Appendix 1: SCA effects of male parents crossed with female parents for grain yield under low and high-soil phosphorus conditions in 2007 and 2008.

No	Hybrid combinations	SK-SDAP-07	SCA	SK-SDAP-08	SCA	SK-DAP-07	SCA	SK-DAP-08	SCA
Guinea-Caudatum/Guinea-Caudatum									
1	12A/00-KO-F5DT-19	320	-647	2250	217	2610	-396	2790	177
2	12A/MALISOR-92-1	70	-856	1680	-388	2820	-47	3130	383
3	12A/02-SB-F4DT-298	620	-223	1650	-507	2830	-120	1820	-543
4	12A/Grinkan	220	-615	1300	-791	2480	-481	2210	-475
5	12A/12A/02-SB-F5DT-189	280	-777	1080	-1326	1880	-1278	2230	-262
6	150A/00-KO-F5DT-19	620	-255	1990	-111	3060	43	3850	736
7	150A/MALISOR-92-1	640	-193	1220	-915	2220	-657	3790	542
8	150A/02-SB-F4DT-298	550	-201	2570	345	2570	-391	3160	296
9	150A/Grinkan	560	-183	2390	231	2630	-341	3020	-166
10	150A/02-SB-F5DT-189	*	*	1450	-1023	2370	-799	2290	-702
11	PR3009A/00-KO-F5DT-19	880	-29	1790	-343	2490	-517	2220	-443
12	PR3009A/MALISOR-92-1	490	-377	1700	-468	3600	732	2100	-697
13	PR3009A/02-SB-F4DT-298	770	-15	2110	-147	2630	-321	2100	-313
14	PR3009A/Grinkan	650	-127	1890	-301	3540	578	3480	745
15	PR3009A/02-SB-F5DT-189	180	-818	1270	-1236	2100	-1059	2080	-462
Mean (kg/ha)		489		1756		2655		2685	
Guinea-Ecotype/Guinea-Ecotype									
1	FambeA/CSM-388	520	-388	2040	-177	2880	-63	1540	-1426
2	FambeA/CSM-63E	650	-254	2170	34	3310	210	2060	-523
3	FambeA/IS 6731	910	-58	1760	-705	2650	-285	1770	-928

4	FambeA/SEGUETANA	690	-326	1510	-901	3090	36	1580	-828
5	GPNA/CSM-388	700	-37	1420	-729	2810	-90	1680	-1489
6	GPNA/CSM-63E	590	-143	1420	-648	2470	-587	1560	-1226
7	GPNA/IS 6731	360	-437	1200	-1197	2690	-203	1640	-1261
8	GPNA/SEGUETANA	460	-385	1270	-1073	2530	-481	3170	559
9	FambeA/CGM-19/9-1-1	170	-762	2520	27	2700	-357	2220	-112
10	FambeA/LATA 3 Bala	1210	-14	2300	-113	*	*	2450	-21
11	GPNA/CGM-19/9-1-1	620	-141	2190	-235	3220	205	1500	-1035
12	GPNA/LATA 3 Bala	870	-183	2080	-265	2840	-407	1980	-694
Mean (kg/ha)		646		1823		2835		1929	
Guinea-Caudatum/Guinea-Ecotype									
1	12A/CSM-388	620	-186	1890	-82	2840	-8	1680	-1236
2	12A/CSM-63E	780	-22	1860	-30	3260	255	1660	-873
3	12A/12A/IS 6731	880	14	1510	-710	2490	-351	1880	-768
4	12A/SEGUETANA	290	-624	1830	-336	2460	-499	1780	-578
5	150A/CSM-388	1080	367	1730	-309	2910	51	1330	-2086
6	150A/CSM-63E	*	*	*	*	*	*	*	*
7	150A/IS 6731	230	-543	*	*	3190	339	2030	-1118
8	150A/SEGUETANA	790	-31	1650	-583	*	*	2020	-838
9	PR3009A/CSM-388	460	-287	1510	-562	2540	-309	1220	-1746
10	PR3009A/CSM-63E	700	-43	1970	-20	2850	-156	2210	-373
11	PR3009A/IS 6731	700	-107	1410	-910	3020	178	1470	-1228
12	PR3009A/SEGUETANA	610	-245	1360	-906	2660	-300	1690	-718
13	12A/CGM-19/9-1-1	930	100	2600	353	3350	387	2020	-262
14	12A/LATA 3 Bala	1370	249	2060	-107	3480	285	2220	-201
15	150A/CGM-19/9-1-1	590	-147	2270	-45	3010	37	2680	-102
16	150A/LATA 3 Bala	990	-39	2100	-135	2900	-306	3110	188
17	PR3009A/CGM-19/9-1-1	950	179	1480	-867	2370	-594	2200	-132

