

CORN HYBRIDS FOR GRAIN 2023

INTRODUCTION

Corn hybrid performance is annually evaluated in official hybrid trials (OHTs) by LSU AgCenter researchers to provide Louisiana growers, 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, stay-green, lodging, shuck cover, ear placement, disease and insect 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 their 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's 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 2022, 45 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, 16 on-farm core block demonstrations were conducted throughout the corn-growing areas of Louisiana by LSU AgCenter extension agents (Tables 10-26). This information should be used to supplement but not replace OHT results.

Table 1. Locations and agronomic milestones for the corn official hybrid trials, 2022.

Location	Soil Type	Previous Crop	Planting Date	Harvest Date	Row Spacing	Seeding Rate	Irrigated
Alexandria	Coushatta silt loam	Cotton	3/29/22	8/30/22	38"	36,000	No
Bossier City	Moreland silty clay loam	Cotton	3/28/22	8/16-17/22	40"	36,000	Yes
St. Joseph	Commerce silt loam	Soybean	3/28/22	9/2/22	38"	36,000	Yes
St. Joseph	Sharkey clay	Soybean	4/5/22	9/8-9/22	38"	36,000	No
Winnsboro	Gigger-Gilbert complex	Soybean	3/29/22	8/17/22	40"	36,000	Yes
Winnsboro ¹	Gigger-Gilbert complex	Corn	3/28/22	8/17/22	40"	36,000	Yes

¹Trial was conducted in a no-till/continuous corn production system.

Table 2. Performance attributes measured in the corn official hybrid trials, 2022.

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 (%)

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 2022 across locations as well as 2021 data for repeated hybrids is summarized in Table 3. Individual location summaries are located in Tables 4 through 9..

Table 3. Summary of yield performance of corn hybrids in the 2022 official hybrid trials.¹

Company	Hybrid	ALEX ²	BC	SJ-sl	SJ-c	WN	WN-nt/cc	2022 AVG	2021 AVG	2-year AVG
Bayer	DKC69-99	142.1	186.1	220.3	203.3	193.0	194.1	189.8	209.7	199.8
BH Genetics	X22002VT2P	144.0	175.4	217.9	190.8	192.4	180.2	183.5		
AgriGold	A647-79VT2PRO	141.2	166.3	225.4	188.6	181.6	184.4	181.2		
WinField	CP5497VT2P	156.2	152.8	219.5	209.8	185.6	161.1	180.8	194.8	187.8
Pioneer	P1870YHR	140.5	174.6	212.1	203.1	171.1	174.7	179.4		
Revere Seed	Revere 1627 TC	145.0	157.2	223.1	200.5	182.5	166.9	179.2		
Dyna-Gro	D57TC29	149.8	131.1	219.0	187.6	207.6	176.0	178.5	201.6	190.1
Revere Seed	Revere 1919 VT2P	145.6	151.1	206.0	186.5	190.0	189.7	178.1	191.7	184.9
AgriGold	A645-16VT2RIB	150.1	161.3	213.5	187.6	185.9	168.6	177.8		
Dyna-Gro	D57VC51	149.1	157.9	206.2	174.0	184.7	193.2	177.5		
Bayer	DKC69-98	135.1	157.2	224.4	177.4	193.1	177.2	177.4		
Dyna-Gro	D57RR51	154.0	162.5	197.6	184.1	189.1	176.6	177.3		
Revere Seed	Revere 1307 TC	151.8	153.0	212.9	198.0	171.8	174.0	176.9	204.7	190.8
Bayer	DKC65-99	142.1	165.1	214.4	186.2	171.5	180.0	176.5	204.4	190.5
Revere Seed	Revere 1577 VT2P	157.0	130.5	213.2	192.4	178.6	186.8	176.4	202.3	189.4
AgriGold	A6659VT2RIB	142.4	155.1	217.2	182.0	184.8	171.4	175.5	202.5	189.0
BH Genetics	BH 8721VT2P	138.9	154.5	207.4	186.3	189.3	175.6	175.3	207.8	191.6
Pioneer	P2042VYHR	135.8	153.2	208.4	181.6	189.1	181.0	174.8	187.8	181.3
Revere Seed	Revere 1525 V	142.0	180.2	189.7	193.0	175.4	165.9	174.3		
Bayer	DKC68-95	138.6	151.4	211.6	187.3	175.5	181.5	174.3		
Dyna-Gro	D55VC80	130.2	165.9	222.2	175.2	178.8	168.9	173.5	214.4	194.0
Revere Seed	Revere 1898 TC	141.7	156.7	206.3	179.1	185.5	170.6	173.3	199.7	186.5
Dyna-Gro	D54VC14	158.6	124.0	199.8	194.0	179.7	182.1	173.0	193.6	183.3
WinField	CP5550VT2P	145.2	155.9	214.8	183.9	167.6	167.5	172.5	205.5	189.0
Dyna-Gro	D57VC53	136.5	159.8	208.9	184.6	172.2	170.8	172.1		
WinField	X20117C/VT2P	147.9	140.1	210.3	195.7	176.1	162.2	172.0		
Progeny	PGY 9117 VT2P	138.9	147.6	203.6	183.5	181.0	176.8	171.9	206.4	189.1
Revere Seed	Revere 1707 VT2P	140.7	159.4	203.4	179.8	182.8	164.0	171.7	212.7	192.2
Bayer	DKC67-94	150.1	147.6	208.8	183.0	170.1	170.1	171.6		
Progeny	PGY 9114 VT2P	145.9	146.2	205.6	191.3	166.3	174.2	171.6		
Bayer	DKC62-70	150.8	144.4	205.2	160.8	182.6	184.1	171.3		
WinField	CP5678VT2P	151.2	127.1	206.7	190.9	174.5	176.7	171.2		
Pioneer	P1718VYHR	137.9	155.9	199.3	176.0	187.4	167.2	170.6		
Progeny	PGY 2118 VT2P	148.0	155.0	197.8	174.3	180.9	167.4	170.6	206.2	188.4
BH Genetics	BH 8966VT2P	137.2	152.2	209.5	177.4	184.9	158.4	169.9	207.9	188.9
Dyna-Gro	D52VC63	136.1	136.1	195.6	190.0	188.0	171.9	169.6	197.4	183.5
Bayer	DKC62-89	133.8	158.0	196.4	174.5	165.8	178.9	167.9	189.2	178.5
Dyna-Gro	D58VC65	144.7	129.2	194.0	168.6	189.3	178.5	167.4		
Bayer	DKC65-95	135.2	161.5	204.7	180.0	174.8	147.3	167.2	205.6	186.4
Pioneer	P1870R	132.1	152.9	206.0	174.1	172.6	164.0	166.9		
Progeny	PGY 8116 SS	140.2	149.4	201.1	170.2	172.6	164.8	166.4	194.0	180.2
WinField	CP5678RR	137.4	140.3	209.0	183.7	174.6	152.1	166.2		
Bayer	DKC65-93	134.6	159.3	198.6	178.9	167.8	153.9	165.5		
Pioneer	P1222YHR	119.0	157.6	195.0	160.8	179.6	178.7	165.1		
Progeny	PGY 2015 VT2P	146.2	141.1	189.6	158.4	146.7	161.0	157.2	201.7	179.4
	Mean	142.7	153.3	207.8	183.7	179.9	172.7			
	CV (%)	9.1	12.8	7.1	9.6	8.3	6.6			
	LSD (0.10)	14.0	18.9	15.4	18.5	15.2	15.5			

¹All yields expressed in bushels per acre and adjusted to 15.5% moisture.

²ALEX=Alexandria; BC=Bossier City; SJ-sl=St. Joseph (silt loam); SJ-c=St. Joseph (clay); WN=Winnsboro; WN- nt/cc=Winnsboro no-till/continuous corn; and AVG=average.

Table 4. Corn official hybrid trial, Dean Lee Research and Extension Center, Alexandria, 2022.

