

## 2016 University of California PIMA COTTON VARIETY TRIALS

Dec. 21, 2016 update

Seed cotton yields, mini-gin calculated lint percent and gin turnout, calculated lint yield averages

Questions?	Cooperative Project by:
contact: Bob Hutmacher (Univ. CA) Cell: (559) 260-8957 email: rbhutmacher@ucdavis.edu	University of CA Coop. Extension (UC-ANR) / Univ. CA Davis Plant Sci Dept. / Univ. CA West Side REC <b>Funding by:</b> CA Cotton Growers&Ginners Assoc., CA Cotton Alliance, UC-ANR/UCCE, UC Davis Plant Sci. Dept. <b>Cooperators:</b> multiple growers, Steve Wright, Dan Munk, Brian Marsh, Bill Weir, Mark Keeley, Raul Delgado, TariLee Frigulti, SJV Quality Cotton Growers Assoc.-Shafter, Univ CA Cooperative Extension Tulare, Kings, Fresno, Kern, Merced Counties

**Location:** University of CA West Side Research Center

clay loam soil

row spacing = 40 inches

field #16 at West Side REC

VARIETY	SEED COMPANY	SEED COTTON (lbs/acre)	MINI-GIN LINT PERCENT (%)	MINI-GIN GIN TURNOUT (%)	LINT YIELD* *(calculated as seed cotton yield times Mini-Gin Turnout)	LINT YIELD (as % of Phy-805 RF yield)	SEEDCOTTON YIELD (as % of Phy-805 RF yield)
PHY 805RF	Phytogen	4994	43.3	41.7	2085	100	100
PX 8188RF	Phytogen	5489	43.4	42.1	2311	111	110
PHY 841RF	Phytogen	5212	44.3	42.9	2236	107	104
PHY 881RF	Phytogen	5668	44.0	43.2	2450	118	113
DP 348RF	Monsanto / Delta Pine	5599	43.2	42.3	2369	114	112
DP 358RF	Monsanto / Delta Pine	5825	42.2	41.1	2399	115	117
DP/OA-EXP. 38	Monsanto / Olvey & Assoc.	5635	43.4	42.3	2383	114	113
DP/OA-EXP. 48	Monsanto / Olvey & Assoc.	5537	43.1	42.2	2338	112	111
HA-1432	Hazera	6039	40.4	38.5	2313	111	121
HA-690	Hazera	5315	39.6	38.3	2035	98	106
HA-701	Hazera	5509	40.3	38.8	2138	103	110
PHY 802RF	Phytogen	5130	42.4	40.9	2105	101	103
PHY 811RF	Phytogen	5549	42.4	41.2	2288	110	111
MEAN		5500	42.5	41.2	2265		
<sup>a</sup> LSD 0.05		556	1.0	1.4	206		
<sup>b</sup> %CV		7.0	1.6	2.3	6.3		
<sup>c</sup> P		0.040	0.000	0.000	0.002		

\* **NOTE: LINT YIELD VALUES** shown were calculated using a mini-gin. This simple ginning method differs from UCCE methods in prior years (mini-gin does not have commercial gin style cleaners. Corrections were calculated for moisture loss/gain between field harvest weight timing and ginning timing, and basic gin loss estimates are typically lower with use of mini-gin. All samples were handled in an identical manner in terms of mini-gin operations, so gin turnout and lint percent numbers represent relative variety differences.

