,143	83.5	34.7	1.3	0.0	13.2	57.0	177.0
Dyna-Gro	**D54VC14**	32,692	78.8	30.0	1.3	0.3	12.9	56.1	176.5
Pioneer	**P1759YHR**	31,660	89.8	35.1	1.0	0.0	11.5	57.0	175.9
Progeny	**PGY 2314TRE**	33,036	82.5	35.1	1.0	0.0	15.3	55.1	174.2
Dyna-Gro	**D55VC80**	28,390	82.2	37.5	1.0	0.0	14.0	55.4	173.8
Bayer	**DKC64-22 VT2P**	30,111	80.9	34.6	1.0	0.0	12.7	56.3	173.5
Dyna-Gro	**D57RR51**	31,660	79.5	30.6	1.0	0.0	12.8	55.7	173.1
Dyna-Gro	**D57VC53**	30,455	79.5	38.7	1.0	0.3	15.2	56.9	172.1
Pioneer	**P1608YHR**	31,315	85.2	36.4	1.0	0.0	12.7	56.5	171.4
WinField	**CP 5893 TRE**	31,660	80.3	38.7	1.0	0.3	15.8	56.3	171.2
Dyna-Gro	**D58VC65**	30,455	76.9	33.6	1.0	0.5	13.6	56.0	170.9
Pioneer	**P1289YHR**	32,864	81.1	33.9	1.0	0.0	12.7	56.7	169.7
Bayer	**DKC65-99 TRE**	30,111	76.2	31.4	1.0	0.0	14.5	55.7	169.5
WinField	**CP 5208 VT2P**	33,208	81.7	31.9	1.0	0.0	13.0	56.0	169.0
Bayer	**DKC70-45 VT2P**	24,433	81.7	38.0	1.0	0.3	15.8	56.1	167.2
Dyna-Gro	**D58VC74**	31,315	85.9	40.7	1.5	0.0	14.5	56.4	165.6
Pioneer	**P1222YHR**	30,627	91.1	41.6	1.0	0.0	11.8	56.3	163.1
Great Heart	**HT-7360VT2P**	31,660	85.2	36.8	1.0	0.0	12.8	54.5	162.2
Great Heart	**HT-7499TRE**	30,455	82.2	39.6	1.0	0.5	14.1	55.8	159.7
Pioneer	**P1870R**	28,562	78.4	27.4	1.0	0.0	14.4	57.5	153.2
	LSD (P=0.10)	3,960	5.1	4.5	0.3	0.4	0.9	0.8	17.2
	CV (%)	10.9	5.2	10.6	21.6	271.2	5.5	1.2	8.3
	Grand Mean	30,888	83.4	36.6	1.1	0.1	13.8	56.1	175.9

[1]Please refer to Table 2 for column header definitions.
[2]Numbers shaded within a column are not significantly different from the numerically greatest value.

Table 7. Official corn hybrid trial, Northeast Research Station, St. Joseph (clay soil), 2023.

Company	Hybrid	PP (No./A)[1]	PH (in)	EH (in)	HC (1-3)	LOD (0-9)	GM (%)	TW (lb/bu)	YLD (bu/A)
Bayer	DKC68-35 VT2P	29,939	76.7	35.8	1.0	0.0	11.7	56.8	207.7[2]
Great Heart	HT-7500TRE	33,724	82.4	42.9	1.0	0.0	12.0	55.9	207.5
Progeny	PGY 2314TRE	32,864	76.3	37.8	1.5	0.0	11.5	55.8	204.2
Pioneer	P1718VYHR	32,692	87.4	40.9	1.0	0.3	11.0	56.5	200.4
Pioneer	P1511YHR	30,455	82.3	38.7	1.3	0.0	10.9	56.0	199.5
Great Heart	HT-7360VT2P	34,585	81.5	37.5	1.0	0.0	10.6	55.7	198.8
Bayer	DKC66-06 TRE	30,111	82.2	39.3	1.0	0.8	11.3	56.5	196.7
Dyna-Gro	D58VC74	30,971	82.3	37.2	1.8	0.0	11.6	57.1	196.6
Bayer	DKC65-99 TRE	33,896	74.7	34.8	1.3	0.0	11.7	57.6	195.3
Dyna-Gro	D56TC44	33,724	80.6	35.5	1.0	0.0	10.8	56.2	194.9
Pioneer	P1759YHR	30,627	87.6	40.6	1.0	0.0	10.7	56.9	193.0
WinField	CP 5893 TRE	33,036	81.0	42.0	1.0	0.0	11.6	58.5	190.5
BH Genetics	BH 8721VT2P	31,143	87.9	39.9	1.3	0.3	11.1	58.0	190.0
Dyna-Gro	D54VC14	30,283	80.0	35.5	1.5	0.0	10.9	56.4	189.6
Pioneer	P17677YHR	31,315	85.8	42.3	1.0	0.0	10.9	57.3	189.5
Pioneer	P17052YHR	31,660	85.0	43.1	1.8	0.3	10.8	59.0	188.5
Bayer	DKC64-22 VT2P	30,627	76.9	38.3	1.3	0.0	11.0	58.0	188.1
Dyna-Gro	D57RR51	31,315	79.6	44.7	1.3	0.3	10.9	57.2	187.7
Bayer	DKC70-45 VT2P	33,552	77.4	39.4	1.0	0.3	12.6	56.6	186.8
Dyna-Gro	D55VC80	34,757	84.8	41.3	1.3	0.0	11.6	56.9	186.7
Pioneer	P1222YHR	33,036	87.9	40.3	1.8	0.3	10.9	57.2	185.4
WinField	CP 5208 VT2P	32,348	77.8	36.7	1.0	0.0	10.2	54.6	184.0
Dyna-Gro	D58VC65	28,562	77.7	35.6	1.3	0.0	10.6	56.2	182.9
Great Heart	HT-7499TRE	31,832	79.8	39.0	1.3	0.0	11.4	55.9	182.8
Pioneer	P1870R	30,971	81.6	34.3	1.0	0.5	10.8	57.8	182.5
BH Genetics	X23001TRE	30,283	83.2	41.4	1.3	0.0	12.6	55.3	180.7
Progeny	PGY 9117VT2P	34,068	82.9	39.1	1.3	0.0	11.1	57.9	179.0
Bayer	DKC65-93	33,208	77.5	36.7	1.8	0.3	11.7	55.8	178.7
WinField	CP 5678 RR	35,101	75.3	35.9	1.0	0.0	10.9	57.2	178.5
Pioneer	P1608YHR	29,423	85.8	39.4	1.3	0.0	10.4	57.0	177.5
Progeny	PGY 2215TRE	35,617	85.6	36.4	1.0	0.0	11.8	57.7	176.1
Pioneer	P1289YHR	31,832	81.9	40.6	1.0	0.0	10.6	56.8	175.7
Bayer	DKC62-70 VT2P	29,939	82.4	38.8	1.3	0.0	10.8	57.9	174.5
Progeny	PGY 2118VT2P	30,111	79.3	39.2	1.0	0.0	12.2	58.2	174.4
Progeny	PGY 9114VT2P	32,692	81.5	39.0	1.3	0.3	10.7	55.7	173.7
BH Genetics	BH 8566VT2P	28,907	87.3	43.8	1.0	0.8	11.5	56.6	171.6
Dyna-Gro	D57VC53	29,939	76.5	38.6	1.3	0.3	12.6	56.0	169.2
	LSD (P=0.10)	4,018	5.3	5.5	0.4	0.5	0.6	1.5	18.9
	CV (%)	10.8	5.6	12.1	30.5	393.8	4.5	2.2	8.6
	Grand Mean	31,869	81.5	39.0	1.2	0.1	11.2	56.8	187.0

[1]*Please refer to Table 2 for column header definitions.*
[2]*Numbers shaded within a column are not significantly different from the numerically greatest value.*

Table 8. Official corn hybrid trial, Macon Ridge Research Station, Winnsboro, 2023.

