Corn Hybrids for Grain 2018

Introduction

This year, commercial corn seed companies provided 40 hybrids that were entered in the official variety trials. Five hybrid trials were conducted at four LSU AgCenter research stations located throughout the state. Commercial seed companies voluntarily entered and selected the hybrids they wanted to have evaluated by the AgCenter.

In addition to the research station tests, the on-farm core block demonstrations were conducted with a total of 10 hybrids planted over 17 locations throughout the corn-growing areas of Louisiana. AgCenter extension agents coordinated these demonstrations.

The official corn hybrid trials were conducted according to AgCenter best management practices. The on-farm core block demonstrations were placed with corn producers and subjected to their standard production practices.

On-farm core block demonstration results are presented to provide yield results by trial, as well as trend comparisons from the compiled data. As opposed to the official variety trial research, core block demonstrations sometimes are not replicated in the field, and a rigorous statistical analysis is not possible. However, sufficient trials were conducted across a variety of locations; therefore, meaningful and relevant observations can be made that will be useful to Louisiana producers as they make hybrid selection decisions.

In conclusion, the LSU AgCenter corn hybrid trials provide the most complete and unbiased source of information on yield comparisons. The data provided in this publication should help you make more informed decisions about which hybrids will perform best for your production area.

Evaluating the data

This publication includes yield data from the official variety trials conducted by AgCenter scientists in a replicated format that allow for statistical comparisons (Tables 10-11). Detailed plant growth measurements were made, but this report only displays yield data. For a complete review of the official variety trial data, visit the corn section of the AgCenter's website at www.lsuagcenter.com/corn.

For a better understanding of how corn hybrids performed in Louisiana, first refer to the official variety trial data. Choose the hybrids that performed well overall and those that performed well in the region most representative of your growing area. Finally, check the on-farm core block data to see if it is consistent with the official variety trial data for your chosen hybrids (Tables 12-29). By making thorough comparisons across the full range of information available, you can improve your chances of choosing hybrids that will perform well on your farm.

Hybrid selection

Hybrid selection is one of the most important decisions a producer will make and is essential for successful corn production. Seed companies offer multiple hybrids for sale to producers for good reasons. Each corn producer has somewhat different soil conditions, irrigation practices and crop rotations than other growers in their farming community. Some hybrids will tend to perform better than others based on soil type, planting date, environmental conditions and location.

Yield is important when selecting a corn hybrid; however, maturity, stay-green, lodging, shuck cover, ear placement, disease and insect resistance need to be considered. Yield data from multiple locations and years are good indicators of the consistency of a hybrid's performance.

Hybrid maturity is rated using the relative maturity (RM) or growing degree day (GDD) rating systems. These two methods are based on the number of days or degree days for a hybrid to reach physiological maturity. Louisiana producers can grow early, midseason, and full-season hybrids. In Louisiana, 112-121 day maturity hybrids usually produce the best yields. Full season hybrids do not consistently outyield mid-season hybrids. It appears there is more variability in yield among hybrids within a given RM rating than there is between maturity groups.

Hybrids that stay 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. At later planting dates, a corn hybrid will grow taller due to an increase in day and night temperatures causing the internodes of the stalks to be longer. Therefore, ear placement will be higher when compared to an earlier planting date. This usually means that the lodging potential will be greater. When planting late in the season, consider planting a hybrid that has a low ear placement.

Also, corn hybrids have different insect and herbicide traits. These biotechnology traits will be need to be considered and should be based on which one best fits into your production system.

Select several hybrids that are consistently top performers over multiple locations or years within a region. Consistency over multiple environments is important because we cannot predict next year's growing conditions.

Planting date

Corn growth and development respond to temperature and are not controlled by day length. Thus, the calendar date is not as important as soil temperature and air temperature when considering to plant corn. Good germination and

emergence are expected when the soil temperature at a 2-inch depth is 55 degrees 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. 25-March 20, and for north Louisiana the optimal planting window generally is March 10-April 1. Extending planting past the last optimal planting date can result in losses of one-half 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. 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 percent field emergence this would equate to planting 33,750-37,500 seeds per acre. The lower end of the recommended range should be used when lower yields are expected due to soil type, late planting date, drought-prone areas or low fertility. Higher populations should be used on highly productive, deep alluvial soils or irrigated fields where moisture will not be a limiting factor.

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

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.

Fertility

Soil testing is the foundation of a sound fertility program. This is the only way for a crop manager to be efficient in applying the 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 N, P, K and S by a 200-bushel-per-acre corn crop is presented in Table 1. 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 1. Approximate amount of nutrients in a 200-bushel-per-acre corn crop.

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

International Plant Nutrition Institute, May 2014.

Soil pH

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

Soil samples should be collected and checked for the degree of acidity or alkalinity. Lime is generally recommended at pH values below 6.1 (Table 2). Recommendations in Table 2 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 agricultural lime material with a CCE of 100 is "stronger" than an agricultural lime material with a CCE of 90 and, consequently, less volume would be needed to increase the pH of a given soil.

Table 2. Lime recommendations for corn, Mehlich 3 extraction.

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

[1]Amount of limestone needed to adjust soil pH to a desired level for corn depends on the initial soil pH, soil clay content and soil buffer capacity (resistance to pH change). Testing soil pH is an excellent indicator of the need for lime and in combination with soil texture is sometimes used to estimate 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. Thus, 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 3).

