
1999 Corn Performance Tests

Anton E. Coy, J. LaDon Day, and Paul A. Rose, Editors

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Preface

In this research report, the results of the 1999 corn performance trials are presented. Corn performance trials were conducted at six locations throughout Georgia in 1999 (see map below). Short-season, mid-season, and full-season hybrids were planted at Tifton, Plains, and Midville in the coastal plain region, at Griffin in the Piedmont region, at Calhoun in the limestone valley region, and at Blairsville in the mountain region. High oil corn hybrids were tested at Tifton and Plains. Hybrids used for silage were evaluated at Tifton, Griffin, Calhoun, and Blairsville, Georgia, and at Quincy, Florida. Preliminary experimental hybrids were tested at Tifton only.

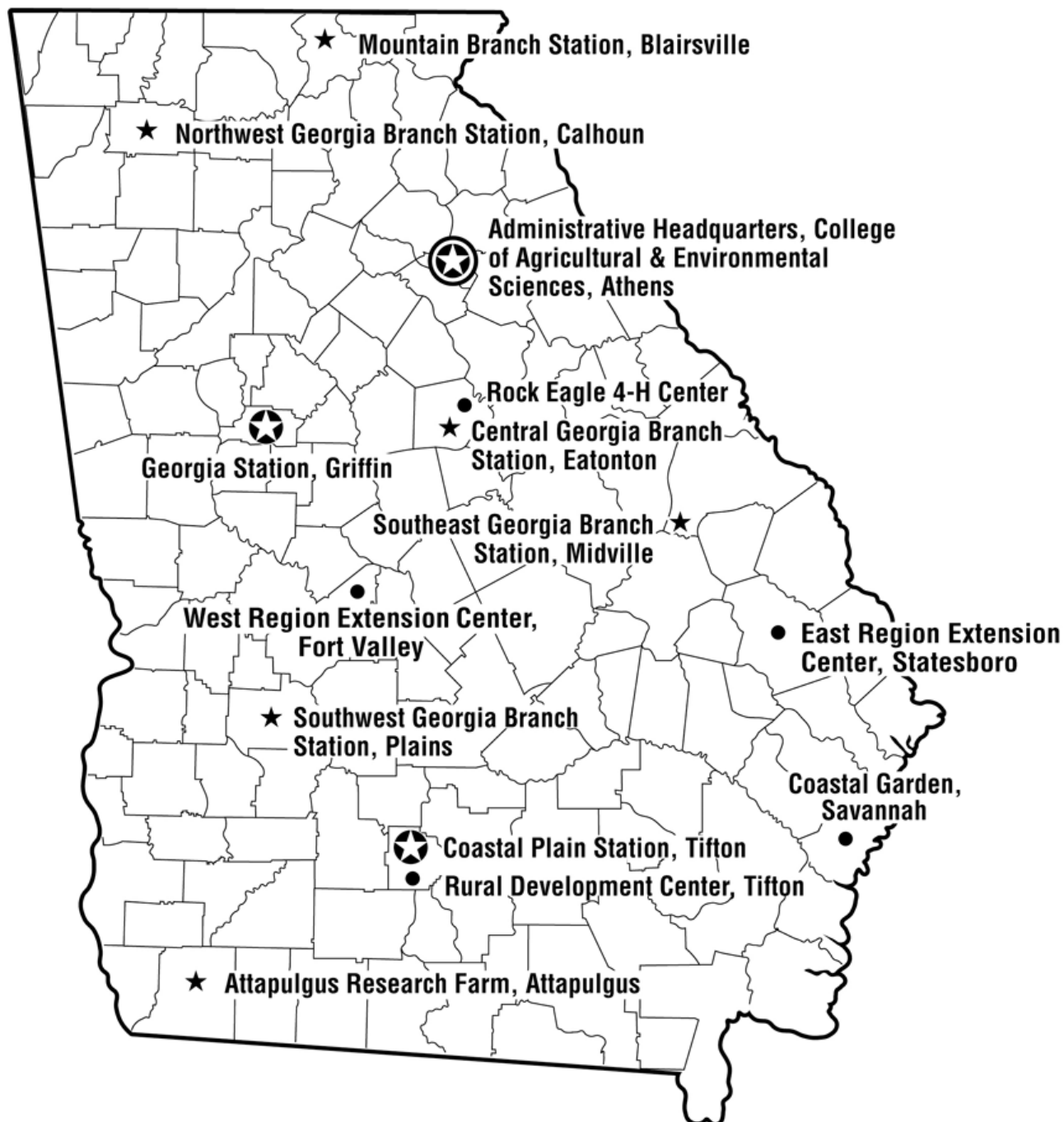
At each site all plots within a maturity group were seeded at the rates specified and not thinned, and the populations at harvest are included in the tables. Information concerning fertilization and cultural practices used in each trial is included with the tables. Grain harvesting was done with a small plot combine, and yields were adjusted to 15.5% moisture. Since data averaged over several years indicate a hybrid's yield potential better than data from only a single year, average yields over several years are included in this report.

The least significant difference (L.S.D.) at the 10% level has been included in the tables to aid in comparing hybrids. If the yields of any two hybrids differ by the L.S.D. value or more, they may be considered different in yield ability. **Bolding** is used in the performance tables to indicate hybrids with yields statistically equal to the highest yielding entry in the test. The standard error (Std. Err.) of an entry mean is included at the bottom of each table to provide a general indicator of the level of precision of each experiment. The lower the value of the standard error of the entry mean, the more precise the experiment.

Producers of hybrid seed corn are invited to enter their hybrids in the Georgia performance trials. Most hybrids entered are commercially available in Georgia, but a few experimental hybrids are also entered. Entry of a hybrid in these trials does not imply endorsement or recommendation by the University of Georgia College of Agriculture.

This report is one of four publications presenting the 1998-99 performance of agronomic crops in Georgia. For information concerning the performance of other crops, refer to one of the following research reports: 1998-99 Small Grains Performance Tests, Experiment Station Research Report #659, 1998-99 Canola Performance Tests, Experiment Station Research Report #660, and the 1998 Field Crops Performance Tests, Experiment Station Research Report #658.

This report, along with performance test information on other crops, is also available at our web site www.swvt.uga.edu. Additional information may be obtained by writing Dr. Anton E. Coy, Crop and Soil Sciences Department, Coastal Plain Experiment Station, Tifton, GA 31793-0748 or J. LaDon Day, Crop and Soil Sciences Department, University of Georgia, Georgia Station, Griffin, GA 30223-1797.



★ Main Experiment Station ★ Branch Station ● Extension Center

The Season

The 1999 corn season was dry and early. March and early April were dry and clear which allowed planting and emergence to progress about a week ahead of average. Dry conditions in mid-April caused some corn acreage to be shifted to other crops and approximately 25% of the corn planted to be in poor condition. Planted acreage was estimated at 300,000 acres representing a 40% decline from 1998. Early May rains improved conditions, but dry weather returned in late May. Tasseling and silking were a week ahead of average, but the dry weather pattern resulted in nearly half of the state's corn in poor condition by mid-June. Scattered rain and slightly cooler than normal temperatures in early July improved conditions slightly. A hot and dry August lessened grain fill.

The severe drought conditions that Georgia has been experiencing since April 1998 continued throughout the corn growing season. Rainfall at the six test sites is listed below. Total seasonal rainfall amount was below normal at all test locations and only 60% of long-term average.

Growing Season Rainfall¹, 1999

Month	Blairsville	Calhoun ²	Griffin	Midville	Plains	Tifton
	----- inches -----					
February	3.94	3.01	2.19	2.49	2.62	1.73
March	3.66	3.24	3.11	1.57	2.42	1.13
April	1.70	2.14	1.53	2.75	2.65	2.07
May	4.46	4.70	2.56	1.62	2.45	2.14
June	3.46	4.85	6.76	2.87	3.30	7.57
July	3.29	4.98	1.37	4.79	3.75	4.65
August	1.93	1.49	2.47	2.30	1.78	1.57
September	1.39	1.01	1.78	4.53	0.83	2.05
<i>Total (8 mo)</i>	<i>23.83</i>	<i>25.42</i>	<i>21.77</i>	<i>22.92</i>	<i>19.80</i>	<i>22.91</i>
<i>Normal (8 mo)</i>	<i>38.53</i>	<i>37.14</i>	<i>35.88</i>	<i>34.70</i>	<i>34.71</i>	<i>35.28</i>

¹ Data submitted by Dr. G. Hoogenboom, Georgia Station, Griffin, GA.

² Floyd County location.

Corn harvest proceeded about a week ahead of average. Only 260,000 acres were harvested for grain at an estimated yield of 95 bushels per acre compared to 80 bushels per acre from 265,000 acres in 1998 and the record 110 bushels per acre from 500,000 acres in 1997.

GRAIN TEST RESULTS

Corn Hybrid Performance in the Coastal Plain

Coastal Plain Region, Georgia

Summary of Corn Hybrid Performance, 1999

Coastal Plain Region of Georgia

Company or Brand	Variety	Yield
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Irr

Name		Coastal Plain Avg.	Tifton Non-Irr.	Non-Irr. Avg.	Tifton Irr.	Plains Irr.	Midville Irr.	
		----- bu/acre -----						
Short-Season								
AgriPro	AP 9707	190.2	167.1	167.1	184.1	199.2	210.2	197.9
AgriPro	HY 9646	187.3	153.7	153.7	182.5	207.3	205.6	198.5
Funk's G	5516	185.2	170.6	170.6	171.6	188.2	210.6	190.1
Zimmerman	Z37	184.6	152.7	152.7	188.1	198.7	199.0	195.3
Southern States	SS747CL	184.5	163.2	163.2	196.8	185.2	192.7	191.6
Southern States	SS769BT	184.4	159.4	159.4	195.4	188.9	194.1	192.8
Funk's G	5510-A	183.6	178.9	178.9	181.6	182.9	191.0	185.1
Pioneer	3245	182.1	157.2	157.2	189.6	180.7	200.9	190.4
Pioneer	32k61	181.9	156.2	156.2	177.8	202.7	191.0	190.5
DeKalb	DK 650	181.0	165.4	165.4	184.5	188.6	185.6	186.2
Southland Genetics	SG1701	180.4	154.3	154.3	174.6	194.5	198.1	189.1
Southern States	SS787	179.9	147.9	147.9	192.1	189.5	190.1	190.5
Pioneer	3223	179.8	144.6	144.6	184.7	179.7	210.0	191.5
Southern States	SS729CL	177.6	157.8	157.8	170.1	175.1	207.5	184.2
Terra	TR1157	177.5	142.4	142.4	166.7	199.3	201.5	189.2
Funk's G	4581	176.6	161.5	161.5	177.1	168.2	199.8	181.7
Asgrow	RX 913	174.3	158.9	158.9	192.2	186.4	159.8	179.5
AgriPro	AP 9829IMI	171.2	148.3	148.3	174.7	174.4	187.6	178.9
Southland Genetics	SG1611	166.0	126.9	126.9	150.7	188.4	198.0	179.0
AgriPro	HS 9843	165.2	149.5	149.5	160.5	164.8	185.9	170.4
Southland Genetics	SG1580	163.6	131.9	131.9	174.7	176.8	171.1	174.2
Zimmerman	1851W	163.5	137.6	137.6	143.8	177.6	195.1	172.2
Asgrow	RX 889	161.4	144.0	144.0	166.1	167.1	168.3	167.2
Terra	TR 1154	161.3	137.1	137.1	141.5	177.5	189.1	169.3
Funk's G	4653	160.5	153.3	153.3	174.4	152.9	161.4	162.9
Asgrow	RX 826	160.1	119.2	119.2	152.4	181.4	187.4	173.7
Funk's G	5505RR	153.8	154.9	154.9	173.9	127.2	159.0	153.4
Pioneer	33K81	149.0	127.1	127.1	147.4	154.1	167.4	156.3
Terra	TR1147RR	145.4	131.2	131.2	144.9	165.0	140.7	150.2
NK	N79-P4	.	119.1	119.1	156.4	183.7	.	.
Pioneer	3563	.	99.0	99.0	140.2	136.4	.	.
Average		172.8	147.4	147.4	171.3	178.8	188.2	180.4
Mid and Full-Season								
DeKalb	DK 679	188.3	155.1	155.1	184.3	201.0	213.0	199.4
Pioneer	3163	186.1	154.5	154.5	181.4	196.5	212.1	196.7
DeKalb	DK 697	184.7	155.4	155.4	185.7	201.0	196.6	194.4
AgriPro	AP 9909	184.4	158.4	158.4	178.1	197.6	203.7	193.1
NK	N 83-N5	180.3	151.8	151.8	167.7	190.0	211.6	189.8
Terra	TR 702E	179.9	158.7	158.7	179.0	185.9	195.8	186.9
AgriPro	AP 9939	175.6	147.9	147.9	161.5	186.3	206.8	184.9
DeKalb	DK 687	174.4	132.3	132.3	181.9	188.0	195.6	188.5
Southern States	SS859CL	173.2	131.6	131.6	173.8	175.0	212.6	187.1
NK	N 8811	170.9	144.1	144.1	163.9	181.6	194.1	179.8
Southland	4120	169.7	137.5	137.5	180.1	165.1	196.0	180.4

Terra	TR 1167	169.2	141.6	141.6	158.8	170.7	205.6	178.4
Pioneer	3085*	166.7	137.9	137.9	143.2	188.1	197.5	176.3
Pioneer	3146	163.6	137.0	137.0	159.3	161.9	196.4	172.5
Southland	1651	162.8	129.7	129.7	167.5	159.0	194.8	173.8
Terra	TR 1185	151.7	123.8	123.8	146.4	152.4	184.3	161.0
<i>Average</i>		<i>173.8</i>	<i>143.6</i>	<i>143.6</i>	<i>169.5</i>	<i>181.3</i>	<i>201.0</i>	<i>183.9</i>

* Full-season hybrid.