18	PR3009A/LATA 3 Bala	630	-433	2120	-147	3430	234	2100	-371
19	FambeA/00-KO-F5DT-19	1520	450	2380	101	2390	-711	2170	-493
20	FambeA/MALISOR-92-1	1150	122	2160	-153	3170	209	2740	-57
21	FambeA/02-SB-F4DT-298	1170	224	2180	-223	3010	-35	2180	-233
22	FambeA/Grinkan	1150	212	2490	153	3290	235	2570	-165
23	FambeA/02-SB-F5DT-189	730	-429	1680	-971	2840	-413	1590	-952
24	GPNA/00-KO-F5DT-19	960	61	1580	-631	2640	-418	1790	-1076
25	GPNA/MALISOR-92-1	430	-427	1350	-895	2360	-559	1730	-1270
26	GPNA/02-SB-F4DT-298	570	-205	2100	-235	2430	-572	2310	-306
27	GPNA/Grinkan	1060	293	2210	-59	2700	-313	1900	-1038
28	GPNA/02-SB-F5DT-189	510	-478	940	-1643	3240	30	1380	-1365
Mean (kg/ha)		809		1862		2878		1987	

Performance of check (control)

Check	**SK-SDAP-07**	**SK-SDAP-08**	**SK-DAP-07**	**SK-DAP-08**
00-KO-F5DT-19	40	1320	2000	3250
MALISOR-92-1	*	800	2180	1900
CSM-388	770	1630	2540	890
Tieblé	580	1360	2320	920
Mean (kg/ha)	463	1278	2260	1740

Appendix 2: Performance of genotypes for 50% heading and plant high under low and high-soil phosphorus conditions.

No	Hybrid combinations	50% Heading (%)				Height (cm)			
		SK-DAP-07	SK-DAP-08	SK-SDP-07	SK-SDAP-08	SK-DAP-07	SK-DAP-08	SK-DAP-07	SK-SDAP-08
Guinea-Caudatum / Guinea-Caudatum									
1	12A/00-KO-F5DT-19	69	72	85	84	280	305	170	226
2	12A/MALISOR-92-1	69	85	85	84	256	296	138	195
3	12A/02-SB-F4DT-298	73	85	85	89	209	220	158	181
4	12A/Grinkan	72	83	86	87	214	235	115	180
5	12A/02-SB-F5DT-189	70	70	84	87	298	305	188	207
6	150A/00-KO-F5DT-19	70	69	80	87	247	276	147	190
7	150A/MALISOR-92-1	72	69	83	87	233	249	94	159
8	150A/02-SB-F4DT-298	74	82	86	85	211	203	145	172
9	150A/Grinkan	71	81	83	84	211	228	131	168
10	150A/02-SB-F5DT-189	68	72	*	87	296	288	-	222
11	PR3009A/00-KO-F5DT-19	68	66	77	83	324	336	204	269
12	PR3009A/MALISOR-92-1	68	71	91	85	348	323	163	232
13	PR3009A/02-SB-F4DT-298	73	79	81	86	281	257	194	218
14	PR3009A/Grinkan	68	79	81	84	282	311	177	221
15	PR3009A/02-SB-F5DT-189	63	63	85	84	327	314	159	242
Mean		70	75	84	86	268	276	156	205
Guinea-Ecotypes/Guinea-Ecotypes									
1	FambeA/CSM-388	70	81	78	82	382	439	244	315
2	FambeA/CSM-63E	66	79	74	79	425	420	251	303
3	FambeA/IS 6731	71	84	76	84	431	458	282	297
4	FambeA/SEGUETANA	67	75	76	82	420	402	270	310
5	GPNA/CSM-388	74	86	78	84	408	427	237	298
6	GPNA/CSM-63E	68	81	75	83	396	420	245	236
7	GPNA/IS 6731	73	90	81	85	410	441	228	296
8	GPNA/SEGUETANA	72	80	81	85	384	383	226	281
9	FambeA/CGM-19/9-1-1	72	83	81	83	395	408	225	306
10	FambeA/Lata 3 Bala	*	86	75	83	*	449	251	285
11	GPNA/CGM-19/9-1-1	74	84	79	83	255	322	184	218
12	GPNA/Lata 3 Bala	74	81	79	83	265	306	169	209

