

CORN HYBRIDS FOR GRAIN 2022

NOTES

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 corn producers with hybrid selection, the LSU AgCenter conducts annual corn OHTs at several locations across the state, providing producers unbiased information on hybrid performance across different soil types and environmental conditions. In 2021, 41 hybrids were entered by commercial seed companies 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, 14 on-farm core block demonstrations were conducted throughout the corn-growing areas of Louisiana by LSU AgCenter extension agents (Tables 10 - 24). This information should be used to supplement but not replace OHT results.

Table 1. Locations and agronomic milestones for the corn official hybrid trials, 2021.

Location	Soil Type	Previous Crop	Planting Date	Harvest Date	Row Spacing	Seeding Rate	Irrigated
Alexandria	Coushatta silt loam	Soybean	3/29/21	8/26/21	38"	36,000	No
Bossier City	Latanier clay	Cotton	3/22/21	9/29/21	40"	36,000	No
St. Joseph	Commerce silt loam	Cotton	3/10/21	8/10-12/21	38"	36,000	No
St. Joseph	Sharkey clay	Soybean	3/10/21	8/13-16/21	38"	36,000	No
Winnsboro	Gigger-Gilbert complex	Soybean	3/22/21	8/26/21	40"	36,000	Yes
Winnsboro ¹	Gigger-Gilbert complex	Corn	3/11/21	8/23/21	40"	36,000	Yes

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

Table 2. Performance attributes measured in the corn official hybrid trials, 2021.

Trait	Abbreviation	Description
Yield	YLD	Grain yield, bushels per acre, 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
Southern rust	SR	Southern rust rating; 0=none, 9=severe

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 2021 across locations 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 2021 official hybrid trials.¹

Company	Hybrid	ALEX ²	BC	SJ-sl	SJ-c	WN	WN-nt/cc	AVG
Dyna-Gro	D55VC80	161.8	149.4	277.4	278.7	221.4	197.7	214.4
Local Seed	LC1707 VT2P	160.1	141.0	286.2	272.0	225.4	191.2	212.7
Bayer	DKC69-99	168.2	123.1	284.7	281.6	220.7	179.9	209.7
BH Genetics	BH 8966VT2P	154.9	123.4	288.1	285.3	209.2	186.4	207.9
BH Genetics	BH 8721VT2P	154.6	111.5	283.6	280.5	231.3	185.1	207.8
Bayer	DKC70-27	170.6	106.5	287.7	278.0	223.7	173.4	206.6
Progeny	PGY 9117VT2P	158.8	132.3	287.6	250.3	225.4	183.7	206.4
Progeny	PGY 2118VT2P	164.2	128.8	279.9	267.9	217.6	179.1	206.2
Bayer	DKC65-95	159.1	123.6	270.1	281.8	209.1	190.2	205.6
Dyna-Gro	D57VC17	147.4	143.1	272.5	276.5	216.5	177.7	205.6
WinField	CP5550/VT2P	161.3	117.1	274.9	282.3	210.6	186.5	205.5
Dyna-Gro	D54VC34	158.0	111.1	282.5	231.5	238.4	211.3	205.5
Bayer	DKC67-44	154.1	134.9	274.4	278.0	211.4	179.8	205.4
WinField	CP5370/VT2P	150.4	132.0	274.1	269.5	228.0	177.4	205.2
AgriGold	A647-42TRC	151.7	128.3	275.6	280.5	216.3	178.0	205.1
Local Seed	LC1307 TC	151.1	148.7	281.5	254.6	228.7	163.4	204.7
Bayer	DKC65-99	166.9	139.8	277.1	248.8	211.6	182.1	204.4
Bayer	DKC68-69	158.7	105.8	275.4	275.3	224.9	185.2	204.2
AgriGold	A6659VT2RIB	143.8	128.8	277.6	268.4	219.2	177.1	202.5
Local Seed	LC1577 VT2P	163.7	94.9	262.1	280.9	226.9	185.6	202.3
Progeny	PGY 2015VT2P	157.3	110.5	271.0	271.9	209.0	190.4	201.7
Dyna-Gro	D57TC29	153.0	116.2	262.1	281.5	224.1	173.0	201.6
Pioneer	P1731YHR	166.2	116.2	285.1	249.4	234.1	154.3	200.9
Progeny	PGY EXP 115TRE	142.0	118.7	254.1	267.9	236.6	184.8	200.7
Local Seed	LC1898 TC	162.6	121.2	269.5	251.3	216.4	177.5	199.7
Dyna-Gro	D52VC63	145.9	130.0	267.7	266.0	213.9	160.9	197.4
Pioneer	P1185YHR	137.8	127.0	247.4	278.4	218.4	173.2	197.0
Bayer	DKC66-18	154.2	106.5	262.4	266.2	207.0	175.3	195.3
Local Seed	LC1506 VT2P	155.4	101.0	267.8	270.7	191.0	185.7	195.3
WinField	CP5497/VT2P	127.4	105.1	284.2	261.9	220.4	169.7	194.8
Progeny	PGY EXP116VT2P	168.2	81.6	281.7	255.5	224.6	155.6	194.5
Progeny	PGY 8116SS	144.2	104.6	260.8	272.6	205.8	175.8	194.0
Pioneer	P1213YHR	156.9	97.8	253.5	263.8	214.4	176.6	193.8
Local Seed	LC1407 VT2P	153.3	104.0	269.0	271.9	202.3	162.1	193.7
Dyna-Gro	D54VC14	155.4	107.4	257.2	269.5	220.6	151.8	193.6
Progeny	PGY 8116VT2P	148.1	113.4	253.6	265.9	209.5	169.6	193.3
Local Seed	LC1616 TC	145.1	129.7	241.8	243.7	213.9	178.6	192.1
Local Seed	LC1919 VT2P	152.5	102.4	265.1	251.9	212.0	166.3	191.7
Bayer	DKC62-89	150.1	96.9	259.2	240.8	203.9	184.1	189.2
BH Genetics	BH 8820VT2P	141.7	100.6	271.7	201.1	221.8	191.0	188.0
Pioneer	P2042VYHR	133.0	84.0	277.7	253.9	218.9	158.9	187.8
	Mean	153.9	117.0	271.6	265.3	217.9	177.7	
	CV (%)	9.3	19.2	6.4	10.0	5.3	11.5	
	LSD (0.10)	16.7	26.3	20.2	31.1	13.5	23.9	

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 Station, Alexandria, 2021.