Tifton, Georgia

Short-Season Corn Hybrid Performance, 1999, Nonirrigated

Tifton, Georgia

Company or Brand Name	Hybrid Name	Yield ¹		Ears/ 100 Plants no.	Ear Grain Weight lb	Grain Qty ² rating	Grain ³ %	Plant Populati n no.	
		1999	3-Yr Avg						
		bu/acre							
Funk's G	5510-A	178.9	151.9	100	0.52	1.5	19.7	20255	9
Funk's G	5516	170.6	161.8	120	0.40	1.8	18.0	20691	9
AgriPro	AP 9707	167.1	156.2	100	0.48	1.8	17.7	20038	8
DeKalb	DK 650	165.4	.	107	0.43	2.0	17.0	20691	9
Southern States	SS747CL	163.2	.	98	0.51	1.5	17.6	18949	9
Funk's G	4581	161.5	157.7	91	0.51	1.8	17.0	20473	9
Southern States	SS769BT	159.4	.	103	0.42	1.8	16.7	21127	9
Asgrow	RX 913	158.9	.	102	0.43	1.8	18.9	21345	9
Southern States	SS729CL	157.8	.	98	0.47	1.5	16.9	19602	9
Pioneer	3245	157.2	152.6	94	0.52	1.3	18.8	19166	9
Pioneer	32k61	156.2	158.4	98	0.47	1.3	16.5	19384	9
Funk's G	5505RR	154.9	.	109	0.41	1.3	16.2	19602	1
Southland Genetics	SG1701	154.3	.	100	0.44	1.5	19.0	20255	7
AgriPro	HY 9646	153.7	149.4	98	0.44	1.0	16.3	20909	9
Funk's G	4653	153.3	.	101	0.43	1.3	18.6	20473	9
Zimmerman	Z37	152.7	.	106	0.44	1.5	20.7	19384	9
AgriPro	HS 9843	149.5	147.7	110	0.42	1.5	18.9	18949	9
AgriPro	AP 9829IMI	148.3	.	111	0.44	2.0	18.9	17642	9
Southern States	SS787	147.9	148.0	104	0.45	1.8	17.3	18078	8
Pioneer	3223	144.6	149.2	98	0.41	1.3	17.0	20909	6
Asgrow	RX 889	144.0	.	112	0.40	1.3	18.6	18731	9
Terra	TR1157	142.4	.	97	0.44	1.3	16.8	18731	8
Zimmerman	1851W	137.6	.	91	0.47	1.8	19.4	19167	9
Terra	TR 1154	137.1	146.9	100	0.41	1.0	15.7	18731	9
Southland Genetics	SG1580	131.9	.	99	0.46	1.5	17.2	16771	9
Terra	TR1147RR	131.2	.	94	0.39	1.8	15.3	20256	9
Pioneer	33K81	127.1	.	100	0.41	1.3	16.3	18077	9
Southland Genetics	SG1611	126.9	.	93	0.43	1.8	16.4	18295	8
Asgrow	RX 826	119.2	.	97	0.36	1.8	17.6	19602	8

NK	N79-P4	119.1	.	96	0.39	2.0	17.5	18731	9
Pioneer	3563	99.0	.	97	0.33	1.0	14.5	17642	9
<i>Average</i>		147.4⁴	152.7	101	0.44	1.5	17.5	19440	9
<i>LSD at 10% Level</i>		19.0	N.S.⁵	12	0.05	N.S.	1.3	2216	1
<i>Std. Err. of Entry Mean</i>		8.1	3.8	5	0.02	0.2	0.5	942	5

¹ Yields calculated at 15.5% moisture.

² Grain quality rating: 1 = excellent to 5 = poor.

³ Grain moisture at harvest.

⁴ CV = 11.0%, and df for EMS = 90.

⁵ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: March 18, 1999.

Harvested: August 10, 1999.

Seeding Rate: 22,000 seeds/acre in 30" rows.

Soil Type: Tifton loamy sand.

Soil Test: P = High, K = Medium, and pH = 5.5.

Fertilization: 85 lb N, 70 lb P₂O₅, and 105 lb K₂O/acre as preplant; 80 lb N and 100 lb S/acre as sidedress.

Previous Crop: Soybean.

Management: Moldboard plowed and rototilled; Sutan, Accent, Permit and one cultivation used for weed control; Lorsban used for insect control.

Test conducted by A. E. Coy and M. D. Pippin.

Mid and Full-Season Corn Hybrid Performance, 1999, Nonirrigated

Tifton, Georgia

Company or Brand Name	Hybrid Name	Yield ¹		Ears/ 100 Plants no.	Ear Grain Weight lb	Grain Qty ² rating	Grain Moisture ³ %	Plant Population no.	
		1999 bu/acre	3-Yr Avg						
Terra	TR 702E	158.7	144.9	99	0.53	1.0	19.3	17642	1
AgriPro	AP 9909	158.4	148.2	118	0.46	2.0	20.7	17642	9
DeKalb	DK 697	155.4	.	100	0.52	1.8	18.2	17642	9
DeKalb	DK 679	155.1	.	105	0.49	2.0	19.0	17860	9
Pioneer	3163	154.5	151.1	100	0.50	1.3	18.5	17860	8
NK	N 83-N5	151.8	.	104	0.46	2.0	18.9	18731	9
AgriPro	AP 9939	147.9	.	96	0.52	1.5	18.8	17206	9
NK	N 8811	144.1	138.6	100	0.51	1.3	20.4	16771	9
Terra	TR 1167	141.6	141.8	101	0.46	1.5	17.0	17642	9
Pioneer	3085*	137.9	130.9	108	0.44	1.0	20.4	17424	6
Southland	4120	137.5	134.6	103	0.47	1.5	19.7	16771	9
Pioneer	3146	137.0	135.1	92	0.52	1.3	20.1	17206	8
DeKalb	DK 687	132.3	141.8	101	0.43	1.8	18.7	17860	9

Southern States	SS859CL	131.6	.	102	0.43	1.8	18.9	17642	7
Southland	1651	129.7	.	99	0.43	2.5	19.8	18296	8
Terra	TR 1185	123.8	129.5	96	0.44	1.3	18.9	16989	9
<i>Average</i>		<i>143.6⁴</i>	<i>139.6</i>	<i>101</i>	<i>0.48</i>	<i>1.6</i>	<i>19.2</i>	<i>17574</i>	<i>9</i>
<i>LSD at 10% Level</i>		<i>18.1</i>	<i>7.8</i>	<i>N.S.⁵</i>	<i>0.06</i>	<i>0.5</i>	<i>0.8</i>	<i>N.S.</i>	<i>1</i>
<i>Std. Err. of Entry Mean</i>		<i>7.6</i>	<i>3.3</i>	<i>5</i>	<i>0.02</i>	<i>0.2</i>	<i>0.4</i>	<i>782</i>	<i>6</i>

* Full-season hybrid.

¹ Yields calculated at 15.5% moisture.

² Grain quality rating: 1 = excellent to 5 = poor.

³ Grain moisture at harvest.

⁴ CV = 10.6%, and df for EMS =45.

⁵ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted:March 18, 1999.

Harvested:August 11, 1999.

Seeding Rate:19,000 seeds/acre in 30" rows.

Soil Type:Tifton loamy sand.

Soil Test:P = High, K = Medium, and pH = 5.5.

Fertilization:85 lb N, 70 lb P₂O₅, and 105 lb K₂O/acre as preplant; 80 lb N and 100 lb S/acre as sidedress.

Previous Crop:Soybean.

Management:Moldboard plowed and rototilled; Sutan, Accent, Permit and one cultivation used for weed control; Lorsban used for insect control.

Test conducted by A. E. Coy and M. D. Pippin.

Short-Season Corn Hybrid Performance, 1999, Irrigated

Tifton, Georgia

Company or Brand Name	Hybrid Name	Yield ¹ 1999 bu/acre	3-Yr Avg	Ears/ 100 Plants no.	Ear Grain Weight lb	Grain Qty ² rating	Grain Moisture ³ %	Plant Population no.	
Southern States	SS747CL	196.8	.	105	0.52	1.5	16.9	20691	6
Southern States	SS769BT	195.4	.	115	0.44	1.0	16.1	22077	8
Asgrow	RX 913	192.2	.	132	0.46	1.0	17.2	18315	5
Southern States	SS787	192.1	200.3	105	0.50	1.8	17.2	20889	9
Pioneer	3245	189.6	202.2	106	0.50	1.5	16.7	20592	8
Zimmerman	Z37	188.1	.	119	0.44	1.3	18.2	20790	7
Pioneer	3223	184.7	199.0	111	0.45	1.3	16.8	20988	7
DeKalb	DK 650	184.5	.	115	0.44	1.3	17.4	20790	8
AgriPro	AP 9707	184.1	206.4	105	0.49	1.3	16.6	20394	6
AgriPro	HY 9646	182.5	200.8	110	0.44	1.3	15.6	21384	7

Funk's G	5510-A	181.6	198.2	101	0.51	2.0	18.4	20394	7
Pioneer	32k61	177.8	198.6	104	0.46	1.0	15.6	20988	9
Funk's G	4581	177.1	192.0	107	0.45	1.3	15.6	20592	8
Southland Genetics	SG1580	174.7	.	104	0.47	2.0	15.7	20295	6
AgriPro	AP 9829IMI	174.7	.	116	0.43	1.0	17.5	20295	7
Southland Genetics	SG1701	174.6	.	111	0.43	1.3	17.0	20790	4
Funk's G	4653	174.4	.	109	0.49	1.5	17.3	19206	7
Funk's G	5505RR	173.9	.	116	0.42	1.8	15.1	19998	1
Funk's G	5516	171.6	193.1	115	0.42	1.5	15.6	19998	7
Southern States	SS729CL	170.1	.	105	0.45	1.3	15.4	20196	8
Terra	TR1157	166.7	.	123	0.40	1.0	15.6	19404	6
Asgrow	RX 889	166.1	.	112	0.43	1.5	17.6	19602	9
AgriPro	HS 9843	160.5	185.7	116	0.41	1.3	16.1	19107	6
NK	N79-P4	156.4	.	102	0.44	1.3	16.8	20097	8
Asgrow	RX 826	152.4	.	105	0.42	1.8	17.3	19998	8
Southland Genetics	SG1611	150.7	.	112	0.40	1.5	16.0	18909	7
Pioneer	33K81	147.4	.	107	0.40	1.8	14.7	19107	9
Terra	TR1147RR	144.9	.	107	0.36	2.0	14.4	20889	9
Zimmerman	1851W	143.8	.	106	0.45	1.3	18.2	17820	7
Terra	TR 1154	141.5	183.5	102	0.40	1.8	14.8	19305	9
Pioneer	3563	140.2	.	103	0.38	2.0	14.3	19701	9
Average		171.3 ⁴	196.3	110	0.44	1.4	16.4	20116	7
LSD at 10% Level		16.8	N.S. ⁵	11	0.04	0.5	0.7	1695	2
Std. Err. of Entry Mean		7.2	3.3	5	0.02	0.2	0.3	722	9

¹ Yields calculated at 15.5% moisture.

² Grain quality rating: 1 = excellent to 5 = poor.

³ Grain moisture at harvest.

⁴ CV = 8.4%, and df for EMS = 90.

⁵ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted:March 18, 1999.

