

Table S1 The geographical distribution pattern of 220 accessions analyzed in this study.

Code	Name	Country	Province	Species
PI 378686 B		Japan	Kochi	<i>Glycine soja</i>
PI 407222		South Korea	Chungchong Puk	<i>Glycine soja</i>
PI 507580		Japan	Kanto and Tosan	<i>Glycine soja</i>
PI 507598		Japan	Toyama	<i>Glycine soja</i>
PI 507600		Japan	Ibaraki	<i>Glycine soja</i>
PI 507606		Japan		<i>Glycine soja</i>
PI 507623		Japan	Tokyo	<i>Glycine soja</i>
PI 507656		Japan	Nagasaki	<i>Glycine soja</i>
PI 507664		Japan	Kumamoto	<i>Glycine soja</i>
WDD01165	Amur 41	Russia		<i>Glycine max</i>
WDD01174	Salut 116	Russia		<i>Glycine max</i>
WDD01215	Saikai 10	Japan	Saga	<i>Glycine max</i>
WDD01252	Tokachi leaf	Japan	Hokkaido	<i>Glycine max</i>
WDD01448		North Korea		<i>Glycine max</i>
WDD02126	Duyu Kong	South Korea	Milyang	<i>Glycine max</i>
WDD02127	Eunhe Kong	South Korea	Milyang	<i>Glycine max</i>
WDD02130	Namhae Kong	South Korea	Milyang	<i>Glycine max</i>
WDD02131	Keunol Kong	South Korea	Milyang	<i>Glycine max</i>
WDD02137	Shinpaldal kong2	South Korea	Suwon	<i>Glycine max</i>
WDD02141	Baekun Kong	South Korea	Suwon	<i>Glycine max</i>
ZDD00219	Yapoche	China	Heilongjiang	<i>Glycine max</i>
ZDD00310	Anqingheidou	China	Heilongjiang	<i>Glycine max</i>
ZDD00603	Changchunmancangjin	China	Jilin	<i>Glycine max</i>
ZDD00610	Niumaohuang	China	Jilin	<i>Glycine max</i>
ZDD00709	Heimoshidou	China	Jilin	<i>Glycine max</i>
ZDD00740	Tiefeng18	China	Liaoning	<i>Glycine max</i>
ZDD00932	Daheiqi	China	Liaoning	<i>Glycine max</i>
ZDD01060	Huangqi	China	Liaoning	<i>Glycine max</i>
ZDD01074		China	Liaoning	<i>Glycine max</i>
ZDD01124	Xiaohuangdou	China	Liaoning	<i>Glycine max</i>
ZDD01138	Xiaohuangdou	China	Liaoning	<i>Glycine max</i>
ZDD01402	Daliheidou	China	Liaoning	<i>Glycine max</i>
ZDD02159	Daheidou	China	Shanxi	<i>Glycine max</i>
ZDD02315	Huipizhiheidou	China	Shanxi	<i>Glycine max</i>
ZDD02447	Yinmanziheidou	China	Shanxi	<i>Glycine max</i>
ZDD02450	Xiaokehei	China	Shanxi	<i>Glycine max</i>
ZDD02611	Wenfeng7hao	China	Shandong	<i>Glycine max</i>
ZDD02626	Shengli3hao	China	Shandong	<i>Glycine max</i>
ZDD02866	Dabaipi	China	Shandong	<i>Glycine max</i>
ZDD02913	Xiaomidou	China	Shandong	<i>Glycine max</i>
ZDD03026	Pingdinghei	China	Shandong	<i>Glycine max</i>
ZDD03153	Biyangxiazihuang	China	Henan	<i>Glycine max</i>
ZDD03237	Zhechuanjiwohuang	China	Henan	<i>Glycine max</i>
ZDD03533	Zhechengxiaohongdou	China	Henan	<i>Glycine max</i>
ZDD03540	Boaihongpizaojiaozi	China	Henan	<i>Glycine max</i>
ZDD03570	Yangxinyangyandou	China	Henan	<i>Glycine max</i>

