

SUPPLEMENTARY DATA

TABLE S1. Information of 310 wild and landrace soybeans used in the study

| Individual | Species | Location | Province and/or Country |
|------------|---------------------|-------------|-------------------------|
| SCs35 | <i>Glycine soja</i> | Taiwan | Taiwan, China |
| SCs36 | <i>Glycine soja</i> | Taiwan | Taiwan, China |
| SCm38 | <i>Glycine max</i> | Taiwan | Taiwan, China |
| SCm39 | <i>Glycine max</i> | Taiwan | Taiwan, China |
| SCm40 | <i>Glycine max</i> | Taiwan | Taiwan, China |
| SCm41 | <i>Glycine max</i> | Taiwan | Taiwan, China |
| SCs44 | <i>Glycine soja</i> | Taiwan | Taiwan, China |
| SCs45 | <i>Glycine soja</i> | Taiwan | Taiwan, China |
| SCs46 | <i>Glycine soja</i> | Taiwan | Taiwan, China |
| SCs47 | <i>Glycine soja</i> | Taiwan | Taiwan, China |
| SCs62 | <i>Glycine soja</i> | Wuhan | Hubei, China |
| SCs63 | <i>Glycine soja</i> | Wufeng | Hubei, China |
| SCs64 | <i>Glycine soja</i> | Songzi | Hubei, China |
| SCs65 | <i>Glycine soja</i> | Lichuan | Hubei, China |
| SCs66 | <i>Glycine soja</i> | Yangxin | Hubei, China |
| SCs67 | <i>Glycine soja</i> | Tongshan | Hubei, China |
| SCs68 | <i>Glycine soja</i> | Wuhan | Hubei, China |
| SCs69 | <i>Glycine soja</i> | Luotian | Hubei, China |
| SCs70 | <i>Glycine soja</i> | Zhijiang | Hubei, China |
| SCs71 | <i>Glycine soja</i> | Shennongjia | Hubei, China |
| SCs76 | <i>Glycine soja</i> | Wuhan | Hubei, China |
| SCs77 | <i>Glycine soja</i> | Wuhan | Hubei, China |
| NEs88 | <i>Glycine soja</i> | Tahe | Heilongjiang, China |
| NEs91 | <i>Glycine soja</i> | Sunwu | Heilongjiang, China |
| NEs92 | <i>Glycine soja</i> | Jiaying | Heilongjiang, China |
| NEs93 | <i>Glycine soja</i> | Nahe | Heilongjiang, China |
| NEs95 | <i>Glycine soja</i> | Qiqihaer | Heilongjiang, China |
| NEs96 | <i>Glycine soja</i> | Qiqihaer | Heilongjiang, China |
| NEs97 | <i>Glycine soja</i> | Jiamusi | Heilongjiang, China |
| NEs98 | <i>Glycine soja</i> | Daqing | Heilongjiang, China |
| NEs99 | <i>Glycine soja</i> | Haerbing | Heilongjiang, China |
| NEs100 | <i>Glycine soja</i> | Linkou | Heilongjiang, China |
| NEs101 | <i>Glycine soja</i> | Jixi | Heilongjiang, China |
| NEs102 | <i>Glycine soja</i> | Shangzhi | Heilongjiang, China |
| NEs103 | <i>Glycine soja</i> | Dongning | Heilongjiang, China |
| NEs104 | <i>Glycine soja</i> | Keyouqianqi | Jilin, China |
| NEs105 | <i>Glycine soja</i> | Yushu | Jilin, China |
| NEs106 | <i>Glycine soja</i> | Dehui | Jilin, China |
| NEs107 | <i>Glycine soja</i> | Jiutai | Jilin, China |
| NEs108 | <i>Glycine soja</i> | Yongji | Jilin, China |

