CALIFORNIA UPLAND COTTON
ADVANCED STRAINS VARIETY TRIALS

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Variety trial yield and fiber quality results are the focus of these trials conducted at both Shafter and West Side Research and Extension Centers. As the yield and fiber quality data for the current year does not become available until well after the field day, a listing is provided of both the entries included in the 2004 field trials as well as a data summary of the 2003 efforts (provided as an example of ongoing data collected in this trial).

2004 Activities – at Shafter and West Side REC sites. This testing program was downsized to small plot trials at UC Shafter and UC West Side Research and Extension Centers beginning in 2002 in response to both reduced grower interest in alternatives to Approved Acalas and inadequate funding to continue large grower field trial activities conducted from 1998 through 2001. The project investigators are appreciative for the participation by seed companies and the UC Research Centers in providing support for ongoing testing of non-Acala Uplands. The actual varieties included in 2004 trials are shown in Table 1, but yield and lint quality data will not be available on 2004 studies until December 2004. Summary results will be posted on our UC cotton web site: http://cottoninfo.ucdavis.edu and in January 2005 issue of the *California Cotton Review* newsletter.

Table 1. Entries in 2004 CA Upland Advanced Strains trials at UC Shafter and West Side Research and Extension Center sites.

Seed Company or Breeder	Variety or Entry #		Seed Company or Breeder	Variety or Entry #
Phytogen	Phy-72			
Bayer / Fibermax	FM-960B2R		Syntech Seed Comp.	Syn-0651
	FM-966 LL			Syn-2226
	FM-958 LL			Syn-2534
	FM-960 RR			Syn-7184
Stoneville / Emergent	ST-5454 B2R			
	ST-4575 BR		USDA-ARS lines (Ulloa and Percy)	03MU-1023
	ST-4686 RR			03MU-1034
	ST-6636 BR			03MU-1050
	ST-6848 RR			03MU-1052
	ST-5242 BR			03MU-1301
Olvey and Associates	OA-85			03MU-1304
				03MU-1306
Delta & Pine Land Co.	DP-444 BR			03MU-1332
	DP-555 BR			03MU-1414
	DP-494 RR			03MU-1424
	DP-434 RR			03MU-1430
	DP-432 RR			03MU-1089-6

* NOTE: Acala variety included for comparison purposes (Phy-72 is not a CA Upland variety)

2003 Activities. Two variety trials (small-scale plot studies) were done on CA Upland cotton varieties in the San Joaquin Valley, and results (yield, HVI quality) are covered in reports available at the previously mentioned website. Data shown here will only cover the "Advanced Strains" CA Upland trials from 2003, with these trials conducted only at the West Side and Shafter REC locations. The tests do not overlap those underway in other SJVCB or UCCE variety trials.

Table 2. Lint quality characteristics of 2 Acala varieties (Phytogen "Phy-72"and CPCSD "SIERRA") and 21 CA Upland varieties in **University of CA Specialist "CA Upland Advanced Strains" variety trial (SHAFTER REC site) in 2003**. **Values shown are averages across 4 field replications at the University of CA Shafter REC in 2003.** All analyses were run on seedcotton collected during field harvests with commercial spindle pickers in 4 field replications per variety at each site. Six pound samples were then run through the Shafter REC research gin, and HVI analyses of lint samples were conducted at the USDA classing office in Visalia, CA.

Seed Company or Breeder	Variety	Micro-naire	Length (in.)	Strength (g/T)	Unif. Index (UI)	Manual Classing Leaf Grade	HVI Trash	Color RD	Color + B
Phytogen	**Phy-72 (Acala comparison)**	4.03	1.22	32.7	84.0	2.0	0.20	80.3	9.35
CPCSD	**Sierra (Acala comparison)**	3.50	1.15	32.2	82.8	2.8	0.25	81.8	9.00
Bayer / Fibermax	**FM-960 BR**	3.55	1.12	32.6	82.0	2.3	0.18	83.5	8.28
Bayer / Fibermax	**FM-989 BR**	3.55	1.16	31.8	82.8	2.3	0.23	82.8	8.25
Bayer / Fibermax	**FM-989 RR**	3.35	1.14	34.1	83.0	2.0	0.20	82.8	8.78
Bayer / Fibermax	**FM-991 RR**	3.85	1.17	32.3	82.8	2.0	0.15	82.8	8.40
Stoneville	**STX-0202 B2R**	3.48	1.14	29.0	81.8	3.3	0.35	80.3	9.20
Stoneville	**STX-0203 BR**	3.83	1.12	27.1	83.0	2.3	0.18	82.3	9.18
Stoneville	**STX-0204 BR**	3.55	1.09	27.5	82.3	2.5	0.25	82.0	8.73
Stoneville	**ST-5303 R**	3.90	1.13	31.8	83.0	1.8	0.15	82.3	8.85
Stoneville	**ST-5599 BR**	3.50	1.13	30.7	81.5	2.5	0.23	80.5	9.20
Olvey & Assoc.	**OAX-300 BR**	3.85	1.07	25.9	81.5	1.5	0.10	82.5	9.40
Olvey & Assoc.	**OAX-303**	3.95	1.13	27.8	82.8	2.0	0.13	82.5	8.90
Olvey & Assoc.	**OA-85**	3.93	1.14	29.2	82.3	2.8	0.25	82.0	8.95
Delta & Pine Land	**DPLX-03X177 R**	3.43	1.16	32.6	82.3	3.0	0.25	81.5	8.73
Delta & Pine Land	**DP-444 BR**	3.38	1.13	28.5	82.3	2.5	0.20	82.0	8.83
Delta & Pine Land	**DP-493**	3.68	1.15	30.9	82.0	2.5	0.20	82.5	8.48
Delta & Pine Land	**DP-555 BR**	3.55	1.16	29.5	81.8	2.0	0.18	84.0	8.08
Delta & Pine Land	**DP-5415 RR**	3.73	1.17	30.6	83.0	2.0	0.13	82.8	8.45
CPCSD	**FM-20415-167**	3.65	1.18	32.7	83.0	2.0	0.20	83.3	8.38
CPCSD	**FM-20414-97**	3.33	1.18	33.7	82.3	2.5	0.23	84.0	8.15
CPCSD	**FM-20414-213**	3.25	1.12	31.0	80.8	2.3	0.18	83.5	8.28
CPCSD	**FM-20414-214**	3.85	1.17	32.5	82.8	2.3	0.15	83.3	8.10
Average *(CA Uplands only)*		**3.63**	**1.14**	**30.6**	**82.3**	**2.3**	**0.20**	**82.5**	**8.65**
LSD (0.05)		0.36	0.03	1.2	1.0	0.6	0.08	1.0	0.31
C.V. (%)		7.1	1.6	2.8	0.8	18.9	29.3	0.9	2.5
P		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

