



orn Hybrid
Maturity Rating
for Alabama

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Alabama Agricultural Experiment Station
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Corn Hybrid Maturity Rating for Alabama

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Vegetative and reproductive development of corn is dependent on adaptation to a particular climate. Major factors in the environment which condition this growth pattern include temperature, moisture, fertility, intensity of radiation, and photoperiod. Although seed companies rate their own hybrids, little information is available which compares the maturity of a large number of hybrids grown under the same environmental and cultural conditions.

An experiment was conducted at the Plant Breeding Unit near Tallassee, Alabama, to accurately determine the number of days required from planting to silage harvest (approximately 35 percent moisture in the grain), and to combine-ready (approximately 25 percent moisture) for the 149 corn hybrids tested in the regular and preliminary corn hybrid yield trials.

Two rows 30 feet long were planted March 31, 1988. All plots were treated equally with nitrogen rates of 60 pounds N per acre at planting and 100 pounds N sidedressed May 9. The plant population was 20,000 plants per acre. Weeds were controlled with 2 pounds per acre of Dual and 2 pounds per acre of Atrazine, along with cultivation. One pound per acre of Sevin was applied June 1 and June 13 to control corn earworms.

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Harvests were made twice per week from July 21 through August 25. Each harvest consisted of three ears randomly taken from each plot. The ears were shelled immediately, and moisture was measured with a Burrows model 700 digital moisture computer. If the grain was higher in moisture than the meter would measure accurately, about 40 percent, the grain was weighed at harvest, partially dried, reweighed, and then the moisture measured with the Burrows machine. The weight lost during drying was used to calculate the original high moisture values. The mid-silk data were the number of days from planting until one-half of the plants in the plot were showing silks. The maximum and minimum air temperatures were recorded daily from March through August. Rainfall was also recorded at the site. The test was irrigated once on June 6 with 1.5 inches of water.

The grain moisture percent measured at each harvest and the days after planting for each harvest date are shown in table 1. Also shown are the computed days to 35 percent moisture, or silage-ready grain moisture, and days to 25 percent moisture, or combine-ready grain moisture. It should be noted, however, that grain over 25 percent moisture cannot be directly marketed and usually must be dried to at least 20 percent before elevators will accept it in Alabama. The days to mid-silk are also shown in this table.

The daily maximum and minimum air temperature and rainfall at the test site are shown in table 2.

Table 1. Corn Grain Moisture Percentage from 10 Harvests, and Days from Planting to Harvest on 149 Hybrids Planted at Tallassee, Alabama, March 31, 1988

Brand	Hybrid	Days to silking	Days to maturity ²		Pct. moisture by harvest date and days after planting ¹									
			35%	25%	7/21	7/28	8/1	8/4	8/8	8/11	8/15	8/18	8/22	8/25
AgraTech	GK 750	84	121	131	45	32	33	30	26	23	22	21	20	-
	GK 825	83	125	133	49	42	39	32	30	23	22	23	22	-
	GK 850	84	123	133	48	40	35	30	29	25	23	22	21	-
	GK 900	84	124	140	47	41	39	32	30	31	27	25	24	21
	888	84	124	138	47	39	34	31	30	28	25	24	21	-
	917 W	78	128	144	49	45	40	37	33	31	28	26	25	24
	921 W	84	128	143	57	46	38	43	32	31	27	28	23	24
	EXP 8901	89	124	138	51	41	32	32	30	26	25	25	22	21
AgriPro	AP 510	86	120	130	42	38	30	27	24	24	21	22	19	-
	AP 670	86	121	133	48	40	33	28	27	26	22	22	20	-
	AP 793	84	124	136	47	39	38	30	29	26	23	23	21	-
	AP 850	85	126	139	49	43	33	35	28	28	26	25	23	22
	818	84	120	130	43	38	28	27	26	23	21	21	20	-
	820	78	121	134	48	37	30	28	27	25	22	22	22	-
	EX 714	85	125	133	49	44	38	29	29	25	23	22	20	-
Asgrow/ O's Gold	RX 860	85	122	137	45	40	33	32	29	26	25	23	21	-
	RX 956 W	84	129	140	50	42	41	38	35	33	27	24	22	-
	2570	78	120	132	48	36	29	27	26	24	21	22	21	-
	5509	84	128	139	53	45	36	37	32	30	26	25	23	23
Cargill	8027	78	121	132	44	40	30	29	26	25	22	20	20	-
	8967	82	125	134	46	42	36	32	34	25	23	23	22	-
	8990	84	122	136	49	38	35	29	27	27	24	24	22	-
	9400 W	84	121	139	44	41	33	30	30	28	26	25	23	21
	9427	84	127	137	50	40	35	36	33	30	24	24	21	-
	SX 16A	84	122	134	50	42	33	30	28	26	22	21	21	-
Coker	21	84	126	138	48	46	41	33	29	29	25	25	23	20
	833 W	78	130	148	51	44	38	36	39	34	29	27	27	26
	8601	86	125	134	48	42	34	35	29	26	21	21	19	-
	8625	89	121	133	47	43	32	28	28	26	22	22	21	-
	8690	84	125	138	46	42	36	34	33	27	25	24	21	-
	8696	85	127	137	49	42	39	33	33	28	24	25	20	19
	8701	84	121	134	47	40	31	29	30	26	23	21	21	-
	CX 5058	84	124	136	45	42	36	32	29	26	24	23	20	-
	CX 7681	85	126	135	55	45	37	35	35	27	23	23	21	-

