

I - VARIETIES

Varietal Studies

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Short staple

Several varieties and strains which have shown promise in prior testing were put out in a testing program throughout the state. Many of the tests were placed on cooperator-grower farms through the efforts of project leaders and county agents. In most instances the varieties are compared or evaluated with respect to certain varieties of known quality and yielding ability.

Much of the interest in short staple cotton is testing the difference between the yields of relatively "low" quality varieties and "high" quality varieties. Superimposed on this is the factor of wilt tolerance. A continuous program of testing and evaluating is necessary to obtain for the grower a high yielding, "high" quality, and wilt tolerant variety.

Long staple

The response of certain of the Pima varieties and strains as a result of being placed in different locations is characterized by what is known as "earliness" and "lateness." This response affects yield and quality at the various locations and therefore will influence the recommendation of a variety for a specific area.

Several tests were established at different locations in the state for the purpose of evaluating the yield and quality of the varieties and strains at each location. Many of the tests were placed on cooperator-grower farms with the aid of the county agents.

A continuing effort is being made to maximize yields and quality of the Pima varieties.

A. GRAHAM COUNTY TESTS

Short Staple

Bob Colvin--Eden

County Agent--John Sears

<u>Variety</u>	<u>Lint/Acre</u>	<u>1st Pick % of Total</u>	<u>Gin Turnout--%</u>
1517C	778bc	92.1	34.8
1517D	691b	91.6	33.7
1517V	826cd	91.3	35.6
4447	836cd	90.3	35.8
DPL 7139	916d	88.7	38.8
Stoneville 7A	787bc	91.2	35.6
DK-51-56-2	682b	88.7	36.0
6016-11-2	710b	89.6	35.6
6010	478a	84.2	37.2
5909	785bc	77.8	37.3
8050	769bc	90.1	36.0

*Yields followed by the same letter are not significantly different.

Soil type--Clay loam

Planting date-- April 5, 1965 Pattern--Solid

Irrigations--Pre-irrigation March 15, Last one on September 6, 1965

Adequate throughout season.

Method of irrigation--furrow, alternate rows, switching rows from one irrigation to the next. Every row, the last two times.

Fertilization--May 15, 1965, 200# Urea, June 15, 1965, 50# N as NH₃

Crop condition--wilt infection very apparent in some spots

Harvested-- machine, first picking, October 21, 1965, Second picking, November 11, 1965

Burns Marshall--Eden

County Agent--John Sears

<u>Variety</u>	<u>Lint/Acre</u>	<u>1st Pick % of Total</u>	<u>Gin Turnout--%</u>
1517D*	760a	91.3	34.2
1517V*	925b	92.6	26.6
4447*	926b	88.3	35.4
6016	900	87.8	38.2
5909	825	77.2	35.6
8050	880	84.2	34.2

*Replicated Varieties, values followed by the same letter are not significantly different.

Dale Clonts--Solomon

County Agent--John Sears

<u>Variety</u>	<u>Lint/Acre</u>	<u>1st Pick % of Total</u>	<u>Gin Turnout--%</u>
S-2	698a	85.1	36.9
P17	696a	89.2	36.9
P-18	760a	90.1	37.2
E1044	743a	89.0	35.8

Soil type--Sandy loam

Planting--April 5, 1965

Irrigation--Preplant, March 15, adequate throughout season

Method of Irrigation--furrow, every other row

Insect Control--Thuracide (Bacteria) for control of worms

Harvest--Machine, First picking, November 15 and 16, 1965, Second picking,
December 3, 1965.

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Carl and Phil Curtis--Safford

County Agent--John Sears

<u>Variety</u>	<u>Lint/Acre</u>	<u>1st Pick % of Total</u>	<u>Gin Turnout--%</u>
S-2	656	87.1	34.5
P-15	754	92.0	35.1
P-17	757	91.7	34.3
P-18	587	88.0	34.1
E1044	657	87.3	33.5

Soil type--clay loam

Planting--April 10, 1965 Pattern--solid

Method of Irrigation--furrow

Fertilization--none

Weed control--Treflan

Insect Control--Spray Corn ear worm

Crop Condition--Slight Rust

Harvest--Machine, First picking, November 19 and 20, 1965, Second picking,
January 12 and 13, 1966.