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|--------|---------------------|--------------|------------------|
| NEs109 | <i>Glycine soja</i> | Huaide | Jilin, China |
| NEs110 | <i>Glycine soja</i> | Shuangyang | Jilin, China |
| NEs111 | <i>Glycine soja</i> | Wangqing | Jilin, China |
| NEs112 | <i>Glycine soja</i> | Tongliao | Jilin, China |
| NEs113 | <i>Glycine soja</i> | Yanji | Jilin, China |
| NEs114 | <i>Glycine soja</i> | Yanji | Jilin, China |
| NEs115 | <i>Glycine soja</i> | Yitong | Jilin, China |
| NEs116 | <i>Glycine soja</i> | Fusong | Jilin, China |
| NEs117 | <i>Glycine soja</i> | Tonghua | Jilin, China |
| NEs118 | <i>Glycine soja</i> | Changbai | Jilin, China |
| NEs119 | <i>Glycine soja</i> | Changtu | Liaoning, China |
| NEs120 | <i>Glycine soja</i> | Kaiyuan | Liaoning, China |
| NEs121 | <i>Glycine soja</i> | Kaiyuan | Liaoning, China |
| NEs123 | <i>Glycine soja</i> | Xinmin | Liaoning, China |
| NEs124 | <i>Glycine soja</i> | Taian | Liaoning, China |
| NEs125 | <i>Glycine soja</i> | Haicheng | Liaoning, China |
| NEs126 | <i>Glycine soja</i> | Gaixian | Liaoning, China |
| NEs127 | <i>Glycine soja</i> | Xinjin | Liaoning, China |
| NEs128 | <i>Glycine soja</i> | Dalian | Liaoning, China |
| NEs129 | <i>Glycine soja</i> | Changhai | Liaoning, China |
| NEs130 | <i>Glycine soja</i> | Xinbing | Liaoning, China |
| NEs131 | <i>Glycine soja</i> | Chaoyang | Liaoning, China |
| NEs132 | <i>Glycine soja</i> | Jianping | Liaoning, China |
| NEs133 | <i>Glycine soja</i> | Yixian | Liaoning, China |
| NCs134 | <i>Glycine soja</i> | Huhehaote | Neimenggu, China |
| NCs135 | <i>Glycine soja</i> | Humengbuteha | Neimenggu, China |
| NEs136 | <i>Glycine soja</i> | Humengarong | Neimenggu, China |
| NCs137 | <i>Glycine soja</i> | Beijing | Beijing, China |
| NEs138 | <i>Glycine soja</i> | Chengde | Hebei, China |
| NEs139 | <i>Glycine soja</i> | Xinglong | Hebei, China |
| NEs140 | <i>Glycine soja</i> | Changli | Hebei, China |
| NCs141 | <i>Glycine soja</i> | Wuqiao | Hebei, China |
| NCs142 | <i>Glycine soja</i> | Dingxian | Hebei, China |
| NCs143 | <i>Glycine soja</i> | Lincheng | Hebei, China |
| NCs144 | <i>Glycine soja</i> | Shilou | Shanxi, China |
| NCs145 | <i>Glycine soja</i> | Helanshan | Ningxia, China |
| NCs146 | <i>Glycine soja</i> | Zhongning | Ningxia, China |
| NCs147 | <i>Glycine soja</i> | Tianzheng | Shanxi, China |
| NCs148 | <i>Glycine soja</i> | Youyu | Shanxi, China |
| NCs149 | <i>Glycine soja</i> | Hequ | Shanxi, China |
| NCs150 | <i>Glycine soja</i> | Hunyuan | Shanxi, China |
| NCs151 | <i>Glycine soja</i> | Dingrang | Shanxi, China |
| NCs152 | <i>Glycine soja</i> | Jiaocheng | Shanxi, China |
| NCs153 | <i>Glycine soja</i> | Shilou | Shanxi, China |

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|--------|---------------------|-----------|-----------------|
| NCs154 | <i>Glycine soja</i> | Taiyuan | Shanxi, China |
| NCs155 | <i>Glycine soja</i> | Yangcheng | Shanxi, China |
| NCs156 | <i>Glycine soja</i> | Yongji | Shanxi, China |
| NCs157 | <i>Glycine soja</i> | Linfen | Shanxi, China |
| NCs158 | <i>Glycine soja</i> | Rongcheng | Shandong, China |
| NCs159 | <i>Glycine soja</i> | Yantai | Shandong, China |
| NCs160 | <i>Glycine soja</i> | Laixi | Shandong, China |
| NCs161 | <i>Glycine soja</i> | Wulian | Shandong, China |
| NCs162 | <i>Glycine soja</i> | Lijin | Shandong, China |
| NCs163 | <i>Glycine soja</i> | Huimin | Shandong, China |
| NCs164 | <i>Glycine soja</i> | Laiwu | Shandong, China |
| NCs165 | <i>Glycine soja</i> | Donga | Shandong, China |
| NCs166 | <i>Glycine soja</i> | Juancheng | Shandong, China |
| NCs167 | <i>Glycine soja</i> | Jingyuan | Gansu, China |
| NCs168 | <i>Glycine soja</i> | Huachi | Gansu, China |
| NCs169 | <i>Glycine soja</i> | Zhenyuan | Gansu, China |
| NCs170 | <i>Glycine soja</i> | Zhangjia | Gansu, China |
| NCs171 | <i>Glycine soja</i> | Zhengning | Gansu, China |
| NCs172 | <i>Glycine soja</i> | Tianshui | Gansu, China |
| NCs173 | <i>Glycine soja</i> | Huixian | Gansu, China |
| NCs174 | <i>Glycine soja</i> | Huaxian | Henan, China |
| NCs175 | <i>Glycine soja</i> | Shanxian | Henan, China |
| NCs176 | <i>Glycine soja</i> | Mengjin | Henan, China |
| NCs177 | <i>Glycine soja</i> | Xinzheng | Henan, China |
| NCs178 | <i>Glycine soja</i> | Baofeng | Henan, China |
| NCs179 | <i>Glycine soja</i> | Yancheng | Henan, China |
| NCs180 | <i>Glycine soja</i> | Miyang | Henan, China |
| NCs181 | <i>Glycine soja</i> | Zhengyang | Henan, China |
| NCs182 | <i>Glycine soja</i> | Taikang | Henan, China |
| NCs183 | <i>Glycine soja</i> | Hengshan | Shaanxi, China |
| NCs184 | <i>Glycine soja</i> | Yulin | Shaanxi, China |
| NCs185 | <i>Glycine soja</i> | Wubao | Shaanxi, China |
| NCs186 | <i>Glycine soja</i> | Yanan | Shaanxi, China |
| NCs187 | <i>Glycine soja</i> | Huanglong | Shaanxi, China |
| NCs188 | <i>Glycine soja</i> | Shiyi | Shaanxi, China |
| NCs189 | <i>Glycine soja</i> | Tongchuan | Shaanxi, China |
| NCs190 | <i>Glycine soja</i> | Yaoxian | Shaanxi, China |
| NCs191 | <i>Glycine soja</i> | Dali | Shaanxi, China |
| NCs192 | <i>Glycine soja</i> | Tongguan | Shaanxi, China |
| NCs193 | <i>Glycine soja</i> | Tongguan | Shaanxi, China |
| NCs194 | <i>Glycine soja</i> | Zhenan | Shaanxi, China |
| NCs195 | <i>Glycine soja</i> | Shanyang | Shaanxi, China |
| NCs196 | <i>Glycine soja</i> | Xixiang | Shaanxi, China |
| NCs197 | <i>Glycine soja</i> | Fengxian | Jiangsu, China |