ZDD03651	Heidou	China	Shaanxi	<i>Glycine max</i>
ZDD03741	Peixiansilizao	China	Jiangsu	<i>Glycine max</i>
ZDD03776	Huaiyangchundou	China	Jiangsu	<i>Glycine max</i>
ZDD03842	Shuyangchunheidou	China	Jiangsu	<i>Glycine max</i>
ZDD03868	Peixianxiaoyoudou	China	Jiangsu	<i>Glycine max</i>
ZDD04429	Taixingheidou	China	Jiangsu	<i>Glycine max</i>
ZDD04572	Mujiangwuyueniumaohuang	China	Jiangsu	<i>Glycine max</i>
ZDD04918		China	Anhui	<i>Glycine max</i>
ZDD04959		China	Anhui	<i>Glycine max</i>
ZDD05502	Nidou	China	Hubei	<i>Glycine max</i>
ZDD06067	Cudou	China	Zhejiang	<i>Glycine max</i>
ZDD06358	Dongshanbaimadou	China	Fujian	<i>Glycine max</i>
ZDD06377	Xiamentengzidou	China	Fujian	<i>Glycine max</i>
ZDD06410	Zhaoanqiudadou	China	Fujian	<i>Glycine max</i>
ZDD06413	Shaxianqingdou	China	Fujian	<i>Glycine max</i>
ZDD06454	Hengfengwudou	China	Jiangxi	<i>Glycine max</i>
ZDD06475	Yantianqingpidou	China	Jiangxi	<i>Glycine max</i>
ZDD06501	Ruijinqingpidou	China	Jiangxi	<i>Glycine max</i>
ZDD06515	Xiangdou4hao	China	Hunan	<i>Glycine max</i>
ZDD06543	Hongzhizhu	China	Hunan	<i>Glycine max</i>
ZDD06803	Dawudou	China	Guangxi	<i>Glycine max</i>
ZDD06823	Hefeng15	China	Heilongjiang	<i>Glycine max</i>
ZDD06856	Heihexiaohuangdou	China	Heilongjiang	<i>Glycine max</i>
ZDD07409	Helongyoutai	China	Jilin	<i>Glycine max</i>
ZDD07644	Kaiyu8hao	China	Liaoning	<i>Glycine max</i>
ZDD07691	Tianedan	China	Liaoning	<i>Glycine max</i>
ZDD08018	Miyunlaoyelian	China	Beijing	<i>Glycine max</i>
ZDD08120	Nidinghuameidou	China	Ningxia	<i>Glycine max</i>
ZDD08124	Yanshihuangdou	China	Xinjiang	<i>Glycine max</i>
ZDD08125	Jichanghuangdou1	China	Xinjiang	<i>Glycine max</i>
ZDD08190	Yangtianxiaohuangdou	China	Hebei	<i>Glycine max</i>
ZDD08251	Datunxiaohaidou	China	Hebei	<i>Glycine max</i>
ZDD08472	Heidou	China	Hebei	<i>Glycine max</i>
ZDD08564	Xiaoyuanhuangdou	China	Shanxi	<i>Glycine max</i>
ZDD08986	xiaolibao<2>	China	Shanxi	<i>Glycine max</i>
ZDD10252	Xiaohaidou	China	Shaanxi	<i>Glycine max</i>
ZDD10430	Huichaxiaohuangdou	China	Shaanxi	<i>Glycine max</i>
ZDD10572	Niupihuangdou	China	Shaanxi	<i>Glycine max</i>
ZDD11014	Lvgundou	China	Gansu	<i>Glycine max</i>
ZDD11092	Youhuangdou	China	Gansu	<i>Glycine max</i>
ZDD11159	Hualvhuangdou	China	Gansu	<i>Glycine max</i>
ZDD11255	77-391-1	China	Jiangsu	<i>Glycine max</i>
ZDD11281	nannong1138-1	China	Jiangsu	<i>Glycine max</i>
ZDD11575	Huasedou	China	Hubei	<i>Glycine max</i>
ZDD11866	Chahuangdaidou1	China	Hubei	<i>Glycine max</i>
ZDD11951	Shanzibaihuangdou	China	Hubei	<i>Glycine max</i>
ZDD12322	Huameidou	China	Hubei	<i>Glycine max</i>
ZDD12407	Zengjialvhuangdou	China	Sichuan	<i>Glycine max</i>