<sup>a</sup> LSD = least significant difference at 5% level (differences in mean values shown that differ by more than LSD value shown are significantly different)

<sup>b</sup> C.V. = coefficient of variation across replications

<sup>c</sup> P = probability (if value shown is 0.05 or less, there is greater than a 95% probability of significant differences between mean values shown)

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### Location: University of CA West Side Research Center

row spacing = 40 inches

field #16 at West Side REC

VARIETY	SEED COMPANY	SEED COTTON (lbs/acre)	2016 MINI-GIN LINT PERCENT (%)	2016 MINI-GIN GIN TURNOUT (%)	for comparison:			
					GIN TURNOUTS PERCENT from 2015 COTTON TRIALS (**2015 analyses done using Shafter Research Gin)			
					Corcoran	Los Banos	Riverdale	Shafter
PHY 805RF	Phytogen	4994	43.3	41.7	34.1	32.1	34.5	33.2
PX 8188RF	Phytogen	5489	43.4	42.1	34.9	33	35.6	33.7
PHY 841RF	Phytogen	5212	44.3	42.9	34.4	33.6	35.2	34
PHY 881RF	Phytogen	5668	44.0	43.2				
DP 348RF	Monsanto / Delta Pine	5599	43.2	42.3	33.3	32.5	33	32.9
DP 358RF	Monsanto / Delta Pine	5825	42.2	41.1	32.6	32.2	33	31.5
DP/OA-EXP. 38	Monsanto / Olvey & Assoc.	5635	43.4	42.3				
DP/OA-EXP. 48	Monsanto / Olvey & Assoc.	5537	43.1	42.2				
HA-1432	Hazera	6039	40.4	38.5				
HA-690	Hazera	5315	39.6	38.3				
HA-701	Hazera	5509	40.3	38.8				
PHY 802RF	Phytogen	5130	42.4	40.9				33.1
PHY 811RF	Phytogen	5549	42.4	41.2	32.4	31.7	33.6	31.6
MEAN		5500	42.5	41.2	* if values not shown, not in 2015 trials			

\*\* Shafter Research Gin is a smaller scale, commercial type gin with lint cleaners. The lint yields shown on the SUMMARY PAGE for this site were determined using the mini-gin turnout % data, which tends to be significantly higher than a more standard type of gin (such as the "Shafter Research Gin" which incorporates lint cleaners). 2015 trial gin turnouts determined using the "Shafter Research Gin" are provided for information only. Since they were determined using different fields in a different year, there is no expectation that the same gin turnouts would apply for 2016 field sites.

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Location: **Mendota area (Fresno County)**

HARVEST DATE: 10/26

VARIETY	SEED COMPANY	SEED COTTON (lbs/acre)	MINI-GIN LINT PERCENT (%)	MINI-GIN GIN TURNOUT (%)	LINT YIELD* (calculated as seed cotton yield times Mini-Gin Turnout)	LINT YIELD (as % of Phy-805 RF yield)	SEEDCOTTON YIELD (as % of Phy-805 RF yield)
PHY 805RF	Phytogen	2645	42.3	41.5	1096	100	100
PX 8188RF	Phytogen	3469	41.1	40.4	1400	128	131
PHY 841RF	Phytogen	3370	42.3	41.4	1395	127	127
PHY 881RF	Phytogen	3626	42.0	40.8	1480	135	137
DP 348RF	Monsanto / Delta Pine	3020	41.2	40.1	1209	110	114
DP 358RF	Monsanto / Delta Pine	2934	40.3	39.2	1148	105	111
DP/OA-EXP. 38	Monsanto / Olvey & Assoc.	2947	41.3	40.4	1189	108	111
DP/OA-EXP. 48	Monsanto / Olvey & Assoc.	2928	41.1	40.4	1182	108	111
MEAN		3117	41.5	40.5	1262		
<sup>a</sup> LSD 0.05		171	1.0	1.1	78		
<sup>b</sup> %CV		3.7	1.6	1.8	4.2		
<sup>c</sup> P		0.000	0.006	0.006	0.000		

\* **NOTE: LINT YIELD VALUES** shown were calculated using a mini-gin. This simple ginning method differs from UCCE methods in prior years (mini-gin does not have commercial gin style cleaners. Corrections were calculated for moisture loss/gain between field harvest weight timing and ginning timing, and basic gin loss estimates are typically lower with use of mini-gin. All samples were handled in an identical manner in terms of mini-gin operations, so gin turnout and lint percent numbers represent relative variety differences.