Company	Hybrid	YLD (15.5%)	GM	TW	PP	MS	PH	EH	HC	SR 1 ¹	SR 2 ¹	SR 3 ¹	SR 4 ¹
		bu/a	%	lb/bu	no./a	DAP	in	in	1-3	0-9	0-9	0-9	0-9
Bayer	DKC70-27	170.6	12.4	59.8	29,372	72.3	76.8	34.8	1.0	1.0	1.5	4.0	7.0
Bayer	DKC69-99	168.2	12.6	60.9	30,059	72.3	75.6	35.5	1.3	0.5	2.3	2.5	7.5
Progeny	PGY EXP116VT2P	168.2	12.4	59.9	30,231	72.3	70.0	31.9	1.0	0.5	2.5	4.0	7.5
Bayer	DKC65-99	166.9	13.2	59.0	28,857	71.5	71.3	30.5	1.0	0.0	0.5	0.8	4.5
Pioneer	P1731YHR	166.2	13.0	59.3	30,403	73.5	83.9	42.2	1.0	1.0	0.8	2.5	5.5
Progeny	PGY 2118VT2P	164.2	12.6	60.3	32,636	73.0	74.5	35.9	1.0	0.5	1.0	3.5	7.5
Local Seed	LC1577 VT2P	163.7	12.3	58.7	30,403	70.5	72.0	31.1	1.8	2.0	3.5	4.5	8.0
Local Seed	LC1898 TC	162.6	12.0	60.1	27,311	70.8	77.5	34.7	1.8	0.5	2.0	3.5	7.0
Dyna-Gro	D55VC80	161.8	12.9	58.9	29,716	72.3	75.1	34.8	1.0	0.5	1.0	2.5	7.0
WinField	CP5550/VT2P	161.3	12.3	56.9	31,777	71.3	70.8	33.5	1.3	1.0	2.5	4.5	7.0
Local Seed	LC1707 VT2P	160.1	12.9	60.2	33,323	72.0	73.1	35.0	1.0	1.0	2.5	4.0	7.5
Bayer	DKC65-95	159.1	12.6	60.0	29,716	72.5	72.6	31.7	2.0	0.5	1.0	2.5	6.5
Progeny	PGY 9117VT2P	158.8	11.9	60.0	30,231	72.0	76.5	35.8	1.8	1.0	2.0	5.0	8.0
Bayer	DKC68-69	158.7	13.0	60.9	31,777	73.0	73.5	33.9	1.3	0.5	0.5	1.5	5.5
Dyna-Gro	D54VC34	158.0	12.3	57.3	31,949	72.3	74.9	35.5	1.0	0.5	2.0	4.0	8.5
Progeny	PGY 2015VT2P	157.3	11.8	60.1	29,029	71.3	74.5	34.8	1.3	1.0	1.8	2.3	5.0
Pioneer	P1213YHR	156.9	12.3	59.0	32,292	69.0	77.1	33.1	1.3	1.0	1.5	4.0	7.0
Local Seed	LC1506 VT2P	155.4	12.4	60.2	29,029	72.3	75.0	35.8	1.5	0.0	0.3	1.3	5.5
Dyna-Gro	D54VC14	155.4	12.3	58.8	31,949	72.3	71.3	30.5	1.5	0.0	0.8	2.0	6.5
BH Genetics	BH 8966VT2P	154.9	12.8	60.4	29,544	72.5	73.6	34.3	1.0	0.5	1.3	4.0	6.5
BH Genetics	BH 8721VT2P	154.6	12.6	59.5	31,777	72.3	77.4	34.7	1.3	1.0	2.5	5.5	8.0
Bayer	DKC66-18	154.2	12.7	57.5	30,575	71.0	68.3	31.7	1.5	1.0	2.0	4.5	7.5
Bayer	DKC67-44	154.1	12.4	59.4	32,292	70.5	75.5	35.9	2.0	0.0	1.5	2.5	7.0
Local Seed	LC1407 VT2P	153.3	12.1	58.7	28,170	70.8	76.7	35.9	3.0	0.5	2.5	4.0	8.0
Dyna-Gro	D57TC29	153.0	12.7	56.6	29,544	71.8	79.2	32.6	1.0	0.5	2.0	5.0	8.0
Local Seed	LC1919 VT2P	152.5	12.4	60.3	28,685	71.8	71.6	33.3	1.0	0.5	1.8	3.5	6.5
AgriGold	A647-42TRC	151.7	12.8	56.0	30,231	72.0	76.5	33.3	1.0	2.0	4.5	7.0	9.0
Local Seed	LC1307 TC	151.1	12.3	56.3	30,403	71.5	72.9	33.0	2.5	1.0	1.5	4.0	8.5
WinField	CP5370/VT2P	150.4	12.1	58.3	32,636	72.5	73.1	33.1	1.0	1.0	3.0	4.0	7.5
Bayer	DKC62-89	150.1	12.4	56.9	27,655	71.5	72.7	34.6	1.8	1.0	1.5	4.5	9.0
Progeny	PGY 8116VT2P	148.1	12.5	59.4	29,716	72.0	73.5	34.9	1.3	1.5	3.5	6.0	7.5
Dyna-Gro	D57VC17	147.4	12.2	59.3	32,807	72.3	70.6	32.8	1.3	1.5	3.0	5.0	8.0
Dyna-Gro	D52VC63	145.9	12.7	57.0	32,464	70.5	71.8	32.3	1.0	1.5	4.0	5.0	8.5
Local Seed	LC1616 TC	145.1	12.7	59.9	29,200	72.3	74.8	36.6	1.0	1.0	3.0	5.0	8.0
Progeny	PGY 8116SS	144.2	12.1	60.6	29,372	72.8	74.5	36.3	1.0	0.5	1.5	4.0	7.5
AgriGold	A6659VT2RIB	143.8	12.6	58.8	31,433	73.5	73.4	33.3	1.8	0.5	1.3	3.0	7.0
Progeny	PGY EXP 115TRE	142.0	12.7	59.1	34,010	72.0	74.8	32.5	1.0	0.5	1.3	3.0	7.0
BH Genetics	BH 8820VT2P	141.7	12.7	58.7	31,090	72.8	73.6	34.5	1.0	0.5	0.8	3.0	7.0
Pioneer	P1185YHR	137.8	12.3	59.4	26,796	70.0	69.2	44.3	1.3	0.5	2.5	3.5	8.0
Pioneer	P2042VYHR	133.0	12.8	59.4	30,575	73.3	75.5	33.6	1.0	1.0	3.5	5.5	7.5
WinField	CP5497/VT2P	127.4	12.4	59.0	31,262	74.3	70.2	32.8	1.5	0.5	2.0	4.0	8.0
	Mean	153.9	12.5	59.0	30,494.9	72.0	74.0	34.3	1.3	0.8	2.0	3.8	7.3
	CV (%)	9.3	4.0	0.9	10.4	1.6	3.0	13.0	31.6	83.3	64.3	33.4	12.7
	LSD (0.10)	16.7	0.6	0.6	NS	1.4	2.6	5.2	0.5	NS	NS	2.1	1.6

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

¹Southern rust ratings conducted on July 1, 9, 15 and 26.

Table 5. Corn official hybrid trial, Red River Research Station, Bossier City, 2021.