Apply nitrogen in a split application with 50-75 percent applied before or at planting, and apply the balance when corn is 3-12 inches tall. All the nitrogen can be applied preplant or at planting, but this increases the risk of fertilizer burn on seedlings and nitrogen loss from leaching or volatilization. An application of 20-50 pounds of nitrogen at tassel may be beneficial if environmental conditions resulted in leaching or volatilization of nitrogen.

Table 3. 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, so these nutrients should be applied preplant or at planting (Table 4). Banding phosphorus will increase its efficiency when the soil pH is very acidic or alkaline or when 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 40-60 pounds of P2O5 per acre will be needed.

Table 4. Phosphorus recommendations for corn, Mehlich 3 extraction.

	Soil test for phosphorus (ppm)				
	Very low	Low	Medium	High	Very high
	<10	10-19	20-34	35-50	>50
	Pounds per acre P_2O_5				
Alluvial-Irrigated	120	90	60	0	0
Alluvial-Non-irrigated	100	80	60	0	0
Upland-Irrigated	100	80	60	0	0
Upland-Non-irrigated	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. K is essential for protein synthesis and is involved in the activation of 60 enzyme systems. It also helps control ionic balance assists in translocation of heavy metals and helps overcome the effects of disease.. Potash deficiency in corn results in reduced growth, delayed maturity and lodging.

Corn uses potassium early in its growth cycle, so these nutrients should be applied preplant or at planting (Tables 5-8). Soil testing is recommended to apply appropriate levels for each field, but in many soils, 40-60 pounds of K_2O per acre will be needed.

Table 5. Potassium recommendations for corn on alluvial soils (irrigated), Mehlich 3 extraction.

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

Table 6. Potassium recommendations for corn on alluvial soils (non-irrigated), Mehlich 3 extraction.										
Soil Type	**V. Low**		**Low**		**Med.**		**High**		**V. High**	
	ppm	**K_2O**	**ppm**	**K_2O**	**ppm**	**K_2O**	**ppm**	**K_2O**	**ppm**	**K_2O**
Clay	<141	100	141-210	80	211-316	60	317-334	0	>334	0
Clay Loam	<123	100	123-175	80	176-263	60	264-282	0	>282	0
F. Sandy Loam	<53	100	53-87	80	88-122	60	123-141	0	>141	0
Loamy Sand	<35	100	35-52	80	53-78	60	79-123	0	>123	0
Silty Clay	<141	100	141-210	80	211-316	60	317-334	0	>334	0
Silt Clay Loam	<123	100	123-175	80	176-263	60	264-282	0	>282	0
Silt Loam	<70	100	70-105	80	106-140	60	141-158	0	>158	0
V. F. Sandy Loam	<53	100	53-87	80	88-122	60	123-141	0	>141	0

Table 7. Potassium recommendations for corn on upland soils (irrigated), Mehlich 3 extraction.										
Soil Type	**V. Low**		**Low**		**Med.**		**High**		**V. High**	
	ppm	**K_2O**	**ppm**	**K_2O**	**ppm**	**K_2O**	**ppm**	**K_2O**	**ppm**	**K_2O**
Clay	<88	100	88-140	80	141-175	60	176-194	0	>194	0
Clay Loam	<88	100	88-140	80	141-175	60	176-194	0	>194	0
F. Sandy Loam	<44	100	44-69	80	70-105	60	106-123	0	>123	0
Loamy Sand	<88	100	88-140	80	141-175	60	176-194	0	>194	0
Silty Clay	<88	100	88-140	80	141-175	60	176-194	0	>194	0
Silt Clay Loam	<62	100	62-96	80	97-140	60	141-158	0	>158	0
Silt Loam	<35	100	35-52	80	53-87	60	88-106	0	>106	0
V. F. Sandy Loam	<44	100	44-69	80	70-105	60	106-123	0	>123	0

Table 8. Potassium recommendations for corn on upland soils (non-irrigated), Mehlich 3 extraction.										
Soil Type	**V. Low**		**Low**		**Med.**		**High**		**V. High**	
	ppm	**K_2O**	**ppm**	**K_2O**	**ppm**	**K_2O**	**ppm**	**K_2O**	**ppm**	**K_2O**
Clay	<88	80	88-140	60	141-175	40	176-194	0	>194	0
Clay Loam	<88	80	88-140	60	141-175	40	176-194	0	>194	0
F. Sandy Loam	<44	80	44-69	60	70-105	40	106-123	0	>123	0
Loamy Sand	<88	80	88-140	60	141-175	40	176-194	0	>194	0
Silty Clay	<88	80	88-140	60	141-175	40	176-194	0	>194	0
Silt Clay Loam	<62	80	62-96	60	97-140	40	141-158	0	>158	0
Silt Loam	<35	80	35-52	60	53-87	40	88-106	0	>106	0
V. F. Sandy Loam	<44	80	44-69	60	70-105	40	106-123	0	>123	0

Sulfur

Sulfur is part of every living cell and is a constituent of two of the 21 amino acids that form proteins. Sulfur is often overlooked in a soil fertility program. Increased crop yields, reduced sulfur emissions from industrial chemical facilities, increased use of higher analysis fertilizers and a greater awareness of the importance of sulfur to corn production are contributing to an increased need for sulfur fertilization.