Company	Hybrid	PP (No./A)[1]	PH (in)	EH (in)	HC (1-3)	LOD (0-9)	CURV (0-9)	GLS (0-9)	GM (%)	TW (lb/bu)	YLD (bu/A)
BH Genetics	**BH 8721VT2P**	33,030	98.4	42.4	1.0	0	1.8	2.5[2]	17.8	56.5	230.8
Pioneer	**P1511YHR**	31,885	97.3	43.1	1.0	0	1	1.8	17.9	57.3	227.7
Progeny	**PGY 9117VT2P**	34,338	100.9	42.0	1.0	0	1.8	2.8	17.7	58.3	226.7
BH Genetics	**X23001TRE**	33,684	99.4	44.6	1.1	0	2.3	1.3	18.0	56.4	225.0
WinField	**CP 5893 TRE**	32,376	98.5	41.1	1.0	0	1	1.8	17.9	59.0	222.5
Dyna-Gro	**D57VC53**	32,212	97.0	41.9	1.0	0	1.3	1.5	18.0	58.2	221.8
WinField	**CP 5208 VT2P**	33,357	100.4	41.4	1.0	0	1.8	2	17.1	57.5	220.1
Pioneer	**P17677YHR**	33,684	96.4	42.0	1.0	0	2	1	17.5	57.3	219.9
Progeny	**PGY 2118VT2P**	32,212	96.4	40.4	1.0	0	2	2	17.2	59.1	219.1
Bayer	**DKC65-93**	33,357	97.4	40.5	1.1	0	1.5	1	17.4	58.3	219.1
BH Genetics	**BH 8566VT2P**	32,866	100.8	45.0	1.0	0	2.3	1.3	16.6	59.1	218.0
Progeny	**PGY 9114VT2P**	32,703	96.0	41.1	1.0	0	3.8	1.3	16.7	58.6	217.8
Pioneer	**P17052YHR**	34,829	95.3	41.4	1.0	0	3	2.8	18.3	58.8	217.2
Progeny	**PGY 2314TRE**	34,992	93.1	36.8	1.0	0	3.5	1.5	16.9	57.9	216.4
Bayer	**DKC70-45 VT2P**	35,810	95.6	40.8	1.0	0	1	1.3	17.1	57.7	216.3
Great Heart	**HT-7500TRE**	32,376	99.1	40.0	1.0	0	2	1	17.2	57.8	215.5
Pioneer	**P1289YHR**	34,174	96.4	42.4	1.0	0	1.5	1.8	16.9	58.5	215.0
Great Heart	**HT-7360VT2P**	33,193	97.9	41.5	1.0	0	1	1.3	17.4	58.9	214.2
Progeny	**PGY 2215TRE**	33,684	95.3	39.9	1.0	0	1.3	1.5	17.4	58.7	213.1
Bayer	**DKC65-99 TRE**	34,338	96.0	39.6	1.0	0	2.8	2	17.0	58.8	212.1
Great Heart	**HT-7499TRE**	33,520	93.8	36.4	1.0	0	2	1.8	16.3	58.1	211.2
Dyna-Gro	**D56TC44**	32,703	94.1	37.9	1.0	0	6	1.3	18.1	58.4	210.9
Bayer	**DKC68-35 VT2P**	34,011	97.8	41.3	1.0	0	1.8	1.3	17.7	58.7	210.3
Dyna-Gro	**D55VC80**	33,521	97.4	41.8	1.0	0	1.3	1.5	17.1	57.5	208.7
Dyna-Gro	**D58VC74**	36,300	97.1	40.5	1.0	0	1.8	2	17.7	56.1	207.4
Bayer	**DKC62-70 VT2P**	32,049	93.5	39.1	1.0	0	3.5	1	17.5	57.8	207.4
Dyna-Gro	**D54VC14**	31,722	93.0	38.8	1.0	0	4	1.3	17.3	58.3	207.3
Bayer	**DKC66-06 TRE**	33,193	95.0	39.4	1.0	0	2	1.8	16.6	58.8	207.1
Pioneer	**P1222YHR**	34,992	97.1	39.4	1.0	0	2	1.8	17.0	59.0	206.4
Pioneer	**P1608YHR**	32,539	96.6	40.6	1.0	0	2	1	17.2	59.1	205.1
Dyna-Gro	**D57RR51**	33,847	95.4	40.8	1.0	0	2	1.5	16.3	58.7	204.5
Pioneer	**P1759YHR**	34,011	97.3	40.8	1.0	0	2.3	1.8	16.9	58.9	204.4
Pioneer	**P1870R**	33,521	97.0	39.6	1.0	0	1.3	2.3	17.0	58.9	204.2
Dyna-Gro	**D58VC65**	32,703	93.5	38.1	1.0	0	2.3	1.3	16.9	58.1	203.6
Pioneer	**P1718VYHR**	32,376	97.1	39.5	1.0	0	2.3	2.5	16.9	58.6	202.9
WinField	**CP 5678 RR**	33,030	94.1	39.0	1.0	0	3	1.5	17.3	58.8	198.0
Bayer	**DKC64-22 VT2P**	29,596	94.0	39.3	1.0	0	3.3	1	18.0	57.7	197.7
	LSD P=.10	3,811	4.8	4.5	0.07	.	0.9	0.6	1.3	1.5	18.3
	CV	9.8	4.3	9.5	5.8	0	35.9	33.9	6.6	2.2	7.3
	Grand Mean	33,317	96.5	40.5	1.0	0	2.2	1.6	17.3	58.2	213.1

[1]Please refer to Table 2 for column header definitions.
[2]Numbers shaded within a column are not significantly different from the numerically greatest value.

Table 9. Official corn hybrid trial, Macon Ridge Research Station, Winnsboro (no-till/continuous corn system), 2023.