Company	Hybrid	YLD (15.5%)	GM	TW	PP	PH	EH	HC
		bu/a	%	lb/bu	no./a	in	in	1-3
Dyna-Gro	D55VC80	149.4	13.1	58.6	35,539	85.5	34.5	1.3
Local Seed	LC1307 TC	148.7	13.2	59.4	35,866	91.0	41.5	2.3
Dyna-Gro	D57VC17	143.1	13.5	58.2	32,931	87.5	39.0	2.5
Local Seed	LC1707 VT2P	141.0	13.4	60.0	35,539	90.3	40.8	1.8
Bayer	DKC65-99	139.8	13.6	57.9	35,865	87.8	35.5	1.3
Bayer	DKC67-44	134.9	13.6	57.5	35,539	83.0	37.5	1.8
Progeny	PGY 9117VT2P	132.3	13.1	58.7	34,887	90.5	37.0	2.0
WinField	CP5370/VT2P	132.0	12.9	57.6	35,540	88.3	37.5	1.5
Dyna-Gro	D52VC63	130.0	13.1	56.9	34,561	89.0	38.5	1.8
Local Seed	LC1616 TC	129.7	13.1	59.9	32,279	80.3	35.5	1.8
Progeny	PGY 2118VT2P	128.8	13.4	60.7	32,931	89.5	41.3	1.3
AgriGold	A6659VT2RIB	128.8	13.1	57.3	34,561	88.5	39.3	1.8
AgriGold	A647-42TRC	128.3	13.2	60.6	33,257	92.0	37.8	1.3
Pioneer	P1185YHR	127.0	13.4	58.9	35,865	80.5	33.8	1.8
Bayer	DKC65-95	123.6	13.2	58.5	34,561	86.5	35.5	1.3
BH Genetics	BH 8966VT2P	123.4	13.3	60.6	34,235	83.8	38.5	1.3
Bayer	DKC69-99	123.1	13.9	60.7	35,865	85.5	38.0	1.5
Local Seed	LC1898 TC	121.2	13.1	59.5	34,235	82.8	35.8	1.5
Progeny	PGY EXP 115TRE	118.7	13.1	60.5	31,627	86.3	33.5	1.8
WinField	CP5550/VT2P	117.1	13.0	55.9	33,909	81.0	35.3	1.3
Pioneer	P1731YHR	116.2	13.5	58.8	34,887	95.5	38.5	1.8
Dyna-Gro	D57TC29	116.2	13.3	58.3	32,931	95.5	34.0	1.3
Progeny	PGY 8116VT2P	113.4	14.7	58.0	35,866	87.8	40.3	2.0
BH Genetics	BH 8721VT2P	111.5	13.1	60.8	35,865	89.0	36.0	1.8
Dyna-Gro	D54VC34	111.1	13.0	56.9	35,865	92.0	36.0	1.5
Progeny	PGY 2015VT2P	110.5	13.1	59.0	34,887	87.0	37.3	1.8
Dyna-Gro	D54VC14	107.4	13.4	57.7	33,909	82.8	35.5	2.0
Bayer	DKC66-18	106.5	13.0	57.1	33,583	79.0	31.0	1.5
Bayer	DKC70-27	106.5	13.2	58.8	33,257	87.0	37.0	1.5
Bayer	DKC68-69	105.8	14.1	57.5	35,213	83.8	37.3	1.5
WinField	CP5497/VT2P	105.1	13.6	56.3	34,235	86.8	39.0	1.5
Progeny	PGY 8116SS	104.6	13.1	58.4	34,887	79.0	35.0	1.5
Local Seed	LC1407 VT2P	104.0	13.0	57.4	34,561	83.8	35.5	2.0
Local Seed	LC1919 VT2P	102.4	13.2	58.6	34,561	81.3	35.5	1.0
Local Seed	LC1506 VT2P	101.0	13.1	59.6	35,213	87.5	37.5	1.3
BH Genetics	BH 8820VT2P	100.6	13.0	57.9	35,865	84.0	34.5	1.5
Pioneer	P1213YHR	97.8	12.9	56.1	35,539	86.8	34.5	1.8
Bayer	DKC62-89	96.9	13.1	58.6	30,975	81.8	34.8	2.0
Local Seed	LC1577 VT2P	94.9	13.9	63.5	35,213	83.3	35.5	1.5
Pioneer	P2042VYHR	84.0	13.2	59.7	35,213	89.8	32.3	2.0
Progeny	PGY EXP116VT2P	81.6	13.2	58.5	31,301	74.8	25.5	1.0
	Mean	117.0	13.3	58.7	34,473.6	86.0	36.3	1.6
	CV (%)	19.2	4.0	3.5	10.5	8.5	13.3	33.6
	LSD (0.10)	26.3	0.6	2.4	NS	8.6	5.6	0.6

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), 2021.

Company	Hybrid	YLD (15.5%)	GM	TW	PP	MS	PH	EH	HC
		bu/a	%	lb/bu	no./a	DAP	in	in	1-3
BH Genetics	BH 8966VT2P	288.1	16.3	59.4	32,979	78.0	89.3	45.6	1.0
Bayer	DKC70-27	287.7	17.8	58.3	31,262	77.8	87.8	43.2	1.0
Progeny	PGY 9117VT2P	287.6	16.4	58.3	35,727	78.0	92.0	42.0	1.5
Local Seed	LC1707 VT2P	286.2	17.1	58.9	34,354	78.0	88.4	44.9	1.0
Pioneer	P1731YHR	285.1	18.1	57.2	31,949	76.8	97.2	45.8	1.0
Bayer	DKC69-99	284.7	16.8	60.3	32,292	77.8	88.5	43.5	1.3
WinField	CP5497/VT2P	284.2	16.3	58.8	31,949	77.8	89.5	39.8	1.3
BH Genetics	BH 8721VT2P	283.6	16.3	59.1	34,697	78.0	90.7	45.1	1.5
Dyna-Gro	D54VC34	282.5	16.0	58.0	35,384	77.5	92.3	39.9	1.0
Progeny	PGY EXP116VT2P	281.7	16.9	59.7	35,384	77.8	81.7	41.1	1.0
Local Seed	LC1307 TC	281.5	15.1	58.1	32,636	78.0	86.3	41.1	2.0
Progeny	PGY 2118VT2P	279.9	16.9	59.1	33,323	78.0	89.3	44.1	1.0
Pioneer	P2042VYHR	277.7	17.8	58.1	35,384	77.3	87.6	41.3	1.0
AgriGold	A6659VT2RIB	277.6	16.8	59.6	32,292	78.0	90.5	40.8	1.3
Dyna-Gro	D55VC80	277.4	16.6	57.9	32,636	78.0	88.2	45.3	1.5
Bayer	DKC65-99	277.1	17.1	58.3	34,353	78.0	87.6	40.8	1.0
AgriGold	A647-42TRC	275.6	17.0	56.9	34,697	77.8	92.6	41.8	1.0
Bayer	DKC68-69	275.4	17.0	59.4	35,727	77.0	87.5	40.8	1.3
WinField	CP5550/VT2P	274.9	16.0	56.7	35,040	77.8	83.1	39.8	1.0
Bayer	DKC67-44	274.4	16.4	58.6	34,697	77.5	88.4	43.0	1.5
WinField	CP5370/VT2P	274.1	15.5	57.8	33,323	77.8	85.6	41.3	1.3
Dyna-Gro	D57VC17	272.5	15.4	59.6	34,010	77.8	84.7	44.1	1.3
BH Genetics	BH 8820VT2P	271.7	17.3	57.7	33,323	78.0	87.2	44.2	1.0
Progeny	PGY 2015VT2P	271.0	15.5	59.2	35,728	78.0	85.4	42.7	1.5
Bayer	DKC65-95	270.1	16.3	58.2	33,323	77.3	86.5	39.3	2.0
Local Seed	LC1898 TC	269.5	15.7	58.9	34,697	77.5	90.0	42.6	1.3
Local Seed	LC1407 VT2P	269.0	15.3	57.7	35,728	77.3	88.7	41.8	1.3
Local Seed	LC1506 VT2P	267.8	15.4	58.9	34,353	78.0	87.9	44.2	1.3
Dyna-Gro	D52VC63	267.7	15.7	58.3	35,384	77.5	84.2	41.2	1.5
Local Seed	LC1919 VT2P	265.1	17.4	58.6	35,728	77.8	82.4	40.4	1.0
Bayer	DKC66-18	262.4	15.7	58.3	32,979	78.0	82.5	40.8	1.3
Dyna-Gro	D57TC29	262.1	16.7	56.7	32,979	78.0	89.0	40.4	1.0
Local Seed	LC1577 VT2P	262.1	15.2	59.1	35,041	76.8	85.3	38.4	2.0
Progeny	PGY 8116SS	260.8	15.7	59.6	31,605	78.0	89.4	43.8	1.0
Bayer	DKC62-89	259.2	16.1	57.7	35,384	77.8	85.9	43.3	1.0
Dyna-Gro	D54VC14	257.2	15.4	58.7	33,666	77.3	82.7	39.1	1.8
Progeny	PGY EXP 115TRE	254.1	15.9	59.6	35,728	78.0	90.8	44.0	1.3
Progeny	PGY 8116VT2P	253.6	16.2	58.5	35,728	78.0	87.4	44.3	1.3
Pioneer	P1213YHR	253.5	16.5	57.2	35,727	76.0	85.2	39.5	1.0
Pioneer	P1185YHR	247.4	15.4	58.4	32,636	76.3	79.8	36.8	1.0
Local Seed	LC1616 TC	241.8	15.4	60.8	35,384	78.0	85.0	44.3	1.0
	Mean	271.6	16.3	58.5	34,127.0	77.7	87.4	42.1	1.3
	CV (%)	6.4	4.5	1.6	13.0	0.6	3.3	6.0	32.4
	LSD (0.10)	20.2	0.9	1.1	NS	0.5	3.4	3.0	0.5

