

# 1991 Yuma County Upland Cotton Variety Trial

## Wayne Stuhr Farm - Wellton, AZ

*Don R. Howell, County Director*

This cotton variety trial included 11 varieties and 3 replications planted flat in a dry mulch on April 5, 1991. The same planter setting was used for all varieties. The field was 569 feet long and each plot consisted of 8 40-inch rows. Additional cultural information will be provided at a later time. Yield in pounds of seed cotton was measured on November 5, 1991 by dumping pickers into 4 wheel seed cotton trailers set on portable scales. Table 1 depicts a statistical analysis of that data along with height, plant population, number of bales in trailer, grade, staple, mike and strength. Each variety of cotton was placed in a separate trailer so that it could be ginned separately. Ginning percentage or % lint turnout was determined for each variety at the gin. This was done for the entire trailer and thus was not replicated. Figure 1 displays that information for each variety. The lint cotton per acre could then be determined using the plot yields and ginning percentage. These data are shown in Figure 2. Bales were classed and graded by USDA in Phoenix. The Phoenix spot price was determined for 11/21/91 and that equaled 56.25 cents per pound. (March 1991 futures close = 60.75 cents for SLM (41) and 1 1/16 (34) minus negative basis of 4.50 cents). The different classes, grades, mikes, and strength were then converted to numerical values or cents per pound using the USDA 1991 ASCS schedule of premiums and discounts for grades, staple length, micronaire and strength. There were no discounts on any of the bales using this system. Figure 3 depicts the average of all quality premiums when added together for each variety. These in turn were added to the spot price and multiplied by the lint yields per acre for lowest yielding replication and highest yielding replication to obtain the gross returns graph (Figure 4). The quality and lint yield data were also converted to dollars per plot and statistically analyzed. Those data are depicted in Table 2. Also listed in Table 2 are plant measurements during the year.

These data can be helpful when determining a cotton variety to plant under these circumstances. This is only one test and figures used for much of the data were not replicated. Only yield per plot of seed cotton was replicated. Growers are therefore cautioned to use their own experience and results of other tests when deciding on a cotton variety to plant.

**Acknowledgements:** In addition to cooperator-grower Wayne Stuhr, Ron Berens made substantial contribution to completion and execution of this trial. Doug Henry also assisted in collecting yield data. Growers Mohawk Gin was very understanding in providing trailers to accomplish keeping varieties separated.

TABLE 1 STUHR VARIETY TRIAL DATA 1991 UPLAND COTTON

VARIETY	AVERAGE		HEIGHT INCHES	NUMBER PLANTS/ ACRE	# BALES/ VAR.	QUALITY INFORMATION			
	LBS/SEED COTTON/ PLOT	1/				GR	ST	MI	STRN
DPL5415	1570	AB	54	44500	3	31	37	44	27.4
						21	36	44	27.4
						21	36	46	27.4
DPL50	1593	A	47	42500	3	31	37	46	23.8
						31	36	44	23.8
						31	37	44	23.8
C-40	1473	ABC	50	41500	3	31	36	42	24.5
						31	35	42	24.5
						31	35	44	24.5
DES119	1497	ABC	49	39000	3	31	36	43	26.8
						31	37	44	26.8
						41	36	43	26.8
DPL5461	1460	ABC	50	41500	3	31	37	42	25.4
						21	37	43	25.4
						31	38	44	25.4
GC100	1442	ABCD	51	33500	3	31	37	42	27.7
						21	37	43	27.7
						21	38	44	27.7
DPL77	1370	BCD	51	39500	3	40	37	39	28.4
						31	36	40	28.4
						31	37	41	28.4
DPL5690	1353	BCD	56	45000	2	31	36	42	30
						21	36	42	30
DPL61	1403	ABCD	53	40000	3	31	37	43	26.6
						31	37	44	26.6
						31	38	44	26.6
S1001	1340	CD	66	41500	3	41	38	44	27.7
						41	37	42	27.7
						31	37	42	27.7
DPL5816	1240	D	66	40000	3	31	37	43	28.9
						21	36	43	28.9
						21	36	42	28.9

1/MEANS FOLLOWED BY THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT AT THE 5% LEVEL OF PROBABILITY. LSD .05=136.8 STUDENT-NEWMAN-KEULS TEST

Table 2.