Company	Hybrid	PP (No./A)[1]	PH (in)	EH (in)	HC (1-3)	LOD (0-9)	CURV (0-9)	GM (%)	TW (lb/bu)	YLD (bu/A)
Dyna-Gro	**D55VC80**	36,100	86.6	42.7	1.8	0.3	1.0	18.0	55.1	209.1[2]
Great Heart	**HT-7360VT2P**	32,180	93.9	42.1	2.3	0.0	1.0	17.3	55.6	208.6
Progeny	**PGY 9114VT2P**	30,383	82.6	40.5	2.5	0.0	3.3	18.3	55.5	193.9
Pioneer	**P1718VYHR**	35,120	94.2	46.4	1.5	0.0	1.0	15.3	56.4	193.8
Dyna-Gro	**D58VC65**	31,200	84.5	39.8	2.0	1.0	1.8	16.2	55.8	193.2
Pioneer	**P1511YHR**	31,690	92.2	43.8	1.8	0.0	1.0	16.6	55.8	193.1
Progeny	**PGY 2314TRE**	36,264	82.7	43.7	1.3	0.0	1.3	17.7	56.2	192.8
Bayer	**DKC65-93**	33,323	87.3	42.6	2.5	0.0	1.0	16.7	55.6	192.4
BH Genetics	**X23001TRE**	32,833	96.6	49.0	1.0	0.5	1.0	15.8	56.0	192.3
Pioneer	**P1870R**	31,527	92.5	38.7	3.0	0.0	1.0	16.3	55.5	191.3
Bayer	**DKC65-99 TRE**	32,670	81.0	37.6	2.0	0.0	1.0	16.8	55.0	191.0
WinField	**CP 5208 VT2P**	33,323	80.5	38.0	1.5	0.0	1.3	15.8	55.6	188.9
Progeny	**PGY 9117VT2P**	37,571	87.4	43.7	2.0	0.0	1.0	16.3	55.7	188.2
Bayer	**DKC66-06 TRE**	29,730	95.6	40.5	2.5	0.0	1.0	15.7	56.2	187.5
Dyna-Gro	**D54VC14**	30,710	78.6	38.5	3.0	0.0	3.3	15.3	55.6	186.5
Great Heart	**HT-7499TRE**	32,997	84.7	43.6	1.3	0.0	1.0	17.5	56.2	183.4
Bayer	**DKC64-22 VT2P**	34,304	82.7	40.4	1.8	0.0	1.3	14.7	57.0	183.3
BH Genetics	**BH 8566VT2P**	31,690	81.9	42.8	1.3	0.0	1.3	16.7	55.7	182.9
Pioneer	**P17677YHR**	33,323	95.6	47.3	1.3	0.0	1.0	14.6	55.9	182.7
Bayer	**DKC62-70 VT2P**	31,690	90.4	39.6	2.8	0.0	1.5	15.5	56.1	182.6
BH Genetics	**BH 8721VT2P**	31,853	91.7	42.2	2.3	0.0	1.0	16.8	55.4	181.9
Bayer	**DKC70-45 VT2P**	29,893	88.9	43.3	1.8	0.3	1.0	16.8	56.2	180.5
Bayer	**DKC68-35 VT2P**	33,323	84.6	39.5	1.5	0.3	1.0	16.5	55.6	179.7
Pioneer	**P1222YHR**	37,080	98.6	45.1	2.0	0.3	1.0	16.0	55.6	179.4
Great Heart	**HT-7500TRE**	30,710	94.6	44.4	1.0	0.0	1.0	15.4	56.1	178.5
Progeny	**PGY 2118VT2P**	33,650	87.8	42.7	1.5	0.0	0.8	16.6	56.1	177.3
Pioneer	**P1608YHR**	32,670	84.2	41.7	1.5	0.0	1.0	15.7	56.0	176.9
Pioneer	**P17052YHR**	30,056	95.5	44.4	2.3	0.0	1.3	14.6	57.1	175.8
WinField	**CP 5678 RR**	32,507	79.7	39.9	2.0	0.8	1.0	15.1	55.9	175.1
Pioneer	**P1289YHR**	40,347	92.0	44.6	1.3	0.5	1.0	17.2	55.8	172.7
WinField	**CP 5893 TRE**	31,853	95.0	45.7	2.3	0.0	1.0	16.0	56.7	170.4
Dyna-Gro	**D57VC53**	31,037	86.9	41.8	1.5	0.5	1.0	14.4	56.4	170.1
Pioneer	**P1759YHR**	31,037	92.6	45.4	1.0	0.3	1.0	14.5	57.0	163.6
Dyna-Gro	**D57RR51**	29,730	81.3	38.5	1.5	0.3	1.3	15.5	56.1	162.8
Progeny	**PGY 2215TRE**	30,546	88.3	41.3	1.8	0.0	1.0	15.6	56.2	160.1
Dyna-Gro	**D56TC44**	31,527	88.0	41.5	1.3	0.0	3.8	14.4	56.1	152.2
	LSD P=.10	4,821	7.8	3.6	0.8	0.5	0.3	2.3	1.2	36.6
	CV	12.6	7.6	7.2	35.6	322.9	22.7	12.0	1.8	13.8
	Grand Mean	32,679	88.3	42.3	1.8	0.1	1.3	16.0	56.0	182.6

[1]Please refer to Table 2 for column header definitions.
[2]Numbers shaded within a column are not significantly different from the numerically greatest value.

Table 10. 2023 core block demonstration summary at 12 parish locations.[1]

Hybrid	Beauregard	East Carroll	Franklin	Madison	Pointe Coupee 1	Pointe Coupee 2	Rapides	Richland	St Landry	West Carroll 1	West Carroll 2	West Feliciana	Average[2]
CP 5208 VT2P	234.4	268.8	233.7	242.0	212.9	187.4	228.9	172.4	175.0	232.5	245.5	--3	221.2
D56TC44	236.4	248.5	225.5	250.6	205.6	183.5	225.2	186.2	181.0	252.5	242.9	145.4	215.3
D57VC53	235.9	261.3	238.4	222.9	199.6	178.5	--	225.3	169.0	244.0	251.7	209.4	221.5
DKC62-70 VT2P	219.4	262.1	224.3	259.2	207.0	174.8	207.1	203.6	162.0	228.3	244.9	199.1	216.0
DKC68-35 VT2P	256.0	283.8	252.8	260.2	220.1	198.5	263.7	217.5	174.0	--	263.4	201.0	235.5
P1511YHR	235.2	250.8	227.3	224.3	191.3	183.9	238.1	205.6	159.0	235.6	255.7	186.5	216.1
P1718VYHR	250.3	246.1	216.4	234.2	195.0	172.5	224.2	157.9	160.0	243.9	234.0	180.4	209.6
PGY 2118VT2P	232.2	260.3	235.2	239.1	199.2	181.3	230.2	163.7	175.0	236.3	252.3	185.2	215.8
PGY 2215TRE	227.5	253.8	231.4	236.3	205.2	172.0	215.0	196.3	189.0	228.3	236.3	173.6	213.7
Location Average	**236.4**	**259.5**	**231.7**	**241.0**	**204.0**	**181.4**	**229.0**	**192.1**	**171.6**	**237.7**	**247.4**	**185.1**	**218.1**
Soil Type	sandy loam	sandy loam	silt loam	sandy loam	silt loam	not given	silt loam	silt loam	silt loam	heavy clay	silty clay	sandy loam	
Planting Date	3/24	3/4	3/6	3/2	3/3	3/7	3/14	3/9	3/29	3/6	3/9	3/10	

[1]All yields expressed in bushels per acre and adjusted to 15.5% moisture.
[2]Average across all locations where the hybrid was included.
[3]Data for some hybrids was not available at particular locations (seed availability, space, mishaps, etc.).

Table 11. Beauregard Parish
Community: DeRidder, LA
County agent: Vince Deshotel
Cooperators: David Smith
GPS coordinates: 30.8358732, -93.3614144
Previous crop: Wheat/soybean
Planted plant population: 34,300
Row spacing (inches): 30
Soil type: Sandy loam
N rate (lbs/acre): 215 + chicken litter 2 tons/A
Irrigation: Yes
Irrigation type: Pivot
Tillage type: None
Date planted: 3/24/23
Date harvested: 8/15/23
Weigh wagon or yield monitor: Weigh wagon

Company	Hybrid	HW (lbs)	GM (%)	Acres	DW (lbs)	Bu/A (raw)	Bu/A (adj)	Rank	TW
Bayer	**DKC68-35 VT2P**	6,070	12.2	0.44	6,307.05	246.35	255.97	1	59.9
Pioneer	**P1718VYHR**	5,896	11.6	0.44	6,168.12	239.29	250.33	2	57.5
Dyna-Gro	**D56TC44**	5,588	11.9	0.44	5,826.07	226.79	236.45	3	58.2
Dyna-Gro	**D57VC53**	5,608	12.4	0.44	5,813.74	227.60	235.95	4	61.5
Pioneer	**P1511YHR**	5,558	11.9	0.44	5,794.79	225.57	235.18	5	58.9
WinField	**CP 5208 VT2P**	5,528	11.7	0.44	5,776.60	224.35	234.44	6	57.7
Progeny	**PGY 2118VT2P**	5,520	12.4	0.44	5,722.51	224.03	232.24	7	61.4
Progeny	**PGY 2215TRE**	5,382	12	0.44	5,604.92	218.43	227.47	8	60.1
Bayer	**DKC62-70 VT2P**	5,180	11.8	0.44	5,406.82	210.23	219.43	9	59.2

Table 12. East Carroll Parish

Community: Transylvania
County agent: R.L. Frazier
Cooperator: Miller Bros
Previous crop: Soybean
Planted plant population: 33,500
Row spacing (inches): 38
Soil type: Sandy loam
Irrigation: Yes
Irrigation type: Furrow
Tillage type: Stale fall seed bed
Date planted: 3/4/23
Date harvested: 8/9/23
Weigh wagon or yield monitor: Yield monitor