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), 2021.

Company	Hybrid	YLD (15.5%)	GM	TW	MS	PH	EH	HC
		bu/a	%	lb/bu	DAP	in	in	1-3
BH Genetics	BH 8966VT2P	285.3	16.7	58.6	78.0	77.3	37.2	1.0
WinField	CP5550/VT2P	282.3	16.5	58.9	78.3	78.4	37.8	1.3
Bayer	DKC65-95	281.8	17.0	58.4	77.3	82.1	35.8	1.0
Bayer	DKC69-99	281.6	16.7	58.7	77.8	80.9	35.9	1.3
Dyna-Gro	D57TC29	281.5	16.0	58.9	77.8	80.4	38.3	1.0
Local Seed	LC1577 VT2P	280.9	17.0	59.0	77.3	81.0	36.8	1.0
BH Genetics	BH 8721VT2P	280.5	16.6	56.9	78.8	80.5	34.4	1.3
AgriGold	A647-42TRC	280.5	15.9	59.1	78.1	77.7	36.7	1.7
Dyna-Gro	D55VC80	278.7	15.7	58.7	78.3	79.0	35.9	1.5
Pioneer	P1185YHR	278.4	16.7	57.4	77.0	80.4	36.9	1.3
Bayer	DKC67-44	278.0	16.0	58.9	78.0	75.8	32.8	1.0
Bayer	DKC70-27	278.0	17.3	58.3	78.3	77.0	58.6	1.3
Dyna-Gro	D57VC17	276.5	16.5	57.8	78.5	80.9	35.3	1.0
Bayer	DKC68-69	275.3	16.6	59.1	78.8	79.5	37.7	1.3
Progeny	PGY 8116SS	272.6	15.8	58.5	78.5	77.0	35.8	1.0
Local Seed	LC1707 VT2P	272.0	15.9	58.3	78.1	78.5	35.3	1.0
Progeny	PGY 2015VT2P	271.9	16.1	58.8	78.0	77.7	36.3	1.0
Local Seed	LC1407 VT2P	271.9	15.5	58.8	78.0	75.2	33.3	1.0
Local Seed	LC1506 VT2P	270.7	15.8	59.8	78.0	77.8	36.7	1.3
WinField	CP5370/VT2P	269.5	16.2	57.5	78.0	79.8	37.4	1.3
Dyna-Gro	D54VC14	269.5	16.3	59.0	77.5	78.2	36.9	1.3
AgriGold	A6659VT2RIB	268.4	15.4	59.0	79.0	76.6	35.2	1.3
Progeny	PGY EXP 115TRE	267.9	16.9	58.8	78.3	79.6	35.0	1.3
Progeny	PGY 2118VT2P	267.9	15.9	57.6	78.0	79.3	38.2	1.5
Bayer	DKC66-18	266.2	15.8	58.1	77.7	73.9	35.4	1.4
Dyna-Gro	D52VC63	266.0	16.3	58.3	78.3	77.8	35.3	1.3
Progeny	PGY 8116VT2P	265.9	16.0	59.1	78.0	78.7	34.5	1.3
Pioneer	P1213YHR	263.8	16.3	57.8	77.0	77.5	35.3	1.3
WinField	CP5497/VT2P	261.9	16.2	58.2	78.5	79.5	33.9	1.3
Progeny	PGY EXP116VT2P	255.5	14.6	60.4	77.5	76.7	36.8	1.0
Local Seed	LC1307 TC	254.6	14.5	59.5	77.8	74.8	34.1	1.0
Pioneer	P2042VYHR	253.9	15.6	57.9	77.5	76.3	35.2	1.5
Local Seed	LC1919 VT2P	251.9	15.3	58.1	78.0	75.8	36.0	1.0
Local Seed	LC1898 TC	251.3	15.7	58.8	77.3	75.1	31.7	1.5
Progeny	PGY 9117VT2P	250.3	16.1	58.9	78.0	76.2	34.8	1.3
Pioneer	P1731YHR	249.4	15.9	57.8	77.5	78.0	38.2	1.5
Bayer	DKC65-99	248.8	15.9	58.7	78.5	80.1	35.8	1.8
Local Seed	LC1616 TC	243.7	14.2	58.9	77.5	76.5	37.1	1.5
Bayer	DKC62-89	240.8	16.0	58.2	78.5	74.2	32.6	1.0
Dyna-Gro	D54VC34	231.5	16.0	58.7	78.0	73.8	34.4	1.3
BH Genetics	BH 8820VT2P	201.1	15.3	58.1	78.0	77.9	34.6	1.5
	Mean	265.3	16.0	58.5	78.0	77.9	36.2	1.3
	CV (%)	10.0	6.4	2.1	1.0	5.2	24.0	43.8
	LSD (0.10)	31.1	1.2	NS	0.9	NS	NS	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, 2021.

