

Table 1. Accumulated seedcotton yields from five harvest dates for three Pima cultivars planted in 30- and 40-inch rows with and without the application of Pix at Phoenix, 1980.

Row width-Treatment-Cultivar			Pounds of seedcotton per acre harvested as of:				
			8/25	9/8	9/22	10/9	10/20
40"	NP	79-103	245	1140	1683	2195	2377
"	"	79-106	239	1242	1992	2517	2698
"	"	Pima S-5	153	987	1416	1989	2207
"	P	79-103	225	1308	1808	2385	2649
"	"	79-106	254	1420	2119	2662	2922
"	"	Pima S-5	134	965	1462	2022	2304
"	NP	all cultivars	212	1123	1697	2234	2427
"	P	all cultivars	204	1231	1796	2356	2625
30"	NP	79-103	255	1483	1890	2308	2569
"	"	79-106	211	1552	2258	2667	2914
"	"	Pima S-5	166	1103	1483	1924	2211
"	P	79-103	250	1246	1708	2164	2405
"	"	79-106	277	1604	2254	2750	3021
"	"	Pima S-5	150	1044	1464	1970	2249
"	NP	all cultivars	211	1379	1877	2300	2565
"	P	all cultivars	226	1298	1809	2295	2558
40"			208	1177	1747	2295	2526
30"			218	1339	1843	2297	2562
NP			212	1251	1787	2267	2496
P			215	1265	1803	2326	2591
79-103			244	1294	1772	2263	2500
79-106			245	1455	2156	2649	2889
Pima S-5			151	1025	1456	1976	2243

P = Pix applied at rate of 20 g active ingredient/acre on 6/26.  
NP = No Pix applied.

#### THE USE OF PIX IN ARIZONA

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#### Upland Cotton

PIX, a cotton plant regulator, was evaluated at several locations during the 1980 growing season. Applications were made to cooperating cotton growers fields by ground using one nozzle directed above each row of cotton.

The Pix label suggests timing the application to appearance of 5-6 white blooms per 25 feet of row. Using bloom member as a guideline, most applications were applied late. Even though flower counts show the timing of application was late, the number of days of the delay was small. This suggest that PIX should be applied at an earlier physiological stage and/or the timing determined using different technique.

An earlier application and/or double application appears to be especially important in the longer growing areas of the state.

Vigorously growing Upland is more likely to favorably respond to PIX applications. Our findings suggest PIX applications following water stress may prove detrimental.

The current method of determining timing of application may be appropriate for the higher elevations of Arizona. Our findings also suggest that late planted cotton may respond favorably to PIX applications.

SUMMARY OF PIX EVALUATION DEMONSTRATIONS ON UPLAND COTTON

Application Date	Blooms per 25 row feet	Variety	Rate/Acre; Yield in pounds			
			1 pint	1½ pts	2 pts	Check
June 5	12-20	ST-825	3599	---	---	3762
June 5	7-15	ST-825	---	---	4114	4155
June 6	5-6	DPL-61	3396	---	---	3528
June 6	14	DPL-61	4012	---	---	4121
July 2	28	DPL-70	3630	3458	---	3743
July 2	30-40	DPL-61	3113	3015	2961	3143
July 8	15-20	ST-825	2590	---	---	2190
August 6	3-5	ST-213	3703	---	---	3298

PIX EVALUATION DEMONSTRATIONS

Gary Thacker - Yuma

Agent-in-Charge - Don Howell

Rate/Acre	Blooms per 25 row feet	Seed Cotton/Acre
Check	12-20	3762 a <sup>1/</sup>
20 gm	12-20	3599 a

C.V.: Yield = 4.30%.

<sup>1/</sup>

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

CROP HISTORY

VARIETY: ST-825. PLANTING: February 26 at 20 lbs/acre.  
 APPLICATION: June 5, 19 inches average plant height, applied with Hustler ground rig.  
 HARVEST: September 24, 1980.

Gary Thacker - Yuma

Agent-in-Charge - Don Howell

Rate/Acre	Blooms per 25 row feet	Seed Cotton/Acre
Check	7-15	4155 a <sup>1/</sup>
40 gm	7-15	4114 a

C.V.: Yield = 6.0%.

<sup>1/</sup>

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

CROP HISTORY

VARIETY: ST-825. PLANTING: February 27, at 20 lbs/Acre.  
 APPLICATION: June 5, 19 inches average plant height, applied with Hustler ground rig.  
 HARVEST: September 24, 1980.

Barkley Company of Arizona -  
Somerton

Agent-in-Charge - Don Howell

Rate/Acre	Blooms per 25 row feet	Seed Cotton/Acre
Check	5-6,	3528 a <sup>1/</sup>
20 gm	5-6	3396 a

C.V.: Yield = 22.1%.

<sup>1/</sup>

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

#### CROP HISTORY

VARIETY: DPL-61. PLANTING: March 6 at 15 lbs/Acre.  
APPLICATION: June 6, 19 inches average plant height, applied with  
Hustler ground rig.  
HARVEST: October 7, 1980.

Barkley Company of Arizona -  
Somerton

Agent-in-Charge - Don Howell

Rate/Acre	Blooms per 25 row feet	Seed Cotton/Acre
Check	14	4121 a <sup>1/</sup>
20 gm	14	4012 a

C.V.: Yield = 11.8%.

<sup>1/</sup>

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

#### CROP HISTORY

VARIETY: DPL-61. PLANTING: March 1 at 15 lbs/Acre.  
APPLICATION: June 6, 18 inches average plant height, applied with Hustler  
ground rig.  
HARVEST: September 24, 1980.