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 parts per million (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.It is also the one that most commonly limits 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 9). 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 percent water-soluble, while zinc oxides essentially are insoluble in a single crop season, 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 percent to 98.3 percent). 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 percent 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 9. Zinc recommendations for corn, Mehlich 3 extraction.

	Mehlich 3 zinc (ppm)	
Low	Medium	High
<1	1-2.25	>2.25
pounds per acre of zinc*		
10	5	0

Table 10. Cultural practices for the LSU AgCenter official variety trials, 2017.

Location	Soil Type	Previous Crop	Planting Date	Harvest Date	Row Spacing	Seeding Rate	Irrigated
St. Joseph	Commerce silt loam	soybeans	3/22	8/17	40	36,000	none
St. Joseph	Sharkey silty clay	cotton	3/21	8/7	40	36,000	none
Winnsboro	Gigger silt loam	soybeans	3/23	8/15	40	36,000	furrow
Alexandria	Coushatta silt loam	soybeans	4/5	9/17	38	36,000	none
Bossier City	Caplis V.F. sandy loam	soybeans	3/16	8/26	40	36,000	none

Table 11. Yield performance of hybrids entered in the LSU AgCenter's official variety trials, 2017.

				St. Joseph			
Company	**Hybrid**	**Alexandria**	**Bossier City**	**Clay**	**Silt loam**	**Winnsboro**	**Avg.**
		bu/acre @ 15.5%					
DeKalb	DKC 70-27	203.0	216	228.2	213.6	203.5	212.9
Dyna-Gro	D57VP51	196.1	193	237.6	204.3	217.4	209.7
Pioneer	P1870YHR	169.8	208	234.0	218.7	207.9	207.7
Armor	AXC7115	180.0	211	230.0	206.6	202.7	206.1
Terral	REV 25BHR26	174.1	218	225.2	222.5	188.7	205.7
Terral	REV 23BHR55	172.5	228	229.1	203.1	193.8	205.3
B-H Genetics	BH 8721VT2P	183.1	197	237.5	191.1	210.8	203.9
Terral	REV 28R10	173.9	208	221.8	222.8	186.6	202.6
Mycogen	MY16M16	170.2	212	236.9	192.6	183.3	199.0
Terral	REV 28BHR18	175.2	195	225.0	208.5	188.6	198.5
Dyna-Gro	D55VC45	167.6	204	218.8	213.4	179.7	196.7
DeKalb	DKC 67-44	182.4	201	214.7	191.6	192.4	196.4

Table 11. Yield performance of hybrids entered in the LSU AgCenter's official variety trials, 2017.							
				St. Joseph			
Company	Hybrid	Alexandria	Bossier City	Clay	Silt loam	Winnsboro	Avg.
		bu/acre @ 15.5%					
DeKalb	DKC 66-59	179.5	181	225.5	208.1	184.8	195.8
Armor	AXC7114	189.5	188	222.8	194.9	181.0	195.2
Augusta	1166	182.9	181	220.5	194.1	188.8	193.5
DeKalb	DKC 68-26	178.9	173	219.0	199.7	195.6	193.2
Armor	AXT7116	182.2	193	214.1	192.9	182.7	193.0
Syngenta	NK 1573	187.4	202	203.3	195.9	174.4	192.6
DeKalb	DKC 66-87	178.0	192	213.7	198.6	177.3	191.9
Syngenta	NK 1405	182.7	215	209.3	177.2	175.4	191.9
Dyna-Gro	D56VC46	174.0	195	210.2	184.0	194.9	191.6
Terral	REV 26BHR50	165.8	217	226.3	166.8	178.6	190.9
B-H Genetics	BH 8848SS	178.5	174	209.5	198.0	194.4	190.8
Armor	1717	175.6	203	207.9	178.3	188.0	190.6
CropLan	CG 6640VT3P	165.5	200	205.3	195.9	181.4	189.6
Pioneer	P1622YHR	168.3	194	208.1	193.9	177.2	188.3
DeKalb	DKC 64-35	179.1	199	194.2	192.0	176.3	188.1
DeKalb	DKC 67-72	171.2	190	207.1	183.0	189.2	188.1
CropLan	CG 7927VT3P	157.6	192	221.4	176.7	192.5	188.0
CropLan	CG 5678VT2P	181.7	188	209.0	182.0	177.3	187.6
B-H Genetics	BH 8477SS	163.9	193	207.4	173.5	200.1	187.6
Great Heart	HT-7516SS	175.3	189	198.7	191.2	183.6	187.6
Dyna-Gro	D54DC94	177.8	197	218.9	170.1	173.0	187.4
Dyna-Gro	D54VC52	183.1	185	212.9	194.7	160.9	187.3
Delta Grow	2888	176.0	184	197.7	188.5	184.4	186.1
DeKalb	DKC 62-08	180.1	187	211.6	134.5	202.2	183.1
Armor	Armor AXC7118	168.9	189	195.4	173.3	188.5	183.0
Dyna-Gro	D58VC65	181.9	180	217.2	165.1	158.8	180.6
Delta Grow	3660	152.8	192	203.2	188.8	156.5	178.7
Dyna-Gro	D58VC37	152.2	193	212.7	158.6	173.1	177.9
Average		175.6	196	216.1	191.0	186.0	
CV, %		7.1	7.7	6.7	9.2	7.9	
LSD (0.10)		14.6	16	13.9	18.3	15.4	

Table 12. Summary of on-farm corn core block demonstrations at 17 locations by parish. Yield in bushels per acre (15.5%), 2017.