Company	Hybrid	YLD (15.5%)	GM	TW	PP	MS	PH	EH	HC	LOD
		bu/a	%	lb/bu	no./a	DAP	in	in	1-3	%
Dyna-Gro	D54VC14	158.6	17.4	53.5	40,709	69.5	73.3	33.4	1.3	0.0
Revere Seed	Revere 1577 VT2P	157.0	17.7	54.1	40,537	68.5	69.7	35.8	1.0	0.0
WinField	CP5497VT2P	156.2	16.8	52.9	35,556	70.0	77.0	36.5	1.0	0.0
Dyna-Gro	D57RR51	154.0	17.8	54.6	37,789	69.8	77.0	35.1	1.5	0.0
Revere Seed	Revere 1307 TC	151.8	16.0	52.3	36,415	70.5	77.5	37.6	1.3	0.0
WinField	CP5678VT2P	151.2	17.8	54.0	37,445	69.8	76.1	36.0	1.0	0.0
Bayer	DKC62-70	150.8	17.2	55.4	34,697	70.5	77.0	37.7	1.3	0.0
AgriGold	A645-16VT2RIB	150.1	17.0	53.0	36,930	70.3	79.8	38.2	1.0	0.0
Bayer	DKC67-94	150.1	17.6	54.4	35,384	70.3	72.4	35.8	1.0	0.0
Dyna-Gro	D57TC29	149.8	17.3	54.8	32,979	70.3	74.6	37.1	1.0	0.0
Dyna-Gro	D57VC51	149.1	17.1	54.3	37,445	69.8	78.0	37.4	1.3	0.0
Progeny	PGY 2118 VT2P	148.0	18.6	55.3	30,231	70.3	79.6	36.3	1.0	0.0
WinField	X20117C/VT2P	147.9	19.3	55.8	34,525	70.5	76.5	38.1	1.0	0.0
Progeny	PGY 2015 VT2P	146.2	17.0	55.5	27,998	69.8	75.7	37.3	1.3	0.0
Progeny	PGY 9114 VT2P	145.9	17.1	54.4	33,495	68.8	72.6	32.7	1.0	0.0
Revere Seed	Revere 1919 VT2P	145.6	17.3	53.4	36,930	71.5	76.2	35.0	1.0	0.0
WinField	CP5550VT2P	145.2	17.2	53.7	38,133	70.5	75.9	37.1	1.3	0.0
Revere Seed	Revere 1627 TC	145.0	17.4	54.7	35,384	70.0	76.7	36.0	1.0	0.0
Dyna-Gro	D58VC65	144.7	17.0	54.5	33,838	69.8	76.0	37.2	1.0	0.0
BH Genetics	X22002VT2P	144.0	18.1	54.6	37,102	71.0	78.7	37.4	1.0	0.0
AgriGold	A6659VT2RIB	142.4	17.3	55.4	36,243	70.0	78.2	35.9	1.3	0.0
Bayer	DKC65-99	142.1	17.4	54.3	32,120	70.5	76.6	35.7	1.3	0.0
Bayer	DKC69-99	142.1	18.3	55.0	34,697	70.8	79.1	36.6	1.0	0.0
Revere Seed	Revere 1525 V	142.0	16.2	52.7	37,274	70.5	77.1	35.7	1.0	0.0
Revere Seed	Revere 1898 TC	141.7	17.5	54.9	34,353	70.0	80.1	36.1	1.0	0.0
AgriGold	A647-79VT2PRO	141.2	17.7	54.2	35,212	70.5	79.0	37.6	1.5	0.0
Revere Seed	Revere 1707 VT2P	140.7	17.6	55.1	34,697	71.3	75.3	38.3	1.0	0.0
Pioneer	P1870YHR	140.5	17.2	53.8	33,323	70.3	78.0	36.1	1.8	0.0
Progeny	PGY 8116 SS	140.2	17.5	55.2	31,949	71.0	75.5	36.3	1.3	0.0
Progeny	PGY 9117 VT2P	138.9	17.4	55.0	34,697	70.0	80.0	37.7	1.3	0.0
BH Genetics	BH 8721VT2P	138.9	17.4	55.0	37,102	70.5	77.7	35.3	1.0	0.0
Bayer	DKC68-95	138.6	17.6	53.8	33,838	70.8	75.8	37.5	1.3	0.0
Pioneer	P1718VYHR	137.9	16.7	52.9	36,758	70.5	76.6	37.8	1.0	0.0
WinField	CP5678RR	137.4	17.3	53.8	35,728	69.3	75.8	34.6	1.0	0.0
BH Genetics	BH 8966VT2P	137.2	18.4	55.8	34,010	70.0	76.5	36.8	1.0	0.0
Dyna-Gro	D57VC53	136.5	18.4	56.0	32,292	70.8	79.0	37.1	1.0	0.0
Dyna-Gro	D52VC63	136.1	16.4	51.8	33,666	69.8	74.2	33.6	1.3	0.0
Pioneer	P2042VYHR	135.8	17.8	55.0	35,384	71.0	81.2	35.9	1.0	0.0
Bayer	DKC65-95	135.2	17.2	53.8	35,212	71.5	75.0	34.2	1.5	0.0
Bayer	DKC69-98	135.1	18.0	54.3	35,041	71.0	80.0	40.3	1.0	0.0
Bayer	DKC65-93	134.6	17.3	53.4	37,961	70.8	75.8	34.2	2.0	0.0
Bayer	DKC62-89	133.8	17.6	54.6	33,666	70.0	76.9	34.9	1.3	0.0
Pioneer	P1870R	132.1	18.0	53.2	36,415	70.8	78.9	34.2	1.3	0.0
Dyna-Gro	D55VC80	130.2	16.9	53.1	36,758	70.0	77.8	40.3	1.0	0.0
Pioneer	P1222YHR	119.0	16.8	54.5	31,605	71.5	78.6	36.0	1.3	0.0
	Mean	142.7	17.4	54.3	35,189.3	70.3	76.8	36.3	1.2	0.0
	CV (%)	9.1	4.7	3.2	11.1	1.5	5.0	7.3	31.5	0.0
	LSD (0.10)	14.0	0.7	1.9	4,155.3	1.0	4.1	2.8	0.4	NS

Numbers shaded within a column are not significantly different from the numerically greatest value.

Table 5. Corn official hybrid trial, Red River Research Station, Bossier City, 2022.

Company	Hybrid	YLD (15.5%)	GM	TW	PP	MS	PH	EH	HC	LOD
		bu/a	%	lb/bu	no./a	DAP	in	in	1-3	%
Bayer	DKC69-99	186.1	15.1	57.8	35,272	66.8	86.8	37.8	1.3	0.0
Revere Seed	Revere 1525 V	180.2	13.5	56.8	34,778	65.5	92.5	36.5	1.3	0.0
BH Genetics	X22002VT2P	175.4	15.4	57.4	35,865	67.3	92.3	37.5	1.0	0.0
Pioneer	P1870YHR	174.6	15.4	57.5	31,716	68.8	91.0	36.5	2.0	0.0
AgriGold	A647-79VT2PRO	166.3	14.7	55.6	31,716	66.5	84.0	35.0	1.5	0.0
Dyna-Gro	D55VC80	165.9	14.0	58.2	31,716	66.3	88.0	39.3	1.8	0.0
Bayer	DKC65-99	165.1	14.8	57.5	34,778	66.3	84.0	33.3	1.3	0.0
Dyna-Gro	D57RR51	162.5	13.9	52.9	33,791	66.0	85.5	34.0	1.5	0.0
Bayer	DKC65-95	161.5	14.2	54.7	32,012	67.0	83.0	35.3	1.5	0.0
AgriGold	A645-16VT2RIB	161.3	14.4	56.2	34,976	65.3	89.3	39.0	1.5	0.0
Dyna-Gro	57VC53	159.8	15.4	56.9	33,494	67.8	89.0	35.8	1.3	0.0
Revere Seed	Revere 1707 VT2P	159.4	15.6	58.3	34,976	66.8	84.5	36.5	1.0	0.0
Bayer	DKC65-93	159.3	14.5	55.8	35,273	66.5	85.5	32.5	1.8	0.0
Bayer	DKC62-89	158.0	14.6	56.6	32,901	65.8	87.3	34.0	1.5	0.0
Dyna-Gro	D57VC51	157.9	14.0	55.9	32,012	67.8	83.0	35.3	1.5	0.0
Pioneer	P1222YHR	157.6	13.6	58.6	31,716	68.0	88.5	36.3	2.0	0.0
Revere Seed	Revere 1627 TC	157.2	14.7	55.0	34,680	66.3	84.3	35.3	1.0	0.0
Bayer	DKC69-98	157.2	14.9	56.1	34,680	68.3	87.3	39.8	1.3	0.0
Revere Seed	Revere 1898 TC	156.7	14.1	57.4	35,273	65.8	89.3	38.0	1.3	0.0
WinField	CP5550VT2P	155.9	14.7	54.4	34,383	65.3	86.5	37.5	1.5	0.0
Pioneer	P1718VYHR	155.9	14.4	55.1	32,309	69.0	89.8	35.0	1.5	0.0
AgriGold	A6659VT2RIB	155.1	14.1	56.6	34,383	66.8	84.8	34.8	1.3	0.0
Progeny	PGY 2118 VT2P	155.0	15.2	57.1	31,419	66.5	88.3	35.3	1.0	0.0
BH Genetics	BH 8721VT2P	154.5	14.6	57.9	34,383	67.8	87.0	36.0	1.5	0.0
Pioneer	P2042VYHR	153.2	15.0	56.2	32,901	69.8	93.8	35.5	1.5	0.0
Revere Seed	Revere 1307 TC	153.0	13.9	56.3	34,662	65.5	85.3	36.0	1.5	0.0
Pioneer	P1870R	152.9	14.5	57.9	34,087	67.5	92.3	34.5	1.8	0.0
WinField	CP5497VT2P	152.8	14.2	55.4	30,827	66.3	87.5	32.8	1.5	0.0
BH Genetics	BH 8966VT2P	152.2	15.3	56.5	34,680	66.8	86.5	34.8	1.3	0.0
Bayer	DKC68-95	151.4	14.5	55.1	34,976	67.5	78.8	34.0	1.8	0.0
Revere Seed	Revere 1919 VT2P	151.1	14.5	57.2	34,976	65.8	86.0	35.3	1.3	0.0
Progeny	PGY 8116 SS	149.4	14.2	57.7	29,641	67.5	86.8	36.5	1.5	0.0
Bayer	DKC67-94	147.6	14.5	57.2	32,308	65.8	87.3	37.0	1.8	0.0
Progeny	PGY 9117 VT2P	147.6	14.8	57.8	33,198	65.8	92.5	38.3	1.8	0.0
Progeny	PGY 9114 VT2P	146.2	14.4	58.2	31,716	65.3	84.8	33.8	1.8	0.0
Bayer	DKC62-70	144.4	13.7	56.1	33,198	66.3	84.5	36.5	2.0	0.0
Progeny	PGY 2015 VT2P	141.1	13.5	57.8	34,680	65.8	83.0	36.0	1.5	0.0
WinField	CP5678RR	140.3	13.8	57.7	32,901	64.0	81.3	33.5	1.0	0.0
WinField	X20117C/VT2P	140.1	15.0	57.2	33,198	66.3	86.5	39.5	1.8	0.0
Dyna-Gro	D52VC63	136.1	13.6	56.7	33,494	65.8	88.3	35.8	1.3	0.0
Dyna-Gro	D57TC29	131.1	14.5	56.4	33,791	66.3	89.0	34.8	1.5	0.0
Revere Seed	Revere 1577 VT2P	130.5	14.1	56.7	35,569	64.3	83.5	32.3	1.3	0.0
Dyna-Gro	D58VC65	129.2	13.9	56.7	33,198	65.5	79.8	30.8	1.5	0.0
WinField	CP5678VT2P	127.1	14.0	57.8	32,901	63.8	84.3	31.3	1.3	0.0
Dyna-Gro	D54VC14	124.0	14.0	56.7	34,383	64.3	80.0	30.5	1.5	0.0
	Mean	153.3	14.4	56.7	33,550.7	66.4	86.5	35.4	1.5	0.0
	CV (%)	12.8	4.7	3.6	8.9	2.5	5.9	9.7	35.8	0.0
	LSD (0.10)	18.9	0.5	2.3	NS	1.4	4.8	3.3	NS	NS

