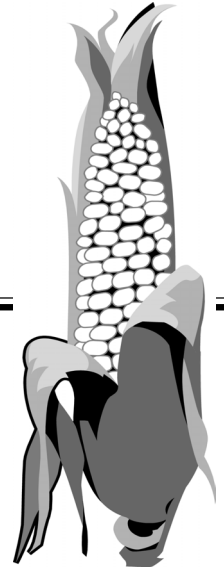




# Corn Hybrids for Grain 2004



## Hybrid Selection

Each year the LSU AgCenter tests commercial corn hybrids which are entered in the state yield tests by private seed companies. From these, a grower should choose several which are adapted to an individual farm. Information in the tables should help you make these important decisions.

Grain yield is probably the single most important trait to consider. Many of the other hybrid characteristics indirectly affect yield as well. The data in Table 1 give two-year average yields for hybrids recommended by the LSU AgCenter. All yields have been adjusted to 15.0% moisture for comparison.

Any hybrid which has been tested for two years and whose average yield falls within 90% of the average yield of the top three hybrids by location is recommended provided it is acceptable in other agronomic traits. Hybrids are listed alphabetically and not in order of performance.

Since hybrids do not perform the same at all locations in Louisiana, it is important to look at yields of the test location most closely fitting your situation. In choosing hybrids where the farm does not fit any test location closely, a consistently high yield across several locations indicates a widely adapted hybrid. This can be determined by comparing two-year means found in the last column of Table 1.

Maturity group is genetically determined in each hybrid. A hybrid's relative maturity to others is usually similar from one year to another. However, maturity date of a given hybrid depends on the daily temperature mean accumulation (growing degree units - GDU) above a base value (50° F for corn), below which little growth occurs. This means that days from planting to maturity may vary from one year to the next, depending on seasonal temperatures.

For Louisiana, hybrids classified as early, medium and full season maturity are recommended for planting.

Early hybrids will normally mature in 100-110 days, medium hybrids in 111-120 days and full-season ones in 121 or more days from planting. In Table 2 days to mid-silk and the moisture percentage give the relative maturity between hybrids.

Other agronomic characteristics of corn hybrids affect yield, quality and harvest efficiency. Hybrids are rated for each of these traits in Table 2. Plant height, ear height and stalk strength are factors in how well a hybrid stands in the field following maturity.

Husk coverage is important in wet harvest seasons. Loosely shucked hybrids may dry down quicker but cannot withstand the wetter, humid Louisiana harvest season like the thicker, tightly shucked ones. Without a tight shuck, grain quality will be low in poor harvest seasons.

Hybrids with loose coverage also tend to have more aflatoxin problems. Corn hybrids have shown deleterious interactions with certain granular insecticides when Beacon or Accent herbicides are applied.

Consult labels for sensitive hybrids.

Diseases also play an important role in reducing corn yield and quality. Some hybrids have tolerance to certain diseases and should be considered when making hybrid choices. The major corn diseases in Louisiana are the leaf blights, rusts and viruses.

## Planting Rate and Depth

The recommended final plant population is 20,000 to 27,000 plants per acre. To get these stands, assume 70%-80% field emergence, and plant 22,000 to 31,000 seed per acre. Seed size and shape are not important in getting a good stand as long as the germination is good. It is important to use a precision corn planter. Some sizes of seed are cheaper than others, but use the correct plate and planter for the size purchased. Corn

should be seeded 1.0 - 1.5 inches deep. On heavy soils, depth can be increased to 2 inches.

The ideal population depends on several factors. The lower end of the recommended range should be planted when low yields are expected due to soil type, a late planting date, a drought-prone area or lower fertilizer use. Higher plant populations should be seeded on good, deep alluvial soils where moisture is not usually limiting or where corn will be irrigated. These populations usually need high nitrogen rates (200 pounds or more of N) and should be planted early. In addition, the best plant populations for hybrids may be less than what is customarily recommended. After hybrid selections have been made, it is advisable to consult with the seed company and request the optimal populations for respective hybrids. This will not only save costs on seed but could increase yield potential as well.