Harvested:August 13, 1999.

Seeding Rate:24,126 seeds/acre in 30" rows.

Soil Type:Tifton loamy sand.

Soil Test:P = High, K = Medium, and pH = 6.0.

Fertilization:116 lb N, 130 lb P₂O₅, and 195 lb K₂O/acre as preplant; 185 lb N and 100 lb S/acre as sidedress.

Previous Crop:Soybean.

Management:Moldboard plowed and rototilled; Sutan, Accent, Permit, and one cultivation used for weed control; Lorsban used for insect control; irrigation 7 inches.

Test conducted by A. E. Coy and M. D. Pippin.

Mid and Full-Season Corn Hybrid Performance, 1999, Irrigated

Tifton, Georgia

Company or Brand Name	Hybrid Name	Yield ¹ 1999 bu/acre	3-Yr Avg	Ears/ 100 Plants no.	Ear Grain Weight lb	Grain Qty ² rating	Grain moisture ³ %	Plant Population no.	Plant Population no.
DeKalb	DK 697	185.7	.	108	0.50	1.0	18.7	20097	7
DeKalb	DK 679	184.3	.	111	0.48	1.5	17.9	19899	9
DeKalb	DK 687	181.9	210.0	114	0.47	1.3	18.1	19800	9
Pioneer	3163	181.4	221.2	105	0.51	1.3	18.2	19701	9
Southland	4120	180.1	190.0	109	0.50	1.0	18.6	19305	9
Terra	TR 702E	179.0	200.2	102	0.50	1.0	18.3	20493	8
AgriPro	AP 9909	178.1	205.5	111	0.49	1.3	18.7	19107	8
Southern States	SS859CL	173.8	.	109	0.47	1.5	18.1	19800	7
NK	N 83-N5	167.7	.	101	0.50	1.0	17.7	19206	4
Southland	1651	167.5	.	111	0.48	1.3	17.8	18018	8
NK	N 8811	163.9	190.7	102	0.49	1.0	20.0	19206	9
AgriPro	AP 9939	161.5	.	102	0.49	1.0	18.3	18711	9
Pioneer	3146	159.3	188.3	100	0.47	1.3	17.3	19305	8
Terra	TR 1167	158.8	182.0	107	0.45	1.0	16.5	19008	9
Terra	TR 1185	146.4	176.6	97	0.48	1.3	19.3	18711	5
Pioneer	3085*	143.2	184.6	112	0.37	1.8	17.9	19998	5
Average		169.5 ⁴	194.9	106	0.48	1.2	18.2	19398	8
LSD at 10% Level		13.4	7.3	8	0.04	N.S. ⁵	0.7	N.S.	2
Std. Err. of Entry Mean		5.6	3.1	4	0.02	0.2	0.3	665	1

* Full-season hybrid.

¹ Yields calculated at 15.5% moisture.

² Grain quality rating: 1 = excellent to 5 = poor.

³ Grain moisture at harvest.

⁴ CV = 6.6%, and df for EMS = 45.

⁵ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted:March 18, 1999.

Harvested:August 12, 1999.

Seeding Rate:21,895 seeds/acre in 30" rows.

Soil Type:Tifton loamy sand.

Soil Test:P = High, K = Medium, and pH = 6.0.

Fertilization:116 lb N, 130 lb P₂O₅, and 195 lb K₂O/acre as preplant; 185 lb N and 100 lb S/acre as sidedress.

Previous Crop:Soybean.

Management:Moldboard plowed and rototilled; Sutan, Accent, Permit, and one cultivation used for weed control;Lorsban used for insect control; irrigation 7 inches.

Test conducted by A. E. Coy and M. D. Pippin.

**Preliminary Corn Hybrid Performance, 1999, Irrigated
Tifton, Georgia**

Company or Brand Name	Hybrid Name	Maturity Class	Yield¹ bu/acre	Ears/ 100 Plants no.	Ear Grain Weight lb	Grain Qty² rating	Grain Moisture³ %	Plant Population no.	Plant Population %
NK	NX 9188	F	203.0	108	0.53	1.3	19.0	20592	6
NK	NX 8318	M	190.7	120	0.44	1.5	17.0	20691	6
Grabow	91609	S	176.6	110	0.45	2.0	15.8	20295	8
Funk's G	X5583	M	169.6	100	0.50	1.8	17.7	19503	9
Grabow	91595	S	169.3	104	0.47	2.0	15.6	19503	9
Southern States	77457	S	168.6	102	0.47	2.0	14.6	19602	8
Southern States	77095	S	168.4	108	0.46	2.3	13.7	18513	6
Southern States	Exp 79027	M	167.9	110	0.45	2.0	17.4	19503	5
Pioneer	3245	S	167.0	101	0.48	2.0	15.9	19404	8
Grabow	91575Bt	S	166.6	105	0.46	2.0	15.8	19503	1
NK	NX 8308	M	164.6	101	0.46	2.0	16.6	20295	4
Funk's G	X5575	S	163.4	103	0.46	1.5	15.3	19305	9
DeKalb	CR 8605	S	160.7	105	0.42	2.0	14.4	20394	8
Southern States	16980	S	148.6	103	0.42	1.8	15.5	19404	9
NK	NX 7617	S	148.3	102	0.43	1.8	17.9	19800	9
NK	NX 7547	S	140.5	104	0.40	2.0	16.8	19305	9
NK	NX 7537	S	137.6	101	0.41	2.0	17.5	19206	9
Greenwood	835	F	136.7	115	0.40	1.5	21.6	17919	3
Greenwood	845	F	133.4	119	0.37	1.3	23.8	19008	6
<i>Average</i>			<i>162.2⁴</i>	<i>106</i>	<i>0.45</i>	<i>1.8</i>	<i>16.9</i>	<i>19566</i>	<i>7</i>
<i>LSD at 10% Level</i>			<i>15.7</i>	<i>8</i>	<i>0.04</i>	<i>0.5</i>	<i>1.2</i>	<i>N.S.⁵</i>	<i>3</i>
<i>Std. Err. of Entry Mean</i>			<i>6.6</i>	<i>3</i>	<i>0.02</i>	<i>0.2</i>	<i>0.5</i>	<i>652</i>	<i>1</i>

¹ Yields calculated at 15.5% moisture.

² Grain quality rating: 1 = excellent to 5 = poor.

³ Grain moisture at harvest.

⁴ CV = 8.2%, and df for EMS = 54.

⁵ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: March 18, 1999.

Harvested: August 12, 1999.

Seeding Rate: 21,895 seeds/acre in 30" rows.

Soil Type: Tifton loamy sand.

Soil Test: P = High, K = Medium, and pH = 6.0.

Fertilization: 116 lb N, 130 lb P₂O₅, and 195 lb K₂O/acre as preplant; 185 lb N and 185 lb S/acre as sidedress.

Previous Crop: Soybean.

Management: Moldboard plowed and rototilled; Sutan, Accen, Permit, and one cultivation used for weed control; Lorsban for insect control; irrigated 7 inches.

Test conducted by A. E. Coy and M. D. Pippin.

Plains, Georgia

Short-Season Corn Hybrid Performance, 1999, Irrigated Plains, Georgia

Company or Brand Name	Hybrid Name	Yield ¹		Ears/ 100 Plants no.	Ear Grain Weight lb	Grain Qty ² rating	Grain ³ %	Plant Populati n no.	
		1999 bu/acre	3-Yr Avg						
AgriPro	HY 9646	207.3	176.3	111	0.49	1.3	15.8	21628	6
Pioneer	32k61	202.7	175.2	108	0.45	1.0	17.0	23740	9
Terra	TR1157	199.3	.	112	0.45	1.3	15.6	22325	7
AgriPro	AP 9707	199.2	159.2	102	0.48	1.5	17.7	23371	7
Zimmerman	Z37	198.7	.	105	0.45	1.3	17.7	24096	6
Southland Genetics	SG1701	194.5	.	102	0.49	1.8	17.2	22325	6
Southern States	SS787	189.5	166.1	105	0.45	1.5	15.7	22652	8
Southern States	SS769BT	188.9	.	112	0.44	1.3	16.7	21780	8
DeKalb	DK 650	188.6	.	130	0.37	1.5	17.0	22433	7
Southland Genetics	SG1611	188.4	.	113	0.46	1.5	16.3	20691	
Funk's G	5516	188.2	161.2	110	0.43	1.8	17.2	22935	
Asgrow	RX 913	186.4	.	118	0.42	1.3	16.7	21453	
Southern States	SS747CL	185.2	.	103	0.47	1.5	16.7	21780	
NK	N79-P4	183.7	.	103	0.48	1.3	17.3	21127	
Funk's G	5510-A	182.9	151.2	105	0.44	1.5	17.9	23523	
Asgrow	RX 826	181.4	.	102	0.45	1.0	17.4	22644	
Pioneer	3245	180.7	162.3	107	0.44	1.3	17.4	22107	
Pioneer	3223	179.7	149.5	111	0.41	1.8	16.6	22325	
Zimmerman	1851W	177.6	.	105	0.48	1.3	18.7	20691	
Terra	TR 1154	177.5	151.8	105	0.42	1.5	15.2	22216	
Southland Genetics	SG1580	176.8	.	102	0.44	2.0	15.7	21919	
Southern States	SS729CL	175.1	.	102	0.44	1.5	16.5	22499	
AgriPro	AP 9829IMI	174.4	.	108	0.41	1.3	18.1	22645	
Funk's G	4581	168.2	157.6	104	0.40	1.3	16.4	22651	
Asgrow	RX 889	167.1	.	127	0.35	1.3	17.1	21453	
Terra	TR1147RR	165.0	.	106	0.40	1.5	15.6	21780	
AgriPro	HS 9843	164.8	156.0	104	0.39	1.3	15.4	22790	
Pioneer	33K81	154.1	.	105	0.41	1.5	16.0	20364	
Funk's G	4653	152.9	.	100	0.39	1.5	15.7	22354	
Pioneer	3563	136.4	.	103	0.35	2.0	14.4	21209	
Funk's G	5505RR	127.2	.	107	0.32	1.8	14.6	20918	
<i>Average</i>		<i>178.8⁴</i>	<i>160.6</i>	<i>107</i>	<i>0.43</i>	<i>1.4</i>	<i>16.5</i>	<i>22143</i>	
<i>LSD at 10% Level</i>		<i>14.9</i>	<i>9.9</i>	<i>6</i>	<i>0.04</i>	<i>N.S.⁵</i>	<i>1.6</i>	<i>N.S.</i>	
<i>Std. Err. of Entry Mean</i>		<i>6.3</i>	<i>7.3</i>	<i>2</i>	<i>0.02</i>	<i>0.2</i>	<i>0.7</i>	<i>828</i>	

¹ Yields calculated at 15.5% moisture.

² Grain quality rating: 1 = excellent to 5 = poor.

³ Grain moisture at harvest.

⁴ CV = 7.1%, and df for EMS = 90.

⁵ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: March 22, 1999.

Harvested: August 18, 1999.

Seeding Rate: 24,126 seeds/acre in 30" rows.

Soil Type: Greenville sandy clay loam.

Soil Test: P = Medium, K = High, and pH = 6.3.

Fertilization: 100 lb N, 84 lb P₂O₅, and 84 lb K₂O/acre as preplant; 150 lb N/acre sidedress.

Previous Crop: Peanuts.

Management: Subsoiled and rototilled; Prowl, Atrazine and one cultivation used for weed control; Lorsban used for insect control; irrigated 12 inches.

Test conducted by A. E. Coy, M. D. Pippin, and R. R. Pines.

Mid and Full-Season Corn Hybrid Performance, 1999, Irrigated

Plains, Georgia

Company or Brand Name	Hybrid Name	Yield ¹		Ears/ 100 Plants no.	Ear Grain Weight lb	Grain Qty ² rating	Grain ³ %	Plant Population no.
		1999	3-Yr Avg					
		bu/acre						
DeKalb	DK 679	201.0	.	123	0.49	1.8	18.2	19929
DeKalb	DK 697	201.0	.	113	0.48	1.0	18.7	21562
AgriPro	AP 9909	197.6	176.9	117	0.47	1.5	19.4	21018
Pioneer	3163	196.5	167.0	101	0.50	1.3	18.5	22554
NK	N 83-N5	190.0	.	120	0.46	1.0	18.6	20033
Pioneer	3085*	188.1	159.3	112	0.47	1.3	18.8	21247
DeKalb	DK 687	188.0	164.0	129	0.38	1.5	17.9	21998
AgriPro	AP 9939	186.3	.	103	0.48	1.0	18.7	21998
Terra	TR 702E	185.9	163.8	105	0.49	1.5	17.5	20957
NK	N 8811	181.6	165.3	112	0.44	1.0	19.9	21671
Southern States	SS859CL	175.0	.	121	0.43	2.0	17.2	19276
Terra	TR 1167	170.7	158.2	111	0.45	1.3	16.4	19231
Southland	4120	165.1	156.5	116	0.46	1.0	18.5	18000
Pioneer	3146	161.9	163.5	114	0.43	1.0	18.6	19058
Southland	1651	159.0	.	116	0.46	1.8	18.8	17315
Terra	TR 1185	152.4	138.9	104	0.45	1.8	17.4	18622
Average		181.3 ⁴	161.3	113	0.46	1.3	18.3	20279
LSD at 10% Level		16.8	N.S. ⁵	9	0.04	0.5	1.2	1851
Std. Err. of Entry Mean		7.0	4.9	4	0.02	0.2	0.5	779

* Full-season hybrid.