Variety	Gross Return Mean/Plot	1/	# Bolls/ Meter		Plant Mapping % Fruited Sites 6/19 (5 Plants)	Average Ht./Inches 6/19 (5 Plants)
			10/21/91	8/20/91		
DPL 5415	\$334	a	119	114	50	28"
DPL 50	\$319	ab	79	95	78	24"
DES 119	\$311	ab	111	90	77	31"
C-40	\$309	ab	107	85	56	30"
GC-100	\$306	ab	72	102	59	27"
DPL-5461	\$300	ab	84	99	56	26"
DPL 77	\$298	ab	93	87	47	27"
DPL 5690	\$295	ab	112	116	46	31"
DPL 61	\$288	ab	84	86	50	26"
S-1001	\$281	b	117	103	61	31"
DPL 5816	\$278	b	99	107	35	28"

1/Means followed by the same letter are not significantly different at the 5% level of probability. LSD .05=29.43 Student-Newman-Keuls Test

Figure 1.

# UPLAND COTTON VARIETY TRIAL

## WAYNE STUHR FARM 1991

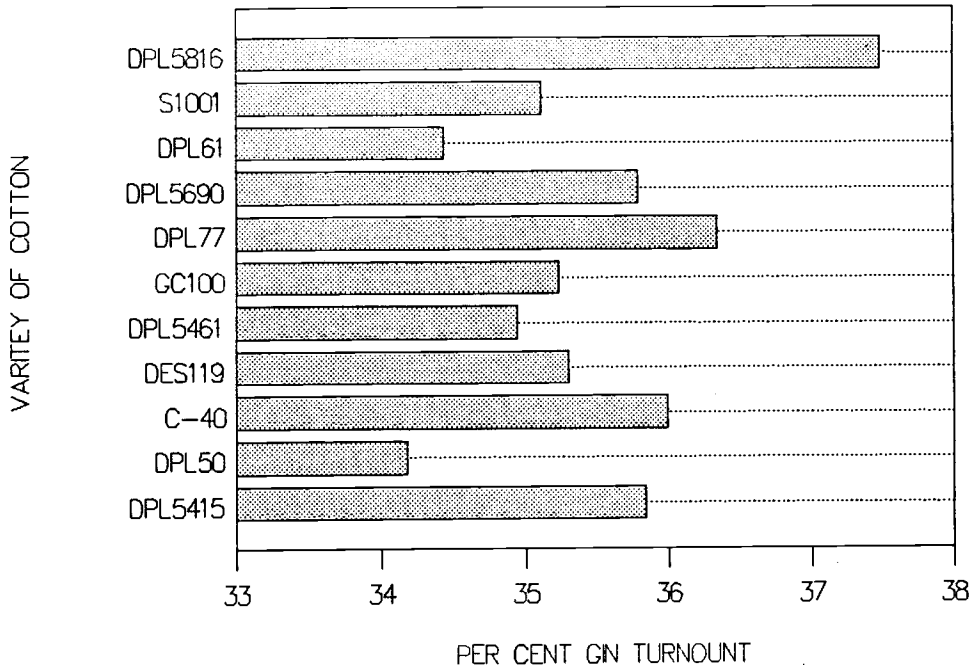
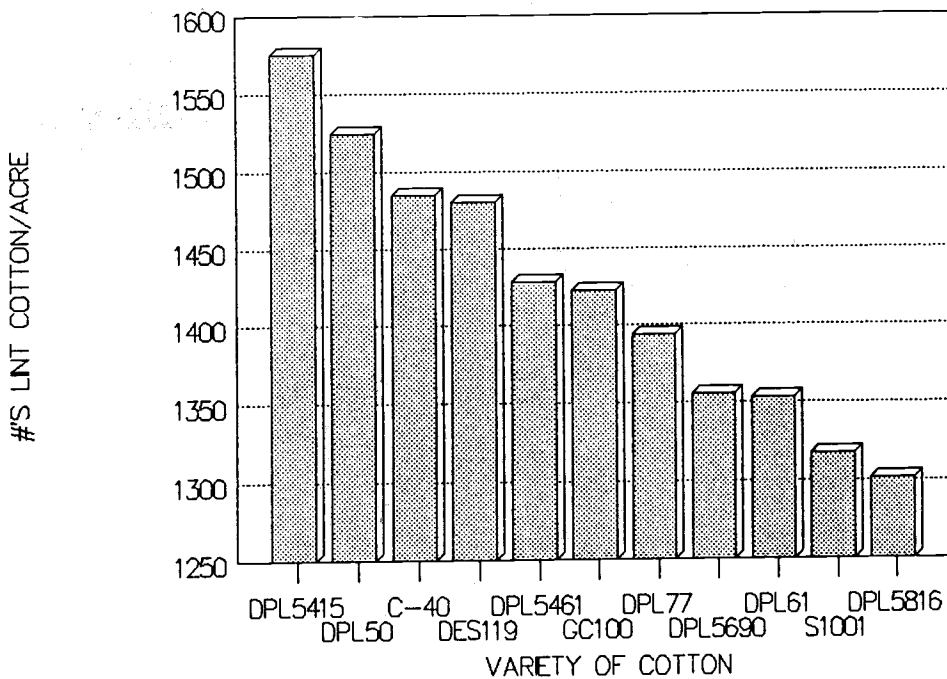