Mean		71	83	78	83	379	406	234	280
Guinea-Caudatum/Guinea-Ecotypes									
1	12A/CSM-388	73	90	83	85	424	428	250	337
2	12A/CSM-63E	72	82	77	84	410	427	258	307
3	12A/IS 6731	77	88	82	85	427	424	280	323
4	12A/SEGUETANA	73	83	80	85	410	440	246	320
5	150A/CSM-388	74	93	82	86	431	428	278	315
6	150A/CSM-63E	*	*	*	*	*	*	*	*
7	150A/IS 6731	71	78	95	*	399	412	171	-
8	150A/SEGUETANA	*	82	80	84	-	402	242	304
9	PR3009A/CSM-388	72	81	79	83	448	422	259	336
10	PR3009A/CSM-63E	69	75	76	82	389	429	260	288
11	PR3009A/IS 6731	71	81	82	87	425	435	259	281
12	PR3009A/SEGUETANA	67	75	80	84	418	430	223	297
13	12A/CGM-19/9-1-1	72	85	81	85	302	352	161	218
14	12A/LATA 3 Bala	72	86	78	85	306	325	197	255
15	150A/CGM-19/9-1-1	71	78	84	85	306	324	161	226
16	150A/LATA 3 Bala	69	88	81	86	297	332	185	215
17	PR3009A/CGM-19/9-1-1	73	78	82	85	396	371	242	239
18	PR3009A/LATA 3 Bala	70	78	79	85	401	389	235	263
19	FambeA/00-KO-F5DT-19	71	82	75	84	401	404	277	308
20	FambeA/MALISOR-92-1	72	79	80	84	375	407	235	287
21	FambeA/02-SB-F4DT-298	74	83	77	83	365	403	252	305
22	FambeA/Grinkan	67	74	77	82	368	403	231	295
23	FambeA/02-SB-F5DT-189	73	81	80	85	398	425	260	301
24	GPNA/00-KO-F5DT-19	77	96	82	89	256	281	195	234
25	GPNA/MALISOR-92-1	73	88	83	88	265	274	147	211
26	GPNA/02-SB-F4DT-298	75	85	85	86	247	313	153	208
27	GPNA/Grinkan	72	86	79	85	254	303	153	200
28	GPNA/02-SB-F5DT-189	73	89	90	89	289	333	173	196
Mean		72	83	81	85	362	382	222	272

Performance of check (control)

Check	**50% Heading (%)**				**Height (cm)**			
	SK-DAP-07	**SK-DAP-08**	**SK-SDP-07**	**SK-SDAP-08**	**SK-DAP-07**	**SK-DAP-08**	**SK-SDAP-07**	**SK-SDAP-08**
00-KO-F5DT-19	74	91	94	92	215	244	111	187
MALISOR-92-1	67	72	*	81	215	220	*	137
CSM-388	74	86	87	84	414	427	269	324

Tieblé	72	90	81	86	381	418	248	305
Mean	72	85	87	86	306	327	209	238