Company	Hybrid	HW (lbs)	GM (%)	PW (in)	RL (ft)	Acres	DW (lbs)	Bu/A (raw)	Bu/A (adj)	Rank
Bayer	**DKC68-35 VT2P**	16,977	14.6	456	1,238	1.08	17,163	280.7	283.8	1
WinField	**CP 5208 VT2P**	15,805	13.1	456	1,238	1.08	16,256	261.3	268.8	2
Bayer	**DKC62-70 VT2P**	15,461	13.4	456	1,238	1.08	15,852	255.6	262.1	3
Dyna-Gro	**D57VC53**	15,814	15.6	456	1,238	1.08	15,805	261.5	261.3	4
Progeny	**PGY 2118VT2P**	15,770	15.7	456	1,238	1.08	15,742	260.8	260.3	5
Innvictis	**Innvictis A1689T***	15,138	13.3	456	1,238	1.08	15,534	250.3	256.9	6
Bayer	**DKC66-06 VT2P***	15,770	14.3	456	1,238	1.08	15,994	260.7	256.8	7
Progeny	**PGY 2215TRE**	15,212	14.7	456	1,238	1.08	15,349	251.5	253.8	8
Pioneer	**P1511YHR**	15,076	15.0	456	1,238	1.08	15,171	249.3	250.8	9
Dyna-Gro	**D56TC44**	14,658	13.4	456	1,238	1.08	15,030	242.4	248.5	10
Pioneer	**P1718VYHR**	14,862	15.4	456	1,238	1.08	14,881	245.7	246.1	11

**Farmer's choice.*

Table 13. Franklin Parish

Community: Winnsboro
County agent: Carol Pinnell-Alison
Cooperator: Campbell Farms
GPS coordinates: 32.092243, -91.775906
Previous crop: Corn
Planted plant population: 33,500
Row spacing (inches): 38
Soil type: Gilbert-Gigger-Egypt
N rate (lbs/acre): 12 gal 30-0-0-2 at planting, 65 gal knifed in for ~250 lbs/A
Irrigation: Yes
Irrigation type: Furrow
Tillage type: Stale seed bed
Date planted: 3/6/23
Date harvested: 8/10/23
Weigh wagon or yield monitor: Weigh wagon
Notes: Applied in the fall 300 pounds of 0-69-90

Company	Hybrid	HW (lbs)	GM (%)	PW (in)	RL (ft)	Acres	DW (lbs)	Bu/A (raw)	Bu/A (adj)	Rank	TW
Bayer	**DKC68-35 VT2P**	4,955	12.8	304	621	0.36	5,113.33	245.00	252.82	1	59.7
Dyna-Gro	**D57VC53**	4,715	13.6	304	621	0.36	4,821.02	233.13	238.37	2	60.3
Progeny	**PGY 2118VT2P**	4,630	13.2	304	621	0.36	4,756.02	228.93	235.16	3	60.7
WinField	**CP 5208 VT2P**	4,575	12.7	304	621	0.36	4,726.60	226.21	233.70	4	57.9
Progeny	**PGY 2215TRE**	4,535	12.8	304	621	0.36	4,679.91	224.23	231.39	5	59.7
Pioneer	**P1511YHR**	4,465	13.0	304	621	0.36	4,597.10	220.77	227.30	6	58.4
Dyna-Gro	**D56TC44**	4,405	12.5	304	621	0.36	4,561.39	217.80	225.53	7	59.1
Bayer	**DKC62-70 VT2P**	4,370	12.3	304	621	0.36	4,535.49	216.07	224.25	8	59.8
Pioneer	**P1718VYHR**	4,265	13.3	304	621	0.36	4,376.04	210.88	216.37	9	59.1

Table 14. Madison Parish

Community: Mound
County agent: R.L. Frazier
Cooperator: Wade Hardgrave
Previous crop: Corn
Planted plant population: 34,000
Row spacing (inches): 38
Soil type: Sandy loam
N rate (lbs/acre): 250
Irrigation: Yes
Irrigation type: Furrow
Tillage type: Stale fall seed bed
Date planted: 3/2/23
Date harvested: 8/2/23
Weigh wagon or yield monitor: Yield monitor

Company	Hybrid Name	HW (lbs)	GM (%)	PW (in)	RL (ft)	Acres	DW (lbs)	Bu/A (raw)	Bu/A (adj)	Rank
Bayer	**DKC68-35 VT2P**	8,585	19.1	380	776	0.56	8,219.25	271.75	260.18	1
Bayer	**DKC62-70 VT2P**	7,637	17	380	711	0.52	7,501.43	263.85	259.16	2
Bayer	**DKC65-99 VT2P***	12,579	17.6	380	1,167	0.85	12,266.39	264.77	258.19	3
Dyna-Gro	**D56TC44**	12,515	16.5	380	1,212	0.88	12,366.89	253.64	250.64	4
Bayer	**DKC70-45V2TP***	11,976	19.5	380	1,127	0.82	11,409.09	261.03	248.67	5
WinField	**CP 5208 VT2P**	12,373	15.9	380	1,250	0.91	12,314.43	243.14	241.99	6
Progeny	**PGY 2118VT2P**	12,086	19	380	1,190	0.87	11,585.40	249.48	239.15	7
Progeny	**PGY 2215TRE**	12,145	17.2	380	1,237	0.90	11,900.66	241.17	236.32	8
Pioneer	**P1718VYHR**	8,653	19	380	870	0.63	8,294.59	244.31	234.19	9
Innvicitis	**Innvictis A1689T***	11,226	17.3	380	1,183	0.86	10,986.87	233.10	228.13	10
Pioneer	**P1511YHR**	11,795	18.7	380	1,243	0.90	11,348.33	233.09	224.26	11
Dyna-Gro	**D57VC53**	11,569	20.2	380	1,204	0.88	10,925.52	236.03	222.90	12

**Farmer's choice.*

Table 15. Pointe Coupee Parish Parish 1

Community: Batchelor
County agent: Mark Carriere
Cooperators: George LaCour
GPS coordinates: 30.8129688 x -91.7781441
Previous crop: Cotton
Planted plant population: 34,000
Row spacing (inches): 38"
Soil type: Silt loam
N rate (lbs/acre): 200 units
Irrigation: No
Irrigation type: N/A
Tillage type: Minimum till - just covered cotton stubble by flipping up from furrow
Date planted: 3/3/23
Date harvested: 7/25/23
Weigh wagon or yield monitor: Weigh wagon
Notes: Survived freeze second week after planting

Company	Hybrid	HW (lbs)	GM (%)	PW (in)	RL (ft)	Acres	DW (lbs)	Bu/A (raw)	Bu/A (adj)	Rank	TW
Bayer	**DKC68-35 VT2P**	12,058	15.8	304	1,676	0.97	12,015.19	220.91	220.12	1	61.4
WinField	**CP 5208 VT2P**	11,428	13.6	304	1,685	0.98	11,684.96	208.25	212.93	2	60.7
Bayer	**DKC62-70 VT2P**	11,024	14.1	304	1,662	0.97	11,206.65	203.66	207.04	3	63.1
Dyna-Gro	**D56TC44**	11,070	14.6	304	1,671	0.97	11,187.91	203.41	205.58	4	60.4
Progeny	**PGY 2215TRE**	11,024	15.1	304	1,657	0.96	11,076.18	204.28	205.25	5	61.3
Bayer	**DKC65-99 VT2P***	11,108	15.4	304	1,693	0.98	11,121.15	201.46	201.70	6	61.7
Dyna-Gro	**D57VC53**	10,824	16.1	304	1,653	0.96	10,747.14	201.06	199.63	7	61.8
Progeny	**PGY 2118VT2P**	11,036	16.1	304	1,689	0.98	10,957.64	200.63	199.20	8	63.1
Bayer	**DKC66-06 VT2P***	10,590	15.7	304	1,649	0.96	10,564.93	197.19	196.72	9	61.2
Pioneer	**P1718VYHR**	10,748	16.1	304	1,680	0.98	10,671.68	196.44	195.04	10	59.9
Pioneer	**P1511YHR**	10,410	15.7	304	1,667	0.97	10,385.36	191.74	191.29	11	60.4