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|--------|---------------------|-----------|-----------------|
| NCs198 | <i>Glycine soja</i> | Muyang | Jiangsu, China |
| NCs199 | <i>Glycine soja</i> | Guannan | Jiangsu, China |
| NCs200 | <i>Glycine soj</i> | Guannan | Jiangsu, China |
| NCs201 | <i>Glycine soja</i> | Funing | Jiangsu, China |
| NCs202 | <i>Glycine soja</i> | Yancheng | Jiangsu, China |
| SCs203 | <i>Glycine soja</i> | Yangzhou | Jiangsu, China |
| SCs204 | <i>Glycine soja</i> | Jiangyin | Jiangsu, China |
| SCs205 | <i>Glycine soja</i> | Wuxian | Jiangsu, China |
| NCs206 | <i>Glycine soja</i> | Haoxian | Anhui, China |
| NCs207 | <i>Glycine soja</i> | Wuhe | Anhui, China |
| NCs208 | <i>Glycine soja</i> | Wuhe | Anhui, China |
| NCs209 | <i>Glycine soja</i> | Fengtai | Anhui, China |
| NCs210 | <i>Glycine soja</i> | Fengtai | Anhui, China |
| SCs212 | <i>Glycine soja</i> | Chuxian | Anhui, China |
| SCs213 | <i>Glycine soja</i> | Hefei | Anhui, China |
| SCs214 | <i>Glycine soja</i> | Chuxian | Anhui, China |
| SCs215 | <i>Glycine soja</i> | Chuxian | Anhui, China |
| SCs216 | <i>Glycine soja</i> | Taihu | Anhui, China |
| SCs217 | <i>Glycine soja</i> | Huangshan | Anhui, China |
| SCs218 | <i>Glycine soja</i> | Qingchuan | Sichuan, China |
| SCs219 | <i>Glycine soja</i> | Pingwu | Sichuan, China |
| SCs220 | <i>Glycine soja</i> | Nanjiang | Sichuan, China |
| SCs221 | <i>Glycine soja</i> | Wanyuan | Sichuan, China |
| SCs224 | <i>Glycine soja</i> | Sichuan | Sichuan, China |
| SCs225 | <i>Glycine soja</i> | Linan | Zhejiang, China |
| SCs226 | <i>Glycine soja</i> | Chengxian | Zhejiang, China |
| SCs227 | <i>Glycine soja</i> | Tiantai | Zhejiang, China |
| SCs228 | <i>Glycine soja</i> | Jinyun | Zhejiang, China |
| SCs229 | <i>Glycine soja</i> | Xiaoshan | Zhejiang, China |
| SCs230 | <i>Glycine soja</i> | Changxin | Zhejiang, China |
| SCs231 | <i>Glycine soja</i> | Chayu | Xizang, China |
| SCs232 | <i>Glycine soja</i> | Chayu | Xizang, China |
| SCs233 | <i>Glycine soja</i> | Hukou | Jiangxi, China |
| SCs234 | <i>Glycine soja</i> | Jiujiang | Jiangxi, China |
| SCs235 | <i>Glycine soja</i> | Xiushui | Jiangxi, China |
| SCs236 | <i>Glycine soja</i> | Wuning | Jiangxi, China |
| SCs237 | <i>Glycine soja</i> | Nanchang | Jiangxi, China |
| SCs238 | <i>Glycine soja</i> | Dexing | Jiangxi, China |
| SCs239 | <i>Glycine soja</i> | Yushan | Jiangxi, China |
| SCs240 | <i>Glycine soja</i> | Yichun | Jiangxi, China |
| SCs241 | <i>Glycine soja</i> | Xingguo | Jiangxi, China |
| SCs242 | <i>Glycine soja</i> | Anyuan | Jiangxi, China |
| SCs244 | <i>Glycine soja</i> | Huarong | Hunan, China |
| SCs245 | <i>Glycine soja</i> | Yueyang | Hunan, China |

