TABLE S2. F_1, F_2, $F_{1:2}$ and $F_{2:3}$ plants, seeds, and progeny numbers in each of the 48 matings, ordered by MG then by mating code and ID number. Population distributional statistics are shown for the one replicate seed protein (and oil) assay (all progeny) in each mating. Only those progeny in the lowest and highest quintiles of the protein distribution, based on quintile cut-off values, were selected for a two replicate seed protein assay. Using the 2-replicate means, progenies with the 22 lowest and 22 highest seed protein were identified, and their respective 44 F_2 progenitors were selectively genotyped (SG). The final percentage of F_2 plants chosen for selective genotyping is shown in the last column.

Mating			Female Parent	F_1	$F_{1:2}$	F_2	$F_{2:3}$	One-Replicate Seed Protein $F_{2:3}$ Distributional Statistics					Seed Oil Statistics		Protein-Oil Phenotype	Two-Replicate Mean Seed Protein Value						F_2 plants Selectively
																Low Pro 22		Quintile Cut		High Pro 22		
No.	ID	MG	Accession	Plts	Sds	Plts	Prog	Min	MN	Max	Var	H^2	Var	H^2	Correlation	Min	Max	Low	High	Min	Max	Genotyped
				---------- number ----------				------- g kg^{-1} -------								---------- g kg-1 ----------						- % -
1	1001	000	PI 153296	17	397	265	253	388	432	483	32	72	36	70	-0.85	399	414	437	448	465	488	17.4
2	1002	000	PI 189963	19	666	277	269	396	435	487	29	74	34	80	-0.86	398	418	437	442	467	491	16.4
3	1003	000	PI 548399	9	394	260	251	398	437	484	29	74	37	82	-0.85	400	423	440	441	466	489	17.5
4	1004	000	PI 372423	19	659	254	251	400	439	494	30	75	33	80	-0.85	401	422	438	446	468	506	17.5
5	1005	000	FC 30687	19	649	261	255	389	433	483	36	79	38	82	-0.88	392	411	432	440	466	483	17.3
6	1006	000	PI 153293	8	311	267	260	385	438	497	36	79	39	83	-0.88	395	416	443	437	469	505	16.9
7	1007	000	PI 372412	13	389	269	261	401	437	479	28	73	35	81	-0.87	403	419	434	441	465	483	16.9
8	1009	000	PI 548414	17	537	270	268	393	437	489	28	73	36	81	-0.88	402	418	436	444	466	486	16.4
9	1022	00	PI 153302	10	332	265	254	391	422	462	20	82	24	85	-0.76	395	405	419	419	446	462	17.3
10	1023	00	PI 159764	17	358	252	242	397	430	483	31	86	29	88	-0.82	399	415	436	432	456	481	18.2
11	1024	00	PI 438415	16	345	264	259	388	425	457	19	81	22	84	-0.79	399	408	430	419	445	458	17.0
12	1025	00	PI 153301	18	287	265	258	395	423	463	19	80	26	86	-0.79	395	408	428	433	448	467	17.1
13	1026	00	PI 189880	18	184	178	173	395	419	450	14	74	12	72	-0.78	398	408	418	427	435	451	25.4
14	1027	00	PI 153297	16	431	257	250	395	428	481	21	82	31	89	-0.78	400	411	422	423	448	480	17.6
15	2211	00	HHP	8	524	219	147	383	434	482	53	87	57	93	-0.81	387	417	430	450	456	480	29.9
16	2212	00	AC Proteus	9	405	286	278	392	418	450	13	45	15	60	-0.73	393	407	424	414	432	451	15.8
17	2213	00	AC Proteina	16	466	288	275	387	416	446	17	59	20	70	-0.80	390	403	434	414	441	458	16.0
18	1039	0	PI 427138	20	761	266	257	385	419	464	17	61	28	83	-0.75	390	405	424	429	441	462	17.1