ZDD12415	Mayibao	China	Sichuan	<i>Glycine max</i>
ZDD12453	Quxianbayuehuang	China	Sichuan	<i>Glycine max</i>
ZDD12680	Qianweiquanshuidou	China	Sichuan	<i>Glycine max</i>
ZDD12910	Hanyuanbalixiaoheidou	China	Sichuan	<i>Glycine max</i>
ZDD13560	Baimaozaodouzi	China	Sichuan	<i>Glycine max</i>
ZDD14190	Baiqiu1hao	China	Fujian	<i>Glycine max</i>
ZDD14252	Fengchengzaowudou	China	Jiangxi	<i>Glycine max</i>
ZDD14505	Yizhangliuyuehuang	China	Hunan	<i>Glycine max</i>
ZDD14782	Changshanidou	China	Hunan	<i>Glycine max</i>
ZDD15357	Dahuangdou-1	China	Guizhou	<i>Glycine max</i>
ZDD16362	Qiyuehuang-1	China	Guizhou	<i>Glycine max</i>
ZDD16740	Podou	China	Guangdong	<i>Glycine max</i>
ZDD16771	Qingyuandaqingdou	China	Guangdong	<i>Glycine max</i>
ZDD16846	Yingdehedou	China	Guangdong	<i>Glycine max</i>
ZDD16874	Heikewudou	China	Guangdong	<i>Glycine max</i>
ZDD16954	Baizhidou	China	Guangxi	<i>Glycine max</i>
ZDD17233	Wushanrenfenghuangdou	China	Guangxi	<i>Glycine max</i>
ZDD17375	Huangdou	China	Yunnan	<i>Glycine max</i>
ZDD17457	Yangyandou	China	Yunnan	<i>Glycine max</i>
ZDD17622	Malanzaochadou	China	Yunnan	<i>Glycine max</i>
ZDD17767	Xiaolimoshidou	China	Heilongjiang	<i>Glycine max</i>
ZDD18524	Xiataizimoshidou	China	Hebei	<i>Glycine max</i>
ZDD18771	Qingdou	China	Hebei	<i>Glycine max</i>
ZDD18870	Dongshan69	China	Shanxi	<i>Glycine max</i>
ZDD19579	Lvhuangdou	China	Gansu	<i>Glycine max</i>
ZDD19699	Sishui1hao	China	Jiangsu	<i>Glycine max</i>
ZDD20449	You1198	China	Hubei	<i>Glycine max</i>
ZDD20532	Xiaokehuangdou	China	Hubei	<i>Glycine max</i>
ZDD20652	1340311	China	Sichuan	<i>Glycine max</i>
ZDD20676	Liuyuehuang	China	Sichuan	<i>Glycine max</i>
ZDD21440	Zaoshumaopengdou	China	Zhejiang	<i>Glycine max</i>
ZDD21485	Quanbian11	China	Fujian	<i>Glycine max</i>
ZDD22191	Enpingqingdou	China	Guangdong	<i>Glycine max</i>
ZDD22648	Suinong14	China	Heilongjiang	<i>Glycine max</i>
ZDD23040	Jidou11	China	Hebei	<i>Glycine max</i>
ZDD23177	Jinpin78	China	Shanxi	<i>Glycine max</i>
ZDD23269	Shang951099	China	Henan	<i>Glycine max</i>
ZDD23277	Zheng911116	China	Henan	<i>Glycine max</i>
ZYD00011		China	Heilongjiang	<i>Glycine soja</i>
ZYD00099		China	Heilongjiang	<i>Glycine soja</i>
ZYD00693		China	Heilongjiang	<i>Glycine soja</i>
ZYD00735		China	Heilongjiang	<i>Glycine soja</i>
ZYD00755		China	Jilin	<i>Glycine soja</i>
ZYD00847		China	Jilin	<i>Glycine soja</i>
ZYD00893		China	Jilin	<i>Glycine soja</i>
ZYD01550		China	Jilin	<i>Glycine soja</i>
ZYD01609		China	Jilin	<i>Glycine soja</i>
ZYD02391		China	Liaoning	<i>Glycine soja</i>