Company	Hybrid	YLD (15.5%)	GM	TW	PP	MS	PH	EH	HC
		bu/a	%	lb/bu	no./a	DAP	in	in	1-3
Dyna-Gro	D54VC34	238.4	15.3	57.5	35,103	73.8	107.5	39.0	1.0
Progeny	PGY EXP 115TRE	236.6	15.8	59.4	33,960	73.0	105.0	38.0	1.0
Pioneer	P1731YHR	234.1	17.0	58.4	32,491	73.8	105.8	39.5	1.0
BH Genetics	BH 8721VT2P	231.3	15.7	60.2	34,776	73.8	105.3	39.3	1.0
Local Seed	LC1307 TC	228.7	14.3	58.5	32,654	72.3	103.5	42.3	1.0
WinField	CP5370/VT2P	228.0	14.6	58.1	32,654	72.5	106.5	39.0	1.0
Local Seed	LC1577 VT2P	226.9	14.2	58.7	33,633	69.0	105.3	38.5	1.0
Local Seed	LC1707 VT2P	225.4	17.5	60.6	34,123	75.5	105.0	39.0	1.0
Progeny	PGY 9117VT2P	225.4	16.3	60.0	33,960	75.5	104.5	39.5	1.0
Bayer	DKC68-69	224.9	16.8	60.2	33,960	76.3	105.3	41.0	1.0
Progeny	PGY EXP116VT2P	224.6	17.1	59.7	33,960	72.5	105.8	40.8	1.0
Dyna-Gro	D57TC29	224.1	16.4	59.2	32,980	75.5	105.8	38.8	1.0
Bayer	DKC70-27	223.7	16.9	60.3	34,287	73.8	104.8	38.3	1.0
BH Genetics	BH 8820VT2P	221.8	16.9	57.7	33,797	73.5	105.3	40.3	1.0
Dyna-Gro	D55VC80	221.4	15.8	58.7	32,654	74.0	105.3	41.0	1.0
Bayer	DKC69-99	220.7	16.4	60.3	32,817	73.8	105.5	39.5	1.0
Dyna-Gro	D54VC14	220.6	14.7	58.7	32,654	69.8	107.5	40.8	1.0
WinField	CP5497/VT2P	220.4	15.5	59.6	34,287	74.8	106.0	38.0	1.0
AgriGold	A6659VT2RIB	219.2	16.2	59.4	33,307	73.8	105.8	39.0	1.0
Pioneer	P2042VYHR	218.9	17.1	59.9	34,776	72.3	105.5	38.0	1.0
Pioneer	P1185YHR	218.4	14.7	60.3	35,103	72.8	106.0	39.0	1.0
Progeny	PGY 2118VT2P	217.6	17.8	60.4	32,817	75.5	105.5	40.3	1.0
Dyna-Gro	D57VC17	216.5	16.0	59.8	33,797	73.8	105.0	41.5	1.0
Local Seed	LC1898 TC	216.4	15.7	59.8	33,960	73.8	104.8	36.5	1.0
AgriGold	A647-42TRC	216.3	16.4	58.5	34,123	76.3	104.8	40.5	1.0
Pioneer	P1213YHR	214.4	15.5	59.6	32,817	73.3	104.8	41.0	1.0
Local Seed	LC1616 TC	213.9	16.3	60.2	34,613	76.3	103.5	39.8	1.0
Dyna-Gro	D52VC63	213.9	14.8	57.8	35,103	69.8	105.0	40.8	1.0
Local Seed	LC1919 VT2P	212.0	17.2	60.5	33,797	73.8	104.8	40.8	1.0
Bayer	DKC65-99	211.6	15.3	58.1	33,960	73.8	102.3	40.8	1.0
Bayer	DKC67-44	211.4	15.8	59.3	31,838	69.8	104.3	39.0	1.0
WinField	CP5550/VT2P	210.6	15.0	57.5	34,123	72.5	104.3	39.3	1.0
Progeny	PGY 8116VT2P	209.5	16.5	59.1	34,287	73.8	105.0	39.5	1.0
BH Genetics	BH 8966VT2P	209.2	17.5	60.4	33,470	75.5	104.0	41.0	1.0
Bayer	DKC65-95	209.1	16.2	60.0	33,144	72.8	104.0	42.5	1.0
Progeny	PGY 2015VT2P	209.0	15.0	60.1	32,328	72.8	105.0	38.0	1.0
Bayer	DKC66-18	207.0	16.1	58.0	32,491	72.5	105.5	39.0	1.0
Progeny	PGY 8116SS	205.8	15.6	61.6	33,144	77.0	104.0	41.3	1.0
Bayer	DKC62-89	203.9	15.9	57.3	32,164	73.5	105.3	38.8	1.0
Local Seed	LC1407 VT2P	202.3	14.7	59.0	31,511	74.0	103.5	41.0	1.0
Local Seed	LC1506 VT2P	191.0	15.5	60.5	33,470	76.3	105.3	39.5	1.0
	Mean	217.9	15.9	59.3	33,533.9	73.6	105.1	39.7	1.0
	CV (%)	5.3	4.2	2.2	6.4	1.3	1.8	5.7	0.0
	LSD (0.10)	13.5	0.8	1.5	NS	1.2	NS	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), 2021.

Company	Hybrid	YLD (15.5%) bu/a	GM %	TW lb/bu
Dyna-Gro	D54VC34	211.3	15.9	60.5
Dyna-Gro	D55VC80	197.7	17.2	59.4
Local Seed	LC1707 VT2P	191.2	16.7	60.2
BH Genetics	BH 8820VT2P	191.0	15.5	59.7
Progeny	PGY 2015VT2P	190.4	15.5	58.5
Bayer	DKC65-95	190.2	16.2	58.8
WinField	CP5550/VT2P	186.5	16.1	59.9
BH Genetics	BH 8966VT2P	186.4	15.7	60.8
Local Seed	LC1506 VT2P	185.7	17.5	59.9
Local Seed	LC1577 VT2P	185.6	16.1	61.4
Bayer	DKC68-69	185.2	16.0	58.8
BH Genetics	BH 8721VT2P	185.1	15.6	58.8
Progeny	PGY EXP 115TRE	184.8	17.2	61.5
Bayer	DKC62-89	184.1	18.9	60.1
Progeny	PGY 9117VT2P	183.7	16.1	60.9
Bayer	DKC65-99	182.1	15.5	59.6
Bayer	DKC69-99	179.9	16.9	61.0
Bayer	DKC67-44	179.8	16.6	58.3
Progeny	PGY 2118VT2P	179.1	15.8	60.2
Local Seed	LC1616 TC	178.6	16.8	61.1
AgriGold	A647-42TRC	178.0	14.5	60.7
Dyna-Gro	D57VC17	177.7	16.6	59.4
Local Seed	LC1898 TC	177.5	16.7	59.8
WinField	CP5370/VT2P	177.4	16.2	60.6
AgriGold	A6659VT2RIB	177.1	15.4	58.4
Pioneer	P1213YHR	176.6	15.1	61.3
Progeny	PGY 8116SS	175.8	17.1	58.7
Bayer	DKC66-18	175.3	16.9	61.4
Bayer	DKC70-27	173.4	17.0	60.2
Pioneer	P1185YHR	173.2	17.5	60.5
Dyna-Gro	D57TC29	173.0	15.9	60.4
WinField	CP5497/VT2P	169.7	16.6	59.9
Progeny	PGY 8116VT2P	169.6	16.1	58.8
Local Seed	LC1919 VT2P	166.3	16.4	61.5
Local Seed	LC1307 TC	163.4	15.5	60.2
Local Seed	LC1407 VT2P	162.1	16.9	61.0
Dyna-Gro	D52VC63	160.9	16.8	59.9
Pioneer	P2042VYHR	158.9	16.9	61.6
Progeny	PGY EXP116VT2P	155.6	15.2	59.8
Pioneer	P1731YHR	154.3	16.2	60.3
Dyna-Gro	D54VC14	151.8	15.9	57.7
	Mean	177.7	16.3	60.0
	CV (%)	11.5	5.8	1.5
	LSD (0.10)	23.9	1.1	1.0