Numbers shaded within a column are not significantly different from the numerically greatest value.

Table 6. Corn official hybrid trial, Northeast Research Station, St. Joseph (silt loam soil), 2022.

Company	Hybrid	YLD (15.5%)	GM	TW	PP	MS	PH	EH	HC	LOD
		bu/a	%	lb/bu	no./a	DAP	in	in	1-3	%
AgriGold	A647-79VT2PRO	225.4	15.2	58.2	29,200	69.0	79.3	40.8	1.3	0.0
Bayer	DKC69-98	224.4	15.1	60.3	30,746	69.3	85.9	43.6	1.3	0.0
Revere Seed	Revere 1627 TC	223.1	15.3	57.7	30,403	68.0	79.9	41.1	1.0	0.0
Dyna-Gro	D55VC80	222.2	15.7	57.9	31,777	68.5	81.4	39.4	1.5	0.0
Bayer	DKC69-99	220.3	15.4	58.6	34,010	68.3	82.5	42.2	1.0	0.0
WinField	CP5497VT2P	219.5	15.8	57.4	30,918	68.8	80.3	37.4	1.3	0.0
Dyna-Gro	D57TC29	219.0	16.3	56.8	35,556	68.0	83.4	38.4	1.0	0.0
BH Genetics	X22002VT2P	217.9	15.4	57.7	32,464	69.3	83.6	44.5	1.0	0.0
AgriGold	A6659VT2RIB	217.2	15.3	57.7	29,372	68.3	81.9	38.6	1.3	0.0
WinField	CP5550VT2P	214.8	15.9	56.5	32,807	68.5	81.7	37.6	1.0	0.0
Bayer	DKC65-99	214.4	15.5	57.5	28,513	69.3	80.0	37.8	1.0	0.0
AgriGold	A645-16VT2RIB	213.5	15.4	57.6	32,292	68.8	85.9	43.6	1.3	0.0
Revere Seed	Revere 1577 VT2P	213.2	15.4	57.8	32,120	67.3	77.8	36.0	1.3	0.0
Revere Seed	Revere 1307 TC	212.9	15.5	56.8	32,807	67.8	80.9	37.1	2.0	0.0
Pioneer	P1870YHR	212.1	15.5	58.1	28,857	69.0	80.9	42.6	1.5	0.0
Bayer	DKC68-95	211.6	15.7	58.4	29,544	68.5	78.7	38.7	1.5	0.0
WinField	X20117C/VT2P	210.3	15.8	59.2	33,838	68.3	83.3	41.5	1.0	0.0
BH Genetics	BH 8966VT2P	209.5	15.8	59.0	31,433	68.8	82.2	44.1	1.0	0.0
WinField	CP5678RR	209.0	15.2	57.9	31,949	67.5	74.5	38.9	1.0	0.0
Dyna-Gro	D57VC53	208.9	15.7	59.9	33,323	68.3	80.4	41.1	1.0	0.0
Bayer	DKC67-94	208.8	15.3	57.3	33,151	68.3	81.8	41.9	1.0	0.0
Pioneer	P2042VYHR	208.4	16.2	59.1	32,636	68.3	85.6	38.9	1.0	0.0
BH Genetics	BH 8721VT2P	207.4	15.4	58.6	30,059	68.5	80.5	40.6	1.3	0.0
WinField	CP5678VT2P	206.7	15.4	58.2	30,403	67.3	77.0	37.3	1.3	0.0
Revere Seed	Revere 1898 TC	206.3	14.9	59.0	31,949	68.0	82.9	39.7	1.3	0.0
Dyna-Gro	D57VC51	206.2	15.4	57.8	33,666	67.8	81.6	39.5	1.0	0.0
Pioneer	P1870R	206.0	15.5	59.2	31,262	68.5	85.3	42.5	1.0	0.0
Revere Seed	Revere 1919 VT2P	206.0	15.6	58.4	32,464	69.0	76.9	39.5	1.0	0.0
Progeny	PGY 9114 VT2P	205.6	15.3	58.0	32,979	66.5	76.8	36.5	1.5	0.0
Bayer	DKC62-70	205.2	15.2	57.5	30,746	68.0	83.6	42.0	1.8	0.0
Bayer	DKC65-95	204.7	15.4	56.6	35,384	69.3	83.7	42.9	1.8	0.0
Progeny	PGY 9117 VT2P	203.6	15.6	58.7	33,838	68.8	80.2	40.9	1.8	0.0
Revere Seed	Revere 1707 VT2P	203.4	15.8	58.9	32,636	68.8	83.7	42.9	1.0	0.0
Progeny	PGY 8116 SS	201.1	14.7	59.6	33,667	68.3	81.6	39.1	1.3	0.0
Dyna-Gro	D54VC14	199.8	15.1	57.7	32,120	67.3	76.1	36.7	1.3	0.0
Pioneer	P1718VYHR	199.3	15.8	57.3	31,262	69.3	85.6	40.5	1.0	0.0
Bayer	DKC65-93	198.6	15.1	56.3	28,342	68.8	82.9	39.6	1.5	0.0
Progeny	PGY 2118 VT2P	197.8	15.5	59.3	31,090	68.5	82.3	37.9	1.0	0.0
Dyna-Gro	D57RR51	197.6	15.4	58.6	31,605	68.3	79.7	38.9	1.0	0.0
Bayer	DKC62-89	196.4	15.1	57.0	34,182	67.5	78.1	41.3	1.3	0.0
Dyna-Gro	D52VC63	195.6	15.2	56.1	30,918	67.8	76.8	36.4	1.3	0.0
Pioneer	P1222YHR	195.0	15.0	58.3	30,918	69.0	83.9	40.2	1.5	0.0
Dyna-Gro	D58VC65	194.0	15.4	58.0	29,201	68.0	77.4	33.8	1.0	0.0
Revere Seed	Revere 1525 V	189.7	16.0	56.3	31,090	68.5	82.8	39.6	1.0	0.0
Progeny	PGY 2015 VT2P	189.6	14.8	58.5	30,231	68.0	81.9	37.5	1.3	0.0
	Mean	207.8	15.4	58.0	31,727.2	68.3	81.2	39.8	1.2	0.0
	CV (%)	7.1	7.2	2.0	11.0	1.4	4.8	10.9	34.0	0.0
	LSD (0.10)	15.4	0.5	0.8	NS	0.9	3.5	4.8	0.4	NS

Numbers shaded within a column are not significantly different from the numerically greatest value.