(Continued)

Table 1 (Continued), Corn Grain Moisture Percentage from 10 Harvests, and Days from Planting to Harvest on 149 Hybrids Planted at Tallassee, Alabama, March 31, 1988

Brand	Hybrid	Days to silking	Days to maturity ²		Pct. moisture, by harvest date and days after planting ¹									
			35%	25%	7/21 (112)	7/28 (119)	8/1 (123)	8/4 (126)	8/8 (130)	8/11 (133)	8/15 (137)	8/18 (140)	8/22 (144)	8/25 (147)
Crist	C-6112	83	122	132	47	32	36	27	26	25	24	23	20	-
	C-7115	84	123	131	48	41	35	32	26	23	21	21	19	-
	C-7118V	83	125	137	50	43	32	34	30	27	24	24	21	-
	C-7125	84	128	139	53	45	43	32	35	28	25	26	22	22
	C-8110	78	116	129	41	30	28	27	26	23	21	22	20	-
	C-8119	85	122	134	48	39	34	29	28	26	24	24	20	-
Dekalb	DK 77 W	84	129	145	51	45	42	37	36	29	30	27	25	24
	DK 636	78	121	129	47	39	28	26	25	22	22	21	19	-
	DK 649	85	124	135	47	42	37	31	29	26	23	22	21	-
	DK 656	83	121	131	46	38	30	28	25	25	22	22	21	-
	DK 689	84	126	140	54	43	42	33	32	31	28	26	22	22
	DK 711	84	125	140	49	44	39	30	28	27	26	24	22	-
	DK 789	84	128	145	52	45	40	34	37	33	27	27	25	24
	EXP 765 W	78	120	135	44	37	32	28	28	25	23	23	21	-
	EXP 775 W	84	125	139	46	39	39	33	33	27	26	25	23	-
Deltapine	5666	84	121	129	47	38	31	27	25	25	20	21	20	-
	5750	83	124	138	49	40	35	32	30	30	25	22	23	-
	X 9986	85	130	145	53	45	36	40	31	32	26	27	26	24
FFR	747 C	84	122	137	50	44	32	28	26	24	21	21	19	-
	929 W	88	128	138	50	42	37	39	35	29	26	26	24	22
	15982	83	122	131	46	39	33	31	26	26	20	22	20	-
	15983	84	126	137	50	40	36	29	36	28	25	22	21	-
	16049	89	128	138	56	45	38	35	33	30	26	25	22	22
Funk's	G-4522	85	124	135	52	42	36	30	28	26	22	24	19	-
	G-4543	86	125	133	49	46	37	29	29	24	23	21	21	-
	G-4614	86	123	133	48	47	33	32	27	25	25	22	21	-
	G-4665	84	122	138	45	40	33	32	28	27	26	24	22	-
	G-4666	85	127	137	48	51	34	36	29	28	24	24	23	-
	G-4734	88	127	134	52	48	39	39	29	28	24	25	23	22
	G-4743	86	131	140	51	46	42	35	36	32	27	27	26	21
	G-4868	88	129	146	52	46	41	41	35	28	26	27	26	25
	RA 1502	85	125	134	49	42	37	34	30	26	23	23	15	21
	6043 W	84	125	138	48	41	31	34	30	29	25	25	23	22
	6058 W	84	125	137	51	47	37	31	30	27	25	24	21	-
	7046 X	84	126	135	52	44	36	33	32	26	23	24	21	-
	8018 X	85	129	141	51	36	38	39	31	35	28	25	24	24