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 14 locations identified by parish.¹

Hybrid	Beauregard	Caddo	Caldwell	East Carroll	Franklin	Madison	Natchitoches	Ouachita	Pointe Coupee	Rapides	Richland	West Carroll 1	West Carroll 2	West Feliciana
DeKalb DKC65-99	193.7	139.5	174.0	252.6	249.4	239.2	138.3	262.4	185.2	224.9	248.4	265.6	227.5	227.0
DeKalb DKC67-44	193.8	145.9	190.1	277.1	241.8	245.4	110.9	261.9	192.7	249.8	261.2	260.8	232.2	210.2
Dyna-Gro D55VC80	190.4	146.0	195.8	265.8	246.6	248.4	163.0	261.6	169.5	236.1	255.8	261.6	240.8	225.6
Dyna-Gro D57TC29	174.6	141.8	207.5	256.9	238.9	236.1	130.0	276.4	192.1	216.8	262.1	255.8	239.8	207.7
Pioneer P2042VYHR	172.2	130.7	179.5	272.5	232.6	232.7	123.9	268.3	189.3	214.9	256.6	182.8	240.1	187.2
Croplan CP5370/VT2P	186.9	145.1	180.1	258.0	241.0		142.3	248.4	181.9	237.4	258.2	255.8	226.9	209.7
Croplan CP5550/VT2P	188.0	142.7	175.9	258.2	226.6		141.2	263.2	184.9	214.5	244.7	250.6	240.2	235.7
Local Seed LC1898 TC	181.2	142.3	180.4		229.6		126.6	257.8		226.7	239.2	236.3	251.6	202.5
Local Seed LC1707 VT2P	188.4		195.7		236.6			266.9		236.0	250.3	193.1	244.8	198.6
AgriGold A6544 VT2P				272.6	229.9								233.4	
AgriGold A6659 VT2P				260.6	229.2								242.4	
Location average	185.5	141.8	186.6	263.8	236.6	240.4	134.5	263.0	185.1	228.6	252.9	240.3	238.2	211.6
Soil type	Sandy loam	Silt loam	Silt loam	Sandy loam	Silt loam	Sandy loam	Silt loam	Silt loam	Silty clay loam	Silt loam	Silt loam	Silt loam	Silty clay loam	Sandy loam
Planting date	3/20/21	4/14/21	3/23/21	3/12/21	3/22/21	3/15/21	3/12/21	3/29/21	4/7/21	3/10/21	3/20/21	3/22/21	3/10/21	3/10/21

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

Table 11. Beauregard Parish

Community: DeRidder
County agent: Todd Fontenot
Cooperators: David Smith and Ryker Cavin
Previous crop: Soybean
Soil type: Sandy loam
Planting Date: 3/20/21
Row spacing (inches): 20

Seeding rate: 29,000
Nitrogen rate (lbs/acre): 233
Irrigation: No
Tillage: Reduced
Harvest date: 8/17/21
GPS coordinates: 30.790533, -93.420131
Yield results obtained by: Weigh wagon

Hybrid	Rows/plot	Row length (ft.)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
Local Seed LC1707 VT2P	12	581	0.40	15.7	58.4	188.39	4
Local Seed LC1898 TC	12	624	0.43	15.3	58.2	181.24	8
Pioneer P2042VYHR	12	624	0.43	15.7	57.8	172.18	10
Dyna-Gro D57TC29	12	624	0.43	15.8	54.8	174.63	9
Dyna-Gro D55VC80	12	624	0.43	15.4	56.5	190.42	3
DeKalb DKC67-44	12	624	0.43	15.4	57.8	193.83	1
DeKalb DKC65-99	12	624	0.43	15.2	57.7	193.71	2
Croplan CP5370/VT2P	12	624	0.43	15.5	56.0	186.88	6
Croplan CP5550/VT2P	12	624	0.43	16.1	54.1	188.02	5
Dyna-Gro D57RR51	12	653	0.45	15.3	58.7	184.09	7

¹Adjusted to 15.5% moisture.

Hybrid in bold letters is the grower's standard.

Table 12. Caddo Parish

Community: Dixie
 County agent: John Terrell
 Cooperators: Jacob and George Rumbaugh
 Previous crop: Corn
 Soil type: Silt loam
 Planting date: 4/14/21
 Row spacing (inches): 30

Seeding rate: 32,000
 Nitrogen rate (lbs/acre): 180
 Irrigation: Yes
 Tillage: Strip
 Harvest date: 9/1/21
 GPS coordinates: 32.698788, -93.811521
 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	509	0.23	13.1	60.1	139.48	8
DeKalb DKC67-44	8	503	0.23	13.8	60.7	145.92	2
Croplan CP5370/VT2P	8	502	0.23	13.5	59.2	145.14	3
Croplan CP5550/VT2P	8	501	0.23	13.7	58.7	142.71	4
Dyna-Gro D55VC80	8	500	0.23	13.1	60.8	145.99	1
Dyna-Gro D57TC29	8	499	0.23	12.9	59.1	141.80	7
Local Seed LC1898 TC	8	498	0.23	12.3	61.9	142.25	5
Pioneer P2042VYHR	8	519	0.24	13.8	60.1	130.72	9
Pioneer P1731YHR	8	517	0.24	13.5	60.3	142.08	6

¹Adjusted to 15.5% moisture.

Hybrid in bold letters is the grower's standard.

Table 13. Caldwell Parish

Community: Columbia
 County agent: Jim McCann
 Cooperator: Sherry Kenney
 Previous crop: Corn
 Soil type: Hebert silt loam
 Planting date: 3/23/21
 Row spacing (inches): 38

Seeding rate: 34,000
 Nitrogen rate (lbs/acre): 220
 Irrigation: Yes
 Tillage: Reduced
 Harvest date: 9/2/21
 GPS coordinates: 32.098081, -92.039506
 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	6	1236	0.54	14.2	59.1	174.05	9
Croplan CP5370/VT2P	6	1236	0.54	14.1	56.9	180.14	6
DeKalb DKC67-44	6	1242	0.54	14.6	59.9	190.06	4
Croplan CP5550/VT2P	6	1242	0.54	13.7	61.7	175.90	8
Dyna-Gro D55VC80	6	1275	0.56	14.0	60.6	195.75	2
Dyna-Gro D57TC29	6	1275	0.56	13.4	60.0	207.48	1
Pioneer P2042VYHR	6	1275	0.56	14.2	61.2	179.48	7
Local Seed LC1898 TC	6	1275	0.56	13.9	58.5	180.44	5
Local Seed LC1707 VT2P	6	1275	0.56	13.8	59.9	195.72	3

¹Adjusted to 15.5% moisture.

