

**Table S2.** Means of 11 agronomic traits for grass pea collection produced in the 2020 and 2021 growing seasons, Antalya (lowland), Turkey

Genotype	USDA GenBank ID	First flowering (day)	50% flowering (day)	Plant height (cm)	Number of pods	Number of branches	Pod height (cm)	Pod width (cm)	Stem diameter (mm)	Hundred seed weight (g)	Biological yield (g)	Seed yield (g)
GP2	PI 117250	93.0	100.0	64.5	23.8	11.0	3.2	0.9	1.3	10.2	8.9	2.5
GP6	PI 117243	96.0	102.3	57.5	20.3	8.8	3.0	1.0	1.8	9.4	6.6	2.2
GP7	PI 117283	95.8	102.0	48.0	32.0	11.8	3.2	1.3	1.7	10.3	6.4	2.6
GP10	PI 117209	93.5	100.3	41.5	19.0	12.5	2.9	1.0	1.3	10.5	5.7	2.4
GP11	PI 117424	89.3	101.3	59.3	34.5	10.3	3.5	1.1	1.5	7.9	6.5	3.1
GP17	PI 117454	91.8	103.0	56.0	13.8	6.0	3.4	1.1	1.3	9.6	6.6	2.3
GP18	PI 117594	91.5	101.5	52.5	15.8	8.5	3.8	1.4	1.8	10.1	7.5	2.7
GP19	PI 117229	92.0	102.0	65.8	28.8	9.5	3.8	1.2	1.3	11.7	6.6	3.2
GP23	PI 117401	88.8	102.0	52.8	21.5	6.0	3.3	1.2	1.7	11.6	3.3	1.2
GP34	PI 667278	99.8	106.8	54.5	7.5	5.5	3.4	1.2	1.5	10.7	4.2	1.3
GP40	PI 422539	103.0	106.0	67.3	14.5	12.8	4.0	1.6	1.8	14.8	6.2	1.6
GP41	PI 358891	103.3	110.5	65.3	10.8	8.3	4.2	1.6	1.7	15.6	13.3	3.7
GP42	PI 283599	102.5	107.5	67.0	26.3	14.8	4.3	1.6	2.3	19.1	11.9	3.2
GP43	PI 283589	105.8	112.5	86.8	31.0	14.3	3.9	1.5	1.9	16.0	8.9	2.3
GP44	PI 283580	97.0	105.0	73.8	17.5	13.3	3.8	1.5	1.7	17.9	8.0	2.3
GP45	PI 283569	101.5	112.5	57.5	20.0	7.0	4.0	1.4	1.8	16.8	13.4	2.5
GP47	PI 221467	106.5	114.8	57.3	14.8	6.3	3.9	1.3	1.7	11.1	7.3	2.2
GP49	PI 667277	101.3	109.5	51.8	24.5	10.5	3.7	1.4	1.3	15.5	12.0	3.0
GP53	PI 667271	95.5	105.8	66.0	17.0	8.3	4.0	1.4	1.6	11.6	4.4	3.8
GP58	PI 667276	96.0	103.5	81.3	28.8	9.0	4.0	1.5	1.9	14.0	16.2	4.2
GP59	PI 667275	96.0	106.0	60.5	18.5	13.3	3.4	1.4	1.9	14.2	14.2	2.9
GP60	PI 667265	100.3	108.0	55.3	27.3	13.3	3.5	1.3	2.1	14.8	19.8	5.3
GP61	PI 667264	96.3	103.0	50.3	12.0	5.5	3.3	1.2	2.0	14.2	13.4	3.4
GP74	PI 513243	93.0	99.5	56.3	15.0	8.5	3.5	1.3	1.7	9.4	10.3	2.1
GP103	PI 667251	101.5	109.5	75.3	20.3	9.5	3.4	1.4	2.2	14.5	16.7	4.9
GP104	PI 667250	101.3	109.5	54.5	16.0	8.0	3.9	1.7	1.9	18.8	22.5	6.2
GP105	PI 667248	103.0	113.0	67.0	21.3	14.3	3.7	1.5	1.7	15.1	11.8	7.3