¹ Yields calculated at 15.5% moisture.

² Grain quality rating: 1 = excellent to 5 = poor.

³ Grain moisture at harvest.

⁴ CV = 7.8%, and df for EMS = 45.

⁵ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: March 22, 1999.

Harvested: August 18, 1999.

Seeding Rate: 24,000 seeds/acre in 30" rows.

Soil Type: Greenville sandy clay loam.

Soil Test: P = Medium, K = High, and pH = 6.3.

Fertilization: 100 lb N, 84 lb P₂O₅, and 84 lb K₂O/acre as preplant; 150 lb N/acre sidedress.

Previous Crop: Peanuts.

Management: Subsoiled and rototilled; Prowl, Atrazine and one cultivation used for weed control; Lorsban used for insect control; irrigated 12 inches.

Test conducted by A. E. Coy, M. D. Pippin and R. R. Pines.

Midville, Georgia

Short-Season Corn Hybrid Performance, 1999, Irrigated Midville, Georgia

Company or Brand Name	Hybrid Name	Yield ¹		Ears/ 100 Plants no.	Ear Grain Weight lb	Grain Qty ² rating	Grain moisture ³ %	Plant Population no.
		1999	3-Yr Avg bu/acre					
Funk's G	5516	210.6	.	103	0.40	1.0	15.8	28968
AgriPro	AP 9707	210.2	.	99	0.41	1.0	16.2	29294
Pioneer	3223	210.0	.	107	0.38	1.0	16.7	29403
Southern States	SS729CL	207.5	.	101	0.39	1.0	16.1	29621
AgriPro	HY 9646	205.6	.	102	0.40	1.0	15.5	27987
Terra	TR1157	201.5	.	105	0.38	1.8	15.7	28096
Pioneer	3245	200.9	.	101	0.39	1.0	16.6	28750
Funk's G	4581	199.8	.	99	0.39	1.0	16.6	28968
Zimmerman	Z37	199.0	.	102	0.40	1.0	19.0	28641
Southland Genetics	SG1701	198.1	.	87	0.63	1.8	16.5	27443
Southland Genetics	SG1611	198.0	.	104	0.40	1.3	16.1	27007
Zimmerman	1851W	195.1	.	101	0.40	1.0	17.7	27988
Southern States	SS769BT	194.1	.	94	0.41	2.0	18.1	29294
Southern States	SS747CL	192.7	.	100	0.38	1.0	16.2	28641

Pioneer	32k61	191.0	.	94	0.41	1.8	17.3	28314
Funk's G	5510-A	191.0	.	100	0.40	1.5	18.0	27552
Southern States	SS787	190.1	.	100	0.37	2.0	16.0	28967
Terra	TR 1154	189.1	.	101	0.40	1.0	15.8	26027
AgriPro	AP 9829IMI	187.6	.	107	0.38	1.0	18.0	26898
Asgrow	RX 826	187.4	.	94	0.38	2.0	17.0	30492
AgriPro	HS 9843	185.9	.	100	0.39	1.3	16.9	27116
DeKalb	DK 650	185.6	.	104	0.36	2.0	17.7	28641
Southland Genetics	SG1580	171.1	.	99	0.36	2.0	16.1	27225
Asgrow	RX 889	168.3	.	102	0.34	1.0	17.6	28423
Pioneer	33K81	167.4	.	99	0.36	1.0	16.8	26898
Funk's G	4653	161.4	.	101	0.33	1.0	16.8	27770
Asgrow	RX 913	159.8	.	107	0.32	1.3	17.4	26790
Funk's G	5505RR	159.0	.	100	0.32	2.0	16.2	28532
Terra	TR1147RR	140.7	.	83	0.40	2.0	16.3	27552
<i>Average</i>		188.2 ⁴	.	100	0.39	1.4	16.8	28183
<i>LSD at 10% Level</i>		18.6		N.S. ⁵	N.S.	0.4	0.9	1988
<i>Std. Err. of Entry Mean</i>		7.9		5	0.05	0.2	0.4	845

¹ Yields calculated at 15.5% moisture.

² Grain quality rating: 1 = excellent to 5 = poor.

³ Grain moisture at harvest.

⁴ CV = 8.4%, and df for EMS = 84.

⁵ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted:March 23, 1999.

Harvested:August 25, 1999.

Seeding Rate:31,000 seeds/acre in 30" rows.

Soil Type:Dothan sandy loam.

Soil Test:P = High, K = Medium, and pH = 6.3.

Fertilization:163 lb N, 98 lb P₂O₅, and 147 lb K₂O/acre as preplant; 193 lb N and 100 lb S/acre as sidedress.

Previous Crop:Cotton.

Management:Subsoiled, bedded and rototilled; Dual, Atrazine and two cultivations for weed control; Lorsban used for insect control; irrigated 16 inches.

Test conducted by A. E. Coy, M. D. Pippin, and R. D. McNeill, IV.

Mid and Full-Season Corn Hybrid Performance, 1999, Irrigated Midville, Georgia

Company or Brand Name	Hybrid Name	Yield ¹		Ears/ 100 Plants no.	Ear Grain Weight lb	Grain Qty ² rating	Grain 3 %	Plant Populati n no.
		1999	3-Yr Avg bu/acre					

DeKalb	DK 679	213.0	.	116	0.41	1.0	16.7	25592
Southern States	SS859CL	212.6	.	109	0.44	1.7	16.9	25156
Pioneer	3163	212.1	.	105	0.45	1.0	16.9	25483
NK	N 83-N5	211.6	.	108	0.44	1.3	16.4	25265
AgriPro	AP 9939	206.8	.	104	0.45	1.0	15.6	24503
Terra	TR 1167	205.6	.	107	0.43	1.0	16.3	25374
AgriPro	AP 9909	203.7	.	110	0.42	1.0	16.7	25265
Pioneer	3085*	197.5	.	110	0.45	1.0	16.9	22978
DeKalb	DK 697	196.6	.	118	0.39	1.0	16.8	24394
Pioneer	3146	196.4	.	104	0.43	1.0	16.8	25265
Southland	4120	196.0	.	117	0.44	1.0	16.3	21889
Terra	TR 702E	195.8	.	103	0.41	1.0	15.6	26245
DeKalb	DK 687	195.6	.	126	0.37	1.3	16.7	24067
Southland	1651	194.8	.	119	0.44	1.5	17.4	21453
NK	N 8811	194.1	.	101	0.41	1.0	16.1	26245
Terra	TR 1185	184.3	.	101	0.44	1.3	16.6	23740
<i>Average</i>		<i>201.0⁴</i>	.	<i>110</i>	<i>0.43</i>	<i>1.1</i>	<i>16.5</i>	<i>24557</i>
<i>LSD at 10% Level</i>		<i>12.0</i>		<i>8</i>	<i>0.04</i>	<i>0.3</i>	<i>N.S.⁵</i>	<i>1674</i>
<i>Std. Err. of Entry Mean</i>		<i>5.0</i>		<i>4</i>	<i>0.02</i>	<i>0.2</i>	<i>0.6</i>	<i>704</i>

* Full-season hybrid.

¹ Yields calculated at 15.5% moisture.

² Grain quality rating: 1 = excellent to 5 = poor.

³ Grain moisture at harvest.

⁴ CV = 5.0%, and df for EMS = 45.

⁵ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: March 23, 1999.

Harvested: August 25, 1999.

Seeding Rate: 26,500 seeds/acre in 30" rows.

Soil Type: Dothan sandy loam.

Soil Test: P = High, K = Medium, and pH = 6.3.

Fertilization: 163 lb N, 98 lb P₂O₅, and 147 lb K₂O/acre as preplant; 193 lb N and 100 lb S/acre as sidedress.

Previous Crop: Cotton.

Management: Subsoiled, bedded and rototilled; Dual, Atrazine, and two cultivations for weed control; Lorsban used for insect control; irrigated 16 inches.

Test conducted by A. E. Coy, M. D. Pippin, and R. D. McNeill, IV.

Corn Hybrid Performance in North Georgia

Calhoun, Georgia

Short-Season Corn Hybrid Performance, 1999, Nonirrigated

Calhoun, Georgia								
Company or Brand Name	Hybrid	Yield ¹		Ears/ 100 Plants no.	Ear Grain Weight lb	Grain Qty ² rating	Grain ³ %	Plant Populat n no.
		1999	2-Yr Avg bu/acre					
Garst	8222IT	112.3	.	99	0.27	1.1	13.1	23232
Pioneer	32k61	112.2	78.4	96	0.31	1.1	12.9	20445
Pioneer	33G26	111.4	73.3	99	0.29	1.1	12.6	21054
Pioneer	3245	110.3	79.9	98	0.29	1.1	12.5	21417
Pioneer	33J56	105.8	.	99	0.28	1.4	12.6	20691
Southern States	SS787	100.0	80.3	100	0.25	1.0	12.4	21780
Pioneer	33K81	99.7	.	99	0.26	1.4	12.4	21175
Southern States	SS729CL	94.6	.	99	0.24	1.3	12.1	21413
Southern States	SS769BT	87.4	.	102	0.24	1.1	12.1	19239
Southern States	SS747CL	86.8	.	98	0.25	1.3	12.1	18997
Funk's G	5510-A	84.7	74.3	98	0.24	1.6	12.7	19481
<i>Average</i>		<i>100.4⁴</i>	<i>77.2</i>	<i>99</i>	<i>0.27</i>	<i>1.2</i>	<i>12.5</i>	<i>20811</i>
<i>LSD at 10% Level</i>		<i>13.7</i>	<i>N.S.⁵</i>	<i>N.S.</i>	<i>0.03</i>	<i>0.2</i>	<i>0.4</i>	<i>N.S.</i>
<i>Std. Err. of Entry Mean</i>		<i>5.7</i>	<i>2.9</i>	<i>1</i>	<i>0.01</i>	<i>0.1</i>	<i>0.1</i>	<i>1136</i>

¹ Yields calculated at 15.5% moisture.

² Grain quality rating: 1 = excellent to 5 = poor.

³ Grain moisture at harvest.

⁴ CV = 11.3%, and df for EMS = 30.

⁵ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: May 11, 1999.

*This test first planted on April 14, but due to stand loss was replanted May 11.

Harvested: September 22, 1999.

Seeding Rate: 25,500 seeds/acre in 30" rows.

Soil Type: Rome gravelly clay loam.

Soil Test: P = High, K = Medium, and pH = 6.2.

Fertilization: 50 lb N, 47 lb P₂O₅, and 70 lb K₂O/acre as preplant; 100 lb N/acre sidedress.

Previous Crop: Soybean.

Management: Moldboard plowed and rototilled; Aatrex and Lasso used for weed control.

Test conducted by P.A. Rose, G. Rawls, J. Stubbs, and J. L. Day.

Mid and Full-Season Corn Hybrid Performance, 1999, Nonirrigated

Calhoun, Georgia								
Company or Brand Name	Hybrid Name	Yield ¹		Ears/ 100	Ear Grain	Grain Qty ²	Grain	Plant Populat

		1999	3-Yr Avg					%
		bu/acre						
Pioneer	33J56	243.2	.	106	0.52	1.0	18.6	25894
Pioneer	32k61	237.4	207.8	101	0.52	1.0	19.4	26741
Pioneer	33G26	227.7	.	109	0.51	1.0	19.7	24321
Pioneer	33K81	216.1	.	106	0.46	1.3	19.4	26136
Pioneer	3245	206.6	193.3	101	0.48	1.0	18.1	24805
Southern States	SS787	196.7	202.7	103	0.43	1.0	17.9	25773
Southern States	SS729CL	193.1	.	102	0.44	1.1	17.4	24926
Southern States	SS747CL	180.7	.	101	0.41	1.1	18.1	25531
Southern States	SS769BT	177.1	.	106	0.39	1.3	18.6	25047
DeKalb	DK 650	176.2	.	107	0.39	1.3	17.6	24563
<i>Average</i>		<i>205.5⁴</i>	<i>201.2</i>	<i>104</i>	<i>0.45</i>	<i>1.1</i>	<i>18.5</i>	<i>25374</i>
<i>LSD at 10% Level</i>		<i>15.7</i>	<i>N.S.⁵</i>	<i>5</i>	<i>0.04</i>	<i>N.S.</i>	<i>1.0</i>	<i>N.S.</i>
<i>Std. Err. of Entry Mean</i>		<i>6.5</i>	<i>3.0</i>	<i>2</i>	<i>0.02</i>	<i>0.1</i>	<i>0.4</i>	<i>711</i>

¹ Yields calculated at 15.5% moisture.