Table 14. East Carroll Parish

Community: Transylvania
 County agent: R.L. Frazier
 Cooperator: Miller Bro Farms
 Previous crop: Peanuts
 Soil type: Sandy loam
 Planting date: 3/12/21
 Row spacing (inches): 38

Seeding rate: 32,400
 Nitrogen rate (lbs/acre): 220
 Irrigation: Yes
 Tillage: Stale fall seed bed
 Harvest date: 8/14/21
 GPS coordinates: 32.645064, -91.183958
 Yield results obtained by: Yield monitor

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
AgriGold A6659 VT2P	12	523	0.46	16.5		260.60	5
AgriGold A6544 VT2P	6	520	0.23	16.5		272.61	2
Dyna-Gro D55VC80	12	511	0.45	16.5		265.77	4
Dyna-Gro D57TC29	12	509	0.44	16.5		256.92	8
Croplan CP5550/VT2P	12	506	0.44	16.5		258.16	6
Croplan CP5370/VT2P	12	503	0.44	16.5		258.01	7
DeKalb DKC67-44	12	501	0.44	16.5		277.13	1
DeKalb DKC65-99	12	498	0.43	16.5		252.64	9
Pioneer P2042VYHR	12	459	0.40	16.5		272.52	3

¹Adjusted to 15.5% moisture.

Table 15. Franklin Parish

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

Seeding rate: 36,000
 Nitrogen rate (lbs/acre): 237
 Irrigation: Yes
 Tillage: Stale seed bed
 Harvest date: 9/10/21
 GPS coordinates: 32.096994, -91.744127
 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	16	372	0.43	12.4	58.8	249.40	1
Croplan CP5370/VT2P	16	372	0.43	12.2	59.1	240.96	4
Dyna-Gro D55VC80	16	372	0.43	12.4	58.4	246.63	2
Pioneer P2042VYHR	16	372	0.43	12.4	60.0	232.60	7
Local Seed LC1707 VT2P	16	372	0.43	12.4	60.3	236.57	6
AgriGold A6659 VT2P	16	372	0.43	12.8	58.5	229.16	10
DeKalb DKC67-44	16	372	0.43	12.6	59.0	241.83	3
Croplan CP5550/VT2P	16	372	0.43	12.6	56.9	226.59	11
Dyna-Gro D57TC29	16	372	0.43	12.8	57.4	238.86	5
Local Seed LC1898 TC	16	372	0.43	12.5	59.5	229.63	9
AgriGold A6544 VT2P	16	372	0.43	12.5	58.1	229.89	8

¹Adjusted to 15.5% moisture.

Table 16. Madison Parish

Community: Mound
 County agent: R.L. Frazier
 Cooperator: Wade Hargrave
 Previous crop: Corn
 Soil type: Sandy loam
 Planting date: 3/15/21
 Row spacing (inches): 38

Seeding rate: 35,000
 Nitrogen rate (lbs/acre): 230
 Irrigation: Yes
 Tillage: Stale fall seed bed
 Harvest date: 8/25/21
 GPS coordinates: 32.313500, -91.037281
 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 D57TC29	10	1280	0.93	16.3		236.11	5
Dyna-Gro D55VC80	10	1272	0.92	16.2		248.35	1
Pioneer P2042VYHR	10	1262	0.92	16.8		232.74	6
DeKalb DKC67-44	10	1252	0.91	15.9		245.37	2
DeKalb DKC65-99	10	1241	0.90	16.1		239.18	3
DeKalb DKC70-27	10	1228	0.89	16.5		237.77	4

¹Adjusted to 15.5% moisture.

Hybrid in bold letters is the grower's standard.

Table 17. Natchitoches Parish

Community: Melrose
 County agent: Randall Mallette
 Cooperator: Jamie Philen
 Previous crop: Corn
 Soil type: Moreland silt loam
 Planting date: 3/12/21
 Row spacing (inches): 38

Seeding rate: 31,744
 Nitrogen rate (lbs/acre): 200
 Irrigation: No
 Tillage: Minimum
 Harvest date: 8/30/21
 GPS coordinates: 31.651778, -93.017278
 Yield results obtained by: Yield monitor

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
Local Seed LC1898 TC	12	1220	1.06	15.1		126.60	6
Croplan CP5370/VT2P	12	1220	1.06	14.7		142.33	2
Dyna-Gro D57TC29	12	1220	1.06	14.2		129.97	5
DeKalb DKC67-44	12	1220	1.06	14.8		110.91	8
DeKalb DKC65-99	12	1220	1.06	14.7		138.30	4
Croplan CP5550/VT2P	12	1220	1.06	14.8		141.16	3
Dyna-Gro D55VC80	12	1220	1.06	15.0		162.96	1
Pioneer P2042VYHR	12	1220	1.06	14.2		123.88	7

¹Adjusted to 15.5% moisture.

Table 18. Ouachita Parish

Community: Fondale
 County agent: Jim McCann
 Cooperator: Tripp Faulk
 Previous crop: Corn
 Soil type: Rilla silt loam
 Planting date: 3/29/21
 Row spacing (inches): 38

Seeding rate: 32,000
 Nitrogen rate (lbs/acre): 210
 Irrigation: Yes
 Tillage: Reduced
 Harvest date: 9/6/21
 GPS coordinates: 32.38764, -92.117876
 Yield results obtained by: Yield monitor

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
Croplan CP5370/VT2P	8	1200	0.70	15.2		248.39	9
DeKalb DKC67-44	8	1200	0.70	15.0		261.89	6
Dyna-Gro D55VC80	8	1200	0.70	15.2		261.58	7
Croplan CP5550/VT2P	8	1200	0.70	14.9		263.21	4
DeKalb DKC65-99	8	1200	0.70	14.8		262.43	5
Dyna-Gro D57TC29	8	1200	0.70	14.9		276.37	1
Pioneer P2042VYHR	8	1200	0.70	14.7		268.29	2
Local Seed LC1707 VT2P	8	1200	0.70	15.1		266.91	3
Local Seed LC1898 TC	8	1200	0.70	14.8		257.84	8

¹Adjusted to 15.5% moisture.

Table 19. Pointe Coupee Parish

Community: Livonia
 County agent: Mark Carriere
 Cooperators: Ray and Donald Schexnayder
 Previous crop: Soybean
 Soil type: Commerce silty clay loam
 Planting date: 4/7/21
 Row spacing (inches): 36

Seeding rate: 35,200
 Nitrogen rate (lbs/acre): 230
 Irrigation: No
 Tillage: Conventional
 Harvest date: 8/8/21
 GPS Coordinates: 30.552222, -91.503889
 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 D57VC51	12	2086	1.72	21.4		193.70	1
Dyna-Gro D55VC80	12	1568	1.30	20.2		169.48	8
Croplan CP5370/VT2P	12	1524	1.26	19.1		181.89	7
DeKalb DKC67-44	12	1488	1.23	20.3		192.70	2
Dyna-Gro D57TC29	12	1567	1.30	20.7		192.11	3
Croplan CP5550/VT2P	12	1556	1.29	19.5		184.88	6
DeKalb DKC65-99	12	1408	1.16	20.2		185.24	5
Pioneer P2042VYHR	12	1620	1.34	23.0		189.31	4

¹Adjusted to 15.5% moisture.

Hybrid in bold letters is the grower's standard.

