

Table 1. Cotton lint yield as percentage of maximum possible lint yield as derived from regression analyses of several tests for different planting dates in the lower elevations of Arizona.

Planting Date	Upland cotton		Pima cotton
	Yuma County	Maricopa-Pinal Cos.	Maricopa County
Percentage of maximum possible yield			
March 2	90.8		
9	96.7		
16	99.6	96.7	
19	--	--	100
20	100.	--	--
23	99.7	98.6	98.8
30	97.4	99.7	96.1
April 5	--	100.	--
6	93.0	99.9	92.8
13	86.7	99.4	88.8
20	79.0	97.9	84.1
27	70.2	95.5	78.8
May 4	60.5	92.3	72.8
11	50.3	88.2	66.1
18	39.9	83.3	58.8
25	29.7	77.5	50.8
June 1	19.9	70.8	
8	11.0	63.3	
15	3.1	54.9	

Cotton Planting Date and Planting Rate

D.L. Kittock and B.B. Taylor, Agronomists; R. Cluff, Extension Agent; M. Thatcher, Farm Supervisor

Summary

DPL 41 and Pima S-5 cotton were planted at seeding rates of 10, 20, and 30 pounds per acre on 5 April, 21 April, and 10 May on the Safford Experimental Farm in 1982. Pima S-5 produced about 55% as much lint/acre as DPL 41. Both varieties had the highest lint yield when planted on 21 April with a planting rate of 20 pounds of seed/acre.

Planting rates and planting dates of upland and pima cotton in Graham County differ widely among growers. Additionally, seeding rates for early and late plantings vary among growers.

In 1982 we conducted a planting rate and planting date study on upland and pima cotton at the Safford Experimental Farm. This was the second year of a proposed three year study on the subject.

Seed of DPL 41 and Pima S-5 were planted at three rates: 10, 20, and 30 pounds per acre on three dates: 5 April, 21 April, and 10 May. Individual plots were four rows wide by 36 feet long. There were five replications. The center two rows of each plot were used for yield determination, stand counts, and plant height measurements. All plantings were preirrigated prior to planting. Harvest was on 7 December.

Pima S-5 on an average produced approximately 55% as much lint as DPL 41, had a significantly higher final stand than DPL 41, and was about 10 cm taller (Table 1). Both DPL 41 and Pima S-5 produced more lint with the 21 April planting than with earlier or later plantings. Both varieties produced the highest lint yield when planted at 20 pounds of seed per acre. Plant height increased about 10 cm with each later planting date. More plants were obtained with the 21 April planting than the earlier or later plantings. There were some significant interactions with varieties, but their effect was minor as compared to treatment effects.

Table 1. Lint yield, plant population, and plant height of DPL 41 and Pima S-5 planted at three rates on three planting dates at Safford, Arizona in 1982.

<u>Variety</u>	<u>Lint Yield</u>	<u>Thousand Plants/Acre</u>	<u>Plant Height (cm)</u>
DPL 41	1179 a ^{1/}	37 b	88 b
Pima S-5	660 b	42 a	97 a
<u>Planting date</u>			
5 April	964 b	34 c	82 c
21 April	1036 a	45 a	92 b
10 May	786 c	40 b	103 a
<u>Planting rate</u> * ^{2/}			
10 lbs/acre	877 b	20 c	90 a
20 " "	970 a	40 b	94 a
30 " "	938 a	58 a	94 a
<u>Var. X planting date</u> *			
DPL 41—5 April	1192 b	30 d	78 d
Pima S-5—5 April	711 d	39 b	87 c
DPL 41—21 April	1330 a	46 a	86 c
Pima S-5—21 April	724 d	44 a	98 b
DPL 41—10 May	1015 c	34 c	99 b
Pima S-5—10 May	546 e	45 a	108 a
<u>Var. X planting rate</u> N.S.			
DPL 41—10 lbs	1075 b	19 e	84 d
Pima S-5—10 lbs	656 c	21 e	96 b
DPL 41—20 lbs	1248 a	38 d	87 d
Pima S-5—20 lbs	677 c	43 c	101 a
DPL 41—30 lbs	1214 a	54 b	92 c
Pima S-5—30 lbs	648 c	63 a	95 b
C.V.	10%	14%	8%

^{1/} Means within a group and followed by the same letter are not significantly different at the 0.05 confidence level.

^{2/} *, N.S. means significant at the 0.05 confidence level and not significant, respectively, for the interactions.

Rate and Date of Planting Upland Cotton

Jim Armstrong, Pima County Extension Agent

Shortened season cotton production is an attempt to increase annual revenue per acre and/or to reduce the constantly increasing cost of production. One way to shorten the production period is to delay planting by about two weeks.