Company	Hybrid	Avoyelles-1	Avoyelles-2	Avoyelles-3	Beauregard	Caddo	Caldwell	Franklin	Grant	Madison-1	Madison-2	Morehouse	Ouachita	Rapides	St. Landry	W. Baton Rouge	W. Carroll-1	W. Carroll-2	Average
DeKalb	DKC70-27	230	206	222	195	252	228	201	273	198	249	212	222	195	199	220	229	197	219
Terral	REV25BHR26	214	176	190	201	242	237	183	241	202	239	215	212	177	201	200	235	197	210
Dyna-Gro	D58VC65	236	217	209	198	240	204	167	246	200	212	222	219	181	193	212	217	197	210
CropLan	5678	221	217	216	190	241	213	169	235	203	232	209	208	182	182	214	243	195	210
DeKalb	DKC62-08	221	199		192	241	215	166	216	208	229	220	215	188	189	208	178	181	204
Armor	1717	199	187	193	187	240	206	172	237	192	228	213	216	178	175	203	212	186	202
Terral	REV28R10	211	201		184	232	212	172	220	185	215	212	205	178	190	194	207	194	201
Terral	REV26BHR50	195	193	208	178	236	175		233	200	213	198	203	174	182	195	211	191	199
Dyna-Gro	D54VC52	213	188	197	193				238	178	209			185	187	206	194	181	197
Armor	1414	207	188	201	174	223	213	170	211	190	227	217	205	171	184	185	199	180	197
Average		215	197	205	189	239	212	175	235	195	225	213	212	181	188	204	213	190	

Table 13. Avoyelles Parish-1

Community: Moreauville	Date planted: 2/27/17	Tillage: Conventional
County agent: Justin Dufour	Row spacing (inches): 38	Harvest date: 8/2/17
Cooperator: Adam Lemoine	Plant population: 37,000	GPS coord: 31.043277N, 91.985365W
Previous crop: Corn	N rate (lbs/acre): 190	
Soil type: Coushatta silt loam	Irrigation: no	

Hybrid	Rows/plot	Row length	Acres/plot	% moisture	Test weight	Bu/acre[1]	Rank
Armor 1414	4	508	0.15	14.2	59	206.70	8
CropLan 5678	4	508	0.15	14.6	61.2	220.64	4
DeKalb DKC62-08	4	508	0.15	14.6	58.1	221.38	3
Dyna-Gro D58VC65	4	508	0.15	14.6	60.2	235.92	1
Armor 1717	4	508	0.15	14.7	61.3	199.15	9
Terral 25BHR26	4	508	0.15	14.8	61.1	213.55	5
Dyna-Gro D54VC52	4	508	0.15	14.6	60.2	212.58	6
Terral 28R10	4	508	0.15	14.9	61.8	210.86	7
Terral 26BHR50	4	508	0.15	15	61.5	194.80	10
DeKalb DKC70-27	4	508	0.15	15.4	60.8	230.44	2

[1]**adjusted to 15.5% moisture**

Table 14. Avoyelles Parish-2							
Community: Bordelonville		Date planted: 3/20/17			Tillage: Conventional		
County agent: Justin Dufour		Row spacing (inches): 36			Harvest date: 8/21/17		
Cooperator: Jeffery Bordelon		Plant population: 30,000			GPS coord: 31.101337N, 91.930478W		
Previous crop: Soybeans		N rate (lbs/acre): 200					
Soil type: Coushatta silt loam		Irrigation: No					
Hybrid	**Rows/plot**	**Row length**	**Acres/plot**	**% moisture**	**Test weight**	**Bu/acre[1]**	**Rank**
Terral 25BHR26	8	450	0.25	14.8	57.5	175.89	10
Dyna-Gro D54VC52	8	450	0.25	14.8	58.6	188.38	7
Armor 1414	8	450	0.25	15.2	55.5	188.36	8
DeKalb DKC70-27	8	450	0.25	15.1	58.9	206.38	3
Terral 26BHR50	8	450	0.25	14.8	59.8	193.46	6
Dyna-Gro D58VC65	8	450	0.25	14.5	59.9	217.32	1
DeKalb DKC62-08	8	450	0.25	14.4	58.3	199.04	5
CropLan 5678	8	450	0.25	14.5	59.5	217.17	2
Terral 28R10	8	450	0.25	14.6	59.4	200.90	4
Armor 1717	8	450	0.25	14.9	58.4	187.14	9