Table 20. Rapides Parish

Community: McNutt
 County agent: Justin Dufour
 Cooperator: Trevor Verzwylt
 Previous crop: Soybean
 Soil type: Coushatta silt loam
 Planting date: 3/10/21
 Row spacing (inches): 38

Seeding rate: 35,000
 Nitrogen rate (lbs/acre): 200
 Irrigation: No
 Tillage: No till
 Harvest date: 8/5/21
 GPS coordinates: 31.308212, 92.636234
 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	5	508	0.18	16.6	57.9	236.14	3
Croplan CP5550/VT2P	5	508	0.18	15.2	56.7	214.48	9
Local Seed LC1707 VT2P	5	508	0.18	15.2	60.2	236.03	4
DeKalb DKC67-44	5	508	0.18	15.2	58.7	249.81	1
Dyna-Gro D57TC29	5	508	0.18	15.5	56.4	216.82	7
Local Seed LC1898 TC	5	508	0.18	15.5	59.9	226.68	5
Croplan CP5370/VT2P	5	508	0.18	14.7	58.2	237.42	2
Pioneer P2042VYHR	5	508	0.18	16.4	59.0	214.89	8
DeKalb DKC65-99	5	508	0.18	17.5	58.8	224.91	6

¹Adjusted to 15.5% moisture.

Table 21. Richland Parish

Community: Rayville
 County agent: Carol Pinnell-Alison
 Cooperator: Elliot Colvin
 Previous crop: Soybean
 Soil type: Sterlington silt loam
 Planting date: 3/20/21
 Row spacing (inches): 30

Seeding rate: 35,000
 Nitrogen rate (lbs/acre): 285
 Irrigation: Yes
 Tillage: Stale seed bed
 Harvest date: 8/21/21
 GPS coordinates: 32.540431, -91.725023
 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	1180	0.54	19.1	57.6	248.41	7
Croplan CP5370/VT2P	8	1180	0.54	16.8	57.4	258.16	3
Dyna-Gro D55VC80	8	1180	0.54	18.3	57.5	255.84	5
Pioneer P2042VYHR	8	1180	0.54	19.2	59.2	256.61	4
Local Seed LC1707 VT2P	8	1180	0.54	19.8	59.0	250.26	6
DeKalb DKC67-44	8	1180	0.54	18.4	58.9	261.16	2
Dyna-Gro D57TC29	8	1180	0.54	18.3	57.2	262.08	1
Croplan CP5550/VT2P	8	1180	0.54	18.8	56.7	244.67	8
Local Seed LC1898 TC	8	1180	0.54	18.2	58.7	239.24	9

¹Adjusted to 15.5% moisture.

Table 22. West Carroll Parish 1

Community: Terry
 County agent: Bruce Garner
 Cooperator: Blaine Chop
 Previous crop: Soybean
 Soil type: Calhoun-Grenada Association
 Planting date: 3/22/21
 Row spacing (inches): 36

Seeding rate: 32,000
 Nitrogen rate (lbs/acre): 235
 Irrigation: Yes
 Tillage: Reduced
 Harvest date: 8/28/21
 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
DeKalb DKC65-99	16	420	0.46	17.5		265.62	1
Dyna-Gro D55VC80	16	420	0.46	17.2		261.63	2
Croplan CP5550/VT2P	16	420	0.46	16.7		250.62	6
DeKalb DKC67-44	16	420	0.46	17.5		260.80	3
Croplan CP5370/VT2P	16	420	0.46	16.2		255.84	4
Dyna-Gro D57TC29	8	420	0.23	16.6		255.76	5
Local Seed LC1898 TC	8	420	0.23	16.5		236.31	7
Pioneer P2042VYHR	8	420	0.23	17.9		182.79	9
Local Seed LC1707 VT2P	8	420	0.23	18.6		193.05	8

¹Adjusted to 15.5% moisture.

Table 23. West Carroll Parish 2

Community: Goodwill
 County agent: Bruce Garner
 Cooperator: Ty Rogers
 Previous crop: Soybean
 Soil type: Forestdale/Dundee-Dubbs complex
 Planting date: 3/10/21
 Row spacing (inches): 30

Seeding rate: 33,000
 Nitrogen rate (lbs/acre): Pre-plant: 30; side-dress: 70-90;
 at tassel: 40; sulfur: 12; zinc: 2
 Irrigation: Yes
 Tillage: Reduced
 Harvest date: 8/12/21
 GPS coordinates: 32.792683, -91.558900
 Yield results obtained by: Yield monitor

Hybrid	Rows/plot	Row length (ft)	Acres/plot	Moisture (%)	Test weight (lb/bu)	Bu/acre ¹	Rank
AgriGold A6659 VT2P	12	1225	0.84	17.5		242.36	3
Local Seed LC1707 VT2P	12	1225	0.84	16.3		244.84	2
Dyna-Gro D55VC80	12	1225	0.84	17.6		240.85	4
Pioneer P2042VYHR	12	1225	0.84	16.1		240.09	6
Local Seed LC1898 TC	12	1225	0.84	16.2		251.62	1
AgriGold A6544 VT2P	12	1225	0.84	16.2		233.44	8
Dyna-Gro D57TC29	12	1225	0.84	15.8		239.76	7
DeKalb DKC65-99	12	1225	0.84	15.0		227.48	10
Croplan CP5550/VT2P	12	1225	0.84	15.8		240.23	5
DeKalb DKC67-44	12	1225	0.84	14.8		232.17	9
Croplan CP5370/VT2P	12	1225	0.84	15.1		226.87	11

¹Adjusted to 15.5% moisture.

Table 24. West Feliciana Parish

Community: Angola
 County agent: Jessie Hoover
 Cooperator: Jeramie Bordelon
 Previous crop: Soybean
 Soil type: Sandy loam
 Planting date: 3/10/21
 Row spacing (inches): 36

Seeding rate: 33,000
 Nitrogen rate (lbs/acre): 250
 Irrigation: No
 Tillage: Conventional
 Harvest date: 8/13/21
 GPS coordinates: 30.966702, -91.622177
 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	393	0.65	16.6	59.4	226.95	2
DeKalb DKC67-44	24	387	0.64	15.4	59.8	210.24	4
Croplan CP5370/VT2P	24	387	0.64	14.7	58.3	209.67	5
Croplan CP5550/VT2P	24	387	0.64	14.7	58.3	235.69	1
Dyna-Gro D55VC80	24	387	0.64	15.0	59.2	225.60	3
Dyna-Gro D57TC29	24	399	0.66	14.5	56.9	207.73	6
Pioneer P2042VYHR	24	399	0.66	15.9	58.9	187.15	9
Local Seed LC1707 VT2P	24	381	0.63	15.9	60.1	198.63	8
Local Seed LC1898 TC	24	369	0.61	15.9	59.8	202.49	7

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 February 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 mean faster corn growth, and cooler temperatures mean slower corn development.

Temperatures are used to calculate growing degree days (GDD), or some people call them 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 25. 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 25. Approximate amount of nutrients in a 200-bushel-per-acre corn crop.

Quantity in pounds		
Element	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 26). Recommendations in Table 26 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 material (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 26. 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 27).

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 27. 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 28). 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 28. 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 29-32). 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 29. 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 30. 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 31. 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 32. 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 33). 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 33. 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 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

- **Overpaying for seed:** Because different brands often sell the same variety for very different prices, some farmers 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 farmers 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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