**Table S2.** continued

<b>Genotype</b>	<b>USDA GenBank ID</b>	<b>First flowering (day)</b>	<b>50% flowering (day)</b>	<b>Plant height (cm)</b>	<b>Number of pods</b>	<b>Number of branches</b>	<b>Pod height (cm)</b>	<b>Pod width (cm)</b>	<b>Stem diameter (mm)</b>	<b>Hundred seed weight (g)</b>	<b>Biological yield (g)</b>	<b>Seed yield (g)</b>
GP107	PI 511770	101.0	108.0	63.3	16.0	12.3	3.8	1.6	1.9	15.7	16.9	4.7
GP108	PI 507931	99.0	107.5	67.8	30.3	9.8	3.6	1.5	1.8	23.9	17.9	4.4
GP110	PI 422538	103.5	111.0	62.8	19.3	10.0	3.4	1.4	1.8	20.9	16.2	3.4
GP114	PI 422529	91.0	106.5	73.3	15.8	5.5	2.9	1.4	1.9	15.8	16.0	2.8
GP116	PI 422521	102.0	109.5	56.5	21.5	14.3	3.3	1.1	2.1	16.6	18.1	2.7
GP117	PI 337007	105.5	110.5	59.3	20.0	10.5	3.4	1.2	2.5	12.8	11.7	2.3
GP119	PI 283592	101.8	108.3	66.0	17.5	9.5	3.2	1.2	1.8	15.8	8.5	1.4
GP120	PI 283587	100.5	107.8	77.0	31.8	15.5	3.6	1.2	1.7	11.2	11.1	1.7
GP124	PI 283579	96.3	104.5	63.5	26.3	15.3	4.3	1.6	1.8	13.3	14.1	2.9
GP133	PI 232923	105.8	111.5	77.5	27.0	18.3	4.0	1.5	1.9	16.3	11.0	1.6
GP135	PI 195995	95.0	103.3	73.3	32.8	12.8	3.4	1.2	1.9	12.7	17.3	3.7
GP145	PI 283562	94.0	105.8	56.8	21.3	11.5	3.2	1.2	1.9	12.8	10.6	2.4
GP147	PI 283576	94.5	102.8	65.5	18.0	9.8	3.8	1.8	1.8	11.8	13.0	5.2
GP149	PI 283595	106.0	112.8	72.5	18.5	7.5	3.7	1.4	1.9	13.4	12.5	2.0
GP150	PI 283594	109.0	116.8	65.3	22.5	10.3	2.6	1.0	1.9	14.2	8.5	1.6
GP152	PI 283588	106.5	113.0	75.5	29.0	13.8	3.9	1.9	1.8	15.2	10.0	2.1
GP156	PI 283559	102.8	112.5	74.8	25.0	12.3	3.7	1.5	1.9	15.7	13.6	3.0
GP157	PI 193544	102.8	110.0	81.5	28.8	8.5	3.4	1.3	1.8	12.8	12.4	2.1
GP161	PI 429368	95.3	105.5	73.0	46.3	12.8	3.4	1.4	1.7	9.3	12.4	4.1
GP163	PI 422541	93.0	100.3	71.5	22.8	9.0	3.4	1.3	1.9	13.4	7.9	3.2
GP164	PI 422531	103.5	108.3	66.3	15.5	8.0	3.9	1.5	2.0	15.6	14.4	3.6
GP165	PI 422527	99.5	104.5	62.5	25.5	10.5	3.2	1.2	2.1	16.3	10.7	2.8
GP166	PI 422526	99.3	104.0	57.5	16.0	5.5	3.3	1.4	1.8	13.8	14.5	3.7
GP177	PI 283584	98.8	106.0	63.8	25.5	9.8	3.8	1.5	2.0	11.5	6.8	2.4
GP178	PI 283577	92.8	101.5	55.0	18.0	8.0	2.9	1.2	2.0	18.7	11.8	3.4

**Table S2.** continued

<b>Genotype</b>	<b>USDA GenBank ID</b>	<b>First flowering (day)</b>	<b>50% flowering (day)</b>	<b>Plant height (cm)</b>	<b>Number of pods</b>	<b>Number of branches</b>	<b>Pod height (cm)</b>	<b>Pod width (cm)</b>	<b>Stem diameter (mm)</b>	<b>Hundred seed weight (g)</b>	<b>Biological yield (g)</b>	<b>Seed yield (g)</b>
GP179	PI 283573	95.0	102.5	49.8	11.0	4.0	3.8	1.3	1.9	14.4	11.4	4.2
GP180	PI 283572	94.5	102.5	73.0	30.8	11.8	3.6	1.4	1.7	15.6	4.9	1.8
GP181	PI 283565	96.5	107.5	46.0	25.0	11.8	3.7	1.5	1.7	14.8	18.0	5.2
GP182	PI 283560	95.5	105.0	67.3	28.3	14.8	3.3	1.2	1.8	13.2	11.6	4.4
GP184	PI 283561	96.8	105.5	84.0	31.0	7.0	3.6	1.1	1.7	18.3	6.2	2.4
GP196	PI 337087	108.5	114.0	70.8	26.5	7.5	3.7	1.3	2.4	14.3	15.0	4.5
GP197	PI 317441	108.0	120.0	75.5	17.5	5.5	3.5	1.3	1.9	7.9	7.2	2.2
GP198	PI 317440	105.3	112.0	66.0	19.5	6.5	3.1	1.1	1.8	12.4	11.2	2.0
GP199	PI 317439	105.8	114.3	80.0	41.0	10.5	3.7	1.2	1.6	10.4	9.6	3.3
GP206	PI 283571	101.0	107.0	88.8	31.0	15.8	4.0	1.2	1.8	13.0	15.3	4.6
GP207	PI 283567	96.8	107.0	80.3	37.8	10.3	3.4	1.2	2.2	12.3	13.2	5.6
GP209	PI 422540	101.8	109.5	87.5	40.8	15.3	4.0	1.4	2.2	14.8	9.3	2.1
GP213	PI 577139	103.0	110.0	90.8	31.0	9.3	3.4	1.4	1.9	15.1	11.5	3.2
GP214	PI 577138	106.3	112.3	71.3	31.5	9.8	3.3	1.3	1.8	13.3	9.0	4.0
GP215	PI 442801	96.8	105.0	42.0	19.3	10.3	3.3	1.4	1.5	14.2	6.2	2.3
GP222	PI 283557	97.3	106.5	61.3	31.3	8.5	3.5	1.1	1.5	12.9	9.9	2.7
GP224	PI 283555	94.8	102.5	59.5	20.5	9.5	3.5	1.3	1.8	14.3	11.1	2.6
GP225	PI 283554	94.5	102.0	62.3	34.3	9.8	3.8	1.4	1.7	15.7	10.4	3.1
GP227	PI 283551	99.3	104.5	54.3	22.0	10.0	3.7	1.2	1.7	13.8	7.7	2.6
GP228	PI 283549	99.0	106.0	60.5	32.0	9.0	3.9	1.4	1.7	13.3	7.5	4.7
GP229	PI 283548	99.5	106.5	70.5	35.0	8.0	3.6	1.1	1.7	9.7	6.9	2.8
GP230	PI 268478	101.5	107.5	64.5	26.0	6.0	3.8	1.2	1.7	14.3	6.5	2.5
GP232	PI 251413	105.8	110.5	55.3	16.0	9.8	3.1	1.3	1.9	11.7	6.3	2.6
GP233	PI 244756	96.8	105.0	71.8	37.0	6.0	3.6	1.2	1.3	9.1	5.9	1.6
GP234	PI 239867	102.0	106.0	49.3	20.0	8.8	3.6	1.2	2.0	10.3	5.1	1.3

