

DOUBLE CROP COTTON VERSUS AN EARLY PLANTING DATE

Sam Stedman, Pat Kirkpatrick and Brooks Taylor

An 80 acre field was divided in two equal areas. One area was planted to barley during winter for a spring harvest in 1980. The second area was planted to cotton in late April of 1980. This field was heavily infested with root rot during 1979.

In May, the barley was harvested, a seedbed rapidly prepared and cotton planted in late May.

A variety test was initiated in each area of the field. One test was planted early and the other planted double crop following barley, four weeks later.

The average yield of the early planted variety test was 1250 pounds lint per acre compared to 983 pounds per acre for the double crop cotton variety test (see tables below).

The four weeks delay in planting date result in an average weekly loss of 67 pounds of lint per acre.

The advantage of double cropping cotton with small grains lies in the relative price-yield advantage the system may offer. Also, the maturity range of the small grain is important. Each week delay in planting cotton results in 50 or more pounds less lint per acre.

David Prechel - Coolidge		Early Plant	
Variety	Turnout ^{1/} %	Lint lbs/A	Plants/A x 1000
DPL-7120	39.5	1397 a ^{2/}	36.8 a ^{2/}
DPL-61	34.7	1338 a	42.5 a
DPL-70	35.6	1329 a	42.8 a
DPL-41	35.1	1281 ab	33.3 a
ST-825	34.0	1216 ab	38.8 a
ST-213	34.1	1146 ab	38.8 a
ST-506	30.9	1045 b	35.3 a

^{1/} Turnouts are based on laboratory gin results.

^{2/} Values followed by the same letter are not significantly different at the .05 level by the Student-Newman-Keul's Test.

C.V.: Stand = 20.6%; Yield = 10.04%.

CROP HISTORY

SOIL TYPE: Sandy Loam. PREVIOUS CROP: Sorghum.
 TILLAGE: Ripped, plowed, disked twice, floated.
 PLANTING: April 28 at 12.5 lbs/A, Maximerge planter in moisture with no cap.
 HERBICIDE: Preplant: Prowl at 2 pts/A, sprayed on and listed in.
 Layby: None.
 FERTILIZER: Preplant: None. Layby: Water run Uran at 10 gals/A, side-dressed 11-48-0 at 200 lbs/A, injected NH₃ at 150 lbs/A in two applications.
 IRRIGATION: 1 preirrigation + 9 more irrigations ending on September 10.
 INSECTICIDE: 4 applications for Lygus and Heliothis Complex.
 DEFOLIATION: October 12 with Def-6 at 2 pts/A and Accelerate at 1 1/2 pts/A.
 HARVEST: December 23, 1980.

DOUBLE CROPPING COTTON VARIETY DEMONSTRATION

Elmer Emrick - Somerton

Agent-in-Charge - Don Howell

Variety	Turnout ^{1/} %	Lint Yield/Acre		Plants/A x 1000
		First Pick	Total	
DPL-61	33.7	1330 a ^{2/}	1552	43.0 a ^{2/}
DPL-70	34.2	1277 a	1406	35.6 a
DPL-7120	36.3	1241 a	1451	46.6 a
DPL-41	36.4	1215 a	1403	46.0 a
ST-506	31.7	1198 a	1326	49.6 a
ST-825	31.7	1172 a	1285	42.6 a
DPL-712	34.7	1131 a	1225	35.6 a

The following varieties appeared in the above test and were replicated twice.

McNair 235	33.0	1142	1344	41.0
Coker 310	31.6	1114	1258	46.6
McNair 220	33.3	1090	1286	32.6
ST-256	31.8	1065	1258	40.6
Coker 315	33.3	1060	1259	36.6
ST-213	32.3	926	1177	40.0

^{1/} Turnouts are based on laboratory gin results.

^{2/} Values followed by the same letter are not significantly different at the .05 level by the Student-Newman-Keul's Test.

C.V.: Stand = 27.9%; Yield = 15.58%.