Bob Moore - Litchfield Park

Agent-in-Charge - Chuck Farr

Rate/Acre	Blooms per 25 row feet	Seed Cotton/Acre
Check	28	3743 a <sup>1/</sup>
20 gm	28	3630 ab
30 gm	28	3458 b

C.V.: Yield = 2.5%.

<sup>1/</sup>

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

#### CROP HISTORY

VARIETY: DPL-70. PLANTING: April 27 at 20 lbs/Acre.  
APPLICATION: July 2, 19 inches average plant height, applied with  
Hustler ground rig.  
HARVEST: October 7, 1980.

Rate/Acre	Blooms per 25 row feet	Seed Cotton/Acre
Check	30-40	3143 a <sup>1/</sup>
20 gm	30-40	3113 a
30 gm	30-40	3015 a
40 gm	30-40	2961 a

C.V.: Yield = 6.2%.

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

## CROP HISTORY

VARIETY: DPL-61. PLANTING: April 23 at 20 lbs/Acre.  
 APPLICATION: July 2, 19 inches average plant height, applied with Hustler ground rig.  
 HARVEST: October 7, 1980.

Tom Clark - Marana

Agent-in-Charge - Jim Armstrong

Rate/Acre	Blooms per 25 row feet	Seed Cotton/Acre
20 gm	15-20	2590 a <sup>1/</sup>
Check	15-20	2190 b

C.V.: Yield = 3.25%.

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

## CROP HISTORY

VARIETY: ST-825. PLANTING: April 14 at 15 lbs/Acre.  
 APPLICATION: July 8, 22 inches average plant height, applied with Hustler ground rig.  
 HARVEST: October 21, 1980.

Harold Reyher - Marana

Agent-in-Charge - Jim Armstrong

Rate/Acre	Blooms per 25 row feet	Seed Cotton/Acre
20 gm	3-5	3703 a <sup>1/</sup>
Check	3-5	3298 a

C.V.: Yield = 6.97%.

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

## CROP HISTORY

VARIETY: ST-213.  
 PLANTING: June 9 at 10 lbs/Acre following barley.  
 APPLICATION: August 6, 19 inches average plant height, applied with Hustler ground rig.  
 HARVEST: November 10, 1980.

# Pima S-5 Cotton

Our findings show Pima and Upland cotton have a different response to PIX applications. Our results of PIX application to Pima cotton are mixed. We suggest caution until additional information is available.

Tom Clark - Marana

Agent-in-Charge - Jim Armstrong

Rate/Acre	Blooms per 25 row feet	Seed Cotton/Acre
20 gm	5	3037 a <sup>1/</sup>
40 gm	5	2947 a
30 gm	5	2870 a
Check	5	2747 a

C.V.: Yield = 7.20%.

<sup>1/</sup>

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

## CROP HISTORY

VARIETY: Pima S-5. PLANTING: April 22 at 15 lbs/Acre.  
APPLICATION: July 8, 19 inches average plant height, applied with Hustler ground rig.  
HARVEST: November 24, 1980.

Art Pacheco - Apex Farms  
Marana

Agent-in-Charge - Jim Armstrong

Rate/Acre	Blooms per 25 row feet	Seed Cotton/Acre
20 gm	10	3565
15 gm + ½pt. Charge + 2½pt. CaZn	10	2935
Check	10	2810
30 gm	10	2805

## CROP HISTORY

VARIETY: Pima S-5. PLANTING: April 10 at 15 lbs/Acre.  
APPLICATION: July 15, 20 inches average plant height, applied by airplane.

\* Heavy clay loam soil.

Art Pacheco - Evco Farms  
Marana

Agent-in-Charge - Jim Armstrong

Rate/Acre	Blooms per 25 row feet	Seed Cotton/Acre
20 gm	5-6	3090
15 gm + ½pt. Charge + 2½ pt. CaZn	5-6	2990
30 gm	5-6	2770
Check	5-6	2560

## CROP HISTORY

VARIETY: Pima S-5. PLANTING: April 16 at 15 lbs/Acre.  
APPLICATION: July 15, average plant height 19 inches, applied by airplane.  
HARVEST: November 13, 1980.

\* Sandy loam soil.

## Safford Experiment Station

Agent-in-Charge - Ron Cluff

Rate/Acre	Blooms per 25 row feet	Seed Cotton/Acre
Check	10	2085 a <sup>1/</sup>
30 gm	10	1988 ab
20 gm + Charge	10	1965 ab
40 gm	10	1913 bc
20 gm	10	1815 c

C.V. Yield = 8.35%.

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

## CROP HISTORY

VARIETY: Pima S-5. PLANTING: April 22 at 15 lbs/Acre.  
APPLICATION: July 15, 24 inches average plant height, applied with Hustler ground rig.

## Marana Experiment Station

Agent-in-Charge - Jim Armstrong

Rate/Acre	Blooms per 25 row feet	Seed Cotton/Acre
Check	5-6	2602 a <sup>1/</sup>
40 gm	5-6	2507 a
20 gm	5-6	2493 a
20 gm + Charge	5-6	2452 a
30 gm	5-6	2398 a

C.V.: Yield = 5.0%.

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

## CROP HISTORY

VARIETY: Pima S-5. PLANTING: April 10 at 12 lbs/Acre.  
APPLICATION: August 7, 16-18 inches average plant height, applied with Hustler ground rig.  
HARVEST: November 10, 1980.