**Table S2.** continued

Genotype	USDA GenBank ID	First flowering (day)	50% flowering (day)	Plant height (cm)	Number of pods	Number of branches	Pod height (cm)	Pod width (cm)	Stem diameter (mm)	Hundred seed weight (g)	Biological yield (g)	Seed yield (g)
GP235	PI 239866	103.8	109.5	53.5	22.5	8.0	3.8	1.2	1.7	13.9	7.3	4.7
GP237	PI 231456	109.0	120.5	67.3	27.8	8.0	3.2	1.2	1.9	9.5	7.9	2.9
GP242	PI 222203	100.8	108.3	71.5	25.0	6.5	3.6	1.2	1.8	8.9	5.1	1.5
GP243	PI 221466	101.5	109.0	57.0	17.0	8.0	3.4	1.2	1.5	8.6	5.4	1.2
GP244	PI 221465	102.3	110.3	59.5	13.5	3.5	3.0	1.1	1.5	9.5	6.5	2.5
GP246	PI 220176	102.3	108.0	70.5	21.8	4.5	3.3	1.2	2.3	8.8	9.0	2.7
GP247	PI 219923	100.8	108.0	60.8	22.0	7.8	3.5	1.1	1.9	9.5	12.8	4.2
GP248	PI 210342	104.8	110.3	56.5	38.3	9.5	3.3	1.2	1.8	9.4	11.4	3.9
GP249	PI 206375	102.0	111.5	55.3	34.8	11.5	3.5	1.2	1.7	11.9	13.3	5.6
GP251	PI 196863	99.5	105.3	72.8	18.0	7.8	3.5	1.3	1.5	9.4	6.6	2.4
GP256	PI 195997	94.5	103.0	66.3	14.0	7.0	3.2	1.1	2.0	10.2	9.9	3.0
GP262	PI 195605	94.5	102.0	62.8	29.8	5.8	3.1	1.1	1.8	8.0	6.2	2.3
GP270	PI 193815	91.3	99.8	43.5	20.3	6.0	3.1	1.1	1.8	10.6	3.9	1.5
Gürbüz	Control	94.5	104.3	59.8	27.5	8.8	3.4	1.2	1.6	10.3	7.8	1.6
Karadağ	Control	94.3	104.5	58.0	16.8	11.3	3.6	1.3	1.8	15.9	8.9	2.5
İptaş	Control	97.5	109.0	62.5	18.8	9.8	3.5	1.2	2.1	13.8	10.4	2.9
Corea	Control	92.0	100.5	68.3	28.3	12.3	3.6	1.3	1.7	14.0	8.6	1.9
Means $\pm$ SD		99.15 $\pm$ 10.1	107.06 $\pm$ 10.5	64.40 $\pm$ 14.3	23.77 $\pm$ 10.7	9.65 $\pm$ 4.2	3.53 $\pm$ 0.4	1.29 $\pm$ 0.2	1.81 $\pm$ 0.2	13.15 $\pm$ 3.5	10.30 $\pm$ 4.2	3.01 $\pm$ 1.8
LSD		1.93**	1.08**	3.13**	5.86**	1.40**	0.11**	0.05**	0.11**	0.05**	0.85**	0.24**

\*\*: Statistically significant at  $p = 0.001$  significance level, respectively.

LSD is least significant differences