Table 7. Corn official hybrid trial, Northeast Research Station, St. Joseph (clay soil), 2022.

Company	Hybrid	YLD (15.5%)	GM	TW	PP	MS	PH	EH	HC	LOD
		bu/a	%	lb/bu	no./a	DAP	in	in	1-3	%
WinField	CP5497VT2P	209.8	15.9	55.9	31,261	61.3	80.3	42.2	1.0	0.0
Bayer	DKC69-99	203.3	15.6	58.3	33,495	62.0	79.3	39.0	1.3	0.0
Pioneer	P1870YHR	203.1	15.6	58.0	31,605	61.3	81.6	39.3	1.0	0.0
Revere Seed	Revere 1627 TC	200.5	16.0	55.7	28,170	60.8	79.1	34.4	1.5	0.0
Revere Seed	Revere 1307 TC	198.0	15.5	55.7	30,918	61.8	78.7	35.3	1.8	0.0
WinField	X20117C/VT2P	195.7	15.8	56.9	30,575	62.0	77.3	40.4	1.0	0.0
Dyna-Gro	D54VC14	194.0	15.8	59.2	33,151	60.0	75.5	36.1	1.0	0.0
Revere Seed	Revere 1525 V	193.0	16.1	56.1	33,495	61.8	81.6	38.3	1.0	0.0
Revere Seed	Revere 1577 VT2P	192.4	15.9	56.7	32,807	59.5	72.9	33.0	1.8	0.0
Progeny	PGY 9114 VT2P	191.3	16.2	56.5	30,403	59.8	73.9	34.8	1.3	0.0
WinField	CP5678VT2P	190.9	15.7	57.4	27,998	60.0	74.3	39.2	1.0	0.0
BH Genetics	X22002VT2P	190.8	15.8	56.8	30,918	63.5	82.3	42.5	1.0	0.0
Dyna-Gro	D52VC63	190.0	15.5	56.2	31,605	60.5	78.8	36.5	1.0	0.0
AgriGold	A647-79VT2PRO	188.6	15.6	56.9	28,513	61.0	78.0	39.2	1.0	0.0
Dyna-Gro	D57TC29	187.6	16.3	55.9	34,354	62.3	82.3	38.4	1.0	0.0
AgriGold	A645-16VT2RIB	187.6	15.6	56.5	31,605	63.0	80.6	38.0	1.3	0.0
Bayer	DKC68-95	187.3	15.8	57.3	30,403	61.8	73.3	36.6	1.3	0.0
Revere Seed	Revere 1919 VT2P	186.5	15.9	57.2	27,998	61.8	75.2	40.8	1.0	0.0
BH Genetics	BH 8721VT2P	186.3	15.8	57.8	30,231	63.0	82.1	37.8	1.3	0.0
Bayer	DKC65-99	186.2	15.7	54.9	33,323	62.0	76.5	33.9	1.3	0.0
Dyna-Gro	D57VC53	184.6	15.7	58.9	30,403	62.5	77.1	40.4	1.0	0.0
Dyna-Gro	D57RR51	184.1	15.4	56.4	31,777	62.0	76.0	39.1	1.0	0.0
WinField	CP5550VT2P	183.9	16.0	55.5	28,342	62.8	75.5	34.2	1.3	0.0
WinField	CP5678RR	183.7	15.8	57.2	29,544	60.5	73.0	37.8	1.0	0.0
Progeny	PGY 9117 VT2P	183.5	15.7	57.3	29,200	63.0	79.3	35.0	1.5	0.0
Bayer	DKC67-94	183.0	15.7	57.1	28,857	61.5	79.6	39.5	1.3	0.0
AgriGold	A6659VT2RIB	182.0	16.1	56.9	27,483	61.0	77.8	35.4	1.3	0.0
Pioneer	P2042VYHR	181.6	16.0	57.6	29,201	62.3	78.9	36.1	1.3	0.0
Bayer	DKC65-95	180.0	15.6	54.5	27,311	61.0	79.5	38.5	2.0	0.0
Revere Seed	Revere 1707 VT2P	179.8	15.7	55.6	29,029	63.0	76.8	41.3	1.0	0.0
Revere Seed	Revere 1898 TC	179.1	15.1	56.8	32,636	61.3	80.5	40.3	1.0	0.0
Bayer	DKC65-93	178.9	15.7	54.9	31,434	61.3	78.8	38.8	1.5	0.0
Bayer	DKC69-98	177.4	15.5	57.3	30,403	63.8	79.7	38.7	1.0	0.0
BH Genetics	BH 8966VT2P	177.4	15.7	57.0	29,201	62.0	77.0	38.9	1.0	0.0
Pioneer	P1718VYHR	176.0	16.2	55.8	30,918	63.5	80.8	36.5	1.0	0.0
Dyna-Gro	D55VC80	175.2	16.0	56.3	33,838	62.5	81.0	38.0	1.5	0.0
Bayer	DKC62-89	174.5	16.2	54.9	30,746	62.0	79.8	36.8	1.5	0.0
Progeny	PGY 2118 VT2P	174.3	15.6	58.4	30,574	62.8	77.8	36.1	1.0	0.0
Pioneer	P1870R	174.1	15.8	58.2	27,998	62.0	81.1	36.2	1.0	0.0
Dyna-Gro	D57VC51	174.0	15.6	56.3	30,747	62.0	77.7	36.7	1.3	0.0
Progeny	PGY 8116 SS	170.2	15.5	57.8	30,403	62.5	79.9	35.1	1.3	0.0
Dyna-Gro	D58VC65	168.6	15.7	57.2	31,605	60.5	74.9	38.4	1.0	0.0
Bayer	DKC62-70	160.8	15.6	54.8	27,655	62.3	76.9	37.1	1.5	0.0
Pioneer	P1222YHR	160.8	15.6	56.7	29,544	63.5	81.3	39.1	1.3	0.0
Progeny	PGY 2015 VT2P	158.4	15.8	56.0	27,654	61.3	76.1	38.8	1.0	0.0
	Mean	183.7	15.8	56.7	30,429.5	61.8	78.2	37.7	1.2	0.0
	CV (%)	9.6	2.8	2.7	11.7	2.4	4.2	10.7	33.2	0.0
	LSD (0.10)	18.5	NS	1.2	NS	1.2	2.7	NS	0.4	NS

Numbers shaded within a column are not significantly different from the numerically greatest value.

Table 8. Corn official hybrid trial, Macon Ridge Research Station, Winnsboro, 2022.