<sup>a</sup> LSD = least significant difference at 5% level (differences in mean values shown that differ by more than LSD value shown are significantly different)

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Location: **Mendota area (Fresno County)**

HARVEST DATE: 10/26

VARIETY	SEED COMPANY	SEED COTTON (lbs/acre)	2016 MINI-GIN LINT PERCENT (%)	2016 MINI-GIN GIN TURNOUT (%)	for comparison: GIN TURNOUTS PERCENT from 2015 COTTON TRIALS (**2015 analyses done using Shafter Research Gin)			
					Corcoran	Los Banos	Riverdale	Shafter
PHY 805RF	Phytogen	2645	42.3	41.5	34.1	32.1	34.5	33.2
PX 8188RF	Phytogen	3469	41.1	40.4	34.9	33	35.6	33.7
PHY 841RF	Phytogen	3370	42.3	41.4	34.4	33.6	35.2	34
PHY 881RF	Phytogen	3626	42.0	40.8				
DP 348RF	Monsanto / Delta Pine	3020	41.2	40.1	33.3	32.5	33	32.9
DP 358RF	Monsanto / Delta Pine	2934	40.3	39.2	32.6	32.2	33	31.5
DP/OA-EXP. 38	Monsanto / Olvey & Assoc.	2947	41.3	40.4				
DP/OA-EXP. 48	Monsanto / Olvey & Assoc.	2928	41.1	40.4				
MEAN		3117	41.5	40.5				

\* if values not shown, not in 2015 trials

\*\* Shafter Research Gin is a smaller scale, commercial type gin with lint cleaners  
The lint yields shown on the SUMMARY PAGE for this site were determined using the mini-gin turnout % data, which tends to be significantly higher than a more standard type of gin (such as the "Shafter Research Gin" which incorporates lint cleaners. 2015 trial gin turnouts determined using the "Shafter Research Gin" are provided for information only. Since they were determined using different fields in a different year, there is no expectation that the same gin turnouts would apply for 2016 field sites.

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Location: **Los Banos area (Merced County)**

HARVEST DATE: 10/12

VARIETY	SEED COMPANY	SEED COTTON (lbs/acre)	MINI-GIN LINT PERCENT (%)	MINI-GIN GIN TURNOUT (%)	LINT YIELD* (calculated as seed cotton yield times Mini-Gin Turnout)	LINT YIELD (as % of Phy-805 RF yield)	SEEDCOTTON YIELD (as % of Phy-805 RF yield)
PHY 805RF	Phytogen	3329	43.8	42.6	1418	100	100
PX 8188RF	Phytogen	4238	43.8	42.7	1809	128	127
PHY 841RF	Phytogen	4231	44.1	42.7	1806	127	127
PHY 881RF	Phytogen	4242	44.2	42.8	1813	128	127
DP 348RF	Monsanto / Delta Pine	4022	43.4	42.4	1705	120	121
DP 358RF	Monsanto / Delta Pine	3817	42.9	41.6	1589	112	115
DP/OA-EXP. 38	Monsanto / Olvey & Assoc.	4026	43.4	42.0	1690	119	121
DP/OA-EXP. 48	Monsanto / Olvey & Assoc.	3820	43.5	42.7	1626	115	115
MEAN		3966	43.6	42.4	1682		
<sup>a</sup> LSD 0.05		246	NS	NS	95		
<sup>b</sup> %CV		4.2	1.5	1.6	3.8		
<sup>c</sup> P		0.000	0.127	0.204	0.000		

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Location: **Los Banos area (Merced County)**