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|--------|---------------------|---------------|------------------|
| SCs246 | <i>Glycine soja</i> | Shimen | Hunan, China |
| SCs247 | <i>Glycine soja</i> | Changde | Hunan, China |
| SCs248 | <i>Glycine soja</i> | Longshan | Hunan, China |
| SCs249 | <i>Glycine soja</i> | Liuyang | Hunan, China |
| SCs250 | <i>Glycine soja</i> | Hengyang | Hunan, China |
| SCs252 | <i>Glycine soja</i> | Chenzhou | Hunan, China |
| SCs253 | <i>Glycine soja</i> | Rongjiang | Guizhou, China |
| SCs254 | <i>Glycine soja</i> | Zhenyuan | Guizhou, China |
| SCs255 | <i>Glycine soja</i> | Majiang | Guizhou, China |
| SCs256 | <i>Glycine soja</i> | Tongren | Guizhou, China |
| SCs257 | <i>Glycine soja</i> | Yinjiang | Guizhou, China |
| SCs258 | <i>Glycine soja</i> | Yanhe | Guizhou, China |
| SCs259 | <i>Glycine soja</i> | Kaiyang | Guizhou, China |
| SCs260 | <i>Glycine soja</i> | Guangze | Fujian, China |
| SCs261 | <i>Glycine soja</i> | Pucheng | Fujian, China |
| SCs262 | <i>Glycine soja</i> | Dangtu | Anhui, China |
| SCs263 | <i>Glycine soja</i> | Xiapu | Fujian, China |
| SCs264 | <i>Glycine soja</i> | Jiangle | Fujian, China |
| SCs265 | <i>Glycine soja</i> | Jiangle | Fujian, China |
| SCs266 | <i>Glycine soja</i> | Jiangle | Fujian, China |
| SCs267 | <i>Glycine soja</i> | Longyan | Fujian, China |
| SCs268 | <i>Glycine soja</i> | Shaxian | Fujian, China |
| SCs269 | <i>Glycine soja</i> | Ninghua | Fujian, China |
| SCs270 | <i>Glycine soja</i> | Shanghang | Fujian, China |
| SCs271 | <i>Glycine soja</i> | Ninglang | Yunnan, China |
| SCs272 | <i>Glycine soja</i> | Yingde | Guangdong, China |
| SCs273 | <i>Glycine soja</i> | Quanzhou | Guangxi, China |
| SCs274 | <i>Glycine soja</i> | Quanzhou | Guangxi, China |
| SCs275 | <i>Glycine soja</i> | Quanzhou | Guangxi, China |
| SCs276 | <i>Glycine soja</i> | Sanjiang | Guangxi, China |
| SCs277 | <i>Glycine soja</i> | Xingan | Guangxi, China |
| SCs278 | <i>Glycine soja</i> | Lipu | Guangxi, China |
| SCs279 | <i>Glycine soja</i> | Hexian | Guangxi, China |
| SCs280 | <i>Glycine soja</i> | Nandan | Guangxi, China |
| SCs281 | <i>Glycine soja</i> | Nandan | Guangxi, China |
| SCs282 | <i>Glycine soja</i> | Xiangzhou | Guangxi, China |
| NCs283 | <i>Glycine soja</i> | Yimengzhunqi | Neimenggu, China |
| NCs285 | <i>Glycine soja</i> | Wuhai | Neimenggu, China |
| NEs286 | <i>Glycine soja</i> | Humengarongqi | Neimenggu, China |
| NEs287 | <i>Glycine soja</i> | Xinganmeng | Neimenggu, China |
| NCs288 | <i>Glycine soja</i> | Taiyuan | Shanxi, China |
| NCs289 | <i>Glycine soja</i> | Weifang | Shandong, China |
| SCs290 | <i>Glycine soja</i> | Rugao | Jiangsu, China |
| NCs291 | <i>Glycine soja</i> | Liangshan | Shandong, China |