CROP HISTORY

SOIL TYPE: Clay Loam. PREVIOUS CROP: Small Grain Seed Increase.
TILLAGE: Disk, List, Mulch.
PLANTING: May 29 at 12 to 15 lbs/A, under cap, in dry mulch.
HERBICIDE: Preplant: Prowl at 1 qt/A + Caparol at 1 1/4 lbs/A, disked in.
Hoed by hand. Layby: None.
FERTILIZER: Preplant: 300 lbs/A of 16-20-0. Layby: None.
IRRIGATION: 1 preirrigation + 5 more irrigations on solid rows ending on
September 11.
INSECTICIDE: 10 applications for Heliothis Complex and Lygus.
Applied Ambush + Fundal with last application on October 6.
3 lbs/A of Temik at planting.
DEFOLIATION: .2 lbs/A of Dropp on October 8.
HARVEST: First Pick on October 16; Second Pick on November 21, 1980.

Variety	Turnout ^{1/} %	Lint lbs/A	Plants/A x 1000
DPL-41	34.1	1073 a ^{2/}	26.0 a
DPL-61	32.8	1025 ab	26.8 a
DPL-70	33.3	984 ab	34.0 a
ST-825	30.5	965 ab	26.3 a
ST-213	31.5	933 b	34.5 a
ST-506	29.7	918 b	33.0 a

^{1/}

Turnouts are based on laboratory gin results.

^{2/}

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

C.V.: Stand = 16.2%; Yield = 5.74%.

CROP HISTORY

SOIL TYPE: Sandy Loam. PREVIOUS CROP: Barley.
TILLAGE: Shred stubble, disk 3 times, list.
PLANTING: May 29 at 12.5 lbs/A, Hill drop and irrigated up.
HERBICIDE: Preplant: Prowl at 2 pts/A, sprayed on and listed in.
Layby: None
FERTILIZER: Preplant: None. Layby: Water run Uran at 10 gals/A,
sidedressed 18-46-0 at 160 lbs/A, injected NH₃ at 150 lbs/A.
IRRIGATION: 9 irrigations ending on September 14. Total water use 3 AF.
INSECTICIDE: 4 applications for Lygus, Heliothis Complex and Perforator.
DEFOLIATION: First application on November 5 with Def-6 at 2 pts/A and
Accelerate at 1 pt/A; Second application on November 22 with
Sodium Chlorate at 2 1/2 gals/A.
HARVEST: First Pick on December 14;

Short Season Cotton

T. J. Henneberry, L. A. Bariola, Research Entomologists; D. L. Kittock, retired Agronomist;
and V. T. Walhood, Plant Physiologist (Shafter, CA)

A split-plot experiment involving 4 acres each of Stoneville 825 nectariless and Deltapine 70 cottons was conducted at Brawley, CA. Plots were split to evaluate 3 irrigation cut-off dates. In each case, one-half of the split plots was insecticide treated. The other one-half of each plot served as an untreated control. In mid-September, one-half of each of the split plots was treated with the plant growth regulator 'Dicamba' plus chlorflurenol to remove late-season green bolls and reduce diapausing pink bollworm populations. Twenty-five firm green bolls were picked weekly and examined for the presence of pink bollworm larvae. Cotton was machine picked and green bolls counted at harvest. Soil was processed in a gin trash machine on December 11, 1979 to determine the effect of treatments on diapausing (overwintering) larvae.

Irrigation cutoff and chemical termination had no effect on numbers of larvae sampled in green bolls. Significantly fewer larvae were found in the nectariless cultivar. Insecticide applications (5) beginning September 3 gave nearly complete control of the pink bollworm. The number of green bolls were significantly reduced as a result of the plant growth regulator treatment and early irrigation cutoff, and fewer diapausing larvae were found in those plots. Yields were not affected as a result of the chemical termination treatment in plots not treated with insecticide but were reduced as a result of chemical termination in the insecticide-treated plots.