

Expression of Maturity and Height in Commercial Hybrid Grain Sorghums

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Crop rotation systems with two crops per season are employed in many areas of Arizona to fully utilize the long and variable growing seasons. Maturity is a major factor in selecting a genotype that will fit properly into a particular crop rotation. Days to 50% bloom is a good characteristic to determine for an accurate measure of relative differences in maturity among genotypes. Dry matter deposition in the seed will be nearly complete about 30 days after 50% bloom.

Plant height to the top of the head may also be of some importance to the grower.

A number of commercially available grain sorghum hybrids were grown at Marana, Arizona in 1978. We tried to obtain and grow seed of nearly all commercial hybrids that might be offered for sale in Arizona. Marana is at an elevation of 2,000 feet with average last and first killing frost dates of March 1 and November 15 respectively for an average growing season of 260 days. Our planting was made on 17 May in dry soil and irrigated on 19 May.

Days to 50% bloom and height in centimeters to the top of the head are given in the table below. Slightly different growing conditions in other areas of the state may give different values for maturity and height than we obtained. However the relative relationship among genotypes for these characteristics should generally remain the same. You may be able to pick a hybrid from this table that you have grown and from its performance on your farm generally predict the performance of other hybrids from this table if grown on your farm.

Hybrid	Days to 50% bloom	Height (cm)	Hybrid	Days to 50% bloom	Height (cm)	Hybrid	Days to 50% bloom	Height (cm)
<u>Asgrow Seed Company</u>								
Dorado E	59	102	C42a	59	99	389	67	118
Topaz	69	118	C42y	66	119	399	57	89
Dorado	62	103	C43y	66	95	400C	61	107
Dorado M	69	133	C46	65	113	Super 400A	60	101
Double TX	69	104	C46+	64	117	401	68	116
Bug Off E	78	118	C48a	62	111	412	69	118
Bug Off	67	135	DD50+	58	107	412A	75	123
Capitan	62	118	D42	61	102	4122	74	141
			D42a	62	115			
			D42y	61	118	<u>Funk Seeds Internat.</u>		
<u>Browning Seed, Inc.</u>			D54	60	98	G251	54	89
Challenger	67	132	D55	61	105	G393	60	101
Challenger T	72	104	D58	71	120	G399	58	92
Golden 865	70	121	D60	72	131	G404	64	106
Sturdy 6100	70	147	E57	68	114	G499 GFP	62	92
Yellow Martin	63	103	E57b+	74	134	G520 GBR	65	111
Big 10,000	74	124	E59	70	124	G522	69	115
Hefty	67	115	D59+	73	132	G522 DR	70	116
775-W	70	146	F61	74	121	G623 GBR	71	109
			F64	75	151	G701 GBR	74	123
<u>Conlee Seed Company</u>			F65a	71	118	G766 W	77	137
Ramrod	64	105	F67	80	114	HW 3903	63	106
Top Hand	72	112	F68	80	113			
Top Hand II	69	121	BR45+	69	107	<u>Growers Seed Assoc.</u>		
Vaquero	67	123	BR54	73	157	E110	56	105
Quickee	60	104	BR64	76	146	ML25	63	114
Grande	70	122	BR65+	77	143	Little Joe A	67	103
Bounty	69	117				1180	69	125
			<u>F-M Advance Seed Co.</u>			1210A	62	114
<u>Crown Quality Seed Co.</u>			19-22	58	107	1310	71	111
CQ 68	68	110	53A	60	118	1320y	70	132
CQ 68Y	69	106	80	70	117	ML 134	70	121
CQ 68A	67	98	82	68	118	ML 135	67	116
CQ 69A	68	103	14	61	105	ML 136A	67	131
			7403	73	128	L 141	71	133
<u>DeKalb Ag. Research, Inc.</u>			AMAK R10	65	117	1334 BR	66	120
A25	53	101	AMAK R12	60	106			
A28+	61	104				<u>McNair Seed Co.</u>		
B35	55	104	<u>Frontier Hybrids, Inc.</u>			521	61	106
B38+	66	116	385	60	98	650	76	136
B39y+	65	101						

Hybrid	Days to 50% bloom	Height (cm)	Hybrid	Days to 50% bloom	Height (cm)	Hybrid	Days to 50% bloom	Height (cm)
895	70	131	R1019	64	104	RA 733 Gb	57	91
546 BR	72	130	GR 1018	64	101	RA 808 Gb	72	118
			R1029-A	64	114	RA 811 AGb	72	126
<u>NC+ Hybrids</u>			GR 1028	65	111			
55X	57	103	R 109-A	68	117	<u>Taylor-Evans Seed Co.</u>		
54X	62	103	GR 108	71	114	Y44 R	61	108
161	63	124	R 1090	69	131	Y45	63	116
162	64	122	GR 1089	70	115	66	70	100
168	70	104				66B	69	103
169	64	123	<u>Pioneer Hi-Bred Internat.</u>			77A	74	120
170	69	109	894	55	87	88A	64	114
171	70	119	8901	53	96	TOPS	75	118
172	71	115	8914	55	98	TF Y101		111
173	65	122	883	61	112	Y101D	72	113
70X	71	115	8790	59	95	Y101R	72	115
175	73	123	878	57	99	Y111	69	125
178	72	135	B877	55	94	Grainmaster A	61	113
			8712	56	96	Grainmaster R	61	109
<u>Northrup King &amp; Company</u>			8681	61	103	Dinero	75	111
121	54	102	866	60	116	Hondo	74	113
125	52	114	8633	66	112	Bird a Boo II	69	112
129	55	108	8626	62	98	Total D	71	126
180	55	110	8592	63	112	Total R	74	125
222	62	102	8585	66	110			
233	57	109	8501	67	107	<u>Texas Triumph Seed Co.</u>		
265	62	113	8475	64	105	Two 52 yG	62	103
266	67	146	846	65	113	Two 60 yG	75	112
Savanna 4	70	133	8451	75	113	Two 60 A	76	110
280	75	125	8454	79	116	Two 62 y	75	103
285	68	136	8442	68	119	Two 62 yG	73	94
278	67	127	8150	65	123	65 BR	74	102
279	69	130	8324	65	109	68 DM	72	126
2778	73	120	8311	76	100	72y	69	125
2779	56	85	8308	77	102	72yG	75	113
2884	74	126	8272	78	109	74 y	74	128
Mini Milo 52	70	104	828	76	131	75 BR	73	126
			B818	73	159	70A	76	110
<u>P-A-G Seeds</u>			820	74	121	70D	70	124
269	52	107	B815	77	141	80	69	115
354	54	100	8283	79	112	90	78	117
3387	63	108	8199	81	129			
4474	69	117	8155	72	111	<u>WAC Seed, Inc.</u>		
4488	68	114				694	72	130
5504	69	117	<u>Ring Around Research</u>			692	73	111
5514	69	120	811-A	70	135	692G	77	107
6658	70	124	808	70	124	692R	68	122
6662	72	125	433	60	94	694R	73	130
			202	59	135	694G	73	142
<u>Paymaster Seed Company</u>			RA 747	69	137	710DR	71	119
R920	55	93	RA BG 68 Gb	66	94	715DR	72	135
R1014	61	102	RA 230	69	116	652 G	67	125