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|--------|---------------------|-----------|---------------------|
| SCs292 | <i>Glycine soja</i> | Fuzhou | Fujian, China |
| SCs293 | <i>Glycine soja</i> | Fuzhou | Fujian, China |
| NEs294 | <i>Glycine soja</i> | Daqing | Heilongjiang, China |
| SCm295 | <i>Glycine max</i> | Taiwan | Taiwan, China |
| SCm296 | <i>Glycine max</i> | Taiwan | Taiwan, China |
| SCm297 | <i>Glycine max</i> | Mingxi | Fujian, China |
| SCm298 | <i>Glycine max</i> | Nanan | Fujian, China |
| SCm299 | <i>Glycine max</i> | Lianping | Guangdong, China |
| SCm300 | <i>Glycine max</i> | Boluo | Guangdong, China |
| SCm301 | <i>Glycine max</i> | Guilin | Guangxi, China |
| SCm302 | <i>Glycine max</i> | Zhongshan | Guangxi, China |
| SCm303 | <i>Glycine max</i> | Simao | Yunnan, China |
| SCm304 | <i>Glycine max</i> | Dali | Yunnan, China |
| SCm305 | <i>Glycine max</i> | Chunan | Zhejiang, China |
| SCm306 | <i>Glycine max</i> | Jiande | Zhejiang, China |
| SCm307 | <i>Glycine max</i> | Yongxiu | Jiangxi, China |
| SCm308 | <i>Glycine max</i> | Fengcheng | Jiangxi, China |
| SCm309 | <i>Glycine max</i> | Hengshan | Hunan, China |
| SCm310 | <i>Glycine max</i> | Hengyang | Hunan, China |
| SCm311 | <i>Glycine max</i> | Xingren | Guizhou, China |
| SCm312 | <i>Glycine max</i> | Anlong | Guizhou, China |
| SCm313 | <i>Glycine max</i> | Congming | Shanghai, China |
| SCm314 | <i>Glycine max</i> | Fengxian | Shanghai, China |
| SCm315 | <i>Glycine max</i> | Huaiyin | Jiangsu, China |
| SCm316 | <i>Glycine max</i> | Nanjing | Jiangsu, China |
| SCm317 | <i>Glycine max</i> | Wuhe | Anhui, China |
| SCm318 | <i>Glycine max</i> | Xiaoxian | Anhui, China |
| SCm319 | <i>Glycine max</i> | Changyang | Hubei, China |
| SCm320 | <i>Glycine max</i> | Tongcheng | Hubei, China |
| SCm321 | <i>Glycine max</i> | Nanchong | Sichuan, China |
| SCm322 | <i>Glycine max</i> | Fengdu | Sichuan, China |
| SCm323 | <i>Glycine max</i> | Nielamu | Xizang, China |
| SCm324 | <i>Glycine max</i> | Linzhi | Xizang, China |
| NCm325 | <i>Glycine max</i> | Guangrao | Shandong, China |
| NCm326 | <i>Glycine max</i> | Pingyuan | Shandong, China |
| NCm327 | <i>Glycine max</i> | Lankao | Henan, China |
| NCm328 | <i>Glycine max</i> | Dengfeng | Henan, China |
| NCm329 | <i>Glycine max</i> | Chengde | Hebei, China |
| NCm330 | <i>Glycine max</i> | Dacheng | Hebei, China |
| NCm331 | <i>Glycine max</i> | Tongxian | Beijing, China |
| NCm332 | <i>Glycine max</i> | Huairong | Beijing, China |
| NCm333 | <i>Glycine max</i> | Daning | Shanxi, China |
| NCm334 | <i>Glycine max</i> | Linchuan | Shanxi, China |
| NCm335 | <i>Glycine max</i> | Suide | Shaanxi, China |

