

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.

Previous experience has shown that when long staple planting was delayed up to two weeks yield loss could be minimized by increasing the seeding rate. It has been questioned as to whether the same effect would be true for short staple.

This test was a continuation of 1981 work and utilized the same variety, DPL 55, and the same planting dates within one day variance.

The following are results obtained in 1982.

Rate and Date of Planting 55 Cotton

Apex Farms, Art Pacheco, Marana

Rate and Date	Seed Cotton Per Plot (Pounds)				Second Pick	Total Pounds Seed Cotton	Pounds-Lint Per Acre
	Rep 1	Rep 2	Rep 3	Rep 4			
17 pounds-April 14	870	900	835	840	555	4000	1235 a ¹ / ₂
9 pounds-April 14	925	870	880	795	460	3930	1217 a
17 pounds-April 28	790	770	755	780	650	3745	1151 b
9 pounds-April 28	805	745	750	705	655	3660	1124 b

There was no significant difference in yield between the low and high planting rates on both planting dates. This evidence supports earlier results which suggests that it does not pay to increase seeding rate as planting date is delayed for short staple cotton. Rates in the 9-11 pound per acre range have yielded as well as rates in the 17-22 pound range. Although there is some actual yield difference between rates no significant difference is evident.

Double Cropping in Graham County

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

Summary

Three upland cotton and two pima cotton cultivars were planted after Inia wheat and Poco barley on the Safford Experimental Farm. Cotton after barley was planted on 26 May and after wheat on 7 June. DPL 712, a short fiber experimental line, produced the most lint in both plantings. DPL 41 and 7209 (experimental U. of A. line) had about equal lint yield. Lint yield of pima cotton cultivars was much lower than upland cotton cultivars.

This test was planted on the Safford Research Farm. Inia wheat and Poco barley were planted following cotton on 18 December, 1981 at the rate of 160 pounds of seed per acre. The soils are Anthony and Grabe clay loams. Grain received 40 pounds of N in the form of UN 32 through the growing season. There were six irrigations for wheat and five for barley for an estimated total of 21 and 18 inches of water, respectively. Barley was harvested on 18 and 19 May, while wheat was harvested on 3 June. Yield of barley was 4136 pounds per acre and wheat was 4499 pounds per acre. Following each harvest the area was shredded; ripped 24 inches deep twice; disked twice; fertilized with urea at 100 pounds of N/acre; herbicides were applied, Prowl at 1.75 pints (0.87 lbs ai./acre) and Caparol at 1.5 pints (0.75 lbs ai./acre); disked twice; listed; bed-shaped; planted; and irrigated.

Three upland cotton varieties and two pima cotton varieties were planted in each test. There were three replications each after barley and wheat. Plots were four rows wide by 220 feet long. Cotton was planted after barley on 25 May and watering began on 26 May. Five plus days of watering were required to wet the beds. Cotton after wheat was planted on 7 June and watered on 8 June. No serious water penetration problem occurred after wheat. Four irrigations were applied following the germination irrigation. An estimated 18 inches of irrigation was applied to the cotton.