Recommended Last Planting Date for Grain Sorghum Hybrids in the Texas South Plains–2007

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For producer questions contact either author. For company updates or additions to this list please call Jim Barber or look for any recent updates via the Internet at http://lubbock.tamu.edu/sorghum You may also obtain recent a copy through your local county extension office. This document is normally updated every other year by March.

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Sorghum producers in the Texas South Plains have many good sorghum hybrids to choose from. The range of planting dates, however, occurs from late April to early July. Many producers may not readily understand the different sorghum maturity classes or when they should or shouldn't be planted (i.e., what is a 110-day sorghum, and how may it vary?). In addition, cold germination tolerance is an attribute, which may be important particularly for early season plantings when good soil moisture is available. Likewise, tillering and its control may strongly influence the success of sorghum cropping particularly as planting date affects tillering (cool temperatures and earlier planting favor tillering). Hybrids that tiller have the ability to compensate upward if production conditions are favorable relative to the established plant population, but tillering hybrids also erode the ability to manage targeted plant populations.

What soil temperatures are needed for good growth on sorghum? Historically, 65 F average daily temperature in the soil has been cited. But at what soil depth is this taken and what about the effects of too cool temperatures on the seed? Some experienced growers in the South Plains will plant in late April in front of cotton. Except for the southern areas of the South Plains one might expect that temperatures are simply too cool up to about May 1. However, some success has been achieved when planting early, but still at least two weeks after your area's last spring freeze/frost. Producers can consider an early planting if average daily soil temps at the 4-6" depth are at least 60 F and 10-day weather prospects predict no cold fronts or extended cool periods. For soil temperatures in the Texas South Plains consult the Texas High Plains Evapotranspiration website, http://txhighplainset.tamu.edu/

These are general guidelines and are not an endorsement of any one hybrid or company by Texas Cooperative Extension. Not all companies responded to our request for information. Suggested last planting dates for each hybrid are intended to be conservative in order to protect the producer. The further north one is in the South Plains, then move toward the earlier portion of the range of last planting dates for a particular hybrid. **Check with the seed company representative in your area for specifics**. Please report discrepancies in growth and maturity for your particular hybrid and suggested planting date to Jim Barber as well as the company representative.

Keep in mind that in terms of historical averages flowering is most harmed by hot weather even when moisture is adequate. Many producers err on the side of planting too much seed per acre. As a result, in droughty conditions producers are at risk of inadequate moisture *per plant* during flowering and grain fill to produce grain. In managing risk, know that most grain sorghum hybrids at modest plant populations are able to flex upward to meet the yield potential of favorable conditions. This is less risky agronomically and economically than having a high plant population crop under droughty conditions.

Managing Risk—Balancing Seeding Rate vs. Available Soil Moisture: Suggested sorghum seeding rates are influenced by the *available* soil moisture in soils of different textures. Generally, sandy to sandy loam soil can store about 1" of available soil water per foot; a silty loam to clay loam soil can store about 1.5" inches per foot; and a clayey soil can store about 2" per foot. Typically, it takes 6-8" inches of available moisture (rainfall, irrigation, or soil

moisture) to bring a higher population irrigated sorghum crop to the point of grain production, and each additional 1" of water should produce 350-425 lbs. of grain. For limited plant population dryland sorghum production 5-6" of moisture may be needed to reach initial grain yield.

For most dryland sorghum production in the Texas South Plains, when soil profile moisture is adequate (>4" of available soil moisture), a good target is 30,000-35,000 seeds/A. If soil moisture is low (2-4"), a seed drop of 25,000-30,000/A is advised. For any dryland situation with poor soil moisture, especially as plantings approach July 1, consider 20,000 seeds/A. For limited irrigation (6-8") with low soil profile moisture conditions, target 40,000-45,000 seeds/A, but if soil moisture is good, consider 50,000-55,000 seeds/A. For full irrigation levels (12" and more), cap target seeding rates at no more than 80,000-90,000 seeds/A on June 1, but by July consider 100,000-110,000 seeds/A for non-tillering hybrids and 80,000-90,000 seeds/A for tillering hybrids. Several producers report, however, that even 80,000 seeds/acre can be more than necessary to achieve grain sorghum yield potentials over 8,000 lbs./acre.

Because seed costs are relatively low for sorghum ($1.00-1.40 cents per pound), growers too easily increase seeding rates as it doesn't much affect production costs. Seeding rates occasionally are altered to reflect planting conditions. In general for high quality seed under favorable conditions, expect germination >90%, and stand establishment of 80-90% for germinated seeds. If difficult germination or stand establishment is expected, stand establishment will often be 60-70% or less. If a rain or irrigation germinates nearly all seed and high establishment occurs, but overall seasonal growing conditions remain poor, plant population will be too high.