[1]adjusted to 15.5% moisture

Table 15. Avoyelles Parish-3							
Community: Brouillette		Date planted: 3/21/17			Tillage: Conventional		
County agent: Justin Dufour		Row spacing (inches): 38			Harvest date: 9/1/17		
Cooperator: Randy McGehee		Plant population: 32,000			GPS coord: 31.2586444N, 91.83755W		
Previous crop: Soybeans		N rate (lbs/acre): 180					
Soil type: Coushatta silt loam		Irrigation: No					
Hybrid	**Rows/plot**	**Row length**	**Acres/plot**	**% moisture**	**Test weight**	**Bu/acre[1]**	**Rank**
Terral 26BHR50	6	736	0.32	14	61.2	207.54	4
Armor 1414	6	736	0.32	13.1	58.6	201.36	5
Dyna-Gro D54VC52	6	736	0.32	13.6	60.7	196.79	6
Terral 25BHR26	6	736	0.32	13.5	60.8	189.96	8
CropLan 5678	6	736	0.32	13.4	61.4	216.29	2
DeKalb DKC70-27	6	736	0.32	13.7	61.5	222.01	1
Dyna-Gro D58VC65	6	736	0.32	13.5	60.5	209.32	3
Armor 1616	6	736	0.32	13	62.8	192.77	7
Terral 28R10*							
DeKalb DKC62-08*							

[1]adjusted to 15.5% moisture
***Harvest error**

Table 16. Beauregard Parish		
Community: DeRidder	Date planted: 3/22/17	Tillage: Minimum
County agent: Keith Hawkins	Row spacing (inches): 30	Harvest date: 7/31/17
Cooperator: Ryker Cavin	Plant population: 30,000	GPS coord: 30.833309N, 93.41478W
Previous crop: Soybeans	N rate (lbs/acre): 205	
Soil type: Caddo-Messer Complex	Irrigation: No	

Hybrid	Rows/plot	Row length	Acres/plot	% moisture	Test weight	Bu/acre[1]	Rank
Armor 1717	12	800	0.55	17.1	58.7	187.28	7
Dyna-Gro D58VC65	12	800	0.55	16.3	61	198.27	2
Terral 26BHR50	12	800	0.55	16.8	59.5	178.13	9
DeKalb DKC70-27	12	800	0.55	17.6	58.2	195.38	3
Dyna-Gro D54VC52	12	800	0.55	15.9	59.1	193.48	4
Terral 28R10	12	800	0.55	16.4	59.7	183.86	8
CropLan 5678	12	800	0.55	16	60.6	190.29	6
Terral 25BHR26	12	800	0.55	15.9	58.8	201.22	1
DeKalb DKC62-08	12	800	0.55	16.1	57.2	191.92	5
Armor 1414	12	800	0.55	14.9	58.9	173.98	10

[1]adjusted to 15.5% moisture

Table 17. Caddo Parish		
Community: Belcher	Date planted: 3/17/17	Tillage: Stale seed bed
County agent: John Terrell	Row spacing (inches): 30	Harvest date: 8/18/17
Cooperator: Ryan Kirby	Plant population: 33,000	GPS coord: 32.71653N, 93.84391W
Previous crop: Cotton	N rate (lbs/acre): 225	
Soil type: Coushatta silt loam	Irrigation: No	

Hybrid	Rows/plot	Row length	Acres/plot	% moisture	Test weight	Bu/acre[1]	Rank
Dyna-Gro D58VC65	12	2686	1.85	16.1	60.4	239.66	6
Armor 1717	12	2570	1.77	15.6	59.5	240.49	5
DeKlab DKC70-27	12	2686	1.85	16.4	62.1	251.67	1
DeKalb DKC62-08	12	2657	1.83	15.3	59.8	241.06	4
Terral 25BHR26	12	2672	1.84	14.9	61.2	242.04	2
Terral 26BHR50	12	2657	1.83	16.7	60.6	236.25	7
Armor 1414	12	2672	1.84	15.4	57.5	222.72	9
CropLan 5678	12	2657	1.83	15.5	62.5	241.46	3
Terral 28R10	12	2672	1.84	15.3	60.8	232.42	8

[1]adjusted to 15.5% moisture

Table 18. Caldwell Parish

Community: Columbia	Date planted: 3/22/17	Tillage: Reduced
County agent: Jim McCann	Row spacing (inches): 38	Harvest date: 9/4/17
Cooperator: Leland Kenney	Plant population: 33,000	GPS coord: 32.07794N, 92.02280W
Previous crop: Corn	N rate (lbs/acre): 200	
Soil type: Hebert silt loam	Irrigation: No	

Hybrid	Rows/plot	Row length	Acres/plot	% moisture	Test weight	Bu/acre[1]	Rank
Terral 26BHR50	8	1015	0.59	16	60	175.20	9
Terral 25BHR26	8	1015	0.59	16.2	59.7	236.88	1
Terral 28R10	8	1015	0.59	15.8	61.3	212.39	6
CropLan 5678	8	1015	0.59	16.5	61.5	213.38	4
DeKalb DKC62-08	8	1015	0.59	15.6	59.9	215.19	3
DeKalb DKC70-27	8	1015	0.59	15.7	62.1	228.16	2
Armor 1717	8	1015	0.59	15.5	63.6	206.31	7
Armor 1414	8	1015	0.59	15.9	61.5	212.80	5
Dyna-Gro D58VC65	8	1015	0.59	15.8	61.4	204.25	8