Company	Hybrid	YLD (15.5%)	GM	TW	PP	MS	PH	EH	HC	LOD
		bu/a	%	lb/bu	no./a	DAP	in	in	1-3	%
Dyna-Gro	D57TC29	207.6	16.5	56.2	34,613	68.5	87.8	28.9	1.3	0.0
Bayer	DKC69-98	193.1	17.6	59.0	30,695	69.5	97.6	40.5	1.3	0.0
Bayer	DKC69-99	193.0	17.5	59.2	31,838	69.8	93.8	37.8	1.5	0.0
BH Genetics	X22002VT2P	192.4	16.3	58.3	33,144	70.0	96.7	37.8	1.5	0.0
Revere Seed	Revere 1919 VT2P	190.0	17.4	59.2	32,164	70.0	90.0	32.0	1.0	0.0
BH Genetics	BH 8721VT2P	189.3	16.7	59.4	33,960	67.3	94.2	36.4	1.3	0.0
Dyna-Gro	D58VC65	189.3	15.8	58.7	31,838	68.0	88.4	33.0	1.0	0.0
Pioneer	P2042VYHR	189.1	18.0	58.8	30,041	69.3	96.6	32.7	1.3	0.0
Dyna-Gro	D57RR51	189.1	17.5	58.2	33,307	67.3	91.3	34.3	1.0	0.0
Dyna-Gro	D52VC63	188.0	14.9	57.8	30,695	68.5	92.2	32.9	1.0	0.0
Pioneer	P1718VYHR	187.4	17.3	56.8	30,042	70.0	99.5	36.6	1.3	0.0
AgriGold	A645-16VT2RIB	185.9	15.5	57.8	33,470	68.8	87.8	35.7	1.8	0.0
WinField	CP5497VT2P	185.6	15.5	58.3	31,674	69.0	98.5	34.8	1.3	0.0
Revere Seed	Revere 1898 TC	185.5	15.1	59.1	34,939	68.3	95.1	35.9	1.0	0.0
BH Genetics	BH 8966VT2P	184.9	17.7	59.9	29,388	68.3	91.5	36.3	1.5	0.0
AgriGold	A6659VT2RIB	184.8	16.7	57.9	34,123	67.3	96.0	36.2	1.5	0.0
Dyna-Gro	D57VC51	184.7	16.5	58.1	32,980	67.5	95.4	34.1	1.0	0.0
Revere Seed	Revere 1707 VT2P	182.8	17.8	59.8	33,634	68.5	90.8	38.4	1.3	0.0
Bayer	DKC62-70	182.6	15.4	57.6	32,001	68.0	90.3	35.9	1.3	0.0
Revere Seed	Revere 1627 TC	182.5	16.2	57.5	33,960	67.8	89.9	33.1	1.3	0.0
AgriGold	A647-79VT2PRO	181.6	16.3	58.3	30,205	69.0	93.9	37.8	1.3	0.0
Progeny	PGY 9117 VT2P	181.0	17.1	59.9	32,980	66.8	86.8	35.9	1.3	0.0
Progeny	PGY 2118 VT2P	180.9	18.1	59.6	29,388	68.0	91.9	36.4	1.3	0.0
Dyna-Gro	D54VC14	179.7	15.2	59.5	35,919	68.0	82.0	29.9	1.5	0.0
Pioneer	P1222YHR	179.6	15.0	59.0	30,858	70.0	94.3	36.8	1.3	0.0
Dyna-Gro	D55VC80	178.8	15.7	58.2	32,327	68.8	92.1	36.8	1.5	0.0
Revere Seed	Revere 1577 VT2P	178.6	15.2	59.5	34,286	66.8	84.7	32.3	1.3	0.0
WinField	X20117C/VT2P	176.1	17.7	59.8	30,858	68.5	92.3	36.2	1.0	0.0
Bayer	DKC68-95	175.5	17.6	59.1	28,409	70.5	89.1	36.6	1.3	0.0
Revere Seed	Revere 1525 V	175.4	15.2	57.6	32,328	68.5	90.0	34.5	1.5	0.0
Bayer	DKC65-95	174.8	16.4	54.1	29,388	66.8	95.2	34.4	1.5	0.0
WinField	CP5678RR	174.6	16.1	58.8	34,286	66.3	87.2	31.2	1.5	0.0
WinField	CP5678VT2P	174.5	16.6	59.0	30,531	68.0	87.3	25.9	1.5	0.0
Pioneer	P1870R	172.6	17.0	60.1	33,307	67.5	94.0	32.9	1.3	0.0
Progeny	PGY 8116 SS	172.6	16.1	60.6	32,327	67.5	93.6	35.2	1.3	0.0
Dyna-Gro	D57VC53	172.2	17.4	59.4	30,368	69.3	91.9	35.9	1.5	0.0
Revere Seed	Revere 1307 TC	171.8	15.8	57.3	32,164	67.5	86.5	31.2	1.5	0.0
Bayer	DKC65-99	171.5	15.4	57.7	33,634	69.5	85.0	29.7	1.0	0.0
Pioneer	P1870YHR	171.1	17.7	59.8	31,021	68.3	97.3	35.5	1.5	0.0
Bayer	DKC67-94	170.1	16.2	57.9	34,287	69.0	92.0	34.0	1.5	0.0
Bayer	DKC65-93	167.8	16.2	55.5	33,960	67.8	89.5	34.2	1.3	0.0
WinField	CP5550VT2P	167.6	15.6	56.8	32,327	70.0	87.7	32.8	1.3	0.0
Progeny	PGY 9114 VT2P	166.3	15.0	59.4	30,042	66.8	84.8	30.1	1.3	0.0
Bayer	DKC62-89	165.8	15.2	57.3	32,164	69.0	91.4	35.2	1.5	0.0
Progeny	PGY 2015 VT2P	146.7	14.7	58.6	29,388	66.3	85.2	35.3	1.3	0.0
	Mean	179.9	16.3	58.4	32,116.7	68.3	91.3	34.4	1.3	0.0
	CV (%)	8.3	6.7	2.6	10.5	1.9	7.0	12.2	35.4	0.0
	LSD (0.10)	15.2	0.7	1.4	NS	1.0	6.0	4.1	NS	NS

Numbers shaded within a column are not significantly different from the numerically greatest value.

Table 9. Corn official hybrid trial, Macon Ridge Research Station, Winnsboro (no-till/continuous corn system), 2022.

Company	Hybrid	YLD (15.5%) bu/a	GM %	TW lb/bu
Bayer	DKC69-99	194.1	17.9	60.1
Dyna-Gro	D57VC51	193.2	18.9	58.3
Revere Seed	Revere 1919 VT2P	189.7	19.7	59.7
Revere Seed	Revere 1577 VT2P	186.8	16.9	58.8
AgriGold	A647-79VT2PRO	184.4	17.5	58.7
Bayer	DKC62-70	184.1	16.4	58.2
Dyna-Gro	D54VC14	182.1	17.9	59.3
Bayer	DKC68-95	181.5	19.6	58.8
Pioneer	P2042VYHR	181.0	19.8	59.5
BH Genetics	X22002VT2P	180.2	17.0	59.1
Bayer	DKC65-99	180.0	16.2	55.0
Bayer	DKC62-89	178.9	15.7	56.9
Pioneer	P1222YHR	178.7	16.6	59.5
Dyna-Gro	D58VC65	178.5	18.2	59.2
Bayer	DKC69-98	177.2	19.2	59.3
Progeny	PGY 9117 VT2P	176.8	19.0	58.6
WinField	CP5678VT2P	176.7	19.3	59.2
Dyna-Gro	D57RR51	176.6	18.7	59.1
Dyna-Gro	D57TC29	176.0	17.5	58.0
BH Genetics	BH 8721VT2P	175.6	19.2	58.9
Pioneer	P1870YHR	174.7	19.3	59.8
Progeny	PGY 9114 VT2P	174.2	17.2	59.1
Revere Seed	Revere 1307 TC	174.0	16.7	56.6
Dyna-Gro	D52VC63	171.9	17.0	57.0
AgriGold	A6659VT2RIB	171.4	17.5	57.9
Dyna-Gro	D57VC53	170.8	19.0	59.9
Revere Seed	Revere 1898 TC	170.6	16.9	58.1
Bayer	DKC67-94	170.1	17.6	57.4
Dyna-Gro	D55VC80	168.9	18.0	56.9
AgriGold	A645-16VT2RIB	168.6	17.2	58.1
WinField	CP5550VT2P	167.5	17.4	55.7
Progeny	Progeny 2118VT2P	167.4	18.6	59.3
Pioneer	P1718VYHR	167.2	18.5	57.4
Revere Seed	Revere 1627 TC	166.9	16.8	56.9
Revere Seed	Revere 1525 V	165.9	16.9	57.1
Progeny	PGY 8116 SS	164.8	18.0	58.9
Revere Seed	Revere 1707 VT2P	164.0	18.6	59.8
Pioneer	P1870R	164.0	18.7	59.2
WinField	X20117C/VT2P	162.2	18.8	59.4
WinField	CP5497VT2P	161.1	16.7	58.0
Progeny	PGY 2015VT2P	161.0	16.6	59.4
BH Genetics	BH 8966VT2P	158.4	19.5	59.8
Bayer	DKC65-93	153.9	16.7	56.7
WinField	CP5678RR	152.1	18.2	59.0
Bayer	DKC65-95	147.3	17.3	55.7
	Mean	172.7	17.9	58.4
	CV (%)	6.6	4.7	2.2
	LSD (0.10)	15.5	2.6	4.0

Numbers shaded within a column are not significantly different from the numerically greatest value.