The following is a general guideline for last recommended plantings of grain sorghum hybrids on the South Plains. Note that many sorghum seed companies will have hybrids intermediate between medium and early (i.e., medium-early). The suggested final planting date for the listed regions has been extended by five days since these guidelines were first compiled in May, 2000. A medium-early hybrid is a good compromise between these two categories if you have doubts, especially if your county is to the north and west in a particular group. In general, Extension suggests the following guidelines as criteria for the last recommended planting dates for sorghum maturity classes in the South Plains region:

Counties	Medium Maturity	Early Maturity
Parmer, Castro, Bailey, northern Lamb, Cochran	June 25	July 5
Swisher, southern Lamb, Hale, Floyd, Hockley, Lubbock, Crosby, Yoakum, Terry	June 30	July 10
Lynn, Garza, Gaines, Dawson, Borden, Scurry, Andrews, Martin, Howard, Mitchell	July 5	July 15

These suggested dates consider the length of sorghum maturity vs. historical averages for cool fall weather, which can be expected ahead of frost. Although these sorghum maturity classes may be planted later and be successful in many years, these guidelines should help producers understand when risk increases relative to achieving grain yield potential. If you must consider a

very late sorghum planting, choose among hybrids that have estimated 'days to maturity' of less than 90 days. Check among seed dealers for suggestions.

In the accompanying table, company representatives have provided estimates of the 'last recommended planted date' for their hybrids. For table headings from left to right, the hybrids below for the South Plains are arranged by date into four general groups for 'last planting date.' Hybrids with a last recommended planting date of June 10-20 are medium-long to long maturity. In addition, late June hybrids are generally medium; early July hybrids are medium-early to early; and the hybrids suggested for July 8-15 are earliest maturity.

Seed Company Recommendations for Last Planting Dates of Selected Hybrids

(listed alphabetically)

Tillering Ratings: 1 = None, 2 = Little, 3 = Moderate, 4 = High

(*) Good early season vigor ratings adapted to early plantings at cooler temperatures

Asgrow (Monsanto), http://www.asgrowanddekalb.com
Mike Heath, (806) 780-7764, mike.heath@monsanto.com

June 10-20		June 21-30		July 1-7		July 8-15	
Hybrid	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**
A567	3	A459*	2	Seneca*	3	Reward	2
A570*	2			Pulsar	3		
A571*	3						
A603	3						

Crosbyton Seed Company, http://www.crosbytonseed.com
Tony Davis, (806) 675-2308, tdavis@crosbytonseed.com

June 10-20		June 21-30		July 1-7		July 8-15	
Hybrid	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**
1489*	2	3080	2	1467*	2	2010	3
6080	3	7050	3	5914*	3	5935	3
9080	2	6 Row Y	3			6035	2
						7031	2
						7431	2

Dekalb (Monsanto), http://www.asgrowanddekalb.com
Mike Heath, (806) 780-7764, mike.heath@monsanto.com

June 10-20		June 21-30		July 1-7		July 8-15	
Hybrid	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**
DKS 53-11	3	DK 40Y	3	DK 36*	3	DK 28E	2
DKS 53-67	3	DK 44	1	DK 39Y	2	DKS 29-28	2
DKS 54-00	3	DKS 37-07	3	DKS 36-00	3		
		DKS 42-40	3	DKS 36-16	3		
		DKS 44-41	3				

Dyna-Gro Seed, http://www.dynagroseed.com
John Griffin, (972) 318-6254, john.griffin@uap.com

June 10-20		June 21-30		July 1-7		July 8-15	
Hybrid	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**
DG 760C*	3	DG 752B*	3	DG 730B*	3		
DG 780B	2	DG 762B*	2	DG 740C	2		
		DG 772	2	DG 754B*	2		
				DG 764B*	2		
				DG 766B*	2		

Frontier Hybrids, http://www.frontierhybrids.com
Billy McClenney, (806) 298-2595, billy@frontierhybrids.com

June 10-20		June 21-30		July 1-7		July 8-15	
Hybrid	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**
F-647E*	3	F-457E	4	F-270E*	4	F-200E	2
F-700E*	3			F-303C*	3	F-227E	2
				F-305E*	3		
				F-505E*	3		

Garst Seed, http://www.garstseed.com
Phil Kunz, (806) 358-4807, phil.kunz@garstseedco.com

June 10-20		June 21-30		July 1-7		July 8-15	
Hybrid	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**
5401	3	2660*	3	5616	3	9135	2
5440*	2	5515	3	5624	3		
5464	3	5664*	2	5631Y	3		
Cherokee*	3			5750	3		