(Continued)

Table 1 (Continued), Corn Grain Moisture Percentage from 10 Harvests, and Days from Planting to Harvest on 149 Hybrids at Tallassee, Alabama, March 31, 1988

Brand	Hybrid	Days to silking	Days to maturity ²		Pct. moisture, by harvest date and days after planting ¹									
			35%	25%	7/21 (112)	7/28 (119)	8/1 (123)	8/4 (126)	8/8 (130)	8/11 (133)	8/15 (137)	8/18 (140)	8/22 (144)	8/25 (147)
Garst	8116	84	123	136	45	40	35	30	29	26	21	22	22	-
	8180	89	129	142	54	46	35	33	35	31	24	26	23	22
	8344	84	122	134	51	39	34	29	27	26	22	22	19	-
HyPerformer	HS 56	84	123	132	39	44	36	29	28	24	21	20	19	-
	HS 60	84	123	134	48	38	31	33	29	25	23	21	20	-
	HS 64	84	125	136	45	40	36	33	32	26	25	23	22	-
	HS 97	84	126	136	54	43	34	34	30	33	22	24	22	-
Jacques	W 210	78	124	139	47	40	37	32	29	28	24	24	23	21
	7820	83	121	131	45	39	28	28	26	23	21	22	20	20
	7900	78	120	130	48	36	30	27	26	23	21	22	20	-
	8210	84	124	135	48	46	33	29	31	26	24	23	21	-
	8250	84	125	139	49	*	33	34	31	27	22	25	21	-
	8280	84	121	133	46	40	31	29	26	24	22	23	21	-
	8350	84	124	134	49	36	36	31	28	26	24	23	21	-
	8400	84	125	137	45	41	38	33	32	27	24	25	24	22
	8700	84	127	137	55	47	38	36	32	29	25	25	23	22
	9220	86	126	141	49	47	37	34	31	29	25	26	24	22
McCurdy	87-77	86	129	141	53	43	37	34	37	33	27	26	25	24
	7372	85	123	133	48	40	29	30	29	24	22	22	21	-
	7777	84	125	138	47	42	34	37	30	30	25	24	23	-
	7800	78	127	140	49	42	39	35	33	29	27	24	23	-
	8172	78	127	142	50	42	37	33	38	28	27	28	25	24
MC+	5891	84	122	133	49	40	31	29	28	25	23	22	19	-
	6414	85	126	136	52	43	32	38	27	28	24	24	19	-
	7507	79	125	135	50	42	38	29	30	26	22	21	21	-
New Northrup King	McNair508	86	137	148	62	54	51	46	39	34	38	29	28	25
	PX 79	85	124	133	56	43	36	30	27	24	23	21	20	-
	PX 95	84	130	143	56	48	38	42	37	31	27	28	25	24
	PX 9581	84	124	134	48	43	35	31	28	25	24	24	22	-
	S 7686	84	125	134	49	43	34	32	29	26	22	22	20	-
	S 7751	83	122	132	47	40	30	28	27	24	22	22	19	-
	S 8645	83	125	137	50	41	39	33	29	28	24	24	22	-
	X 8727	84	123	137	48	41	33	31	33	27	25	24	23	-

(Continued)

Table 1 (Continued), Corn Grain Moisture Percentage from 10 Harvests, and Days from Planting to Harvest on 149 Hybrids Planted at Tallahassee, Alabama, March 31, 1988