Table 10. Yield summary of the corn on-farm core block demonstrations at 16 locations identified by parish.¹

Hybrid	Avoyelles	Beauregard	Caldwell	East Carroll	Franklin	Madison	Ouachita	Pointe Coupee1	Pointe Coupee2	Rapides	Richland	St. Landry	Tensas	West Carroll1	West Carroll2	West Feliciana	Average2
DeKalb DKC65-99	208.1	142.6	144.3	243.9	221.6	259.2	232.6	210.8	132.9	265.0	186.4	197.2	173.9	205.6	189.9	239.0	195.7
Croplan CP5550VT2P	210.8	195.7	179.3	242.0	214.9	249.7	210.8	212.0	135.3	224.3	198.3	203.8	167.7	204.3	192.0	239.3	193.8
Dyna-Gro D55VC80	208.5	172.2	149.7	249.0	224.3	243.6	240.2	210.4	135.4	234.6	186.1	200.6	154.5	204.5	193.0	229.0	193.4
Dyna-Gro D57VC53	197.9	185.4	182.8	246.3	197.2	247.4	268.9	207.4	133.4	238.1	185.5	190.8	183.7	184.7	178.7	204.2	190.9
Croplan CP5497VT2P	218.1	216.0	177.8	231.6	221.6	248.9	246.2	199.7	131.3	221.5	172.9	195.7	162.9	195.7	184.7	218.9	190.6
DeKalb DKC62-70	221.1		179.5	240.2	195.5	246.8	240.9	192.0	111.6	221.2	190.9		164.1	170.3	197.3	244.5	189.4
Pioneer P1718VYHR	202.5	103.6	164.1	240.8	211.4	245.9	259.3	203.8	106.6	228.5	177.1	175.9		186.3	182.6	239.6	189.2
Pioneer P1222YHR	200.7	193.3	192.1	242.3	204.6	239.5	231.4	213.1	111.2	212.5	180.7	172.2		195.7	189.6	193.0	186.2
Location average	208.5	172.7	171.2	242.0	211.4	247.6	241.3	206.1	124.7	230.7	184.8	190.9	167.8	193.4	188.5	225.9	
Soil type	Silty clay loam/clay	Sandy loam	Silt loam	Sandy loam	Silt loam	Sandy loam	Silt loam	Silt loam	Sandy loam	Silt loam	Silt loam	Clay loam	Silt loam	Silty clay loam	Silt loam	Sandy loam	
Planting date	3/10	4/7	3/29	3/30	3/21	3/29	4/4	3/10	3/5	3/27	4/9	3/10	3/29	3/28	3/27	3/4	

¹All yields expressed in bushels per acre and adjusted to 15.5% moisture.

²Balanced average that represents the 13 locations in which all hybrids were present.

Table 11. Avoyelles Parish

Community: Bordelonville
 County agent: Justin Dufour
 Cooperator: Jeramie Bordelon
 Previous crop: Soybean
 Soil type: Coushatta silty clay loam/Moreland clay
 Planting date: 3/10/22
 Row spacing (inches): 36

Seeding rate: 33,000
 Nitrogen rate (lbs/acre): 200
 Irrigation: No
 Tillage: Conventional
 Harvest date: 8/13/22
 GPS coordinates: 31.107894, -91.897317
 Yield results obtained by: Weigh wagon

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
DeKalb DKC65-99	4	1,005	0.28	14.6	60.9	208.07	5
DeKalb DKC62-70	4	1,005	0.28	14.4	60.3	221.11	1
Croplan CP5497VT2P	4	1,005	0.28	14.3	59.7	218.09	2
Croplan CP5550VT2P	4	1,005	0.28	14.6	58.9	210.81	3
Dyna-Gro D55VC80	4	1,005	0.28	14.8	60.2	208.50	4
Dyna-Gro D57VC53	4	1,005	0.28	15.2	61.2	197.94	8
Pioneer P1222YHR	4	1,005	0.28	13.9	60.0	200.71	7
Pioneer P1718VYHR	4	1,005	0.28	15.2	57.8	202.47	6

¹Adjusted to 15.5% moisture.

Table 12. Beauregard Parish

Community: DeRidder
 County agent: Todd Fontenot
 Cooperators: David Smith and Ryker Cavin
 Previous crop: Soybean
 Soil type: Sandy loam
 Planting Date: 4/7/22
 Row spacing (inches): 30

Seeding rate: 33,000
 Nitrogen rate (lbs/acre): 210
 Irrigation: Yes
 Tillage: No till
 Harvest date: 8/31/22
 GPS coordinates: 30.859701, -93.323269
 Yield results obtained by: Weigh wagon

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
DeKalb DKC65-99**	12	765	0.53	15.9	56.5	142.56	12
Croplan CP5497VT2P	12	765	0.53	15.7	56.1	216.00	1
Croplan CP5550VT2P	12	765	0.53	15.9	54.9	195.65	5
Dyna-Gro D55VC80	12	765	0.53	16.3	55.1	172.23	11
Dyna-Gro D57VC53**	12	765	0.53	16.5	56.9	185.41	8
Pioneer P1222YHR	12	765	0.53	16.2	55.1	193.27	6
Pioneer P1718VYHR**	12	765	0.53	16.6	55.7	103.57	13
Revere 1307 TC	12	765	0.53	15.8	55.2	202.64	4
Revere 1513 SSX	12	765	0.53	16.1	54.5	178.90	9
Revere 1525 V	12	765	0.53	15.9	54.9	208.67	2
Revere 1707 VT2P**	12	765	0.53	16.3	56.6	174.24	10
Revere 1898 TC**	12	765	0.53	15.9	56.3	187.89	7
Revere 1919 VT2P	12	765	0.53	16.3	57.2	206.34	3

¹Adjusted to 15.5% moisture.

Hybrids in bold letters are the grower's standard.

**Designates severe lodging.

Table 13. Caldwell Parish

Community: Columbia
 County agent: Jim McCann
 Cooperator: Sherry Kenney
 Previous crop: Corn
 Soil type: Hebert silt loam
 Planting date: 3/29/22
 Row spacing (inches): 38

Seeding rate: 34,000
 Nitrogen rate (lbs/acre): 220
 Irrigation: Yes
 Tillage: Reduced
 Harvest date: 9/8/22
 GPS coordinates: 32.094650, -92.040550
 Yield results obtained by: Weigh wagon

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
DeKalb DKC65-99	8	1,227	0.71	15.6	58.2	144.31	9
DeKalb DKC62-70	8	1,242	0.72	15.4	60.5	179.51	3
Croplan CP5497VT2P	8	1,176	0.68	16.2	58.1	177.84	6
Croplan CP5550VT2P	8	1,173	0.68	15.6	58.2	179.34	4
Dyna-Gro D55VC80**	8	1,206	0.70	15.7	58.8	149.70	8
Dyna-Gro D57VC53	8	1,191	0.69	15.5	58.0	182.81	2
Pioneer P1222YHR	8	1,248	0.73	15.6	56.4	192.09	1
Pioneer P1718VYHR	8	1,287	0.75	15.6	57.6	164.11	7
DeKalb DKC70-25	8	1,170	0.68	15.8	59.3	178.78	5
Croplan CP5678VT2P	7	1,302	0.66	15.4	58.9	131.38	10

¹Adjusted to 15.5% moisture.

Hybrids in bold letters are the grower's standard.

**Designates severe lodging.

Table 14. East Carroll Parish

Community: Transylvania
 County agent: R.L. Frazier
 Cooperator: Miller Bro Farms
 Previous crop: Soybean
 Soil type: Sandy loam
 Planting date: 3/30/22
 Row spacing (inches): 38

Seeding rate: 33,500
 Nitrogen rate (lbs/acre): 220
 Irrigation: Yes
 Tillage: Stale fall seedbed
 Harvest date: 8/12/22
 GPS coordinates: 32.648586, -91.210108
 Yield results obtained by: Yield monitor

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
Croplan CP5497VT2P	12	1,181	1.03	17.4		231.60	8
Pioneer P1718VYHR	12	1,171	1.02	17.9		240.82	6
DeKalb DKC65-99	12	1,167	1.02	16.8		243.95	3
Dyna-Gro D57VC53	12	1,165	1.02	18.1		246.25	2
Croplan CP5550VT2P	12	1,161	1.01	17.0		242.04	5
Pioneer P1222YHR	12	1,165	1.02	15.9		242.27	4
Dyna-Gro D55VC80	12	1,160	1.01	17.0		248.99	1
DeKalb DKC62-70	12	1,160	1.01	16.5		240.24	7

¹Adjusted to 15.5% moisture.