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|--------|---------------------|----------------|---------------------|
| NCm336 | <i>Glycine max</i> | Zichang | Shaanxi, China |
| NCm337 | <i>Glycine max</i> | Zhongwei | Ningxia, China |
| NCm338 | <i>Glycine max</i> | Zhongwei | Ningxia, China |
| NCm339 | <i>Glycine max</i> | Huachi | Gansu, China |
| NCm340 | <i>Glycine max</i> | Huating | Gansu, China |
| NCm341 | <i>Glycine max</i> | Helingeer | Neimenggu, China |
| NCm342 | <i>Glycine max</i> | Yikezhaomeng | Neimenggu, China |
| NCm343 | <i>Glycine max</i> | Jinghe | Xinjiang, China |
| NCm344 | <i>Glycine max</i> | Yanqi | Xinjiang, China |
| NEm345 | <i>Glycine max</i> | Tieling | Liaoning, China |
| NEm346 | <i>Glycine max</i> | Shenyang | Liaoning, China |
| NEm347 | <i>Glycine max</i> | Changling | Jilin, China |
| NEm348 | <i>Glycine max</i> | Jilin | Jilin, China |
| NEm349 | <i>Glycine max</i> | Jiamusi | Heilongjiang, China |
| NEm350 | <i>Glycine max</i> | Tonghe | Heilongjiang, China |
| SCs351 | <i>Glycine soja</i> | Wuhan | Hubei China |
| Ks352 | <i>Glycine soja</i> | Chungchong Puk | South Korea |
| Js353 | <i>Glycine soja</i> | Okayama | Japan |
| Js354 | <i>Glycine soja</i> | Nagano | Japan |
| Rs355 | <i>Glycine soja</i> | Amur | Russian Far East |
| Rs356 | <i>Glycine soja</i> | Primorye | Russian Far East |
| Js357 | <i>Glycine soja</i> | Hokkaido | Japan |
| Rs358 | <i>Glycine soja</i> | Khabarovsk | Russian Far East |
| Ks359 | <i>Glycine soja</i> | Cheju | South Korea |
| Ks360 | <i>Glycine soja</i> | Cholla Puk | South Korea |
| Rs361 | <i>Glycine soja</i> | Khabarovsk | Russian Far East |
| Rs362 | <i>Glycine soja</i> | Khabarovsk | Russian Far East |
| Ks363 | <i>Glycine soja</i> | Cholla Puk | South Korea |
| Js364 | <i>Glycine soja</i> | Akita | Japan |
| Ks365 | <i>Glycine soja</i> | Kyonggi | South Korea |
| Js366 | <i>Glycine soja</i> | Miyazaki | Japan |
| Jm367 | <i>Glycine max</i> | Yamaguchi | Japan |
| Km369 | <i>Glycine max</i> | Cholla Puk | South Korea |
| Jm370 | <i>Glycine max</i> | Akita | Japan |
| Km371 | <i>Glycine max</i> | Seoul | South Korea |
| Km372 | <i>Glycine max</i> | Cheju | South Korea |
| Jm373 | <i>Glycine max</i> | Aichi | Japan |
| Jm374 | <i>Glycine max</i> | Yamagata | Japan |
| Km375 | <i>Glycine max</i> | Cholla Namdo | South Korea |
| Jm376 | <i>Glycine max</i> | Shariin | Japan |
| Jm377 | <i>Glycine max</i> | Kumamoto | Japan |
| Jm378 | <i>Glycine max</i> | Nagano | Japan |
| Jm379 | <i>Glycine max</i> | Kisaya | Japan |
| Jm380 | <i>Glycine max</i> | Tokushima | Japan |

| | | | |
|-------|--------------------|------------------|-------------|
| Km381 | <i>Glycine max</i> | Chungchong Namdo | South Korea |
| Jm382 | <i>Glycine max</i> | Kumamoto | Japan |
| Jm383 | <i>Glycine max</i> | Kumamoto | Japan |
| Jm384 | <i>Glycine max</i> | Fukushima | Japan |
| Jm385 | <i>Glycine max</i> | Akita | Japan |
| Jm386 | <i>Glycine max</i> | Kagoshima | Japan |