² Grain quality rating: 1 = excellent to 5 = poor.

³ Grain moisture at harvest.

⁴ CV = 6.3%, and df for EMS = 27.

⁵ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: May 11, 1999.

Harvested: October 15, 1999.

Seeding Rate: 27,000 seeds/acre in 30" rows.

Soil Type: Bradson clay loam.

Soil Test: P = High, K = Medium, and pH = 6.3.

Fertilization: 30 lb N, 60 lb P₂O₅, and 90 lb K₂O/acre as preplant; 125 lb N/acre sidedress.

Previous Crop: Soybean.

Mid and Full-Season Corn Hybrid Performance, 1999, Nonirrigated Blairsville, Georgia

Company or Brand Name	Hybrid Name	Yield ¹		Ears/ 100 Plants no.	Ear Grain Weight lb	Grain Qty ² rating	Grain ³ %	Plant Populati n no.
		1999	3-Yr Avg bu/acre					
Pioneer	3163	207.6	203.7	119	0.41	1.0	18.8	25289
Southern States	SS859CL	206.3	.	107	0.47	1.1	20.6	24684
NK	N 8811	194.0	202.2	107	0.50	1.1	21.6	21659
Pioneer	3085*	190.9	202.6	121	0.44	1.0	22.7	22143
DeKalb	DK 687	181.1	.	128	0.37	1.0	20.7	23353

<i>Average</i>	<i>196.0</i> ⁴	<i>202.8</i>	<i>116</i>	<i>0.44</i>	<i>1.1</i>	<i>20.9</i>	<i>23426</i>
<i>LSD at 10% Level</i>	<i>10.3</i>	<i>N.S.</i> ⁵	<i>13</i>	<i>0.05</i>	<i>N.S.</i>	<i>1.3</i>	<i>1738</i>
<i>Std. Err. of Entry Mean</i>	<i>4.1</i>	<i>3.1</i>	<i>5</i>	<i>0.02</i>	<i>0.1</i>	<i>0.5</i>	<i>689</i>

* Full-season hybrid.

¹ Yields calculated at 15.5% moisture.

² Grain quality rating: 1 = excellent to 5 = poor.

³ Grain moisture at harvest.

⁴ CV = 4.2%, and df for EMS = 12.

⁵ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: May 11, 1999.

Harvested: October 15, 1999.

Seeding Rate: 25,500 seeds/acre in 30" rows.

Soil Type: Bradson clay loam.

Soil Test: P = High, K = Medium, and pH = 6.3.

Fertilization: 30 lb N, 60 lb P₂O₅, and 90 lb K₂O/acre as preplant; 125 lb N/acre sidedress.

Previous Crop: Soybean.

Management: Moldboard plowed and disked; Aatrex, Bicep, and one cultivation with weed control.

Test conducted by P. A. Rose, J. L. Day, and H. D. Garrett.

HIGH OIL CORN TESTS RESULTS

High Oil Corn Hybrid Performance in the Coastal Plain

Tifton, Georgia

High Oil Corn Hybrid Performance, 1999, Irrigated Tifton, Georgia

Company or Brand Name	Hybrid Name	Yield ¹		Ears/100 Plants no.	Ear Grain Weight lb	Grain Qlty ² rating	Grain ³ %	Plant Pop. no.	Erect Plants %
		1999	2-Yr Avg						
		bu/acre							
Pioneer	3245S	185.8	173.5	101	0.35	1.8	16.6	29730	97
Grabow	91575TC	168.2	.	100	0.33	2.0	16.1	28532	86
	2								
Grabow	71580Bt/TC3	167.4	.	101	0.32	2.3	17.0	29948	93
Grabow	71580TC	162.7	163.4	100	0.33	2.3	16.8	28423	97
	3								

Grabow	71651TC 3	162.4	.	104	0.32	1.8	17.1	28205	72
Grabow	71593-S	161.8	156.8	100	0.31	2.0	17.5	29947	90
Pioneer	32R90	160.7	167.6	100	0.31	2.0	16.6	29294	94
Grabow	71651TC 2.5	158.9	.	107	0.29	2.0	18.1	29512	79
Grabow	71577TC 2.5	154.3	.	100	0.30	2.0	15.6	29294	78
Grabow	71577Bt/ TC2	154.3	.	100	0.29	1.8	14.6	29403	83
Grabow	1580TC	154.1	.	102	0.31	2.0	16.6	28097	86
Grabow	1611-S	154.0	149.3	102	0.28	2.3	16.5	30928	97
Pfister	SK2550- Super Kernoil	153.9	.	102	0.28	2.0	16.3	30165	86
AgriGold	A6460TC	153.1	.	101	0.28	2.0	15.6	30057	79
SS	767TC	152.1	.	101	0.29	2.0	17.1	29621	91
Grabow	71593TC 2.5	152.0	.	100	0.29	2.0	15.6	29185	87
AgriGold	A6432TC	150.9	.	100	0.29	2.5	15.9	29294	92
AgriGold	A6590TC	150.0	.	100	0.30	2.0	18.4	29294	83
Pfister	SK2652- Super Kernoil	149.3	.	100	0.28	2.0	15.6	29948	81
Grabow	71580Bt/ TC	147.9	.	103	0.28	2.0	18.0	29294	67
Grabow	71580Bt/ TC2.5	147.8	.	100	0.27	2.3	16.1	30274	80
SS	727TC	147.5	.	99	0.27	2.0	15.0	30274	87
Pfister	SK3977- Super Kernoil	146.5	.	100	0.28	2.0	17.8	30165	76
Grabow	81533TC 3	145.5	.	100	0.29	2.0	16.4	28750	94
Grabow	1611TC3	145.4	.	104	0.28	2.0	17.7	29185	91
Grabow	71577Bt/ TC	145.2	.	101	0.27	2.3	16.0	29621	76
Grabow	71593TC 3	143.7	.	99	0.29	2.0	16.2	28641	90
Grabow	71580TC 2.5	142.7	.	100	0.29	2.3	16.7	27987	89
Grabow	71577TC 2	142.4	.	99	0.26	2.0	15.2	30601	69
AgriGold	A6490TC	142.2	.	101	0.28	2.3	16.7	28641	90
Pfister	SK2680- Super Kernoil	142.0	.	100	0.26	2.0	16.4	30819	82
Grabow	81562TC 2	139.6	.	100	0.27	2.0	15.1	29512	88

Grabow	81533TC 2	137.2	.	101	0.27	2.3	16.5	28205	93
Pfister Super Kernoil NK	SK3049- 19 N6423T C	135.2	.	100	0.27	2.3	16.6	28205	82
Garst	8366TC2	128.9	148.3	99	0.24	2.0	15.6	30928	54
Grabow	91567TC 2	126.7	.	103	0.24	2.0	14.8	28532	79
Pfister Super Kernoil	SK3001- 19	126.2	.	101	0.25	2.0	15.7	28641	93
Wilson	EDX 92	120.6	126.9	99	0.25	2.0	18.2	27879	78
Pfister Super Kernoil NK	SK102-1 9 N5220T C	119.4	.	98	0.25	2.0	17.2	28314	92
Wilson	EDX 30	109.6	132.4	99	0.21	2.3	17.7	30492	94
<i>Average</i>		146.1 ⁴	150.9	101	0.28	2.1	16.4	29343	84
<i>LSD at 10% Level</i>		14.4	N.S. ⁵	N.S.	0.03	N.S.	1.2	1612	12
<i>Std. Err. of Entry</i>		6.2	4.7	1	0.01	0.2	0.5	688	5
<i>Mean</i>									

¹ Yields calculated at 15.5% moisture.

² Grain quality rating: 1 = excellent to 5 = poor.

³ Grain moisture at harvest.

⁴ CV = 8.4%, and df for EMS = 123.

⁵ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: April 14, 1999.

Harvested: August 26, 1999.

Seeding Rate: 31,627 seeds/acre in 30" rows.

Soil Type: Tifton loamy sand.

Soil Test: P = High, K = Medium, and pH = 6.2.

Fertilization: 166 lb N, 130 lb P₂O₅, and 195 lb K₂O/acre as preplant; 185 lb N and 31 lb S/acre as sidedress.

Previous Crop: Cotton.

Management: Moldboard plowed and rototilled; Prowl, Atrazine and one cultivation used for weed control; Lorsban used for insect control; irrigated 8 inches.

Test conducted by A. E. Coy and M. D. Pippin.

Plains, Georgia

Plains, Georgia:								
High Oil Corn Hybrid Performance, 1999, Irrigated								
Company or Brand Name	Hybrid Name	Yield ¹		Ears/ 100 Plants no.	Ear Grain Weight lb	Grain Qty ² rating	Grain Moistu re ³ %	Plan Pop no
		1999	2-Yr Avg					
		bu/acre						
Pioneer	3245S	185.3	174.3	.	.	1.0	15.7	.
Grabow	91575TC2	176.9	.	.	.	1.8	13.5	.
Pioneer	32R90	174.7	153.5	.	.	1.3	14.4	.
Grabow	71593TC2.5	164.7	.	.	.	1.3	15.3	.
NK	N6423TC	159.0	147.3	.	.	1.0	13.7	.
Grabow	71580TC3	155.3	145.3	.	.	1.8	14.5	.
AgriGold	A6460TC	154.8	.	.	.	1.8	15.2	.
Grabow	81533TC3	154.1	133.1	.	.	1.7	12.6	.
Grabow	1580TC	154.0	.	.	.	1.8	14.0	.
Grabow	71593-S	153.7	148.3	.	.	1.3	14.1	.
Grabow	71580Bt/TC2.5	152.2	.	.	.	1.6	14.7	.
AgriGold	A6590TC	152.1	.	.	.	1.8	15.9	.
AgriGold	A6432TC	151.9	.	.	.	1.3	12.2	.
AgriGold	A6490TC	150.6	.	.	.	1.5	13.4	.
Grabow	71651TC2.5	149.9	.	.	.	1.8	16.1	.
Pfister Super Kernoil	SK2550-19	149.5	.	.	.	1.4	12.3	.
Grabow	71580TC2.5	148.3	.	.	.	1.0	14.9	.
Pfister Super Kernoil	SK3049-19	146.8	.	.	.	1.9	13.8	.
Pfister Super Kernoil	SK3001-19	146.8	.	.	.	1.5	13.3	.
Grabow	71580Bt/TC	146.3	.	.	.	1.5	15.8	.
Garst	8366TC2	145.7	144.6	.	.	1.3	13.4	.
Pfister Super Kernoil	SK3977-19	143.1	.	.	.	1.7	14.4	.
Grabow	71577TC2	142.7	.	.	.	1.7	14.8	.
Grabow	71577Bt/TC2	140.2	.	.	.	1.8	13.5	.
Grabow	71651TC3	139.6	.	.	.	1.5	16.8	.
Grabow	71577Bt/TC	139.3	.	.	.	1.5	13.2	.
Grabow	71577TC2.5	139.1	.	.	.	1.7	13.6	.
Grabow	81533TC2	138.4	.	.	.	1.5	13.2	.
SS	767TC	136.9	.	.	.	1.0	14.6	.
Pfister Super Kernoil	SK2680-19	136.7	.	.	.	1.8	12.3	.
Grabow	1611TC3	132.7	.	.	.	1.3	16.8	.
Grabow	71593TC3	132.0	.	.	.	1.5	14.1	.
Grabow	71580Bt/TC3	131.7	.	.	.	1.5	14.2	.
Pfister Super Kernoil	SK2652-19	130.4	.	.	.	1.8	14.0	.
Grabow	81562TC2	129.7	.	.	.	1.9	13.6	.
Pfister Super Kernoil	SK102-19	128.4	.	.	.	1.4	14.0	.
Grabow	1611-S	128.0	127.2	.	.	1.5	15.3	.
Wilson	EDX 30	123.6	129.6	.	.	1.3	18.7	.
SS	727TC	120.3	.	.	.	2.0	13.2	.
NK	N5220TC	108.0	120.9	.	.	1.5	12.2	.
Grabow	91567TC2	104.0	.	.	.	1.6	12.4	.
Wilson	EDX 92	103.8	108.0	.	.	1.5	16.1	.
Average		142.9 ⁴	139.3	.	.	1.5	14.3	.