Table 15. Franklin Parish

Community: Winnsboro
 County agent: Carol Pinnell-Alison
 Cooperator: Campbell Farms
 Previous crop: Corn
 Soil type: Gigger silt loam, Gilbert-Egypt complex
 Planting date: 3/21/22
 Row spacing (inches): 38

Seeding rate: 36,000
 Nitrogen rate (lbs/acre): 227
 Irrigation: Yes
 Tillage: Stale seedbed
 Harvest date: 8/17/22
 GPS coordinates: 32.092243, -91.775906
 Yield results obtained by: Weigh wagon

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
Dyna-Gro D55VC80	16	664	0.77	14.1	59.3	224.27	1
DeKalb DKC65-99	16	664	0.77	13.8	60.4	221.59	3
Croplan CP5497VT2P	8	664	0.39	14.4	59.7	221.60	2
Pioneer P1718VYHR	8	655	0.38	14.4	58.0	211.44	5
Dyna-Gro D57VC53	8	646	0.38	13.9	59.7	197.23	7
DeKalb DKC62-70	8	642	0.37	14.1	59.6	195.47	8
Croplan CP5550VT2P	8	637	0.37	13.6	58.8	214.89	4
Pioneer P1222YHR	8	629	0.37	13.5	59.6	204.56	6

¹Adjusted to 15.5% moisture.

Table 16. Madison Parish

Community: Mound
 County agent: R.L. Frazier
 Cooperator: Wade Hargrave
 Previous crop: Soybean
 Soil type: Sandy loam
 Planting date: 3/29/22
 Row spacing (inches): 38

Seeding rate: 32,400
 Nitrogen rate (lbs/acre): 225
 Irrigation: Yes
 Tillage: Stale fall seedbed
 Harvest date: 8/9/22
 GPS coordinates: 32.315310, -91.077971
 Yield results obtained by: Yield monitor

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
DeKalb DKC65-99	10	1,180	0.86	18.2		259.21	1
DeKalb DKC62-70	10	1,180	0.86	17.3		246.78	6
Croplan CP5497VT2P	10	1,173	0.85	18.4		248.86	3
Croplan CP5550VT2P	10	1,171	0.85	17.5		249.66	2
Dyna-Gro D55VC80	10	1,166	0.85	17.5		243.61	10
Dyna-Gro D57VC53	10	1,162	0.84	19.2		247.38	4
Pioneer P1222YHR	10	1,155	0.84	17.0		239.52	11
Pioneer P1718VYHR	10	1,150	0.84	18.6		245.87	8
DeKalb DKC67-44	10	1,146	0.83	18.0		247.23	5
DeKalb DKC62-89	10	1,140	0.83	16.8		236.43	12
DeKalb DKC65-93	10	1,136	0.83	17.8		246.40	7
DeKalb DKC70-27	10	1,132	0.82	18.7		244.81	9

¹Adjusted to 15.5% moisture.

Hybrids in bold letters are the grower's standard.

Table 17. Ouachita Parish

Community: Fondale
 County agent: Jim McCann
 Cooperator: Tripp Faulk
 Previous crop: Corn
 Soil type: Rilla silt loam
 Planting date: 4/4/22
 Row spacing (inches): 38

Seeding rate: 32,000
 Nitrogen rate (lbs/acre): 200
 Irrigation: Yes
 Tillage: Reduced
 Harvest date: 9/3/22
 GPS coordinates: 32.390341, -92.117728
 Yield results obtained by: Yield monitor

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
DeKalb DKC65-99	8	1,100	0.64	15.5		232.62	7
DeKalb DKC62-70	8	1,118	0.65	15.2		240.87	5
Croplan CP5497VT2P	8	1,100	0.64	15.1		246.21	4
Croplan CP5550VT2P	8	1,118	0.65	15.2		210.78	9
Dyna-Gro D55VC80	8	1,118	0.65	15.6		240.18	6
Dyna-Gro D57VC53	8	1,100	0.64	16.5		268.87	1
Pioneer P1222YHR	8	1,118	0.65	15.4		231.36	8
Pioneer P1718VYHR	8	1,118	0.65	15.7		259.28	3
DeKalb DKC70-27	8	1,118	0.65	16.3		267.76	2

¹Adjusted to 15.5% moisture.

Hybrids in bold letters are the grower's standard.

Table 18. Pointe Coupee Parish 1

Community: Livonia
 County agent: Mark Carriere
 Cooperators: Schexnayder and Sons
 Previous crop: Soybean
 Soil type: Convent silt loam
 Planting date: 3/10/22
 Row spacing (inches): 36

Seeding rate: 35,000
 Nitrogen rate (lbs/acre): 200
 Irrigation: No
 Tillage: Conventional
 Harvest date: 8/7/22
 GPS Coordinates: 30.580910, -91.531115
 Yield results obtained by: Yield monitor

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
Croplan CP5550VT2P	12	2,523	2.09	18.6		212.01	2
Dyna-Gro D57VC53	12	2,545	2.10	20.3		207.39	5
Pioneer P1718VYHR	12	2,562	2.12	19.5		203.82	6
Croplan CP5497VT2P	12	2,571	2.12	19.0		199.71	7
Dyna-Gro D55VC80	12	2,588	2.14	19.0		210.37	4
DeKalb DKC65-99	12	2,601	2.15	19.4		210.79	3
Pioneer P1222YHR	12	2,609	2.16	18.5		213.07	1
DeKalb DKC62-70	12	2,628	2.17	18.6		192.00	8

¹Adjusted to 15.5% moisture.

Table 19. Pointe Coupee Parish 2

Community: Morganza
 County agent: Mark Carriere
 Cooperator: George LaCour
 Previous crop: Soybean
 Soil type: Robinsonville sandy loam
 Planting date: 3/5/22
 Row spacing (inches): 38

Seeding rate: 35,000
 Nitrogen rate (lbs/acre): 200
 Irrigation: No
 Tillage: Conventional
 Harvest date: 7/29/22
 GPS coordinates: 30.649691, -91.740371
 Yield results obtained by: Weigh wagon

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
Pioneer P1718VYHR	8	801	0.47	16.7	57.4	106.56	8
Croplan CP5497VT2P	8	808	0.47	16.9	57.2	131.32	5
Dyna-Gro D55VC80	8	815	0.47	15.9	58.7	135.44	1
DeKalb DKC65-99	8	822	0.48	16.3	59.2	132.90	4
Pioneer P1222YHR	8	829	0.48	15.7	59.1	111.22	7
Dyna-Gro D57VC53	8	834	0.49	16.9	59.5	133.38	3
DeKalb DKC62-70	8	839	0.49	16.1	57.2	111.63	6
Croplan CP5550VT2P	8	846	0.49	15.8	57.2	135.33	2

¹Adjusted to 15.5% moisture.

Table 20. Rapides Parish

Community: McNutt
 County agent: Justin Dufour
 Cooperator: Trevor Verzwylt
 Previous crop: Soybean
 Soil type: Coushatta silt loam
 Planting date: 3/27/22
 Row spacing (inches): 38

Seeding rate: 34,000
 Nitrogen rate (lbs/acre): 220
 Irrigation: Yes
 Tillage: Conventional
 Harvest date: 8/13/22
 GPS coordinates: 31.303752, -92.623237
 Yield results obtained by: Weigh wagon

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
Dyna-Gro D57VC53	6	1,284	0.56	17.7	60.4	238.06	2
Croplan CP5550VT2P	6	1,284	0.56	15.9	58.8	224.29	5
DeKalb DKC65-99	6	1,284	0.56	16.9	61.5	265.02	1
Pioneer P1222YHR	6	1,284	0.56	15.6	58.8	212.48	8
Dyna-Gro D55VC80	6	1,284	0.56	15.6	59.6	234.58	3
Croplan CP5497VT2P	6	1,284	0.56	15.1	61.0	221.49	6
DeKalb DKC62-70	6	1,284	0.56	16.2	60.4	221.22	7
Pioneer P1718VYHR	6	1,284	0.56	16.7	59.9	228.51	4

¹Adjusted to 15.5% moisture.

Table 21. Richland Parish

Community: Rayville
 County agent: Carol Pinnell-Alison
 Cooperator: Elliot Colvin
 Previous crop: Corn
 Soil type: Gilbert-Egypt complex
 Planting date: 4/9/22
 Row spacing (inches): 30

Seeding rate: 35,000
 Nitrogen rate (lbs/acre): 225
 Irrigation: Yes
 Tillage: Stale seedbed
 Harvest date: 9/2/22
 GPS coordinates: 32.451545, -91.756123
 Yield results obtained by: Yield monitor

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
DeKalb DKC62-70	12	1,102	0.76	15.0	56.7	190.93	2
Dyna-Gro D55VC80	12	1,102	0.76	15.8	57.7	186.11	4
Croplan CP5550VT2P	12	1,102	0.76	14.8	55.5	198.28	1
Pioneer P1718VYHR	12	1,102	0.76	15.4	57.8	177.14	7
DeKalb DKC65-99	12	1,102	0.76	14.8	57.2	186.44	3
Dyna-Gro D57VC53	12	1,102	0.76	16.8	59.1	185.50	5
Croplan CP5497VT2P	12	1,102	0.76	15.4	56.7	172.93	8
Pioneer P1222YHR	12	1,102	0.76	14.9	56.6	180.68	6

¹Adjusted to 15.5% moisture.