Table 16. Pointe Coupee Parish 2

Community: Livonia
County agent: Mark Carriere
Cooperators: Ray, Donald and Dan Schexnayder
GPS coordinates: 20.5987164 x -91.5278367
Previous crop: Soybeans
Planted plant population: 35,000
Row spacing (inches): 36"
Soil type: Not given
N rate (lbs/acre): Not given
Irrigation: No
Irrigation type: N/A
Tillage type: Not given
Date planted: 3/7/23
Date harvested: 7/29/23
Weigh wagon or yield monitor: Yield monitor
Notes: Survived freeze 1.5 to 2 weeks after planting

Company	Hybrid	HW (lbs)	GM (%)	PW (in)	RL (ft)	Acres	DW (lbs)	Bu/A (raw)	Bu/A (adj)	Rank
Bayer	**DKC68-35 VT2P**	14,994	14.1	432	1,659	1.37	15,242.42	195.28	198.52	1
WinField	**CP 5208 VT2P**	13,459	12	432	1,616	1.34	14,016.47	179.96	187.41	2
Pioneer	**P1511YHR**	13,704	14.2	432	1,635	1.35	13,914.83	181.10	183.89	3
Dyna-Gro	**D56TC44**	13,091	12.6	432	1,594	1.32	13,540.28	177.45	183.54	4
Progeny	**PGY 2118VT2P**	13,614	15.1	432	1,630	1.35	13,678.44	180.47	181.32	5
Dyna-Gro	**D57VC53**	13,499	14.8	432	1,648	1.36	13,610.83	176.99	178.45	6
Bayer	**DKC62-70 VT2P**	12,383	12.9	432	1,578	1.30	12,764.02	169.56	174.77	7
Pioneer	**P1718VYHR**	12,496	13.1	432	1,610	1.33	12,850.92	167.70	172.47	8
Progeny	**PGY 2215TRE**	12,273	13.2	432	1,584	1.31	12,607.06	167.41	171.97	9

Table 17. Rapides Parish

Community: McNutt
County agent: Justin Dufour
Cooperator: Trevor Verzwyvelt
GPS coordinates: 31.303752, -92.623237
Previous crop: Corn
Planted plant population: 34,000
Row spacing (inches): 38
Soil type: Coushatta silt loam
N rate (lbs/acre): 220
Irrigation: Yes
Irrigation type: Furrow
Tillage type: Conventional
Date planted: 3/14/23
Date harvested: 8/19/23
Weigh wagon or yield monitor: Weigh wagon

Company	Hybrid Name	HW (lbs)	GM (%)	PW (in)	RL (ft)	Acres	DW (lbs)	Bu/A (raw)	Bu/A (adj)	Rank
Bayer	**DKC68-35 VT2P**	10,410	10.5	304	1,284	0.75	11,025.98	248.94	263.67	1
Pioneer	**P1511YHR**	7,020	10.1	228	1,284	0.56	7,468.62	223.83	238.13	2
Progeny	**PGY 2118VT2P**	9,080	10.4	304	1,284	0.75	9,628.02	217.13	230.24	3
WinField	**CP 5208 VT2P**	9,150	11.6	304	1,284	0.75	9,572.31	218.81	228.91	4
Dyna-Gro	**D56TC44**	6,660	10.4	228	1,284	0.56	7,061.96	212.35	225.17	5
Pioneer	**P1718VYHR**	8,890	10.9	304	1,284	0.75	9,373.95	212.59	224.16	6
Progeny	**PGY 2215TRE**	8,450	10.1	304	1,284	0.75	8,990.00	202.07	214.98	7
Bayer	**DKC62-70 VT2P**	8,150	10.2	304	1,284	0.75	8,661.18	194.89	207.12	8

Table 18. Richland Parish

Community: Rayville
County agent: Carol Pinnell-Alison
Cooperator: Elliot Colvin
GPS coordinates: 32.540431, -91.725023
Previous crop: Soybeans
Planted plant population: 35,000
Row spacing (inches): 30
Soil type: Sterlington silt loam
N rate (lbs/acre): 265
Irrigation: Yes
Irrigation type: Furrow
Tillage type: Stale seed bed
Date planted: 3/9/23
Date harvested: 7/27/23
Weigh wagon or yield monitor: Yield monitor
Notes: P & K variable rate granular, 8 row plots

Company	Hybrid	HW (lbs)	GM (%)	PW (in)	RL (ft)	Acres	DW (lbs)	Bu/A (raw)	Bu/A (adj)	Rank	TW
Dyna-Gro	**D57VC53**	7,059	20.1	240	1,152	0.53	6,674.72	238.32	225.35	1	54.7
Bayer	**DKC68-35 VT2P**	6,696	18.7	240	1,152	0.53	6,442.42	226.06	217.50	2	56.7
Pioneer	**P1511YHR**	6,206	17.1	240	1,152	0.53	6,088.49	209.52	205.55	3	57.4
Bayer	**DKC62-70 VT2P**	6,377	20.1	240	1,152	0.53	6,029.85	215.29	203.57	4	54.2
Progeny	**PGY 2215TRE**	6,165	20.3	240	1,152	0.53	5,814.80	208.14	196.31	5	54
Dyna-Gro	**D56TC44**	5,868	20.6	240	1,152	0.53	5,513.84	198.11	186.15	6	53.6
WinField	**CP 5208 VT2P**	5,361	19.5	240	1,152	0.53	5,107.22	180.99	172.43	7	56.5
Progeny	**PGY 2118VT2P**	5,180	20.9	240	1,152	0.53	4,848.97	174.88	163.71	8	54.4
Pioneer	**P1718VYHR**	4,921	19.7	240	1,152	0.53	4,676.41	166.14	157.88	9	53.1

Table 19. St. Landry Parish

Community: Palmetto
County agent: Vince Deshotel
Cooperator: Charlie Fontenot
Previous crop: Rice
Planted plant population: 34,000
Row spacing (inches): 38
Soil type: Silt loam
N rate (lbs/acre): 220
Irrigation: Yes
Irrigation type: Flood/flat/furrow
Tillage type: Minimum
Date planted: 3/29/23
Date harvested: 8/2/23
Weigh wagon or yield monitor: Yield monitor

Company	Hybrid	GM (%)	PW (in)	RL (ft)	Acres	Bu/A (raw)	Bu/A (adj)	Rank
Progeny	**PGY 2215TRE**	19.5	456	1,227	1.07	189.00	180.05	1
Dyna-Gro	**D56TC44**	19.7	456	1,227	1.07	181.00	172.00	2
WinField	**CP 5208 VT2P**	17.6	456	1,227	1.07	175.00	170.65	3
Bayer	**DKC68-35 VT2P**	20.4	456	1,227	1.07	174.00	163.91	4
Progeny	**PGY 2118VT2P**	22.9	456	1,227	1.07	175.00	159.67	5
Bayer	**DKC62-70 VT2P**	18.6	456	1,227	1.07	162.00	156.06	6
Dyna-Gro	**D57VC53**	23	456	1,227	1.07	169.00	154.00	7
Pioneer	**P1718VYHR**	21.3	456	1,227	1.07	160.00	149.02	8
Pioneer	**P1511YHR**	21.6	456	1,227	1.07	159.00	147.52	9

Table 20. West Carroll Parish 1

Community: Terry
County agent: Bruce Garner
Cooperator: Blaine Chop
GPS coordinates: 32°53'3.83", -91°19'21.79"
Previous crop: Soybean
Planted plant population: 34,000
Row spacing (inches): 36