[1]adjusted to 15.5% moisture

Table 19. Franklin Parish

Community: Winnsboro	Date planted: 3/21/17	Tillage: Stale seed bed
County agent: Carol Pinnell-Alison	Row spacing (inches): 38	Harvest date: 8/25/17
Cooperator: Campbell Farm	Plant population: 32,000	GPS coord: 32.09868N, 91.78648W
Previous crop: Soybeans	N rate (lbs/acre): 240	
Soil type: Gigger-Gilbert complex	Irrigation: Yes	

Hybrid	Rows/plot	Row length	Acres/plot	% moisture	Test weight	Bu/acre[1]	Rank
Terral 26BHR50 *							
Dyna-Gro D58VC65	16	346	0.40	15.4	59.7	166.59	7
Dekalb 62-08	16	346	0.40	14.6	59.5	166.37	8
Terral 25BHR26	16	346	0.40	15.2	59.4	183.46	2
Armor 1414	16	346	0.40	14.6	58.6	169.73	5
Croplan 5678	16	346	0.40	14.9	60	168.91	6
Armor 1717	16	346	0.40	14.8	60.2	171.80	4
Dekalb 70-27	16	346	0.40	15.5	61	200.56	1
Terral 28R10	16	346	0.40	14.9	62.2	172.04	3

[1]adjusted to 15.5% moisture
***Lost to weigh wagon malfunction**

Table 20. Grant Parish							
Community: Colfax		Date planted: 3/22/17			Tillage: Conventional-planted flat		
County agent: Donna Morgan		Row spacing (inches): 40			Harvest date: 8/21/17		
Cooperator: Eddie Gatlin		Plant population: 32,000			GPS coord: 31.48846N, 92.67719W		
Previous crop: Soybeans		N rate (lbs/acre): 180					
Soil type: Roxanna sand		Irrigation: No					
Hybrid	**Rows/plot**	**Row length**	**Acres/plot**	**% moisture**	**Test weight**	**Bu/acre[1]**	**Rank**
DeKalb DKC62-08	12	674	0.62	15	59.9	215.58	9
Terral 28R10	12	674	0.62	15.9	59.5	219.56	8
Dyna-Gro D58VC65	12	674	0.62	14.6	64.5	245.93	2
Armor 1414	12	674	0.62	15.3	57.4	211.29	10
Croplan 5678	12	674	0.62	14.5	62	235.24	6
Terral 26BHR50	12	674	0.62	14.8	64.7	233.31	7
Armor 1717	12	684	0.63	14.6	63.9	237.16	5
DeKalb DKC70-27	12	684	0.63	15.3	62.8	272.61	1
Terral 25BHR26	12	730	0.67	14.5	61.6	241.24	3
Dyna-Gro D54VC52	12	691	0.63	14.9	61	237.51	4

[1]adjusted to 15.5% moisture

Table 21. Madison Parish-1							
Community: Mound		Date planted: 3/23/17			Tillage: Minimum till		
County Agent: R.L. Frazier		Row spacing (inches): 38			Harvest date: 8/3/17		
Cooperator: Collins Farm		Plant population: 35,000			GPS coord:		
Previous crop: Corn		N rate (lbs/acre): 250					
Soil type: Sharkey clay		Irrigation: Yes					
Hybrid	**Rows/plot**	**Row length**	**Acres/plot**	**% moisture**	**Test weight**	**Bu/acre[1]**	**Rank**
CropLan 5678	12	769	0.67	18.3		202.91	2
Dekalb DKC62-08	12	780	0.68	17.16		208.47	1
Terral 26BHR50	12	780	0.68	19.07		200.07	4
Dyna-Gro D54VC52	12	791	0.69	17.57		177.77	10
Armor 1717	12	791	0.69	18.2		192.40	7
Dekalb DKC70-27	12	791	0.69	19.45		197.55	6
Terral 28R10	12	791	0.69	18.25		184.62	9
Armor 1414	12	791	0.69	17.61		189.65	8
Dyna-Gro D58VC65	12	791	0.69	18.25		199.97	5
Terral 25BHR26	12	791	0.69	17.92		201.58	3

[1]adjusted to 15.5% moisture

Table 22. Madison Parish-2		
Community: Mound	Date planted: 3/20/17	Tillage: Minimal
County agent: R.L. Frazier	Row spacing (inches): 38	Harvest date: 8/23/17
Cooperator: Wade Hargrave	Plant population: 32,000	GPS coord: 32.31338N, 91.03747W
Previous crop: Corn	N rate (lbs/acre): 250	
Soil type: Commerce silt loam	Irrigation: Furrow, not used in 2017	

Hybrid	Rows/plot	Row length	Acres/plot	% moisture	Test weight	Bu/acre[1]	Rank
Dyna-Gro D54VC52	8	1312	0.76	15.3		209.13	10
Terral 26BHR50	8	1278	0.74	14.6		213.07	8
Dekalb DKC6208	8	1269	0.74	13.5		229.24	4
Dekalb DKC70-27	8	1264	0.74	14.9		248.80	1
Terral 25BHR26	8	1254	0.73	14.2		239.10	2
Croplan 5678	8	1261	0.73	14.3		232.43	3
Terral 28R10	8	1249	0.73	14.5		215.19	7
Armor 1717	8	1242	0.72	14.3		228.42	5
Armor 1414	8	1231	0.72	13.8		227.02	6
Dyna-Gro D58VC65	8	1244	0.72	14.4		211.96	9