19	1040	0	PI 261469	15	691	260	238	375	422	463	23	71	32	85	-0.80	380	407	422	426	448	463	18.5
20	1041	0	PI 181571	24	710	268	248	388	419	454	18	62	30	84	-0.71	394	407	422	424	443	460	17.7
21	1042	0	PI 424148	8	297	219	210	392	424	465	21	68	30	84	-0.76	396	412	427	419	447	462	21.0
22	1043	0	PI 423954	13	379	267	248	383	429	464	26	73	27	82	-0.73	363	408	428	428	445	461	17.7
23	1044	0	PI 154196	18	1117	271	245	384	419	454	21	67	28	83	-0.78	385	405	428	424	443	461	18.0

24	1054	I	PI 437088A	7	789	225	184	402	435	481	24	70	26	20	-0.80	406	423	432	429	454	487	23.9
25	1055	I	PI 423949	12	1014	286	265	386	428	476	24	69	42	50	-0.82	392	410	422	423	448	477	16.6
26	1056	I	PI 427141	11	906	285	258	392	431	471	27	73	39	46	-0.77	397	411	427	431	458	477	17.1
27	1057	I	PI 437716A	6	497	272	246	392	425	460	17	58	27	21	-0.67	396	413	437	433	446	468	17.9
28	1058	I	PI 423942	6	548	279	246	379	432	480	27	73	42	50	-0.76	375	411	431	428	455	482	17.9
29	1075	II	PI 423948A	2	238	208	183	372	430	475	38	72	43	66	-0.75	370	408	423	439	454	474	24.0
30	1076	II	PI437112A	11	703	217	188	371	431	483	34	69	43	66	-0.76	375	410	425	439	451	479	23.4
31	1098	II	PI 548608	14	685	254	230	389	419	457	15	31	21	29	-0.66	389	405	419	427	435	456	19.1
32	1107	III	PI 445845	14	891	278	222	384	426	471	31	57	36	49	-0.78	385	407	433	421	450	473	19.8
33	1108	III	PI 398516	12	966	280	226	376	423	466	27	50	29	37	-0.74	374	403	419	432	443	464	19.5
34	1109	III	PI 91725-4	15	838	263	225	383	425	480	30	55	50	64	-0.76	387	404	426	439	445	486	19.6
35	1110	III	PI 340011	13	833	254	208	384	425	476	30	55	36	49	-0.81	385	405	421	417	444	474	21.2
36	1111	III	PI 243532	9	489	273	216	386	425	496	42	68	52	65	-0.74	386	405	429	440	449	497	20.4
37	1113	III	PI 408138C	12	1042	259	219	391	430	495	33	59	31	41	-0.78	390	409	429	428	450	498	20.1
38	1121	III	PI 398672	14	670	262	217	377	419	464	31	56	31	42	-0.73	380	400	425	429	443	472	20.3
39	1122	III	PI 360843	18	1544	213	189	373	419	459	19	30	22	18	-0.68	377	402	415	424	435	456	23.3
40	1138	IV	PI 253666A	9	735	242	141	376	431	494	42	76	58	73	-0.80	379	413	434	446	453	493	31.2
41	1139	IV	PI 407788A	17	1399	283	167	391	434	476	32	69	54	71	-0.83	391	412	420	447	455	484	26.3
42	1140	IV	PI 424286	16	554	264	189	389	429	467	27	63	39	60	-0.83	389	411	431	441	448	465	23.3
43	1142	IV	PI 407877B	10	936	278	217	397	429	473	21	52	33	54	-0.80	397	412	423	425	447	482	20.3
44	1143	IV	PI 398704	5	415	279	195	378	431	471	32	69	54	71	-0.83	380	411	422	446	455	475	22.6
45	1145	IV	PI 398970	1	85	165	115	381	428	478	38	74	48	67	-0.81	384	413	416	438	442	473	38.3
46	1146	IV	PI 407823	5	2190	254	171	397	424	467	19	48	40	62	-0.75	396	408	416	432	440	463	25.7
47	1152	IV	PI 407773B	2	500	260	145	394	425	465	26	61	40	62	-0.81	393	410	416	420	439	463	30.3
48	1183	V	PI 458256	9	870	288	231	377	411	451	15	34	15	0	-0.68	376	396	417	405	425	448	19.0