<i>LSD at 10% Level</i>	20.6	15.9	0.5	1.2
<i>Std. Err. of Entry Mean</i>	8.8	6.7	0.2	0.5

¹ Yields calculated at 15.5% moisture.

² Grain quality rating: 1 = excellent to 5 = poor.

³ Grain moisture at harvest.

⁴ CV = 12.3%, and df for EMS = 123.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: April 13, 1999.

Harvested: September 1, 1999.

Seeding Rate: 31,627 seeds/acre in 30" rows.

Soil Type: Greenville sandy clay loam.

Soil Test: P = Medium, K = High, and pH = 6.3.

Fertilization: 100 lb N, 84 lb P₂O₅, and 84 lb K₂O/acre as preplant; 100 lb N/acre as sidedress.

Previous Crop: Peanuts.

Management: Subsoiled and rototilled; Prowl, Atrazine, Permit and one cultivation used for weed control; irrigated 8 inches.

Test conducted by A. E. Coy, M. D. Pippin and R. R. Pines.

Seed Yield and Quality Characteristics of High Oil Corn Hybrids and Top Cross Blends Grown in Georgia, 1999

Seed Yield and Quality Characteristics of High Oil Corn Hybrids and Top Cross Blends Grown in Georgia, 1999

Part 1

Company or Brand Name	Hybrid Name	Seed Yield			Total Oil ¹ — O.P. ²		Protein—
		Tifton	Plains	Avg	Tifton	Plains	Tifton
		---- bu/acre ----			%		%
AgriGold	A6432TC	150.9	151.9	151.4	7.4	7.2	9.1
AgriGold	A6460TC	153.1	154.8	153.9	7.1	7.3	9.7
AgriGold	A6490TC	142.2	150.6	146.4	8.4	7.8	10.0
AgriGold	A6590TC	150.0	152.1	151.1	7.7	7.0	8.9
Garst	8366TC2	128.9	145.7	137.3	7.9	7.4	9.6
Grabow	1580TC	154.1	154.0	154.0	6.9	7.2	8.5
Grabow	1611-S	154.0	128.0	141.0	6.9	6.9	9.9
Grabow	1611TC3	145.4	132.7	139.0	7.4	6.9	9.4
Grabow	71577Bt/TC	145.2	139.3	142.2	7.8	7.0	10.0
Grabow	71577Bt/TC2	154.3	140.2	147.2	7.0	7.2	9.5
Grabow	71577TC2	142.4	142.7	142.6	6.9	7.4	9.4
Grabow	71577TC2.5	154.3	139.1	146.7	7.0	7.4	9.4
Grabow	71580Bt/TC	147.9	146.3	147.1	7.7	6.9	9.5
Grabow	71580Bt/TC2.5	147.8	152.2	150.0	7.4	7.1	8.7
Grabow	71580Bt/TC3	167.4	131.7	149.5	7.8	6.9	9.3
Grabow	71580TC2.5	142.7	148.3	145.5	7.0	7.3	10.0

Grabow	71580TC3	162.7	155.3	159.0	7.4	7.4	8.9
Grabow	71593-S	161.8	153.7	157.7	7.3	7.0	9.1
Grabow	71593TC2.5	152.0	164.7	158.3	7.1	7.4	9.0
Grabow	71593TC3	143.7	132.0	137.9	7.5	7.4	9.2
Grabow	71651TC2.5	158.9	149.9	154.4	7.1	7.0	9.8
Grabow	71651TC3	162.4	139.6	151.0	7.5	7.9	9.8
Grabow	81533TC2	137.2	138.4	137.8	7.4	7.6	9.7
Grabow	81533TC3	145.5	154.1	149.8	7.4	7.6	10.3
Grabow	81562TC2	139.6	129.7	134.6	8.2	8.8	9.0
Grabow	91567TC2	126.7	104.0	115.3	8.3	8.3	10.1
Grabow	91575TC2	168.2	176.9	172.5	7.3	7.5	9.5
NK	N5220TC	118.1	108.0	113.0	7.0	7.1	10.1
NK	N6423TC	130.7	159.0	144.8	6.9	6.9	9.7
Pfister	SK102-19	119.4	128.4	123.9	8.1	8.0	11.1
Pfister	SK2550-19	153.9	149.5	151.7	7.9	8.0	9.8
Pfister	SK2652-19	149.3	130.4	139.8	7.1	7.1	8.8
Pfister	SK2680-19	142.0	136.7	139.3	7.4	6.8	9.3
Pfister	SK3001-19	126.2	146.8	136.5	7.1	8.2	10.4
Pfister	SK3049-19	135.2	146.8	141.0	7.1	7.0	9.0
Pfister	SK3977-19	146.5	143.1	144.8	7.5	7.4	9.3
Pioneer	3245S	185.8	185.3	185.5	6.9	6.6	9.5
Pioneer	32R90	160.7	174.7	167.7	6.9	7.0	10.2
SS	727TC	147.5	120.3	133.9	6.8	6.4	8.9
SS	767TC	152.1	136.9	144.5	7.6	7.0	9.4
Wilson	EDX 30	109.6	123.6	116.6	7.0	6.7	10.6
Wilson	EDX 92	120.6	103.8	112.2	7.8	6.5	10.2
<i>Average</i>		<i>146.1</i>	<i>142.9</i>	<i>144.5</i>	<i>7.4</i>	<i>7.3</i>	<i>9.5</i>
<i>LSD at 10% Level</i>		<i>14.4</i>	<i>20.6</i>	<i>12.5</i>	<i>N.S.³</i>	<i>0.5</i>	<i>1.0</i>
<i>Std. Err. of Entry Mean</i>		<i>6.2</i>	<i>8.8</i>	<i>6.2</i>	<i>0.5</i>	<i>0.2</i>	<i>0.4</i>

¹ Oil percentage expressed on a zero moisture basis.

² Open pollinated (O.P.) derived seed sample.

³ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore, an LSD value was not calculated.

Seed Yield and Quality Characteristics of High Oil Corn Hybrids and Top Cross Blends Grown in Georgia, 1999

Part 2

Company or Brand Hybrid Name		Starch— Tifton	O.P. Plains	Met. Energy— Tifton	O.P. Plains	Lysine— O. Tifton
		%		Kcal/lb		%
AgriGold	A6432TC	67.4	67.2	1641	1653	0.30
AgriGold	A6460TC	67.2	67.0	1641	1653	0.31
AgriGold	A6490TC	65.6	65.0	1663	1671	0.32
AgriGold	A6590TC	66.8	67.8	1651	1639	0.30
Garst	8366TC2	66.5	66.8	1656	1640	0.31
Grabow	1580TC	68.4	67.7	1633	1644	0.29
Grabow	1611-S	67.5	66.7	1630	1641	0.30

Grabow	1611TC3	67.1	67.3	1635	1635	0.30
Grabow	71577Bt/TC	66.0	67.3	1653	1644	0.31
Grabow	71577Bt/TC2	67.8	67.1	1639	1653	0.30
Grabow	71577TC2	67.9	67.0	1638	1654	0.30
Grabow	71577TC2.5	67.5	67.1	1642	1658	0.30
Grabow	71580Bt/TC	67.1	67.1	1639	1646	0.31
Grabow	71580Bt/TC2.5	67.9	67.2	1642	1649	0.30
Grabow	71580Bt/TC3	66.7	68.0	1652	1630	0.31
Grabow	71580TC2.5	67.9	67.7	1638	1639	0.31
Grabow	71580TC3	67.9	66.9	1642	1654	0.30
Grabow	71593-S	68.2	67.2	1637	1648	0.30
Grabow	71593TC2.5	68.1	66.9	1635	1656	0.30
Grabow	71593TC3	67.3	66.7	1644	1659	0.30
Grabow	71651TC2.5	67.7	67.3	1641	1650	0.31
Grabow	71651TC3	66.9	65.6	1645	1671	0.31
Grabow	81533TC2	67.0	66.3	1649	1655	0.31
Grabow	81533TC3	66.4	66.0	1641	1667	0.31
Grabow	81562TC2	66.6	65.5	1653	1678	0.31
Grabow	91567TC2	65.5	65.4	1668	1668	0.32
Grabow	91575TC2	66.8	66.5	1638	1655	0.30
NK	N5220TC	67.6	68.1	1636	1647	0.31
NK	N6423TC	68.1	67.7	1639	1651	0.30
Pfister	SK102-19	65.6	66.0	1666	1667	0.33
Pfister	SK2550-19	66.1	65.0	1660	1675	0.31
Pfister	SK2652-19	68.3	67.4	1632	1648	0.29
Pfister	SK2680-19	67.8	68.3	1641	1637	0.30
Pfister	SK3001-19	66.9	65.8	1635	1671	0.31
Pfister	SK3049-19	68.0	67.7	1633	1648	0.30
Pfister	SK3977-19	67.4	67.3	1641	1651	0.30
Pioneer	3245S	67.5	67.4	1638	1633	0.30
Pioneer	32R90	67.6	66.6	1630	1639	0.31
SS	727TC	68.1	68.0	1633	1633	0.29
SS	767TC	67.1	67.5	1651	1638	0.31
Wilson	EDX 30	67.2	66.4	1638	1642	0.31
Wilson	EDX 92	66.2	68.4	1657	1633	0.32
Average		67.2	66.9	1643	1650	0.31
LSD at 10% Level		N.S.	0.9	15	N.S.	0.01
Std. Err. of Entry Mean		0.8	0.4	6	10	0.01

¹ Oil percentage expressed on a zero moisture basis.

² Open pollinated (O.P.) derived seed sample.

³ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore, an LSD value was not calculated.

SILAGE TESTS RESULTS

Selection of Corn Hybrids for Use as Silage

J.C. Johnson, Jr., and R.N. Gates

The information presented in the following tables is intended to help producers select corn hybrids that produce large yields of high quality silage. Consistently high yields over several locations and years reliably show a hybrid's ability to produce top yields. Primary quality factors are the proportion of grain and the digestibility of the grain and non-grain portions of the hybrid. Hybrids differ in the proportion of grain they produce.

In the past, it was accepted that a hybrid with the highest proportion of grain made the highest quality silage. Research has shown that, many times, this is not true. In-vitro dry matter digestibility (IVDMD) is a measure of the percentage of a feedstuff the animal can digest and utilize. IVDMD values for grain are high and do not vary greatly among hybrids. IVDMD values for the non-grain portion (fodder) of the corn plant are lower but much more variable among hybrids compared to the grain portion. Thus, one hybrid with a lower proportion of grain could have high quality (digestibility) because the IVDMD of its fodder portion was much higher than another hybrid having a higher proportion of grain but a much lower IVDMD of its fodder portion.