## Fertilization

Soil pH should be at least 5.5 for profitable production of corn. For soils capable of producing 150+ bushels an acre, use 160 to 240 pounds of nitrogen per acre. The higher rates are for heavier soils. On other soils, 120-160 pounds per acre is probably all that should be used. If irrigated, then 240 pounds of N can be justified. Apply nitrogen before or at planting, or in a split application with 50%-75% applied preplant and the balance when corn is 10-12 inches tall. Nitrogen sources are not nearly as important as how it is applied. Keep high rates of nitrogen away from seed or young seedlings.

Phosphorus and potassium should be applied on alluvial soils only according to a soil test. For other soils, at least 40-60 pounds of each will probably be needed. Both  $P_2O_5$  and  $K_2O$  are needed by the plant early and should be put out before or at planting.

## Planting Date

For top yields in Louisiana, plant corn as close as possible to the date of average last spring freeze. In south Louisiana, plant from February 25 to March 20; in north Louisiana from March 10 to April 1. In most years April 15 is the last date for maximum yield potential. Extending planting to May 1 will usually result in a yield reduction of 30% or more.

Corn younger than the 6-leaf stage can usually withstand a light frost if the temperature doesn't get

much below 30°F. A moderate freeze will burn any existing leaves to the ground, but new leaves should emerge in four to five days with higher temperatures. It is only after the growing point moves upward near the soil surface that the possibility of injury increases.

## Acknowledgment

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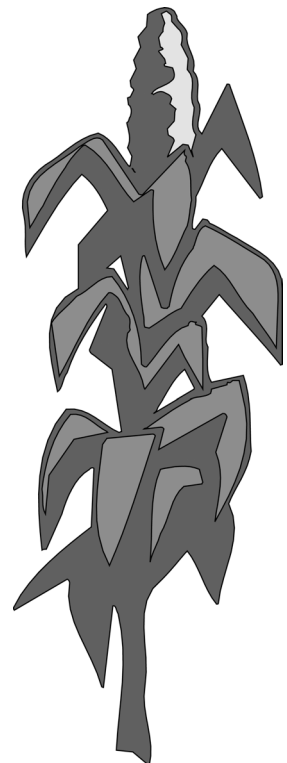
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**Table 1. Yields of Recommended Corn Hybrids, 2002-2003.**

Hybrid	Locations <sup>1</sup>						2-yr Mean <sup>3</sup>
	A	BR	BC <sup>2</sup>	SJ Clay	SJ Loam	W <sup>2</sup>	
<b>Early Maturity</b> . . . . .							
N65-M7	141*	116	145	137*	163*	169	139
Pioneer 34B23	145	103*	149	138*	175	159	140
<b>Medium Maturity</b> . . . . .							
DeKalb DK697	149	127	152	137*	179	196	148
DeKalb DKC68-70 YGCB	146	115*	128	140	166*	177	142
DeKalb DKC69-70 YGCB	152	126	154	149	178	193	151
DynaGro 5515	135*	113*	150	147	172	174	142
DynaGro 5518	149	100*	158	139	177	199	141
DynaGro 58K22	149	107*	155	141	177	-	144
DynaGro 57K66	144	99*	137	133*	165*	-	135
Garst 8230 IT	147	112*	126	150	170	185	145
Garst 8288	140*	109*	141	146	179	167	144
Genesis 2A16 RR	145	97*	161	151	172	158	141
Genesis 2A16 YG	150	100*	144	157	185	173	148
Genesis 2B16 TR	137*	119	135	150	166*	161	143
Genesis 3214 YG	157	98*	160	152	170	168	144
Golden Acres 2995 RR	142*	133	152	133*	170	-	145
Golden Acres 8112	150	91*	142	137*	177	160	139
N83-N5 Bt/LL	151	100*	151	140	174	173	141
N83-Z8	150	104*	144	149	183	188	147
Pioneer 31B13 YGCB	162	113*	159	151	184	181	153
Pioneer 31G98	150	114*	158	151	179	185	149
Pioneer 31R88	153	123	150	145	179	161	150
Pioneer 32D99	152	126	172	155	189	184	156
Pioneer 32R25	159	121	150	143	182	175	151
Pioneer 32W86	149	109*	163	150	180	180	147
Southern States 859 CL	139*	123	146	134*	179	176	144
Terral 2130	149	107*	154	137*	175	182	142
Terral 2140	149	97*	144	139	179	166	141
Terral 2140nRR	151	104*	157	142	174	191	143
Terral 2155 Bt	140*	97*	149	140	174	176	138
Terral 2160Bt	149	106*	125	150	183	180	147
Terral 23R15n	140*	118	143	133*	169	159	140
Terral 24R10	143	110*	144	136*	164*	-	138
Terral 26BR10n	143	122	156	145	170	171	145

\* Yield reported but not recommended at respective location.