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Max Green--Safford

County Agent--John Sears

<u>Variety</u>	<u>Lint/Acre</u>	<u>1st Pick % of Total</u>	<u>Gin Turnout--%</u>
S-2	644b	72.3	38.7
P-17	752a	72.0	37.6
E1044	707a	70.7	35.4

Soil type--Sandy Clay loam
 Planting--April 15, 1965 Pattern--Solid
 Irrigations--adequate, last irrigation in September
 Method of Irrigation--all furrows the first two irrigations, every other furrow thereafter.
 Fertilization--Late June 80# urea every other row.
 Crop Condition--Spots of root rot
 Defoliation--none
 Harvest--Machine, First picking, October 29, 1965, Second picking, January 13, 1966.

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Lee Hunt--Thatcher County Agent--John Sears

<u>Variety</u>	<u>Lint/Acre</u>	<u>1st Pick % of Total</u>	<u>Gin Turnout--%</u>
S-1	710b	69.8	35.3
P-17	870a	67.0	37.0
E1044	836a	73.6	35.2

Soil type--clay loam
 Planting--April 10, 1965 Pattern--solid
 Irrigation--Preplant in March, last one on September 1, 1965
 Method of Irrigation--furrow, the same alternate row each time.
 Fertilization--Side dress June 15, 150# 16-48-0
 Harvest--Machine, First picking, October 28, 1965, Second picking, November 22, 1965.

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Farrell Layton--Thatcher County Agent--John Sears

<u>Variety</u>	<u>Lint/Acre</u>	<u>1st Pick % of Total</u>	<u>Gin Turnout--%</u>
S-1	933b	81.5	34.1
S-2	856c	83.9	35.1
P-15	960b	91.5	37.0
P-17	1044a	81.5	34.7
E1044	931b	83.5	33.5

Soil type--Clay loam
 Planting--March 29, 1965 Pattern--Solid
 Irrigation--adequate
 Method of Irrigation--furrow
 Fertilization--May 25, 1965, 125# Urea
 Weed Control--Treflon-preplant

Crop Condition--Some Boll rot
 Defoliation--None
 Harvest--Machine, First picking, November 2, 1965, Second picking
 started December 8, 1965 (rain) finished January 12, 1966.

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Scott Pace--Solomon County Agent--John Sears

<u>Variety</u>	<u>Lint/Acre</u>	<u>1st Pick % of Total</u>	<u>Gin Turnout--%</u>
S-2	750b	84.9	35.0
P-15	872a	88.9	35.1
P-17	854a	83.0	34.7
P-18	806ab	90.2	33.8
E1044	839a	82.7	33.1

Soil type--Clay loam
 Planting--April 15, 1965 Pattern--Plant 2, Skip 1
 Irrigations--Preplant--last one in early September, adequate during the
 season.
 Method of Irrigation--between planted rows two times, every row thereafter
 Fertilization--none
 Insect Control--Two sprayings of Toxaphene and DDT for Corn ear worm
 Crop Condition--Some Pink Bollworm damage in the top.
 Defoliation--November 2, 1965
 Harvest--Machine, First picking, November 15, 1965, Second picking,
 December 7 and 8, 1965.