Blairsville, Calhoun, Griffin, and Tifton, Georgia, 1999

Summary of Evaluations of Corn Hybrids for Silage Blairsville, Calhoun, Griffin, and Tifton, Georgia, 1999										
Compa ny or Brand Name	Hybrid No.	Maturity Class	Quality Factors ¹				Dry Matter Yield			
			IVDMD		Whole Plant ²	Grain Portion %	Statew Avg*	Blairsv ille	Calhou n	Griffin Tifton
			Fodder	Grain						
			----- % -----						tons/acre	
Short and Mid-Season										
AgriPro AP 9707		S	59.6	93.4	77.4	53	.	.	.	9.3
AgriPro AP 9829IMI		S	56.9	93.1	75.6	52	.	.	.	10.4
AgriPro AP 9909		M	63.9	93.4	79.5	53	.	.	.	10.1
AgriPro AP 9939		M	59.2	95.3	78.3	53	.	.	.	10.6
AgriPro HS 9843		S	57.2	93.4	76.3	53	.	.	.	8.1
AgriPro HY 9646		S	58.7	94.7	76.8	50	.	.	.	10.5
Asgrow RX 897		S	58.7	94.1	76.7	51	.	.	.	9.2
Asgrow RX 913		S	58.5	92.6	77.2	55	.	.	.	8.7
DeKalb DK 687		M	60.9	94.4	77.7	50	9.8	10.8	.	8.1
Garst 8220		M	60.0	92.5	77.7	55	.	.	.	7.7
NK N 83-N5		M	61.4	93.5	78.0	52	.	.	.	10.7
NK N 83-R7		M	63.9	93.0	78.9	51	.	.	.	10.7
NK N 8811		M	59.7	93.4	77.5	53	11.2	12.8	.	10.3

Pioneer3154	M	59.6	92.6	75.7	49	10.4	13.0	.	8.8	9.4
Pioneer3167	M	61.7	94.0	77.4	49	9.4	10.4	.	7.8	9.9
Pioneer31G20	M	58.4	92.3	75.1	49	12.3	15.4	.	9.4	12.0
Pioneer32k61	S	59.1	94.3	76.0	48	10.0	11.7	.	8.1	10.2
Pioneer33J56	S	58.5	93.5	77.3	54	10.7	12.8	.	8.3	11.0
Southern CL States	M	63.1	92.0	78.3	52	10.0	11.5	.	8.6	9.8
Southern CL States	M	55.2	94.2	75.6	52	10.3	11.5	.	8.7	10.7
Southern CL States	M	60.4	94.1	78.1	52	9.1	9.8	.	8.0	9.6
Southern CL States	M	60.1	93.7	77.2	51	9.9	12.2	.	7.6	10.0
Zimmerman 1851W	S	62.1	93.5	76.4	45	.	.	.	.	11.3
Zimmerman Z64W	S	60.0	93.6	75.4	46	.	.	.	.	10.5
Average		59.9	93.5	77.1	51	10.3	12.0	.	8.5	10.3
LSD at 10% Level		3.5	N.S. ³	1.9	2	-	1.9		1.1	1.0
Std. Err. of Entry Mean		1.5	1.0	1.0	1	-	0.8		0.4	0.4
Full-Season										
Greenwood 830	F	50.6	86.0	66.3	44	.	.	.	.	10.3
Greenwood 835	F	55.0	86.1	68.0	42	.	.	.	.	12.2
Greenwood 840	F	49.5	78.4	62.2	44	.	.	.	.	9.9
NK McNair 508	F	52.3	86.8	67.3	44	.	.	.	.	10.5
NK NX 9188	F	52.4	87.1	69.8	50	.	.	.	.	12.0
Pioneer3085	F	50.7	83.7	68.4	54	9.7	10.7	.	8.4	9.9
Southern Exp 79579	F	56.1	84.1	68.9	45	10.6	11.5	.	8.8	11.4
Southland Gen 1 etics	M	56.3	83.5	70.5	52	.	.	.	.	11.3
Southland Gen 6 etics	F	55.2	85.4	68.5	44	.	.	.	.	9.5
Southland Gen 7 etics	F	49.3	88.3	66.2	44	.	.	.	.	10.7
Southland 9006C	F	54.0	86.2	68.0	43	.	.	.	.	10.7

nd Gen

etics

<i>Average</i>	<i>52.9</i>	<i>85.1</i>	<i>67.7</i>	<i>46</i>	<i>10.2</i>	<i>11.1</i>	<i>.</i>	<i>8.6</i>	<i>10.7</i>
<i>LSD at 10% Level</i>	<i>3.4</i>	<i>N.S.</i>	<i>3.7</i>	<i>4</i>	<i>-</i>	<i>N.S.</i>		<i>N.S.</i>	<i>1.2</i>
<i>Std. Err. of Entry Mean</i>	<i>1.4</i>	<i>2.4</i>	<i>1.5</i>	<i>2</i>	<i>-</i>	<i>0.8</i>		<i>0.4</i>	<i>0.5</i>

* Tifton, Griffin, and Blairsville.

¹ Quality factors taken from the replicated silage trial at Tifton.

² This variable is calculated to reflect the relative contribution of each component using the following formula: whole plant IVDMD = fodder IVDMD X percent fodder + grain IVDMD X percent grain.

³ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries performing equally to highest performing entry within a column based on Fisher's protected LSD (P = 0.10).

Tifton, Georgia

Evaluation of Corn Hybrids for Silage, 1999, Irrigated Tifton, Georgia

Company or Brand Name	Hybrid Name	Maturity Class	Forage Yield		Dry Matter %	Grain Portion %	Plant Pop. no.
			Dry tons/acre	Green			
Short and Mid-Season							
Pioneer	31G20	M	12.0	23.1	52.2	49	25701
Zimmerman	1851	S	11.3	23.7	47.6	45	22869
Pioneer	33J56	S	11.0	23.6	47.1	54	24612
NK	N 83-N5	M	10.7	21.1	50.9	52	25483
Southern States	SS859CL	M	10.7	21.7	49.5	52	23740
NK	N 83-R7	M	10.7	23.6	45.3	51	23522
Asgrow	RX 913	S	10.6	20.5	51.8	55	25483
DeKalb	DK 687	M	10.6	25.2	42.1	50	23740
AgriPro	AP 9939	M	10.6	22.5	47.0	53	23958
NK	N 8811	M	10.6	22.3	47.6	53	24829
AgriPro	HY 9646	S	10.5	20.1	52.2	50	23740
Zimmerman	Z64W	S	10.5	22.9	45.7	46	24394
AgriPro	AP 9829IMI	S	10.4	21.6	48.4	52	25483
Asgrow	RX 897	S	10.2	20.7	49.3	51	25047
Pioneer	32k61	S	10.2	20.7	49.5	48	23740
AgriPro	AP 9909	M	10.1	21.7	46.6	53	24176
Southern States	SS943	M	10.0	21.7	46.1	51	24176
Garst	8220	M	9.9	21.9	45.2	55	23523
Pioneer	3167	M	9.9	23.7	42.0	49	24394
Southern States	SS849CL	M	9.8	21.8	45.1	52	23522
Southern States	SS897	M	9.6	21.8	44.2	52	23740

Pioneer	3154	M	9.4	18.9	49.9	49	23740	1
AgriPro	AP 9707	S	9.3	21.8	42.9	53	24612	
AgriPro	HS 9843	S	8.1	16.9	48.0	53	23740	
Average			10.3 ¹	21.8	47.3	51	24248	1
LSD at 10% Level			1.0	2.6	3.3	2	1403	6
Std. Err. of Entry Mean			0.4	1.1	1.4	1	595	6
Full-Season								
Greenwood	835	F	12.2	29.7	41.1	42	25047	1
NK	NX 9188	F	12.0	26.1	45.9	50	24612	
Southern States	Exp 79579	F	11.4	26.0	43.8	45	24611	
Southland Genetics	SG1701	M	11.3	23.6	48.3	52	24176	
Southland Genetics	SG1877	F	10.7	27.2	39.3	44	21345	1
Southland Genetics	9006C	F	10.7	24.3	43.9	43	25700	1
NK	McNair 508	F	10.5	24.4	43.2	44	24612	1
Greenwood	830	F	10.3	24.5	41.9	44	23522	1
Greenwood	840	F	9.9	26.0	38.0	44	22216	1
Pioneer	3085	F	9.9	25.4	39.1	54	24612	1
Southland Genetics	SG1836	F	9.5	24.7	38.3	44	24611	9
Average			10.7 ²	25.6	42.1	46	24097	1
LSD at 10% Level			1.2	N.S. ³	3.3	4	2180	M
Std. Err. of Entry Mean			0.5	1.4	1.4	2	908	6

¹ CV = 8.7%, and df for EMS = 68.

² CV = 9.4%, and df for EMS = 30.

³ The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: March 18, 1999.

Harvested: July 23, 1999.

Seeding Rate: 26,000 seeds/acre in 30" rows.

Soil Type: Tifton loamy sand.

Soil Test: P = High, K = Medium, and pH = 6.0.

Fertilization: 116 lb N, 130 lb P₂O₅, and 195 lb K₂O/acre as preplant; 31 lb N and 31 lb S/acre as sidedress.

Previous Crop: Soybean.

Management: Moldboard plowed and rototilled; Sutan, Accent, Penumon, and Lorsban used for weed control; one cultivation used for weed control; Lorsban used for insect control; irrigated 6 inches.

Test conducted by A. E. Coy and M. D. Pippin.

Griffin, Georgia

Evaluation of Corn Hybrids for Silage, 1999, Irrigated

Griffin, Georgia

Company or Brand Name	Hybrid Name	Maturity Class	Forage Yield	Dry Matter	Grain Portion	Plant Pop.	
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			Dry	Green	%	%	no.	
			tons/acre					
NK	N 8811	M	10.3	21.3	48.4	47	25168	9
Pioneer	31G20	M	9.4	15.9	59.1	49	28798	8
Asgrow	RX 897	S	9.2	16.4	56.0	47	27830	
Pioneer	3154	M	8.8	14.2	61.8	52	25410	8
Southern States	Exp 79579	F	8.8	18.1	48.6	51	27830	
Asgrow	RX 913	S	8.7	16.7	51.9	50	25894	
Southern States	SS859CL	M	8.7	15.8	55.0	51	22748	
Southern States	SS849CL	M	8.6	16.4	52.5	53	26620	
Pioneer	3085	F	8.4	18.9	44.8	52	26136	8
Pioneer	33J56	S	8.3	14.7	56.0	49	24926	
Pioneer	32k61	S	8.1	14.0	58.6	47	25652	
DeKalb	DK 687	M	8.1	15.0	53.7	47	26378	
Southern States	SS897	M	8.0	16.1	49.7	50	27588	
Pioneer	3167	M	7.8	14.8	52.5	51	25894	
Garst	8220	M	7.7	14.4	53.5	53	26862	
Southern States	SS943	M	7.6	14.6	52.2	51	24200	
<i>Average</i>			<i>8.5¹</i>	<i>16.1</i>	<i>53.4</i>	<i>50</i>	<i>26121</i>	<i>8</i>
<i>LSD at 10% Level</i>			<i>1.1</i>	<i>1.8</i>	<i>3.8</i>	<i>3</i>	<i>N.S.²</i>	<i>M</i>
<i>Std. Err. of Entry Mean</i>			<i>0.4</i>	<i>0.8</i>	<i>0.6</i>	<i>1</i>	<i>1662</i>	<i>8</i>

¹ CV = 10.6%, and df for EMS = 45.

² The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted:April 8, 1999.

Harvested:September 1, 1999.

Seeding Rate:31,000 seeds/acre in 30" rows.

Soil Type:Applying coarse sandy loam.

Soil Test:P = Medium, K = High, and pH = 6.7.

Fertilization:49 lb N, 98 lb P₂O₅, and 147 lb K₂O/acre as preplant;
N/acre as sidedress.

Previous Crop:Soybean.

Management:Moldboard plowed and rototilled; Aatrex and Lasso used for
weed control; irrigated 9 inches.

Test conducted by J. L. Day and P. A. Rose.

Calhoun, Georgia

Evaluation of Corn Hybrids for Silage, 1999, Irrigated Calhoun, Georgia

A corn hybrid for silage performance trial was conducted at this location during the 1999 growing season. However, high wind and rain caused considerable lodging and variation in performance among plots within the test. Since this data could potentially be misleading if used in making decisions concerning hybrid selection, we have chosen not to present them in this

publication.

Blairsville, Georgia

Evaluation of Corn Hybrids for Silage, 1999, Nonirrigated Blairsville, Georgia

Company or Brand Name	Hybrid Name	Maturity Class	Forage Yield		Dry Matter %	Grain Portion %	Plant Pop. no.	2
			Dry tons/acre	Green				
Pioneer	31G20	M	15.4	29.5	52.1	48	26606	1
Pioneer	3154	M	13.0	25.0	51.8	50	25155	1
Pioneer	33J56	S	12.8	25.7	50.0	55	27090	
NK	N 8811	M	12.8	29.5	43.3	49	26606	1
Southern States	SS943	M	12.2	23.8	51.1	53	28058	
Pioneer	32k61	S	11.7	22.3	52.2	49	26123	
Southern States	Exp 79579	F	11.5	19.4	59.4	44	26606	
Southern States	SS849CL	M	11.5	22.7	50.4	52	25155	
Southern States	SS859CL	M	11.5	22.6	50.8	51	24188	
DeKalb	DK 687	M	10.8	23.4	46.0	46	24671	
Pioneer	3085	F	10.7	24.1	44.5	52	24671	1
Pioneer	3167	M	10.4	23.6	44.1	50	28541	
Southern States	SS897	M	9.8	21.5	46.0	52	24671	
Average			11.8 ¹	24.1	49.4	50	26011	1
LSD at 10% Level			1.9	3.2	4.1	4	N.S. ²	
Std. Err. of Entry Mean			0.8	1.4	1.7	2	1759	

¹ CV = 13.4%, and df for EMS = 36.