Soil type: Heavy clay - Sharkey clay
N rate (lbs/acre): 230
Irrigation: Yes
Irrigation type: Furrow
Tillage type: Minimum
Date planted: 3/6/23
Date harvested: 8/26/23
Weigh wagon or yield monitor: Yield monitor

Company	Hybrid Name	HW (lbs)	GM (%)	PW (in)	RL (ft)	Acres	DW (lbs)	Bu/A (raw)	Bu/A (adj)	Rank
Dyna-Gro	**D56TC44**	19,535	15.6	576	1,250	1.38	19,511.88	252.78	252.48	1
Dyna-Gro	**D57VC53**	18,700	14.8	576	1,250	1.38	18,854.91	241.98	243.98	2
Pioneer	**P1718VYHR**	18,585	14.3	576	1,250	1.38	18,848.93	240.49	243.90	3
Progeny	**PGY 2118VT2P**	18,172	15.1	576	1,250	1.38	18,258.02	235.14	236.26	4
Pioneer	**P1511YHR**	18,140	15.2	576	1,250	1.38	18,204.40	234.73	235.56	5
WinField	**CP 5208 VT2P**	17,842	14.9	576	1,250	1.38	17,968.69	230.87	232.51	6
Bayer	**DKC62-70 VT2P**	17,495	14.8	576	1,250	1.38	17,639.93	226.38	228.26	7
Progeny	**PGY 2215TRE**	17,495	14.8	576	1,250	1.38	17,639.93	226.38	228.26	7

Table 21. West Carroll Parish 2

Community: Goodwill
County agent: Bruce Garner
Cooperator: Ty Rogers
GPS coordinates: Lat 32°47'28.20"N Lon: 91°33'28.37"W
Previous crop: Soybean
Planted plant population: 34,000
Row spacing (inches): 30

Soil type: Silty/clay - Calhoun Grenda Complex
N rate (lbs/acre): 230
Irrigation: Yes
Irrigation type: Furrow or pivot furrow
Tillage type: Minimum
Date planted: 3/9/23
Date harvested: 8/18/23
Weigh wagon or yield monitor: Yield monitor

Company	Hybrid Name	HW (lbs)	GM (%)	PW (in)	RL (ft)	Acres	DW (lbs)	Bu/A (raw)	Bu/A (adj)	Rank
Bayer	**DKC68-35 VT2P**	11,950	10.3	360	1,250	0.86	12,685.38	248.13	263.40	1
Pioneer	**P1511YHR**	11,575	10.1	360	1,250	0.86	12,314.70	240.34	255.70	2
Progeny	**PGY 2118VT2P**	11,510	10.8	360	1,250	0.86	12,150.20	239.00	252.29	3
Dyna-Gro	**D57VC53**	11,470	10.7	360	1,250	0.86	12,121.55	238.16	251.69	4
WinField	**CP 5208 VT2P**	11,015	9.3	360	1,250	0.86	11,823.2	228.7	245.50	5
Bayer	**DKC62-70 VT2P**	11,025	9.6	360	1,250	0.86	11,794.79	228.92	244.91	6
Pioneer	**P1608YHR***	11,090	10.3	360	1,250	0.86	11,772.46	230.27	244.44	7
Dyna-Gro	**D56TC44**	10,945	9.7	360	1,250	0.86	11,696.25	227.26	242.86	8
Pioneer	**P17052YHR***	10,900	9.7	360	1,250	0.86	11,648.17	226.33	241.86	9
Progeny	**PGY 2215TRE**	10,625	9.5	360	1,250	0.86	11,379.44	220.62	236.28	10
Pioneer	**P1718VYHR**	10,500	9.3	360	1,250	0.86	11,270.41	218.02	234.02	11

**Farmer's choice.*

Table 22. St. West Feliciana Parish

Community: Angola
County agent: Jessie Hoover
Cooperator: Jeramie Bordelon
GPS coordinates: 30.959477, -91.610978
Previous crop: Soybean
Planted plant population: 32,000
Row spacing (inches): 36"
Soil type: Sandy loam
N rate (lbs/acre): 200
Irrigation: No
Irrigation type: N/A
Tillage type: Conventional
Date planted: 3/10/23
Date harvested: 8/8/23
Weigh wagon or yield monitor: Yield monitor
Notes: Very dry, also had late freeze

Company	Hybrid	HW (lbs)	GM (%)	Acres	DW (lbs)	Bu/A (raw)	Bu/A (adj)	Rank
Dyna-Gro	**D57VC53**	12,429	12.3	1.10	12,899.68	201.77	209.41	1
Bayer	**DKC68-35 VT2P**	13,088	12.8	1.20	13,506.20	194.76	200.99	2
Bayer	**DKC62-70 VT2P**	11,846	12.5	1.10	12,266.57	192.31	199.13	3
Pioneer	**P1511YHR**	11,079	12.4	1.10	11,485.45	179.85	186.45	4
Progeny	**PGY 2118VT2P**	11,223	14.1	1.10	11,408.94	182.19	185.21	5
Pioneer	**P1718VYHR**	10,660	11.9	1.10	11,114.15	173.05	180.42	6[1]
Progeny	**PGY 2215TRE**	10,318	12.4	1.10	10,696.53	167.50	173.64	7
Dyna-Gro	**D56TC44**	8,667	12.7	1.10	8,954.19	140.70	145.36	8[2]

[1]*Lodging.*
[2]*Combine malfunction.*

PLANTING DATE

Corn growth and development responds to temperature and is not controlled by day length. Thus, the calendar date is not as important as soil and air temperature when considering optimum timing to plant corn. Good germination and emergence are expected when the soil temperature at a 2-inch depth is 55 degrees Fahrenheit by 9 a.m. for three consecutive days. This normally occurs in late February and March in Louisiana. In most years, the optimal planting window for south Louisiana is Feb. 23 to March 23, and for north Louisiana March 10 to April 10. Extending planting past the last optimal planting date can result in losses of half of a bushel to 1 bushel per day.

Frost may occur after these planting dates in some years; however, corn typically withstands frost with little economic injury. Corn younger than V6 (six-leaf stage) usually can withstand a light frost if the temperature does not drop below 30 degrees Fahrenheit. A moderate freeze will burn any existing leaves and cause them to drop, but new leaves can emerge in four to five days with warm temperatures. However, as the growing point moves upward near the soil surface, the possibility of injury increases.

PLANTING RATE AND DEPTH

The optimal plant population for corn ranges from 27,000 to 30,000 live plants per acre. At 80% field emergence this would equate to planting 33,750 to 37,500 seeds per acre. The lower end of the recommended range should be used when lower yields are expected because of soil type, late planting date, drought-prone areas or low fertility. Higher populations should be used on highly productive deep alluvial soils or irrigated fields where moisture will not be a limiting factor.

Also, seeding densities can be affected by "ear flex." Full-flex hybrids can compensate for fewer plants per acre because the ear grows both in length and girth. These hybrids usually produce only one ear per stalk. Individual semi-flex hybrid ears will not compensate to the extent that full-flex hybrids will, but with low stand density and excellent growing conditions they may set two or more ears. Fixed-ear hybrids must obtain the desired population for maximum yield.

Seed size and shape are not critical for a good stand but be sure to use the correct plate and planter for the size purchased. Corn should be planted 2 inches deep. It is vitally important to establish seed contact with moist soil, but planting seeds greater than 2 inches deep can increase the probability of an uneven plant stand, which can affect growth and yield.