Golden Acres Genetics, http://www.gaseed.com
James Allison, (512) 793-5205, jallison@pegasusbb.com

June 10-20		June 21-30		July 1-7		July 8-15	
Hybrid	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**
3694	3	3545	3	697	1	627	1
3799*	2	3552	1	3300	2	3311*	2
3827	3	3566	2	3322	2		
444E	3	737*	1	M 3838	2		
522 DR	3						

Golden Harvest, http://www.goldenharvestseeds.com
Eric Dam, (800) 228-9906, ext. 267, eric.dam@ghseeds.com

June 10-20		June 21-30		July 1-7		July 8-15	
Hybrid	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**
H-262	1	H-307*	2	H-454*	3	H-505BW	2
H-279	1	H-390W	3	H-486*	2	H-508W	2
		H-403*	2			H-511	3

NC+ Hybrids, http://www.nc-plus.com
David Rohrbach, (806) 676-9077, rohrbach1@cox.net

June 10-20		June 21-30		July 1-7		July 8-15	
Hybrid	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**
7R83*	2	271	3	262	2	5C35	3
8R18	3	371	3	5B89	3	5B74E*	2
		7B47*	3	6B50*	2		
		7C22	3	6B70	4		
		7C49	3	6C21	3		
		7R37E	3	Y363	3		

Pioneer Hi-Bred International, Inc., http://www.pioneer.com
Robert Bowling, (806) 922-8188, robert.bowling@pioneer.com

June 10-20		June 21-30		July 1-7		July 8-15	
Hybrid	**Tillering†**	**Hybrid**	**Tillering†**	**Hybrid**	**Tillering†**	**Hybrid**	**Tillering†**
83G66	3	8500*	2	87G57*	3	8925*	3
84G62*	3	85G85*	3	86G71*	2		
		85G01*	3	86G08*	3		
		85Y34	3				
		85G46*	3				
		85Y40*	3				

†Pioneer published rating of tillering is in opposite direction with a high number representing lower tillering.

Production Plus, http://www.proplusseed.com
Mike Northcutt, (800) 530-4364, proplus@proplusseed.com

June 10-20		June 21-30		July 1-7		July 8-15	
Hybrid	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**
PP-655	?	PP-599W	3	PP-333	3		
PP-777	2	PP-644	2				
PP-799E	1						

Richardson Seeds Ltd., http://www.richardsonseeds.com
Jarrod Cook, (806) 749-2247, jarrod@richardsonseeds.com

June 10-20		June 21-30		July 1-7		July 8-15	
Hybrid	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**
Jowar-1	2	9200Y	2	9200Y	2	Dash E	3
		9212Y	2	RS225	2	Sprint E	3
		9300	2	RS250E	2	Sprint II	2
		9322	2			Swift	3
						Swift W*	3

Sorghum Partners, http://www.sorghum-partners.com **Larry McDowell, David Thomas, (800) 645-7478, larry.mcdowell@sorghum-partners.com**							
June 10-20		June 21-30		July 1-7		July 8-15	
Hybrid	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**
K73-J6	3	K35-Y5*	3	251*	2	251*	2
NK 6638*	3	KS 585	2	KS 310*	2	KS 310*	2
NK 7633	3	NK 4420	3	KS35-Y5*	3		
NK 7655	3	NK 5418*	3				
NK 7829*	3						

Triumph Seed Co., http://www.triumphseed.com **Bill Wagner, (806) 662-1276, bwagner@triumphseed.com**							
June 10-20		June 21-30		July 1-7		July 8-15	
Hybrid	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**
TR465	3	TR438	3	TR433	3	TR418*	3
TR481	2	TR442	3	TR434	3	TR420*	3
TR82G	3	TR459	2				
		TR460	3				
		TR461	3				
		TR463	3				

Warner Seeds, Inc., http://www.warnerseeds.com **Kelsey Monk, (806) 364-4470, kmonk@warnerseeds.com**							
June 10-20		June 21-30		July 1-7		July 8-15	
Hybrid	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**	**Hybrid**	**Tillering**
W-624-Y	2	W-588-Y	2	W-528-W	2	W-494-A	2
W-625-Y	2	W-614-W	3	W-560-T	2		
W-632-W	3	W-622-E	3	W-664-T	2		
W-816-E	3	W-638-W	2				
W-818-E	2	W-644-E	3				
W-839-DR*	3						
W-844-E	3						
W-851-DR*	3						
W-858-E*	2						
W-876-DR	2						
W-902-W	2						
W-965-E*	2						