ZYD02631	China	Liaoning	<i>Glycine soja</i>
ZYD02726	China	Beijing	<i>Glycine soja</i>
ZYD02738	China	Hebei	<i>Glycine soja</i>
ZYD02739	China	Hebei	<i>Glycine soja</i>
ZYD02749	China	Hebei	<i>Glycine soja</i>
ZYD02767	China	Hebei	<i>Glycine soja</i>
ZYD02797	China	Ningxia	<i>Glycine soja</i>
ZYD02798	China	Ningxia	<i>Glycine soja</i>
ZYD02851	China	Shanxi	<i>Glycine soja</i>
ZYD02878	China	Shanxi	<i>Glycine soja</i>
ZYD03100	China	Shanxi	<i>Glycine soja</i>
ZYD03120	China	Shanxi	<i>Glycine soja</i>
ZYD03149	China	Shanxi	<i>Glycine soja</i>
ZYD03174	China	Shanxi	<i>Glycine soja</i>
ZYD03217	China	Shanxi	<i>Glycine soja</i>
ZYD03223	China	Shandong	<i>Glycine soja</i>
ZYD03247	China	Shandong	<i>Glycine soja</i>
ZYD03262	China	Shandong	<i>Glycine soja</i>
ZYD03294	China	Gansu	<i>Glycine soja</i>
ZYD03299	China	Gansu	<i>Glycine soja</i>
ZYD03315	China	Gansu	<i>Glycine soja</i>
ZYD03386	China	Henan	<i>Glycine soja</i>
ZYD03423	China	Henan	<i>Glycine soja</i>
ZYD03489	China	Henan	<i>Glycine soja</i>
ZYD03582	China	Henan	<i>Glycine soja</i>
ZYD03597	China	Henan	<i>Glycine soja</i>
ZYD03609	China	Henan	<i>Glycine soja</i>
ZYD03632	China	Henan	<i>Glycine soja</i>
ZYD03670	China	Henan	<i>Glycine soja</i>
ZYD03687	China	Henan	<i>Glycine soja</i>
ZYD03757	China	Shaanxi	<i>Glycine soja</i>
ZYD03888	China	Shaanxi	<i>Glycine soja</i>
ZYD03960	China	Shaanxi	<i>Glycine soja</i>
ZYD03991	China	Shaanxi	<i>Glycine soja</i>
ZYD04108	China	Jiangsu	<i>Glycine soja</i>
ZYD04186	China	Jiangsu	<i>Glycine soja</i>
ZYD04217	China	Anhui	<i>Glycine soja</i>
ZYD04224	China	Anhui	<i>Glycine soja</i>
ZYD04318	China	Sichuan	<i>Glycine soja</i>
ZYD04320	China	Sichuan	<i>Glycine soja</i>
ZYD04330	China	Sichuan	<i>Glycine soja</i>
ZYD04344	China	Sichuan	<i>Glycine soja</i>
ZYD04348	China	Sichuan	<i>Glycine soja</i>
ZYD04361	China	Hubei	<i>Glycine soja</i>
ZYD04366	China	Hubei	<i>Glycine soja</i>
ZYD04371	China	Hubei	<i>Glycine soja</i>
ZYD04419	China	Hubei	<i>Glycine soja</i>
ZYD04488	China	Zhejiang	<i>Glycine soja</i>