Brand	Hybrid	Days to silking	Days to maturity ²		Pct. moisture, by harvest date and days after planting ¹									
			35%	25%	7/21 (112)	7/28 (119)	8/1 (123)	8/4 (126)	8/8 (130)	8/11 (133)	8/15 (137)	8/18 (140)	8/22 (144)	8/25 (147)
Pioneer	3055	82	128	143	53	46	42	35	32	29	28	25	26	23
	3140	84	125	136	48	44	38	33	30	27	24	22	21	-
	3144 W	84	125	138	47	41	38	30	33	27	26	24	24	23
	3147	84	129	143	54	47	40	35	37	35	26	27	24	26
	3165	85	128	143	53	45	43	38	32	29	26	27	24	23
	3187	84	130	141	52	46	41	35	36	34	24	26	22	-
	3283 W	84	127	139	47	45	33	38	31	28	23	24	22	-
	3295	86	125	136	49	42	34	35	30	26	24	23	22	-
	3320	84	125	138	46	40	35	36	28	27	25	24	23	-
	3343	78	122	132	46	40	28	32	26	25	21	21	20	-
3358	85	121	135	49	41	33	28	28	26	24	24	22	-	
SeedTec	ST 2601	84	121	132	52	43	33	28	26	26	23	22	22	-
	ST 7711	83	125	139	51	44	37	32	31	29	25	25	22	21
	ST 7750	85	125	136	51	43	39	33	27	28	25	23	20	-
Solar	SO 4000	84	123	133	51	42	32	31	29	24	22	22	20	-
	SO 5020	84	127	139	52	42	39	33	34	28	27	24	22	-
	SO 6040	84	127	140	46	42	38	37	33	27	28	26	21	-
	SO 6080 W	84	128	142	54	45	42	31	32	29	27	26	24	23
Summit	TR 1185	86	124	136	47	42	35	31	33	27	24	24	22	-
	TR 3303	84	121	129	49	37	32	27	24	21	20	21	19	-
	TR 4405	84	128	140	56	44	38	38	34	31	26	25	22	-
Sunbelt	1802	84	122	134	47	38	36	29	28	25	23	24	23	-
	1827	84	126	137	53	46	40	34	32	30	25	24	23	-
	1860	84	135	143	53	47	39	42	39	38	29	28	24	25
	1876	83	138	149	59	55	42	48	37	39	37	33	29	27
	1882	83	130	149	52	46	37	37	33	36	29	28	26	26
	5613	85	125	134	48	42	36	35	28	26	22	22	21	-
	6225	85	127	136	52	43	38	35	33	28	24	25	25	22
	7400	84	130	145	47	46	44	42	38	35	26	29	25	24
	7705	85	124	138	52	45	36	32	30	27	26	24	22	-
Terra	TR 363 E	84	123	135	48	42	35	32	30	26	23	22	21	-
	TR 364 E	84	125	136	49	41	34	33	31	25	25	23	21	-
	TR 365 E	83	125	135	47	43	29	30	31	26	23	22	20	-
	TR 366 E	83	121	134	49	42	32	27	33	26	23	23	21	-
	TR 402 E	84	124	138	53	42	35	32	30	27	25	25	23	22

(Continued)

Table 1 (Continued), Corn Grain Moisture Percentage from 10 Harvests, and Days from Planting to Harvest on 149 Hybrids Planted at Tallassee, Alabama, March 31, 1988

Brand	Hybrid	Days to silking	Days to maturity ²		Pct. moisture, by harvest date and days after planting ¹										
			35%	25%	7/21 (112)	7/28 (119)	8/1 (123)	8/4 (126)	8/8 (130)	8/11 (133)	8/15 (137)	8/18 (140)	8/22 (144)	8/25 (147)	
Triumph	1595	83	120	131	48	36	28	27	26	25	22	21	20	-	
	1650 FG	84	128	142	50	43	37	39	34	30	26	27	23	23	
	2020	85	124	137	47	40	33	34	30	28	24	23	22	-	
Zimmerman	2 14 W	84	126	142	47	43	39	34	32	30	27	29	25	24	
	2 16 W	88	128	140	46	41	41	37	31	29	26	25	23	24	
	2 17 W	88	129	140	48	45	41	43	34	30	27	26	23	23	
	2 27	78	123	135	48	40	30	30	27	26	23	23	21	-	
	2 31	83	122	134	50	40	31	29	27	26	22	22	21	-	
	2 33	79	123	136	46	38	32	34	29	27	24	24	22	21	
	2 54 W	85	130	145	50	44	37	35	38	33	28	29	25	24	
	2 60 W	85	128	142	49	44	40	39	31	29	27	27	24	23	

¹Numbers in parenthesis are days from planting to harvest for each harvest date.