<sup>1</sup> Data from Dean Lee Research Station, Alexandria (A); Ben Hur Central Station, Baton Rouge (BR); Red River Research Station, Bossier City (BC); Northeast Research Station, St. Joseph Clay and Loam, and Herby Hitt Farm, Winnsboro (W). All yields are last two-year averages expressed in bushels per acre.

<sup>2</sup> Data from Bossier City and Winnsboro are 2003 and 2002 one-year data, respectively, therefore no hybrids are recommended for these locations.

<sup>3</sup> Mean derived by averaging across all locations having two-year data.

**Table 2. Agronomic Data for Recommended Corn Hybrids, 2003<sup>1</sup>**

<b>Hybrid</b>	<b>Mid Silk</b>	<b>Harvest Moisture</b>	<b>Plant Height</b>	<b>Ear Height</b>	<b>Husk Cover</b>
<b>Early Maturity</b> . . . . .					
N65-M7	56	17	84	30	1.5
Pioneer 34B23	56	17	86	34	2.0
<b>Medium Maturity</b> . . . . .					
DeKalb DK697	59	18	90	39	3.0
DeKalb DKC68-70 YGCB	61	18	93	40	1.0
DeKalb DKC69-70 YGCB	60	20	89	36	1.5
DynaGro 5515	60	16	90	37	2.0
DynaGro 5518	60	17	90	39	2.0
DynaGro 58K22	61	18	100	38	2.0
DynaGro 57K66	60	17	89	33	1.5
Garst 8230 IT	59	18	91	37	2.0
Garst 8288	56	20	91	37	1.0
Genesis 2A16 RR	58	17	97	42	2.5
Genesis 2A16 YG	57	19	94	37	2.0
Genesis 2B16 TR	58	19	89	35	1.0
Genesis 3214 YG	55	19	87	36	2.5
Golden Acres 2995 RR	60	19	89	42	1.5
Golden Acres 8112	60	18	89	36	2.5
N83-N5	60	18	90	37	3.0
N83-Z8 Bt/LL	59	19	93	36	2.0
Pioneer 31B13 YGCB	57	19	95	32	2.5
Pioneer 31G98	60	17	97	32	2.5
Pioneer 31R88	56	18	91	41	3.0
Pioneer 32D99	60	20	94	41	2.0
Pioneer 32R25	61	18	93	37	2.5
Pioneer 32W86	57	17	101	37	2.5
Southern States 859 CL	59	17	90	35	1.5
Terral 2130	59	17	96	41	2.5
Terral 2140	60	18	90	34	2.0
Terral 2140nRR	60	17	92	39	2.0
Terral 2155 Bt	56	19	89	35	1.5
Terral 2160Bt	59	20	93	41	2.0
Terral 23R15n	60	18	92	36	1.0
Terral 24R10	59	19	95	38	1.5
Terral 26BR10n	61	19	89	32	1.5

<sup>1</sup> Plant and ear height are reported in inches; harvest moisture is reported as a percent; mid-silk is the average number of days from planting to 50% silk emergence from ear shoot; husk cover: 1 = excellent coverage, 2 = medium and 3 = poor shuck coverage. Data from 2003 test at Dean Lee Research Station, Alexandria LA on silt loam soil.

<p><b>Louisiana State University Agricultural Center</b>                  William B. Richardson, Chancellor  <b>Louisiana Agricultural Experiment Station</b>                  William H. Brown, Vice Chancellor and Director  <b>Louisiana Cooperative Extension Service</b>                  Paul D. Coreil, Vice Chancellor and Director  <b>Pub. 2827 (4M) 10/03</b>                  Issued in furtherance of Cooperative Extension work, Acts of Congress of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture. The Louisiana Cooperative Extension Service provides equal opportunities in programs and employment.</p>	<p><b>Visit our Web site:</b>  <a href="http://www.lsuagcenter.com">www.lsuagcenter.com</a></p>
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