ZYD04569	China	Zhejiang	<i>Glycine soja</i>
ZYD04591	China	Xizang	<i>Glycine soja</i>
ZYD04601	China	Jiangxi	<i>Glycine soja</i>
ZYD04631	China	Jiangxi	<i>Glycine soja</i>
ZYD04681	China	Hunan	<i>Glycine soja</i>
ZYD04687	China	Hunan	<i>Glycine soja</i>
ZYD04695	China	Hunan	<i>Glycine soja</i>
ZYD04696	China	Hunan	<i>Glycine soja</i>
ZYD04701	China	Hunan	<i>Glycine soja</i>
ZYD04734	China	Guizhou	<i>Glycine soja</i>
ZYD04753	China	Guizhou	<i>Glycine soja</i>
ZYD04852	China	Fujian	<i>Glycine soja</i>
ZYD04926	China	Fujian	<i>Glycine soja</i>
ZYD05055	China	Fujian	<i>Glycine soja</i>
ZYD05070	China	Fujian	<i>Glycine soja</i>
ZYD05101	China	Fujian	<i>Glycine soja</i>
ZYD05173	China	Yunnan	<i>Glycine soja</i>
ZYD05183	China	Guangdong	<i>Glycine soja</i>
ZYD05188	China	Guangdong	<i>Glycine soja</i>
ZYD05213	China	Guangxi	<i>Glycine soja</i>
ZYD05255	China	Guangxi	<i>Glycine soja</i>
ZYD05266	China	Guangxi	<i>Glycine soja</i>
ZYD05280	China	Guangxi	<i>Glycine soja</i>
ZYD05704	China	Inner Mongolia	<i>Glycine soja</i>
ZYD05715	China	Inner Mongolia	<i>Glycine soja</i>
ZYD05775	China	Shanxi	<i>Glycine soja</i>
ZYD05839	China	Shanxi	<i>Glycine soja</i>
ZYD05914	China	Shandong	<i>Glycine soja</i>
ZYD06156	China	Liaoning	<i>Glycine soja</i>
ZYD06284	China	Hebei	<i>Glycine soja</i>

Note NA, not available

Type	Longitude (°E)	Latitude (°N)
	132.6	32.5
	127.4	36.5
	138.6	35.6
	137.3	36.3
	140.2	36.2
	139.4	36.2
	139.3	35.4
	129.3	32.6
	130.4	32.4
Released cultar		
Released cultar		
Released cultar		
Released cultar	141.1	43.0
NA		
NA	128.4	35.3
NA	128.4	35.3
NA	128.4	35.3
NA	128.4	35.3
Released cultar	126.6	37.2
NA	126.6	37.2
Landrace	126.6	45.3
Landrace	127.3	46.5
Landrace	125.0	43.3
Landrace	125.5	41.4
Landrace	126.3	43.6
Released cultar	123.5	42.2
Landrace	120.3	41.3
Landrace	122.4	40.1
Landrace	118.6	42.2
Landrace	118.6	42.2
Landrace	124.5	40.4
Landrace	118.4	43.3
Landrace	112.6	39.0
Landrace	111.1	38.3
Landrace	111.3	36.4
Landrace	111.4	36.4
Released cultar	116.3	35.1
Landrace	118.1	36.1
Landrace	117.1	34.5
Landrace	116.3	35.6
Landrace	117.1	36.1
Landrace	113.2	32.4
Landrace	111.3	33.1
Landrace	115.2	34.0
Landrace	113.0	35.1
Landrace	114.0	32.1