CORN GROWTH AND DEVELOPMENT

Corn growth and development are closely related to temperature. Warmer temperatures result in rapid corn growth, and cooler temperatures result in slower corn development. Temperatures are used to calculate growing degree days (GDD) or heat units (HU). Several formulas exist to calculate these GDD, but the one used most often is the modified 86/50 cutoff method (MGDD). MGDD for any given day are calculated by subtracting 50 from the average daily temperature. The average daily temperature is calculated by adding the daily high and the daily low temperatures and then dividing by two.

$$GDD = \frac{\text{Max. Temp} + \text{Min. Temp.}}{2} - 50F$$

Two criteria exist when calculating MGDD. First, if the daily high was greater than 86 degrees Fahrenheit, then 86 degrees Fahrenheit is used to calculate the average. Second, if the daily low

was less than 50 degrees Fahrenheit, then 50 degrees Fahrenheit is used to calculate the average. These upper and lower temperature thresholds or limits define the boundaries beyond which corn develops very slowly, if at all. Throughout the years, we have talked about the number of MGDD accumulated when silking or physiological maturity (black layer) occurs. For example, a particular hybrid will silk at 1,365 MGDD or reach physiological maturity at 2,800 MGDD. Another useful purpose for following MGDD accumulation is to track the rate of leaf development prior to pollination. From V1 to V10, new leaves, which are defined by the appearance of leaf collars, emerge at a rate of about 85 MGDD per leaf. This is equivalent to about one leaf every five to six days in early April. From V10 to the final leaf, leaves emerge at a rate of about 50 MGDD per leaf.

Practical uses of this information include estimating how far along the corn crop should be for any given location if we know the planting date and the MGDD accumulations since the planting date. It is especially important to know the emergence date, but if this is not available, we can use 125 MGDD from planting to emergence. For instance, corn should reach the V6 growth stage by the time 635 MGDD have accumulated since planting. This is calculated by using 125 MGDD from planting to emergence, then figuring 510 MGDD (6 multiplied by 85) from emergence to V6. It is very important to remember that a shortage of MGDD resulting from early season cool temperatures can never be recovered. Midsummer days in the 90s do not necessarily accelerate MGDD accumulations because rate of growth is minimal when temperatures are above 86 degrees Fahrenheit. Also, plant stress (soil compaction, excessive soil moisture, pest injury, hail damage) can interfere with this relationship and retard leaf development. Comparisons of predicted leaf development stages with actual leaf stages can, therefore, be used as an indicator of plant stress.

FERTILITY

Soil testing is the foundation of a sound fertility program and is necessary for maximum efficiency in applying correct rates of lime and fertilizer. Proper fertility is critical for optimizing crop yields, particularly in corn. Seldom is there a field that does not require the addition of fertilizer. The estimated uptake of nitrogen (N), phosphorus (P), potassium (K) and sulfur (S) by a 200-bushel-per-acre corn crop is presented in Table 23. Be aware that the values presented are not the amount of nutrients that need to be applied, but rather the total uptake by the corn crop from soil, fertilizer, and other sources.

Table 23. Approximate amount of nutrients in a 200-bushel-per-acre corn crop.

	Quantity in pounds	
Element	Grain	Stover
Nitrogen (N)	134	90
Phosphorus (P_2O_5)	70	32
Potassium (K_2O)	50	220
Sulfur (S)	16	14

International Plant Nutrition Institute, May 2014.

SOIL PH

Soil pH affects the availability of nutrients to plant roots. The desirable soil pH for corn ranges from 5.8 to 7.0. Continued cultivation and the use of chemical fertilizers, especially those containing ammonium and sulfur, tend to decrease soil pH over time. Irrigation with water high in calcium carbonate, on the other hand, tends to increase soil pH.

Soil samples should be collected and checked for the degree of acidity or alkalinity. Lime is generally recommended to raise pH values below 6.1 (Table 24). Soil texture and the buffer capacity of the soil are required for a more accurate estimate of the amount of lime that is needed. If lime is needed, it is recommended to apply it during the fall to provide enough time for it to react with the soil. The relative neutralizing material (RNV) of lime impacts the amount that needs to be applied. The RNV of a material is based on its fineness and calcium carbonate equivalent (CCE), or the amount of pure calcium carbonate to which the selected material corresponds, with finer materials reacting more quickly than coarse materials. An ag lime material with a CCE of 100 is “stronger” than an ag lime material with a CCE of 90. Consequently, less volume would be needed to increase the pH of a given soil.

Table 24. Lime recommendations for corn, Mehlich 3 extraction.

Soil pH	Lime (tons/acre)[1]
Above 6.1	0
5.8-6.1	1
5.0-5.8	2
Below 5	3

[1]Amount of limestone needed to adjust soil pH to a desired level for corn depends on the initial soil pH, soil clay content, and soil buffer capacity (resistance to pH change). Testing soil pH is an excellent indicator of the need for lime and in combination with soil texture is sometimes used to estimate the lime requirement. However, most soil testing laboratories offer a buffer lime-requirement test that provides a more accurate estimate of the quantity of lime that should be applied.

NITROGEN

Nitrogen is necessary for chlorophyll synthesis and is part of the chlorophyll molecule involved in photosynthesis. Lack of N and chlorophyll means the crop will not utilize sunlight as an energy source to carry on essential functions, such as nutrient uptake. It is an essential component of amino acids, which form plant proteins. Therefore, N is directly responsible for increasing protein content. A rough rule of thumb is to apply 1 to 1.2 pounds of actual N for each bushel of corn produced. Nitrogen should be applied according to whether the field is an alluvial plain, such as the Delta, or an upland soil and whether it is irrigated or dryland (Table 25). Apply nitrogen in a split application with 50% to 75% applied before or at planting and the balance when corn is 3 to 12 inches tall. All the nitrogen can be applied pre-plant or at planting, but this increases the risk of fertilizer burn on seedlings and nitrogen loss from leaching or volatilization. An application of 20 to 50 pounds of nitrogen at tassel may be beneficial if environmental conditions result in leaching or volatilization of nitrogen.

Table 25. Nitrogen rates for corn in Louisiana based on field conditions.

Soil	Irrigation	Nitrogen Rate (lbs/acre)
Alluvial	Yes	180-270
Alluvial	No	140-210
Upland	Yes	160-230
Upland	No	120-190

PHOSPHORUS

Phosphorus plays a role in photosynthesis, respiration, energy storage and transfer, cell division and cell enlargement in the plant. It promotes early root formation and growth, increases water use efficiency and hastens maturity. Corn uses phosphorus early in its growth cycle, and it should be applied preplant or at planting (Table 26). Banding phosphorus will increase its efficiency when the soil pH is very acidic or alkaline or when soil test phosphorus levels are low. Also, starter fertilizers can be beneficial for soils that have a high pH or have very low to low phosphorus levels. Soil testing is recommended to apply appropriate levels for each field, but in many soils 40 to 60 pounds of P_2O_5 per acre will be needed.

Table 26. Phosphorus recommendations for corn based on soil test (ppm) and pounds of P_2O_5 to apply per acre.

	Very low	Low	Medium	High	Very high
	<10 ppm	10-19 ppm	20-34 ppm	35-50 ppm	>50 ppm
Alluvial-Irrigated	120	90	60	0	0
Alluvial-Dryland	100	80	60	0	0
Upland-Irrigated	100	80	60	0	0
Upland-Dryland	80	60	40	0	0

POTASSIUM

Potassium is vital to photosynthesis. When K is deficient, photosynthesis declines and plant respiration increases, which reduces carbohydrate supply. Other functions of K include that it is essential for protein synthesis, helps control ionic balance and translocation of heavy metals, helps overcome the effects of disease, and is involved in the activation of 60 enzyme systems. Potash deficiency in corn results in reduced growth, delayed maturity, and lodging. Corn uses potassium early in its growth cycle, and it should be applied pre-plant or at planting (Tables 27-30). Soil testing is recommended to apply appropriate levels for each field, but in many soils 40 to 60 pounds of K_2O per acre will be needed.

Table 27. Potassium recommendations based on soil test (ppm) and soil type for corn on alluvial soils (irrigated).