TABLE S2. Genetic diversity of 56 loci

| Loci | LG ^a | Position in LG(cM) | N_A ^b | F_{IS} ^c | H_E ^d |
|-----------|-----------------|--------------------|--------------------|-----------------------|--------------------|
| Satt684 | A1 | 3.54 | 27 | 0.955 | 0.880 |
| Satt050 | A1 | 46.45 | 29 | 0.969 | 0.801 |
| SOYNOD26A | A1 | 66.8 | 29 | 0.94 | 0.899 |
| Satt174 | A1 | 88.58 | 21 | 0.935 | 0.858 |
| Satt390 | A2 | 9.14 | 29 | 0.983 | 0.907 |
| Satt208 | A2 | 128.44 | 25 | 0.941 | 0.881 |
| Satt429 | A2 | 162.03 | 47 | 0.953 | 0.956 |
| Satt509 | B1 | 32.51 | 28 | 0.95 | 0.896 |
| Sat_128 | B1 | 53.41 | 39 | 0.941 | 0.934 |
| Satt126 | B2 | 27.63 | 19 | 0.927 | 0.803 |
| Satt556 | B2 | 73.21 | 36 | 0.92 | 0.911 |
| Satt063 | B2 | 93.49 | 21 | 0.897 | 0.751 |
| Satt687 | B2 | 113.61 | 18 | 0.96 | 0.745 |
| SOYGPATR | C1 | 10.34 | 13 | 0.822 | 0.643 |
| Satt194 | C1 | 26.35 | 28 | 0.929 | 0.904 |
| Sat_140 | C1 | 41.43 | 39 | 0.96 | 0.951 |
| AW277661 | C1 | 74.79 | 27 | 0.953 | 0.857 |
| Satt180 | C1 | 127.77 | 29 | 0.88 | 0.876 |
| Satt227 | C2 | 26.65 | 8 | 0.914 | 0.747 |
| Satt322 | C2 | 82.23 | 7 | 0.935 | 0.599 |
| Satt363 | C2 | 98.07 | 35 | 0.954 | 0.939 |
| Satt184 | D1a | 17.52 | 33 | 0.925 | 0.86 |
| Satt179 | D1a | 56.2 | 36 | 0.93 | 0.932 |
| Satt217 | D1b | 9.8 | 38 | 0.901 | 0.925 |
| BE021153 | D1b | 30.23 | 5 | 0.968 | 0.384 |
| Satt271 | D1b | 137.06 | 7 | 0.954 | 0.504 |
| Satt002 | D2 | 47.73 | 33 | 0.956 | 0.912 |
| Satt669 | D2 | 67.71 | 35 | 0.973 | 0.905 |
| Satt082 | D2 | 87.25 | 10 | 0.957 | 0.735 |
| Satt186 | D2 | 105.45 | 31 | 0.97 | 0.918 |
| Satt212 | E | 32.27 | 8 | 0.944 | 0.578 |
| Satt369 | E | 56.27 | 23 | 0.967 | 0.884 |
| BE806387 | F | 22.97 | 12 | 0.98 | 0.814 |
| Satt114 | F | 63.69 | 18 | 0.957 | 0.833 |
| Satt362 | F | 82.83 | 21 | 0.96 | 0.883 |
| Satt324 | G | 33.26 | 19 | 0.93 | 0.885 |
| U08405 | H | 7.26 | 29 | 0.933 | 0.828 |
| Satt142 | H | 86.49 | 52 | 0.963 | 0.941 |
| Satt571 | I | 18.5 | 21 | 0.944 | 0.922 |
| Satt239 | I | 36.94 | 28 | 0.934 | 0.938 |
| Sat_268 | I | 55.1 | 34 | 0.929 | 0.879 |
| AW310961 | J | 5.19 | 22 | 0.935 | 0.874 |

| | | | | | |
|----------|---|--------|----|-------|-------|
| Sat_093 | J | 46.09 | 51 | 0.945 | 0.969 |
| Sat_087 | K | 4.85 | 46 | 0.968 | 0.964 |
| Satt240 | K | 52.88 | 16 | 0.911 | 0.856 |
| Satt166 | L | 66.51 | 38 | 0.946 | 0.925 |
| Satt373 | L | 107.24 | 35 | 0.924 | 0.944 |
| Satt540 | M | 35.85 | 47 | 0.934 | 0.957 |
| Satt175 | M | 66.99 | 26 | 0.884 | 0.905 |
| Satt697 | M | 85.35 | 18 | 0.905 | 0.857 |
| BF008905 | O | 28.95 | 10 | 0.985 | 0.784 |
| Satt420 | O | 49.71 | 39 | 0.923 | 0.917 |
| BE801128 | O | 68.97 | 11 | 0.946 | 0.795 |
| Satt447 | O | 82.09 | 28 | 0.95 | 0.816 |
| Satt243 | O | 119.5 | 56 | 0.933 | 0.942 |
| Scaa001 | O | 146.37 | 8 | 0.953 | 0.622 |

^a: Linkage groups of soybeans;

^b: number of alleles;

^c: fixation index;

^d: expected heterozygosity.

TABLE S3. The four gene loci and primer sequences

| Gene locus | Forward primer 5'–3' | Reverse primer 5'–3' | Alignment length (bp) |
|-----------------|-------------------------------|-------------------------------|--------------------------|
| <i>BG406170</i> | GCGTTGGAGATTG GAGATAA | TGGGACAGTAAGC AGTTGACC | 410 |
| <i>AF105221</i> | GCGACGCATTCAG TACACACTACAC | GCGGCCAAAGAAA GACAAGTAGATA | 484 |
| <i>J02746</i> | GCGGGGTGTTTCGA GGTTTCTAAT | GCGATGCGTTGGA ATTCAGGATA | 429 |
| <i>AJ003246</i> | GCGGGCAAAAAG GAAGAAAT | GCGGGGAAAAGGT GAAAATTA | 518 |