² The F-test indicated no statistical differences at the alpha = .10 probability level; therefore an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: May 11, 1999

Harvested: October 15, 1999

Seeding Rate: 28,600 plants/acre in 30" rows

Soil Type: Bradson clay loam

Soil Test: P = High, K = Medium, and pH = 6.3

Fertilization: 30 lb N, 60 lb P₂O₅, and 90 lb K₂O/acre as preplant; 1 lb N/acre as sidedress.

Previous Crop: Soybean

Management: Moldboard plowed and disked; Aatrex, Bicep, and one other herbicide cultivation used for weed control.

Test conducted by P. A. Rose, J. L. Day, and H. D. Garrett.

Quincy, Florida

**Evaluation of Corn Hybrids for Silage, 1999, Irrigated
Quincy, Florida**

Company or Brand Name	Hybrid Name	Maturity Class	Forage Yield (35% moisture) tons/acre	Dry Matter %	Grain Portion %	Plant Pop. no.	2-Yr Fora tor
Short and Mid-Season							
Pioneer	32k61	S	22.8	.	.	.	
Southern States	SS859CL	M	22.5	.	.	.	
NK	N 83-N5	M	22.0	.	.	.	
Pioneer	3223	S	21.4	.	.	.	
NK	N 83-R7	M	21.3	.	.	.	
NK	N 8811	M	21.2	.	.	.	
AgriPro	AP 9707	S	20.7	.	.	.	
DeKalb	DK 687	M	20.6	.	.	.	
Pioneer	31G20	M	20.6	.	.	.	
Pioneer	33J56	S	20.4	.	.	.	
AgriPro	AP 9909	M	20.0	.	.	.	
Asgrow	RX 913	S	20.0	.	.	.	
Zimmerman	1851W	S	20.0	.	.	.	
AgriPro	HS 9843	S	19.9	.	.	.	
AgriPro	AP 9939	M	19.8	.	.	.	
NK	N73-N8	S	19.6	.	.	.	
AgriPro	AP 9829IMI	S	19.6	.	.	.	
AgriPro	HY 9646	S	19.4	.	.	.	
Funk's G	5088	S	19.4	.	.	.	
Zimmerman	Z64W	S	19.4	.	.	.	
Southern States	SS849CL	M	19.2	.	.	.	
Funk's G	X5583	M	19.1	.	.	.	
Pioneer	3154	M	18.9	.	.	.	
Pioneer	3167	M	18.8	.	.	.	
Southern States	SS943	M	18.8	.	.	.	
Pioneer	3245	S	18.3	.	.	.	
Garst	8220	M	18.3	.	.	.	
Funk's G	5516	S	18.1	.	.	.	
Asgrow	RX 897	S	18.0	.	.	.	
Pioneer	3146	M	18.0	.	.	.	
Pioneer	3098	M	17.9	.	.	.	
Southern States	SS897	M	17.8	.	.	.	
Funk's G	4581	S	16.8	.	.	.	
Pioneer	3163	M	16.5	.	.	.	
NK	N79-P4	S	16.2	.	.	.	
<i>Average</i>			<i>19.5¹</i>	.	.	.	
<i>LSD at 5% Level</i>			<i>3.3</i>				
<i>Std. Err. of Entry Mean</i>			<i>1.2</i>				
Full-Season							
NK	NX 9188	F	31.9	.	.	.	
Southland Genetics	SG1877	F	25.1	.	.	.	
NK	McNair 508	F	24.9	.	.	.	
Southern States	Exp 79579	F	24.8	.	.	.	

Greenwood	835	F	24.5	.	.	.
Pioneer	3085	F	24.4	.	.	.
Southland Genetics	SG1701	M	24.4	.	.	.
Greenwood	830	F	24.1	.	.	.
Southland Genetics	SG1836	F	23.0	.	.	.
Greenwood	845	F	22.4	.	.	.
<i>Average</i>			24.9 ²	.	.	.
<i>LSD at 5% Level</i>			3.6			
<i>Std. Err. of Entry Mean</i>			1.3			

¹ CV = 12.1%, and df for EMS = 101.

² CV = 10.0%, and df for EMS = 27.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: Short and Mid-Season: March 26, 1999.

Full-Season: March 30, 1999.

Harvested: Short and Mid-Season: July 12, 1999.

Full-Season: July 20, 1999.

Plant Population: 30,000 plants/acre in 36" rows.

Soil Type: Norfolk loamy sand.

Soil Test: P = Medium, K = Medium, and pH = 5.5.

Fertilization: 18 lb N, 54 lb P₂O₅, and 108 lb K₂O/acre as preplant;
N/acre as sidedress.

Previous Crop: Cotton.

Management: Strip tilled with subsoiler; Aatrex, Prowl, Permit, and
Gramoxone (directed) used for weed control; irrigated
inches.

Test conducted by D. L. Wright and B. Kidd.

INSECT SCREENING RESULTS

Evaluation of Corn Hybrids for Resistance to Insects

N. W. Widstrom

Environmental conditions in Georgia during the 1999 growing season were unfavorable for buildup of insect populations large enough to cause serious damage to corn. Generally, this damage is greatest in late-planted corn left in the field for an extended period past maturity.

Hybrids resistant to insects are recommended for planting and are presently the only economical means, in late plantings, for the reduction of damage by corn earworm, fall armyworm, maize weevil, and pink scavenger caterpillar. Consult your local county agent and/or extension entomologist for additional control recommendations for other insects.

Percent yield losses attributable to all insects for individual hybrids varied from 0.4% to 3.9% and are reflected by VG, G, F, P, and VP ratings in the tables. Hybrids in the tests sustained average yield losses of 1.2%, and 1.9% in the full and mid-season, and short-season hybrid tests, respectively. The mean level of overall yield loss for all tests was 1.6%. Of the total loss, about 34% was attributable to ear injury by the corn earworm, 58% to the pink scavenger

caterpillar, and 8% to the maize weevil. Losses to the pink scavenger caterpillar and maize weevil are based on damage by multiple generations of these insects as the corn dries in the field. Timely harvest will substantially reduce losses to these two insects.

Evaluations for resistance to corn earworm and fall armyworm, maize weevil, and pink scavenger caterpillar are given for hybrids in the tables following. Lettered ratings refer only to relative resistance to insects and are not indicative of yield. Thus, a hybrid rated poor for resistance to insects might possibly be among the highest yielders and vice versa. See the yield data in other tables for this information.

Husk tightness ratings were assigned using a scale of 1 to 5, in which 1 = very loose and 5 = very tight. No average rating was less than 2.0 or greater than 4.0; therefore, only loose, medium, and tight ratings are given in the tables.

Both the hybrid tests (mid and full-season, and short-season) were planted April 2, 1999. Plots were thinned to 20,000 plants per acre. Ratings for overall insect damage were completed during September.

Data for this section were compiled by J. M. Cook and J. C. Mullis of the United States Department of Agriculture, Agricultural Research Service, Insect Biology and Population Management Research Laboratory, and Georgia Coastal Plain Experiment Station, Tifton, Georgia.

Tifton, Georgia

Short-Season Corn Hybrids, 1999 Evaluations for Resistance to Insects and Other Traits Tifton, Georgia

Company or Brand Name	Hybrid Name	Husk Tightness ¹	Days to Anthesis	Overall Resist- to Insect Inju 1999 2
Terra	TR1154	M	63	VG
Zimmerman	1851W	M	64	VG
Asgrow	RX889	M	62	VG
Funk's G	5516	M	64	VG
NK	NX7547	M	62	VG
Funk's G	4581	M	66	G
Funk's G	4653	M	64	G
AgriPro	HS9843	M	63	G
Pioneer	33K81	M	63	G
Pioneer	3245	M	64	G
Garst	8222IT	M	64	G
NK	NX7537	M	61	G
NK	N79-P4	M	62	G
Southern States	SS787	M	66	G
Grabow	91575Bt	M	61	G

NK	NX7617	M	61	G
Pioneer	32K61	M	62	G
Funk's G	5510-A	M	65	G
Asgrow	RX826	M	62	G
Grabow	91595	M	64	G
Southern States	16980	M	60	G
AgriPro	AP9707	M	64	G
Funk's G	5505RR	M	63	G
Southern States	SS747IT	M	66	G
AgriPro	HY9646	T	65	F
AgriPro	AP9828IMI	M	64	F
Southland Genetics	SG1580	M	63	F
Funk's G	X5575	M	64	F
Southern States	SS769BT	M	62	F
Grabow	91609	M	66	F
Asgrow	RX913	M	65	F
Southern States	77457	M	64	F
Pioneer	3223	T	65	F
Pioneer	3563	M	64	F
Zimmerman	Z37	M	64	F
Southern States	SS729IT	M	63	F
Southland Genetics	SG1611	M	63	F
Pioneer	33G26	M	62	P
Terra	TR1157	M	61	P
DeKalb	DK650	M	64	P
Southern States	77095	M	64	P
DeKalb	CR8605	L	63	P
Pioneer	33J56	M	63	P
Terra	TR1147RR	L	62	P

¹ L = loose husks, M - medium-tight husks, T = tight husks

² Overall resistance to insect injury evaluations were made on the basis of total percent damage to the ear or more of the following insect categories: corn earworm and fall armyworm, maize weevil, and pink scavenger caterpillar. Ratings were made on a scale from *very good* to *very poor*, where VG = very good; G = good; P = poor; and VP = very poor.

Mid- and Full-Season Corn Hybrids, 1999
Evaluations for Resistance to Insects and Other Traits
Tifton, Georgia

Company or Brand Name	Hybrid Name	Husk Tightness¹	Days to Anthesis	Overall Resistance to Insect Injury 1999 2
Greenwood	835*	T	70	VG
Greenwood	845*	T	70	VG
Terra	TR1167	M	65	VG
Southland Genetics	9006c*	T	70	VG
Pioneer	3163	M	64	VG

NK	N8811	M	64	VG
Southern States	Exp79027	M	64	VG
Terra	TR702E	M	64	VG
Pioneer	3146	M	64	VG
Garst	8220	L	66	VG
Pioneer	31G20	M	66	VG
DeKalb	DK687	M	64	VG
AgriPro	AP9939	M	64	G
Southland Genetics	SG1701*	M	64	G
DeKalb	DK697	L	64	G
NK	NX8318	L	64	G
Southern States	SS859IT	M	64	G
NK	NX9188*	L	70	G
Funk's G	X5583	M	64	G
NK	NX8308	M	64	G
Southland	4120	M	64	G
Terra	TR1185	L	64	F
AgriPro	AP9909	L	66	F
DeKalb	DK679	L	66	F
NK	N83-N5	L	67	F
Southland	1651	L	64	F
Pioneer	3085*	M	68	F

* Full-season hybrid.

¹ L = loose husks, M = medium-tight husks, T = tight husks.

² Overall resistance to insect injury evaluations were made on the basis of total percent damage to the ear or more of the following insect categories: corn earworm and fall armyworm, maize weevil, and pink scavenger caterpillar. Ratings were made on a scale from *very good* to *very poor*, where VG = very good; G = good; F = poor; and VP = very poor.

Sources of Seed for the 1999 Corn Hybrid Tests

Company or Brand Name	Seed Source
AgriGold	AgriGold Hybrids, Route 1, Box 203, St. Francisville, IL 62460
AgriPro/HyPerformer	AgriPro Seeds, Inc., 6075 Popular Ave., Suite 435, Memphis, TN 38119
Asgrow	Asgrow Seed Company, P.O. Box 359, Marion, AR 72364
DeKalb	Monsanto Global Seed Group, 3100 Sycamore Road, DeKalb, IL 60115
Funk's G	United Agri Products, P.O. Box 534, Athens, AL 35611
Garst	Garst Seed Company, 7728 State Road 1241, Hickory, KY 42051
Grabow	Grabow Seed, 6830 Lisa Lane, Dunwoody, GA 30338

Greenwood	Greenwood, 8431 Davis Road, Laurel Hill, FL 32567
NK	Novartis Seeds, Inc., P.O. Box 249, Grifton, NC 28530
Pfister	Pfister Hybrid Corn Co., 187 N. Fayette Street, El Paso, TX 61738
Pioneer	Pioneer Hi-Bred International, Inc., 6767 Old Madison Pike, Suite 110, Huntsville, AL 35806
Southland, Southland Genetics	Southland Seed Company, Inc., Route 10, 404 Holly Dr., Dublin, GA 31021
Southern States, SS	Southern States Coop, P.O. Box 26234, Richmond, VA 23260
Terra	Terra Distribution, P.O. Box 171376, Memphis, TN 38187
Wilson, Zimmerman	Wilson Genetics, L.L.C., P.O. Box 391, Harlan, IA 51537
