

Planting Date and Seeding Rate of Upland and Pima
Cotton in Graham County

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There is considerable controversy concerning the best date and seeding rate for planting cotton. Many subscribe to the theory that the earlier a stand can be obtained the higher the yields. Others disagree. They contend an early planting date subjects seedlings to cold temperatures that often affect vigor and stands, both resulting in reduced yields.

Planting rates add to the disagreement. Some believe that low rates should be used on fine textured soils and high rates on sands and where vert or root rot may be a problem. They also suggest low planting rates for an early spring planting with an increase in planting rate as the season progresses. Others suggest additional seed is required in early spring to offset seedling loss due to seedling disease and a low rate is preferred in late spring.

Two cottons, DP-41 and Pima S-5 were planted April 10, April 20 and May 10 at 10, 15 and 20 pounds seed per acre on the Safford Experiment Farm. Results are presented below.

Planting rate lb/ac	Planting Date			Average
	April 10	April 20	May 10	
	-----yield seed cotton lb/ac-----			
<u>DPL-41</u>				
10	3182	3669	2784	3212
20	3336	3477	2349	3054
30	3079	3374	2681	3054
Av.	3199	3507	2605	
 <u>Pima S-5</u>				
10	2925	2117	2784	2609
20	3092	2001	2977	2690
30	3118	2245	2835	2733
Av.	3045	2121	2865	

These data do not show an advantage for any planting rate at a specific planting date or as an average of all planting dates. The data do show differences between planting dates.

Although April 20 appears to be the preferred planting date for upland cotton and April 10 for Pima cotton we wish to reserve judgement to another year. The field the test was in had a heavy infestation of pink bollworms in mid July. Before control could be achieved, a large percentage of young bolls were damaged. We believe the infestation may have penalized the earlier planting dates to a greater degree than later dates. We do not know how the pink bollworm infestation affected planting rates. We plan to repeat this test two additional years.

Rate and Date of Planting Upland Cotton

Jim Armstrong, Pima County Extension Agent

Growers are interested in delaying the planting date for upland cotton to accomodate double cropping and/or shortened growing season. These are attempts to increase the annual revenue per acre or to reduce the ever-increasing cost of production. Obviously these are highly desirable goals.

Previous experience had shown us that when long staple planting was delayed an increase in seeding rate would minimize loss attributed to the later planting within certain time and rate constraints. It was questionable as to whether the same results would apply to upland cotton.

For this reason a comparison was designed to test whether or not this was valid. The following results were obtained using DPL 55.

Rate and Date of Planting Upland Cotton
Apex Farms, Art Pacheco, Marana

Date and Rate	Seed Cotton Per Plot (Pounds)				Total Pounds Seed Cotton	Pounds Lint/Acre
	Rep 1	Rep 2	Rep 3	Rep 4		
April 15-11 pounds	970	1005	910	955	3840	1179 a ¹
April 15-22 pounds	890	1010	885	805	3590	1108 ab
April 29-11 pounds	940	925	925	870	3660	1129 bc
April 29-22 pounds	835	845	780	795	3255	1007 c

¹ Values followed by the same letter not significantly different at .05 level by the Student - Newman - Keul's Test

CROP HISTORY

SOIL TYPE:	Loam	Previous Crop:	Upland Cotton
Land Prep.:	Plow, Landplane and List		
Herbicide:	1.8 lb. Caparol as layby on 7/6/81		
Fertilizer:	114 lb. NH ₃ water run		
Irrigation:	Preirrigation 3/16 - 3/21 - 2AF. Three irrigations, alternate rows Terminal 3/27/81 - Total Water Applied - 3.65 AF		
Insecticide:	3 applications for Perforator, Lygus and Cotton Bollworm		
Defoliation:	2 gal. Sodium Chlorate on 9/22/81		
Harvest:	First pick - 10/7/81, second pick 1/4/82		

The results as shown above indicate that increasing seeding rate had little or no effect on either planting date. The eleven pound rate on April 15 produced the most pounds of lint although this yield is not significantly different from the higher rate. The low rate produced the highest yield at both planting dates. Thus it is obvious that no positive gain resulted from increasing the seeding rate at either planting date.