Figure 2.

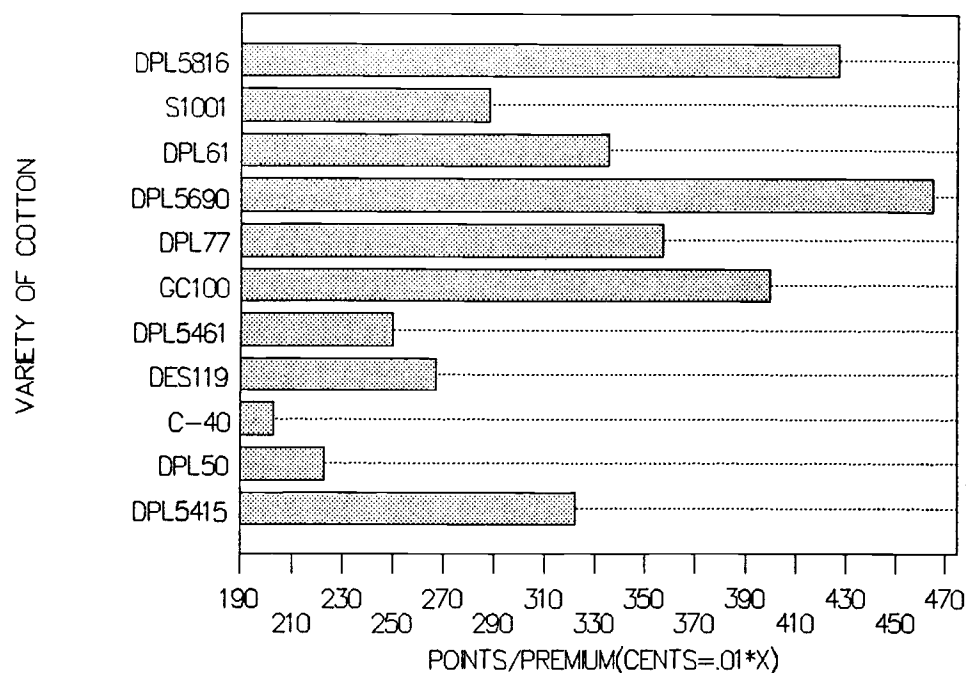
# UPLAND COTTON VARIETY TRIAL

## WAYNE STUHR FARM 1991



**Figure 3.** UPLAND COTTON VARIETY TRIAL

WAYNE STUHR FARM 1991



**Figure 4.** UPLAND COTTON VARIETY TRIAL

WAYNE STUHR FARM 1991