* NS = not significant: LSD indicates that values separated by the amount shown (or more) are significantly different: C.V. (%) indicates amount of variation in data (higher number = more variable data); P value is indicator of probability of statistical differences.

Table 3. **CALIFORNIA UPLANDS ADVANCED STRAINS (Farm Advisors & Specialist Trials) – 2003.** Lint yields (in lbs/acre and as % of Approved Acala variety "Phytogen-72") by test location and average gin turnout for each variety in *2003 California Upland Advanced Strains Variety (UCCE Cooperators: R. Hutmacher, B. Marsh, M. Keeley, R. Delgado, S. Ball, F. Leal, E. Scott and J. Ross in fields at the UC Shafter & West Side Research & Extension Centers).*

Seed Company Or Breeder	Variety Name or Number	*40" rows* Shafter REC (Kern County) Lint Yields		*40" rows* West Side REC (Fresno Co.) Yields		Average Lint Yields Across 2 Locations		Average Gin Turnout Across Two locations (%)
		(lbs lint per acre)	(as % of Phy-72 Yield)	(lbs lint per acre)	(as % of Phy-72 Yield)	(lbs lint per acre)	(as % of Phy-72 Yield)	
Phytogen	**Phytogen-72** (Acala for comparison)	1487	100.0	1058	100.0	1273	100.0	33.0
CPCSD	**Sierra** (Acala variety for comparison)	1351	90.9	981	92.7	1166	91.6	33.6
Bayer / Fibermax	**FM-960 BR**	1400	94.1	1249	118.1	1325	104.1	33.5
Bayer / Fibermax	**FM-989 BR**	1350	90.8	1025	96.9	1188	93.3	33.1
Bayer / Fibermax	**FM-989 RR**	1295	87.1	922	87.1	1109	87.1	34.0
Bayer / Fibermax	**FM-991 RR**	1338	90.0	783	74.0	1061	83.3	32.5
Stoneville	**STX-0202 B2R**	1245	83.7	1109	104.8	1177	92.5	31.9
Stoneville	**STX-0203 BR**	1600	107.6	1530	144.6	1565	122.9	34.6
Stoneville	**STX-0204 BR**	1443	97.0	1193	112.8	1318	103.5	32.5
Stoneville	**ST-5303 R**	1352	90.9	1221	115.4	1287	101.1	33.9
Stoneville	**ST-5599 BR**	1235	83.1	1406	132.9	1321	103.8	32.7
Olvey & Assoc.	**OAX-300 BR**	1556	104.6	1484*	140.3*	1520*	119.4	34.9 *
Olvey & Assoc.	**OAX-303**	1302	87.6	1179	111.4	1241	97.5	35.4
Olvey & Assoc.	**OA-85**	1541	103.6	1531	144.7	1536	120.7	35.7
Delta & Pine Land Company	**DPLX-03X177 R**	1115	75.0	969	91.6	1042	81.9	34.1
Delta & Pine Land Company	**DP-444 BR**	1374	92.4	1477	139.6	1426	112.0	34.6
Delta & Pine Land Company	**DP-493**	1366	91.9	985	93.1	1176	92.4	34.6
Delta & Pine Land	**DP-555 BR**	1456	97.9	1002	94.7	1229	96.5	35.2
Delta & Pine Land	**DP-5415 RR**	1375	92.5	1020	96.4	1198	94.1	33.6
CPCSD	**FM-20415-167**	1359	91.4	981	92.7	1170	91.9	31.6
CPCSD	**FM-20414-97**	1391	93.5	1095	103.5	1243	97.6	33.3
CPCSD	**FM-20414-213**	1343	90.3	979	92.5	1161	91.2	33.0
CPCSD	**FM-20414-214**	1313	88.3	958	90.5	1136	89.2	33.7
Average		**1373**		**1121**		**1247**		**33.7**
LSD (0.05)		153		144		108		0.6
C.V. (%)		7.9		9.1		8.7		1.9