Table 22. St. Landry Parish

Community: Palmetto
 County agent: Vince Deshotel
 Cooperator: Charlie Fontenot
 Previous crop: Rice
 Soil type: Clay loam
 Planting date: 3/10/22
 Row spacing (inches): 36

Seeding rate: 34,000
 Nitrogen rate (lbs/acre): 220
 Irrigation: Yes
 Tillage: Minimum
 Harvest date: 8/15/22
 GPS coordinates: 30.765247, -91.884209
 Yield results obtained by: Yield monitor

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
DeKalb DKC65-99	12	1,319	1.09	17.9		197.23	3
Croplan CP5497VT2P	12	1,295	1.07	17.3		195.74	4
Croplan CP5550VT2P	12	1,295	1.07	17.2		203.81	1
Dyna-Gro D55VC80	12	1,295	1.07	17.7		200.64	2
Dyna-Gro D57VC53	12	1,319	1.09	19.4		190.77	5
Pioneer P1222YHR	12	1,319	1.09	16.4		172.15	8
Pioneer P1718VYHR	12	1,319	1.09	17.9		175.86	7
DeKalb DKC67-44	12	1,319	1.09	17.8		189.70	6

¹Adjusted to 15.5% moisture.

Hybrid in bold letters is the grower's standard.

Table 23. Tensas Parish

Community: Newellton
 County agent: Dennis Burns
 Cooperators: Dr. Lowell Stonecipher and Brian Kifer
 Previous crop: Wheat/soybean
 Soil type: Bruin silt loam
 Planting date: 3/29/22
 Row spacing (inches): 30

Seeding rate: 35,000
 Nitrogen rate (lbs/acre): 250
 Irrigation: No
 Tillage: Stale seedbed
 Harvest date: 9/16/22
 GPS coordinates: 32.042530, -91.217372
 Yield results obtained by: Yield monitor

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
Croplan CP5497VT2P	8	2,573	1.18	16.3		162.91	5
Croplan CP5550VT2P	8	2,778	1.28	16.3		167.73	3
Dyna-Gro D57VC53	8	2,510	1.15	16.3		183.68	1
Dyna-Gro D55VC80	8	3,154	1.45	16.3		154.50	6
DeKalb DKC65-99	8	2,606	1.20	16.3		173.87	2
DeKalb DKC62-70	8	3,562	1.64	16.3		164.06	4

¹Adjusted to 15.5% moisture.

Table 24. West Carroll Parish 1

Community: Goodwill
 County agent: Bruce Garner
 Cooperator: Ty Rogers
 Previous crop: Soybean
 Soil type: Forestdale/Dundee-Dubbs complex
 Planting date: 3/28/22
 Row spacing (inches): 30
 Seeding rate: 34,000

Nitrogen rate (lbs/acre): Pre-plant: 30; side-dress: 70-90; at tassel: 40; sulfur: 12; zinc: 2
 Irrigation: Yes
 Tillage: Reduced
 Harvest date: 8/13/22
 GPS coordinates: 32.791781, -91.562945
 Yield results obtained by: Yield monitor

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
Pioneer P1718VYHR	8	1,225	0.56	16.5		186.33	6
DeKalb DKC62-70	8	1,225	0.56	17.7		170.32	8
Dyna-Gro D55VC80	8	1,225	0.56	17.4		204.52	2
Croplan CP5497VT2P	8	1,225	0.56	18.6		195.74	4
DeKalb DKC65-99	8	1,225	0.56	17.0		205.61	1
Pioneer P1222YHR	8	1,225	0.56	17.0		195.69	5
Croplan CP5550VT2P	8	1,225	0.56	17.3		204.30	3
Dyna-Gro D57VC53	8	1,225	0.56	19.4		184.67	7

¹Adjusted to 15.5% moisture.

Table 25. West Carroll Parish 2

Community: Terry
 County agent: Bruce Garner
 Cooperator: Blaine Chop
 Previous crop: Corn
 Soil type: Calhoun-Grenada Association
 Planting date: 3/27/22
 Row spacing (inches): 36

Seeding rate: 34,000
 Nitrogen rate (lbs/acre): 245
 Irrigation: Yes
 Tillage: Reduced
 Harvest date: 8/21/22
 GPS coordinates: 32.943569, -91.354419
 Yield results obtained by: Yield monitor

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
Dyna-Gro D57VC53	16	415	0.46	18.4		178.74	8
Pioneer P1718VYHR	16	415	0.46	17.5		182.62	7
Croplan CP5550VT2P	16	415	0.46	16.8		192.05	3
Dyna-Gro D55VC80	16	415	0.46	16.8		193.01	2
DeKalb DKC62-70	16	415	0.46	17.1		197.29	1
Pioneer P1222YHR	16	415	0.46	16.2		189.56	5
Croplan CP5497VT2P	16	415	0.46	17.0		184.68	6
DeKalb DKC65-99	16	415	0.46	16.9		189.90	4

¹Adjusted to 15.5% moisture.

Table 26. West Feliciana Parish

Community: Angola
 County agent: Jessie Hoover
 Cooperator: Jeramie Bordelon
 Previous crop: Soybean
 Soil type: Sandy loam
 Planting date: 3/4/22
 Row spacing (inches): 36

Seeding rate: 33,000
 Nitrogen rate (lbs/acre): 200
 Irrigation: No
 Tillage: Conventional
 Harvest date: 8/15/22
 GPS coordinates: 30.971785, -91.607681
 Yield results obtained by: Yield monitor

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
DeKalb DKC65-99	24	787	1.30	14.5	58.7	239.05	4
DeKalb DKC62-70	24	787	1.30	14.4	60.7	244.46	1
Croplan CP549VT2P	24	787	1.30	14.0	59.8	218.87	6
Croplan CP5550VT2P	24	726	1.20	13.9	58.4	239.27	3
Dyna-Gro D55VC80	24	726	1.20	14.1	59.0	229.00	5
Dyna-Gro D57VC53	24	726	1.20	13.8	61.6	204.21	7
Pioneer P1222YHR	24	726	1.20	14.0	58.8	193.03	8
Pioneer P1718VYHR	24	605	1.00	14.4	58.5	239.60	2

¹Adjusted to 15.5% moisture.

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 semiflex 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.

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

Two criteria or rules 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 27. 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 27. Approximate amount of nutrients in a 200-bushel-per-acre corn crop.

Element	Quantity in pounds	
	Grain	Stover
Nitrogen (N)	134	90
Phosphorus (P ₂ O ₅)	70	32
Potassium (K ₂ O)	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 at pH values below 6.1 (Table 28). Recommendations in Table 28 are general

guidelines to raise pH. 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 value (RNV) of lime impacts the amount that is needed 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 28. 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

¹Amount 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 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 29).

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 29. 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 30). 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 30. 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-Nonirrigated	100	80	60	0	0
Upland-Irrigated	100	80	60	0	0
Upland-Nonirrigated	80	60	40	0	0

POTASSIUM

Potassium is vital to photosynthesis. When K is deficient, photosynthesis declines and the plant's respiration increases, which reduces the plant's 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 31-34). 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 31. 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 ₂ O	ppm	K ₂ O	ppm	K ₂ O	ppm	K ₂ O	ppm	K ₂ O
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 32. 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 ₂ O	ppm	K ₂ O	ppm	K ₂ O	ppm	K ₂ O	ppm	K ₂ O
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 33. 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 ₂ O	ppm	K ₂ O	ppm	K ₂ O	ppm	K ₂ O	ppm	K ₂ O
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 34. 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 ₂ O	ppm	K ₂ O	ppm	K ₂ O	ppm	K ₂ O	ppm	K ₂ O
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 yields. 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 35). 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 35. 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. Seed is one of the largest expenses on the farm, and seed varieties differ greatly in both price and yield potential.

To make seed selection even more challenging, farmers also need to contend with a common practice in the seed industry where the same variety is sold under multiple brand names, which is referred to **seed relabeling**.

Seed relabeling creates two significant problems for farmers:

- **Inconsistent seed pricing:** Because different brands often sell the same variety for very different prices, producers may significantly overpay, perhaps not realizing that other brands sell the variety at a lower price.

- **Lack of genetic diversity:** When the same variety is sold under multiple brand names, it is easy for producers to unknowingly purchase the same variety from multiple brands while thinking they are buying a unique variety from each brand. This can lead to a failure to establish the genetic diversity that many farmers strive for when selecting the seed lineup.

Methodology: Decoding a seed tag

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 **variety** marketed under multiple brand names.

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