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B. MARICOPA COUNTY TESTS

Short Staple

Newell Barney--Queen Creek

County Agent--Charles Farr

<u>Variety</u>	<u>Lint/Acre</u>	<u>1st Pick % of Total</u>
Acala 44-10	968	67.7
Hopicala	1034	75.6
6010	917	74.9
Hy Bee	1293	71.2

Soil type--Gila loam

Planted--April 10, 1965 Pattern--Plant 2, Skip 1

Fertilization--300# 16-20-0, 75# N as Urea

Irrigation--adequate

Method of Irrigation--Center row

Defoliation--Mg ClO₃, November 1, 1965

Harvest--Machine, November 15, 1965 and January 20, 1966

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Long Staple

James Hamilton--Queen Creek

County Agent--Charles Farr

<u>Variety</u>	<u>Lint/Acre</u>	<u>1st Pick % of Total</u>	<u>Gin Turnout--%</u>
S-2	363a	100	36.5
P-15	385a	100	34.7

Soil type--Sandy loam

Planting Pattern--Solid

Irrigations--adequate

Method of Irrigation--furrow

Harvest--Machine, Picked--January 12, 1966

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Norman Pretzer--Eloy

County Agent--Sam Stedman

<u>Variety</u>	<u>Lint/Acre</u>	<u>Gin Turnout--%</u>
----- Demonstration 1 -----		
Hopicala	1101	32.50
Deltapine 5540	1330	32.80
----- Demonstration 2 -----		
Hopicala	1524	32.40
Acala 4-42	1477	32.60

Soil--Sandy clay

Planting--April 21, 1965 Pattern--Plant 2, Skip 2

Crop Condition--wilt infestation

Harvest--Machine, Picked--October 20, 1965

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Long Staple

Emmett Grasty--Maricopa

County Agent--Sam Stedman

<u>Variety</u>	<u>Lint/Acre</u>	<u>1st Pick % of Total</u>	<u>Gin Turnout--%</u>
S-2	984	84.9	35.1*
P-15	1020	89.5	35.5*

*Based on 200-boll samples

Planting--Pattern--Solid

Harvest--Machine, First picking, November 18, 1965--Second picking,
January 13, 1966.

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Allan McFaddin--Maricopa

County Agent--Sam Stedman

<u>Variety</u>	<u>Lint/Acre</u>	<u>1st Pick % of Total</u>	<u>Gin Turnout--%</u>
Test I			
S-2	751a	100	34.8
P-15	776a	100	35.2
Test II			
S-2	783a	100	34.8
P-17	649a	100	35.6

Planting Pattern--Solid

Irrigations--adequate

Fertilization--120 Units of N

Harvest--Machine, picked--January 4, 1966

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D. YUMA COUNTY TESTS

Short Staple

Ferguson--Yuma County Agent--Jim Hazlitt

<u>Variety</u>	<u>Lint/Acre</u>	<u>1st Pick % of Total</u>	<u>Gin Turnout--*</u> %
Deltapine S.L.	2218	88.4	35.6
6010	1753	84.2	33.6
Hopicala	1801	80.8	32.4

*Gin turnout for 1st picking only.

Soil type--Silt loam

Planting date--March 23, 1965 Pattern--Plant 2, Skip 2

Harvest--Machine, Picked 1st--December 31, 1965, Second picking,
January 3, 1966

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Hunter--Matthews--Salome County Agent--Jim Hazlitt

<u>Variety</u>	<u>Lint/Acre*</u>	<u>Turnout--%**</u>
Deltapine S.L.	2283c	35.9
6010	1808a	37.2
Hopicala	1990ab	35.8
Hy Bee	1972ab	34.0
Acala 4-42	2133bc	36.8

*Yields followed by the same letter are not significantly different.

**Gin turnout is based on Boll samples adjusted to reflect trash content.

Soil type--Sandy loam

Planted--April 25, 1965 Pattern--Plant 2, Skip 2

Harvest--Machine--January 12, 1966

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Simmons--Parker County Agent--Jim Hazlitt

<u>Seed Cotton</u>	<u>Variety</u>	<u>Lint/Acre</u>	<u>Gin Turnout--%**</u>
4668	Deltapine S.L.	1666	35.7
4841	Hopicala	1651	34.1
5027	6010	1780	35.4
5027	DK-51-54-2	1719	34.2
4375	DK-51-56-2	1575	36.0

*Gin turnout based on boll samples adjusted to reflect trash content.

Soil type--Loam

Planted--March 17, 1965 Pattern--Plant 2, Skip 1

Harvest--Machine--January 25, 1966

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