Landrace	109.6	33.6
Landrace	117.6	34.2
Landrace	114.5	33.4
Landrace	118.5	34.1
Landrace	116.5	34.4
Landrace	120.0	32.1
Landrace	120.4	31.1
Landrace	116.3	33.2
Landrace	116.3	33.2
Landrace	114.2	30.2
Landrace	121.0	30.4
Landrace	117.3	23.4
Landrace	118.0	24.3
Landrace	117.1	23.4
Landrace	117.5	26.2
Landrace	117.4	28.3
Landrace	117.5	29.2
Landrace	116.0	25.6
Released cultar	112.6	28.1
Landrace	112.5	27.2
Landrace	109.1	21.4
Released cultar	105.5	28.5
Landrace	127.3	50.2
Landrace	129.0	42.3
Released cultar	124.0	42.3
Landrace	123.3	41.4
Landrace	116.5	40.2
Landrace	105.4	37.3
Landrace	86.3	42.0
Landrace	87.3	44.0
Landrace	115.5	40.5
Landrace	115.5	39.2
Landrace	115.5	37.5
Landrace	114.0	40.3
Landrace	111.1	35.2
Landrace	111.1	39.0
Landrace	110.1	34.1
Landrace	109.2	32.2
Landrace	107.6	36.3
Landrace	105.2	34.0
Landrace	106.2	33.5
Released cultar	119.2	32.1
Released cultar	118.4	32.1
Landrace	114.0	29.3
Landrace	111.5	31.5
Landrace	110.3	33.0
Landrace	110.4	30.1
Landrace	105.5	32.3

Landrace	108.5	30.6
Landrace	106.6	30.2
Landrace	103.5	29.1
Landrace	102.4	29.2
Landrace	102.5	27.1
Released cultar	117.4	26.2
Landrace	115.5	28.1
Landrace	112.6	25.3
Landrace	112.6	28.1
Landrace	106.5	27.3
Landrace	107.3	25.5
Landrace	111.0	21.3
Landrace	113.0	23.4
Landrace	113.2	24.1
Landrace	110.0	19.4
Landrace	109.2	22.3
Landrace	108.1	23.4
Landrace	100.5	26.4
Landrace	99.2	24.0
Landrace	103.4	27.2
Landrace	126.5	45.5
Landrace	117.3	40.2
Landrace	114.2	38.2
Released cultar	112.0	37.1
Landrace	107.0	35.2
Released cultar	118.4	33.4
Released cultar	114.2	30.4
Landrace	109.4	32.2
Released cultar	103.6	30.3
Landrace	104.2	31.1
Landrace	118.5	28.6
Released cultar	118.4	25.1
Landrace	112.2	22.1
Released cultar	126.6	46.4
Released cultar		
Released cultar	112.0	37.1
Released cultar		
Released cultar		
	126.4	51.4
	130.2	48.5
	127.6	45.1
	130.1	44.0
	121.2	46.0
	125.4	44.3
	125.5	44.1
	125.4	42.2
	126.1	41.1
	122.3	42.2

124.0	40.3
116.2	39.5
117.6	40.6
117.6	40.6
119.1	39.4
114.3	37.0
105.4	37.3
106.4	38.5
111.1	39.2
112.2	39.0
112.5	36.5
112.3	35.3
110.4	35.4
110.4	34.4
110.5	36.3
122.2	37.1
118.3	36.4
118.1	37.3
104.4	36.3
108.2	35.3
107.2	35.1
114.3	35.4
112.1	34.1
113.0	33.5
112.4	33.0
112.4	35.1
113.0	34.3
114.5	33.3
114.0	34.4
113.6	35.0
109.1	35.1
107.1	34.2
109.1	32.3
109.6	33.6
119.2	34.2
120.2	31.4
117.5	33.1
115.2	33.0
106.5	32.2
108.1	32.1
107.3	31.1
108.5	28.5
103.6	30.3
109.3	30.2
110.0	29.5
111.5	31.5
113.5	31.4
119.6	28.3

120.3	27.4
97.3	28.4
115.5	29.3
116.5	28.1
109.3	29.3
109.4	27.6
112.5	27.2
112.4	26.5
111.4	26.1
108.1	27.0
108.2	28.0
117.2	27.3
118.2	27.0
117.0	25.1
118.5	26.4
117.3	25.6
100.5	27.2
113.2	24.5
112.4	24.3
111.0	25.6
110.5	24.5
110.0	24.6
109.4	23.6
110.5	39.4
110.5	39.4
112.3	37.5
112.3	37.5
117.1	37.1
123.5	42.2
118.4	40.0