[1]adjusted to 15.5% moisture

Table 23. Morehouse Parish		
Community: Collinston	Date planted: 3/20/17	Tillage: Conventional
County agent: R. Letlow, O. Hill	Row spacing (inches): 38	Harvest date: 8/21/17
Cooperator: Harper Armstrong	Plant population: 32,000	GPS coord:
Previous crop: Soybeans	N rate (lbs/acre): 200 + 1 T chick litter	
Soil type: Galion silt loam	Irrigation: Furrow	

Hybrid	Rows/plot	Row length	Acres/plot	% moisture	Test weight	Bu/acre[1]	Rank
Terral 26BHR50	8	1260	0.73	14		198.11	9
Terral 25BHR26	8	1260	0.73	14.1		215.08	4
Terral 28R10	8	1164	0.68	14.4		212.49	6
CropLan 5678	8	1164	0.68	13.7		208.52	8
Dekalb DKC62-08	8	1146	0.67	15.1		219.67	2
Dekalb DKC70-27	8	1146	0.67	17.3		211.98	7
Armor 1717	8	930	0.54	15.7		213.24	5
Armor 1414	8	930	0.54	16		217.47	3
Dyna-Gro D58VC65	8	921	0.54	16.2		221.72	1

[1]adjusted to 15.5% moisture

Table 24. Ouachita Parish		
Community: Fondale	Date planted: 3/22/17	Tillage: Minimum till
County agent: Richard Letlow	Row spacing (inches): 38	Harvest date: 8/16/17
Cooperator: Tripp Faulk	Plant population: 32,000	GPS coord:
Previous crop: Soybeans	N rate (lbs/acre): 200	
Soil type: Sterlington silt loam	Irrigation: Furrow	

Hybrid	Rows/plot	Row length	Acres/plot	% moisture	Test weight	Bu/acre[1]	Rank
Terral 26BHR50	8	383	0.22	18.2		202.56	9
Terral 25BHR26	8	383	0.22	17.4		212.06	5
Terral 28R10	8	383	0.22	17.6		204.67	8
CropLan 5678	8	383	0.22	17.3		208.24	6
Dekalb DKC62-08	8	383	0.22	17.1		214.88	4
Dekalb DKC70-27	8	383	0.22	19.2		222.16	1
Armor 1717	8	383	0.22	18.2		216.37	3
Armor 1414	8	383	0.22	17.1		205.28	7
Dyna-Gro D58VC65	8	383	0.22	17.6		218.74	2

[1]adjusted to 15.5% moisture

Table 25. Rapides Parish		
Community: Lecompte	Date planted: 3/13/17	Tillage: Reduced
Study Director: Dan Fromme	Row spacing (inches): 38	Harvest date: 8/24/17
Cooperator: Dean Lee Res. & Ext. CTR.	Plant population: 34,000	GPS coord: 31.104640N, 92.235694W
Previous crop: Soybeans	N rate (lbs/acre): 200	Misc. Plots 4 rows by 45 feet in length, 4 replications in a RCBD
Soil type: Coushatta silt loam	Irrigation: No	

Hybrid	Bu/Acre@15.5%		% Moisture		Test Weight	
DeKalb DKC70-27	194.9	a	16.35 a	a	58.45	ab
Pioneer 1870YHR	189.3	ab	16.43 a	a	58.25	abc
DeKalb DKC62-08	187.9	abc	15.65	a	57.25	abc
Dyna-Gro D54VC52	185.4	a-d	16.60	a	57.35	abc
CropLan 5678	181.6	a-e	16.33	a	58.86	a
Dyna-Gro D58VC65	181.4	a-e	15.98	a	57.60	abc
Terral 28R10	178.1	b-e	16.25	a	55.73	bcd
Armor 1717	177.6	b-e	15.85	a	56.93	abc
Terral 25BHR26	177.2	b-e	16.45	a	56.30	a-d
Terral 26BHR50	174.2	cde	17.05	a	55.58	cd
Pioneer 1662YHR	173.6	de	16.18	a	55.78	bcd
Armor 1414	171.0	e	16.28	a	53.60	d
LSD (0.05)	13.80		NS		2.869	
CV	5.3		4.1		3.51	
P>F	0.0377		0.3412		0.0422	

[1]adjusted to 15.5% moisture

Table 26. St. Landry Parish							
Community: Washington		Date planted: 3/21/17			Tillage: Conventional		
County agent: Vince Deshotel		Row spacing (inches): 36			Harvest date: 8/24/17		
Cooperator: Lawrence Thistlewaite III		Plant population: 31,100			GPS coord:		
Previous crop: Soybeans		N rate (lbs/acre): 200					
Soil type: Gallion silt loam		Irrigation: No					
Hybrid	**Rows/plot**	**Row length**	**Acres/plot**	**% moisture**	**Test weight**	**Bu/acre[1]**	**Rank**
Dekalb DKC62-08	10	681	0.47	14.63	57.27	188.64	5
CropLan 5678	10	702	0.48	14.40	59.6	181.77	9
Terral 26BHR50	10	723	0.50	14.49	60.74	181.96	8
DeKalb DKC70-27	10	744	0.51	14.88	59.23	199.26	2
Dyna-Gro 58VC65	10	765	0.53	14.39	57.58	193.05	3
Terral 28R10	10	786	0.54	14.78	58.75	189.50	4
Armor 1414	10	807	0.56	14.46	55.82	183.57	7
Dyna-Gro D54VC52	10	828	0.57	14.53	59.22	186.62	6
Terral 25BHR26	10	849	0.58	14.27	59.62	200.90	1
Armor 1717	10	873	0.60	14.40	58.92	175.41	10