HARVEST DATE: 10/12

VARIETY	SEED COMPANY	SEED COTTON (lbs/acre)	2016 MINI-GIN LINT PERCENT (%)	2016 MINI-GIN GIN TURNOUT (%)	for comparison: GIN TURNOUTS PERCENT from 2015 COTTON TRIALS (**2015 analyses done using Shafter Research Gin)			
					Corcoran	Los Banos	Riverdale	Shafter
PHY 805RF	Phytogen	3329	43.8	42.6	34.1	32.1	34.5	33.2
PX 8188RF	Phytogen	4238	43.8	42.7	34.9	33	35.6	33.7
PHY 841RF	Phytogen	4231	44.1	42.7	34.4	33.6	35.2	34
PHY 881RF	Phytogen	4242	44.2	42.8				
DP 348RF	Monsanto / Delta Pine	4022	43.4	42.4	33.3	32.5	33	32.9
DP 358RF	Monsanto / Delta Pine	3817	42.9	41.6	32.6	32.2	33	31.5
DP/OA-EXP. 38	Monsanto / Olvey & Assoc.	4026	43.4	42.0				
DP/OA-EXP. 48	Monsanto / Olvey & Assoc.	3820	43.5	42.7				
MEAN		3966	43.6	42.4				

\* if values not shown, not in 2015 trials

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**LOCATION: Corcoran area - Kings County**

HARVEST DATE: 10/27

row spacing = 30 inches

VARIETY	SEED COMPANY	SEED COTTON (lbs/acre)	MINI-GIN LINT PERCENT (%)	MINI-GIN GIN TURNOUT (%)	LINT YIELD* (calculated as seed cotton yield times Mini-Gin Turnout)	LINT YIELD (as % of Phy-805 RF yield)	SEEDCOTTON YIELD (as % of Phy-805 RF yield)
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PX 8188RF	Phytogen	5366	41.1	39.7	2131	123	124
PHY 841RF	Phytogen	5375	41.4	39.9	2144	124	124
PHY 881RF	Phytogen	5547	42.1	40.7	2255	130	128
DP 348RF	Monsanto / Delta Pine	5540	40.6	39.3	2179	126	128
DP 358RF	Monsanto / Delta Pine	5334	40.2	38.5	2055	119	123
DP/OA-EXP. 38	Monsanto / Olvey and Assoc.	5484	41.1	39.8	2182	126	127
DP/OA-EXP. 48	Monsanto / Olvey and Assoc.	5577	41.0	39.7	2213	128	129
MEAN		5319	41.1	39.7	2111		
<sup>a</sup> LSD 0.05		187	0.7	0.9	101		
<sup>b</sup> %CV		2.4	1.1	1.6	3.2		
<sup>c</sup> P		0.000	0.001	0.007	0.000		

\* **NOTE: LINT YIELD VALUES** shown were calculated using a mini-gin. This simple ginning method differs from UCCE methods in prior years (mini-gin does not have commercial gin style cleaners. Corrections were calculated for moisture loss/gain between field harvest weight timing and ginning timing, and basic gin loss estimates are typically lower with use of mini-gin. All samples were handled in an identical manner in terms of mini-gin operations, so gin turnout and lint percent numbers represent relative variety differences.

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**LOCATION: Corcoran area - Kings County**

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					GIN TURNOUTS PERCENT from 2015 COTTON TRIALS (**2015 analyses done using Shafter Research Gin)			
					Corcoran	Los Banos	Riverdale	Shafter
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PX 8188RF	Phytogen	5366	41.1	39.7	34.9	33	35.6	33.7
PHY 841RF	Phytogen	5375	41.4	39.9	34.4	33.6	35.2	34
PHY 881RF	Phytogen	5547	42.1	40.7				
DP 348RF	Monsanto / Delta Pine	5540	40.6	39.3	33.3	32.5	33	32.9
DP 358RF	Monsanto / Delta Pine	5334	40.2	38.5	32.6	32.2	33	31.5
DP/OA-EXP. 38	Monsanto / Olvey and Assoc.	5484	41.1	39.8				
DP/OA-EXP. 48	Monsanto / Olvey and Assoc.	5577	41.0	39.7				
MEAN		5319	41.1	39.7				

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