Soil Type	VL	VL	L	L	M	M	H	H	VH	VH
	ppm	K_2O	ppm	K_2O	ppm	K_2O	ppm	K_2O	ppm	K_2O
Clay	<141	100	141-210	90	211-316	60	317-334	0	>334	0
Clay Loam	<123	100	123-175	90	176-263	60	264-282	0	>282	0
F. Sandy Loam	<53	100	53-87	90	88-122	60	123-141	0	>141	0
Loamy Sand	<35	100	35-52	90	53-78	60	79-123	0	>123	0
Silty Clay	<141	100	141-210	90	211-316	60	317-334	0	>334	0
Silt Clay Loam	<123	100	123-175	90	176-263	60	264-282	0	>282	0
Silt Loam	<70	100	70-105	90	106-140	60	141-158	0	>158	0
V. F. Sandy Loam	<53	100	53-87	90	88-122	60	123-141	0	>141	0

Table 28. Potassium recommendations based on soil test (ppm) and soil type for corn on alluvial soils (nonirrigated).

Soil Type	VL	VL	L	L	M	M	H	H	VH	VH
	ppm	K_2O	ppm	K_2O	ppm	K_2O	ppm	K_2O	ppm	K_2O
Clay	<141	100	141-210	80	211-316	60	317-334	0	>334	0
Clay Loam	<123	100	123-175	80	176-263	60	264-282	0	>282	0
F. Sandy Loam	<53	100	53-87	80	88-122	60	123-141	0	>141	0
Loamy Sand	<35	100	35-52	80	53-78	60	79-123	0	>123	0
Silty Clay	<141	100	141-210	80	211-316	60	317-334	0	>334	0
Silt Clay Loam	<123	100	123-175	80	176-263	60	264-282	0	>282	0
Silt Loam	<70	100	70-105	80	106-140	60	141-158	0	>158	0
V. F. Sandy Loam	<53	100	53-87	80	88-122	60	123-141	0	>141	0

Table 29. Potassium recommendations based on soil test (ppm) and soil type for corn on upland soils (irrigated).

Soil Type	VL	VL	L	L	M	M	H	H	VH	VH
	ppm	K_2O	ppm	K_2O	ppm	K_2O	ppm	K_2O	ppm	K_2O
Clay	<88	100	88-140	80	141-175	60	176-194	0	>194	0
Clay Loam	<88	100	88-140	80	141-175	60	176-194	0	>194	0
F. Sandy Loam	<44	100	44-69	80	70-105	60	106-123	0	>123	0
Loamy Sand	<88	100	88-140	80	141-175	60	176-194	0	>194	0
Silty Clay	<88	100	88-140	80	141-175	60	176-194	0	>194	0
Silt Clay Loam	<62	100	62-96	80	97-140	60	141-158	0	>158	0
Silt Loam	<35	100	35-52	80	53-87	60	88-106	0	>106	0
V. F. Sandy Loam	<44	100	44-69	80	70-105	60	106-123	0	>123	0

Table 30. Potassium recommendations based on soil test (ppm) and soil type for corn on upland soils (nonirrigated).

Soil Type	VL	VL	L	L	M	M	H	H	VH	VH
	ppm	K_2O	ppm	K_2O	ppm	K_2O	ppm	K_2O	ppm	K_2O
Clay	<88	80	88-140	60	141-175	40	176-194	0	>194	0
Clay Loam	<88	80	88-140	60	141-175	40	176-194	0	>194	0
F. Sandy Loam	<44	80	44-69	60	70-105	40	106-123	0	>123	0
Loamy Sand	<88	80	88-140	60	141-175	40	176-194	0	>194	0
Silty Clay	<88	80	88-140	60	141-175	40	176-194	0	>194	0
Silt Clay Loam	<62	80	62-96	60	97-140	40	141-158	0	>158	0
Silt Loam	<35	80	35-52	60	53-87	40	88-106	0	>106	0
V. F. Sandy Loam	<44	80	44-69	60	70-105	40	106-123	0	>123	0

SULFUR

Sulfur is part of every living cell and is a constituent of two of the 21 amino acids that form proteins. Sulfur is often overlooked in a soil fertility program. With a reduction in sulfur emissions from industrial and transportation sources, atmospheric sulfur depositions are much lower; therefore, sulfur deficiencies in corn are becoming more common. A typical 200-bushel-per-acre corn crop takes up about 30 pounds per acre with about 16 pounds per acre removed in the grain at harvest. When a soil test is utilized to determine if sulfur is needed, values of less than 12 ppm (Mehlich 3) generally suggest that additional sulfur may be needed. The typical recommended rate is 20 pounds of sulfur in the sulfate form per acre.

ZINC

Zinc was one of the first micronutrients recognized as essential for plants and the one most commonly limiting yield. Although it is required in small amounts, high yields are impossible without it. Corn is one of the most responsive crops to zinc applications. If zinc is lower than 1 ppm, apply 10 pounds of zinc in a soluble form, such as zinc sulfate or zinc chelate, per acre (Table 31). Among the inorganic zinc sources on the market, the most common sources are sulfates, oxides, and oxysulfates. Zinc sulfate and zinc chelates essentially are 100% water-soluble, while zinc oxides essentially are insoluble in a single crop season and are thus unavailable to the crop to be planted. Oxysulfates are a mixture of sulfates and oxides, with varying proportions of sulfates and oxides and different solubility levels (0.7% to 98.3%). The effectiveness of these can be highly variable, depending on solubility. Low solubility materials may have some value in a long-term buildup program, but when immediate results are the goal, highly soluble fertilizers are the best choices. For acceptable in-season efficacy, a zinc-fertilizer source should be at least 50% water-soluble. If a soil test shows zinc is between 1 and 2.25 ppm, apply 5 pounds of zinc per acre when broadcasting. Less is needed if using a banded application.

Table 31. Zinc recommendations for corn based on soil test (ppm) and pounds of zinc to apply per acre.

Low	Medium	High
<1 ppm	1-2.25 ppm	>2.25 ppm
10 lbs/acre	5 lbs/acre	0 lbs/acre

SEED RELABELING

Seed selection is one of the most critical decisions that farmers make each year and is one of the largest expenses on the farm. Hybrid seed differs greatly in price and yield potential. To make seed selection even more challenging, farmers also need to consider a common practice in the seed industry where the same variety is sold under multiple brand names, which is referred to as seed relabeling. **Seed relabeling creates two significant problems for farmers:**

- **Inconsistent seed pricing:** Because different brands often sell the same hybrid for very different prices, producers may significantly overpay, perhaps not realizing that other brands sell the hybrid at a lower price.
- **Lack of genetic diversity:** When the same hybrid is sold under multiple brand names, it is easy for producers to unknowingly purchase the same genetics from multiple brands while thinking they are buying unique attributes from each brand. This can lead to a failure to establish the genetic diversity that many farmers strive for when selecting seed.

Federal and state seed labeling regulations typically require bags of seed to be labeled with the variety name. Relabeled seeds can be identified when you find the same **hybrid** marketed under multiple brand names.

ACKNOWLEDGEMENTS

LSU AgCenter Northeast Research Station
Matt Foster, Assistant Professor/Corn Specialist
Dennis Burns, Research Coordinator
Warren Ratcliff, Research Farm Manager
Theresa McLemore, Research Associate
Ashley Barfield, Research Associate
Riley Tullos, Research Associate

LSU AgCenter Dean Lee Research and Extension Center
Daniel Stephenson, Professor/State Weed Specialist
Boyd Padgett, Professor/Plant Pathologist
Cory Juneau, Farm Manager
Fred Collins, Research Associate
Tashia Monaghan, Research Associate

LSU AgCenter Macon Ridge Research Station
Rasel Parvej, Assistant Professor/Soil Fertility Specialist
Trey Price, Associate Professor/Plant Pathologist
Scott Washam, Research Farm Manager
Myra Purvis, Research Associate
Dustin Ezell, Research Associate
Moklasur Rahman, Research Associate
Jamil Uddin, Postdoctoral Researcher

LSU AgCenter Red River Research Station
William Waltman, Research Farm Manager
Rusty Anderson, Research Associate

Visit our website: www.LSUAgCenter.com

P2827 (951) 11/23 REV.