[1]adjusted to 15.5% moisture

Table 27. West Baton Rouge Parish							
Community: Erwinville		Date planted: 3/24/17			Tillage: Minimum		
County agent: Stephen Borel		Row spacing (inches): 36			Harvest date: 8/12/17		
Cooperator: Schexnayder Farms		Plant population: 33,300			GPS coord: 30.510891N, 91.396219W		
Previous crop: Soybeans		N rate (lbs/acre): 200					
Soil type: Sharkey clay		Irrigation: No					
Hybrid	**Rows/plot**	**Row length**	**Acres/plot**	**% moisture**	**Test weight**	**Bu/acre[1]**	**Rank**
Armor 1717	12	2548	2.11	19.6		202.91	6
Dekalb DKC62-08	12	2552	2.11	18.7		208.24	4
CropLan 5678	12	2552	2.11	19.3		214.22	2
Terral 26BHR50	12	2553	2.11	19.9		194.60	8
Dyna-Gro D58VC65	12	2555	2.11	19.6		212.15	3
Armor 1414	12	2555	2.11	18.4		184.74	10
Terral 25BHR26	12	2555	2.11	19.1		199.81	7
Dyna-Gro D54VC52	12	2557	2.11	19.3		206.14	5
Dekalb DKC70-27	12	2557	2.11	20.2		219.55	1
Terral 28R10	12	2557	2.11	19.7		193.61	9

[1]adjusted to 15.5% moisture

Table 28. West Carroll Parish-1							
Community: Goodwill		Date planted: 3/28/17			Tillage: Reduced tillage		
County agent: Bruce Garner		Row spacing (inches): 30			Harvest date: 8/23/17		
Cooperator: Ty Rodgers		Plant population: 33,000			GPS coord: 32.473239N, 91.333384W		
Previous crop: Soybeans		N rate (lbs/acre): 257					
Soil type: Forestdale silty clay loam		Irrigation: Furrow					
Hybrid	**Rows/plot**	**Row length**	**Acres/plot**	**% moisture**	**Test weight**	**Bu/acre[1]**	**Rank**
Terral 25BHR26	24	1220	1.68	15		235.10	2
Armor 1414	24	1220	1.68	15		199.28	8
Dyna-Gro D58VC65	12	1220	0.84	15		216.91	4
Dekalb DKC70-27	24	1220	1.68	15.6		229.45	3
Terral 28R10	24	1220	1.68	15		207.44	7
Dyna-Gro D54VC52	24	1220	1.68	16		194.00	9
Armor 1717	24	1220	1.68	14		211.60	5
Dekalb DKC62-08	24	1220	1.68	14.1		178.25	10
CropLan 5678	24	1220	1.68	14		242.90	1
Terral 26BHR50	24	1220	1.68	14		211.25	6

[1]adjusted to 15.5% moisture

Table 29. West Carroll Parish-2							
Community: Chickasaw		Date planted: 3/23/17			Tillage: Reduced tillage		
County agent: Bruce Garner		Row spacing (inches): 38			Harvest date: 8/23/17		
Cooperator: Russ Perkins		Plant population: 32,000			GPS coord: 32.581649N, 91.165911W		
Previous crop: Corn		N rate (lbs/acre): 261					
Soil type: Sharkey clay		Irrigation: Furrow					
Hybrid	**Rows/plot**	**Row length**	**Acres/plot**	**% moisture**	**Test weight**	**Bu/acre[1]**	**Rank**
Terral 28R10	16	1230	1.43	15.9		193.87	5
Armor 1414	16	1230	1.43	14		179.57	10
Dyna-Grow D54VC52	16	1230	1.43	15.4		181.34	9
CropLan 5678	16	1230	1.43	14.9		194.93	4
Dekalb DKC70-27	16	1230	1.43	16.1		196.54	3
Armor 1717	16	1230	1.43	15		185.95	7
Dyna-Gro D58VC65	16	1230	1.43	14.9		197.23	2
Terral 25BHR26	16	1230	1.43	14.7		197.41	1
Dekalb DKC62-08	16	1230	1.43	13.8		181.39	8
Terral 26BHR50	16	1230	1.43	15.1		190.74	6

[1]adjusted to 15.5% moisture

Acknowledgements: The following people contributed to this publication.

Dan D. Fromme, Associate Professor/State Corn Specialist, Dean Lee Research & Extension Center

H.J. "Rick" Mascagni, Professor/Research Agronomist, Northeast Research Station

Keith Shannon, Research Associate, Dean Lee Research & Extension Center

Dana Landry, Research Associate, Dean Lee Research & Extension Center

Caitlin Woodard, Research Associate, Dean Lee Research & Extension Center

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Pub. 2827 rev. 09/17
William B. Richardson, LSU Vice President for Agriculture
Louisiana State University Agricultural Center, Louisiana Agricultural Experiment Station Louisiana Cooperative Extension Service, LSU College of Agriculture