²Physiological maturity at 35 percent moisture; combine maturity at 25 percent moisture.

Table 2. Air Temperature (Maximum and Minimum) and Precipitation by Date and Month at Plant Breeding Unit, Tallassee, Alabama, 1988

Date	March			April			May		
	Air temp. °F Max.	Air temp. °F Min.	Precip., inches	Air temp. °F Max.	Air temp. °F Min.	Precip., inches	Air temp. °F Max.	Air temp. °F Min.	Precip., inches
1	72	31		79	62	.08	79	47	
2	77	32		71	61		82	45	
3	70	55		73	61	.38	81	48	
4	66	59	1.00	83	60		80	53	
5	45	56		89	50		76	50	
6	71	36		73	61	.11	81	45	
7	78	39		75	51		83	49	
8	68	46		79	46		85	55	
9	75	58	.80	79	50		84	54	
10	52	42	.12	84	49		78	68	1.45
11	70	31		64	52	.51	82	52	
12	67	43		57	42		84	53	
13	64	54	.09	76	44		81	62	.04
14	52	37		81	44		84	56	
15	52	27		83	48		89	59	
16	57	26		71	49		85	64	
17	67	29		82	44		87	60	
18	50	40	.14	83	61	.31	83	54	
19	55	40	.38	67	60	1.60	83	55	
20	71	31		73	39		86	55	
21	79	37		83	46		89	59	
22	83	40		80	56		81	62	.25
23	80	50		78	68	.46	85	64	.12
24	79	52		84	66	.86	84	63	.84
25	69	55		72	60	.96	79	63	
26	79	58	1.10	70	60		78	57	
27	74	41		79	53		81	49	
28	80	37		72	44		85	52	
29	82	50		75	42		89	56	
30	79	59		72	50		91	58	
31	83	59		-	-		90	61	
Total			3.63			5.27			2.66

(Continued)

Table 2. (Continued), Air Temperature (Maximum and Minimum) and Precipitation by Date and Month at Plant Breeding Unit, Tallassee, Alabama, 1988

Date	June			July			August		
	Air temp. °F		Precip., inches	Air temp. °F		Precip., inches	Air temp. °F		Precip., inches
	Max.	Min.		Max.	Min.		Max.	Min.	
1	90	59		-	-		95	70	
2	93	60		-	-	3.40	93	72	
3	90	63		-	-		94	71	
4	80	65		-	-		93	69	.07
5	79	60		-	-	.07	91	71	
6	87	63		-	-		92	70	
7	87	68	.07	87	-		90	71	
8	91	66	.90	90	62		91	73	
9	91	67		92	68		91	73	
10	79	59		88	72	.72	94	71	.70
11	83	53		85	73	.98	92	73	
12	86	56		89	72	.28	90	75	
13	87	56		90	71		93	72	
14	88	57		-	-		93	70	
15	90	59		-	-		88	74	.50
16	95	63		-	-	2.35	91	72	
17	96	65		-	-		91	71	
18	94	68		89	73	T	95	71	
19	83	67		90	70		93	72	
20	93	65		91	71		92	74	
21	96	66		92	72	.22	88	74	.09
22	97	67		86	73	T	94	72	
23	96	69		-	70		93	73	
24	97	73		-	-		85	72	
25	100	72	.64	90	65		94	69	.10
26	96	71	1.65	86	67		96	64	
27	94	72		90	70		96	67	
28	-	-		91	69		93	68	
29	-	-		92	69		95	68	
30	-	-		93	71		-	72	
31	-	-		94	72		-	-	
Total			3.26			8.02			1.46

Information contained herein is available to all without regardless to race, color, sex, or national origin.