TABLE S4. Summary for parameters (K' , d , Nb) used in the coalescent simulation

| K'^a | d^b | Nb^c | K' | d | Nb | K' | d | Nb |
|--------|-------|--------|------|------|------|------|------|------|
| 0.1 | 100 | 10 | 0.1 | 1000 | 100 | 0.1 | 2000 | 200 |
| 0.5 | 100 | 50 | 0.5 | 1000 | 500 | 0.5 | 2000 | 1000 |
| 1 | 100 | 100 | 1 | 1000 | 1000 | 1 | 2000 | 2000 |
| 1.1 | 100 | 110 | 1.1 | 1000 | 1100 | 1.1 | 2000 | 2200 |
| 1.2 | 100 | 120 | 1.2 | 1000 | 1200 | 1.2 | 2000 | 2400 |
| 1.3 | 100 | 130 | 1.3 | 1000 | 1300 | 1.3 | 2000 | 2600 |
| 1.4 | 100 | 140 | 1.4 | 1000 | 1400 | 1.4 | 2000 | 2800 |
| 1.5 | 100 | 150 | 1.5 | 1000 | 1500 | 1.5 | 2000 | 3000 |
| 1.6 | 100 | 160 | 1.6 | 1000 | 1600 | 1.6 | 2000 | 3200 |
| 1.7 | 100 | 170 | 1.7 | 1000 | 1700 | 1.7 | 2000 | 3400 |
| 1.8 | 100 | 180 | 1.8 | 1000 | 1800 | 1.8 | 2000 | 3600 |
| 1.9 | 100 | 190 | 1.9 | 1000 | 1900 | 1.9 | 2000 | 3800 |
| 2 | 100 | 200 | 2 | 1000 | 2000 | 2 | 2000 | 4000 |
| 2.1 | 100 | 210 | 2.1 | 1000 | 2100 | 2.1 | 2000 | 4200 |
| 2.2 | 100 | 220 | 2.2 | 1000 | 2200 | 2.2 | 2000 | 4400 |
| 2.3 | 100 | 230 | 2.3 | 1000 | 2300 | 2.3 | 2000 | 4600 |
| 2.4 | 100 | 240 | 2.4 | 1000 | 2400 | 2.4 | 2000 | 4800 |
| 2.5 | 100 | 250 | 2.5 | 1000 | 2500 | 2.5 | 2000 | 5000 |
| 2.6 | 100 | 260 | 2.6 | 1000 | 2600 | 2.6 | 2000 | 5200 |
| 2.7 | 100 | 270 | 2.7 | 1000 | 2700 | 2.7 | 2000 | 5400 |
| 2.8 | 100 | 280 | 2.8 | 1000 | 2800 | 2.8 | 2000 | 5600 |
| 2.9 | 100 | 290 | 2.9 | 1000 | 2900 | 2.9 | 2000 | 5800 |
| 3 | 100 | 300 | 3 | 1000 | 3000 | 3 | 2000 | 6000 |
| 3.1 | 100 | 310 | 3.1 | 1000 | 3100 | 3.1 | 2000 | 6200 |
| 3.2 | 100 | 320 | 3.2 | 1000 | 3200 | 3.2 | 2000 | 6400 |
| 3.3 | 100 | 330 | 3.3 | 1000 | 3300 | 3.3 | 2000 | 6600 |
| 3.4 | 100 | 340 | 3.4 | 1000 | 3400 | 3.4 | 2000 | 6800 |
| 3.5 | 100 | 350 | 3.5 | 1000 | 3500 | 3.5 | 2000 | 7000 |
| 3.6 | 100 | 360 | 3.6 | 1000 | 3600 | 3.6 | 2000 | 7200 |
| 3.7 | 100 | 370 | 3.7 | 1000 | 3700 | 3.7 | 2000 | 7400 |
| 3.8 | 100 | 380 | 3.8 | 1000 | 3800 | 3.8 | 2000 | 7600 |
| 3.9 | 100 | 390 | 3.9 | 1000 | 3900 | 3.9 | 2000 | 7800 |
| 4 | 100 | 400 | 4 | 1000 | 4000 | 4 | 2000 | 8000 |
| 4.1 | 100 | 410 | 4.1 | 1000 | 4100 | 4.1 | 2000 | 8200 |
| 4.2 | 100 | 420 | 4.2 | 1000 | 4200 | 4.2 | 2000 | 8400 |
| 4.3 | 100 | 430 | 4.3 | 1000 | 4300 | 4.3 | 2000 | 8600 |
| 4.4 | 100 | 440 | 4.4 | 1000 | 4400 | 4.4 | 2000 | 8800 |
| 4.5 | 100 | 450 | 4.5 | 1000 | 4500 | 4.5 | 2000 | 9000 |
| 4.6 | 100 | 460 | 4.6 | 1000 | 4600 | 4.6 | 2000 | 9200 |
| 4.7 | 100 | 470 | 4.7 | 1000 | 4700 | 4.7 | 2000 | 9400 |
| 4.8 | 100 | 480 | 4.8 | 1000 | 4800 | 4.8 | 2000 | 9600 |
| 4.9 | 100 | 490 | 4.9 | 1000 | 4900 | 4.9 | 2000 | 9800 |

| | | | | | | | | |
|-----|-----|------|-----|------|-------|-----|------|-------|
| 5 | 100 | 500 | 5 | 1000 | 5000 | 5 | 2000 | 10000 |
| 6 | 100 | 600 | 6 | 1000 | 6000 | 6 | 2000 | 12000 |
| 7 | 100 | 700 | 7 | 1000 | 7000 | 7 | 2000 | 14000 |
| 8 | 100 | 800 | 8 | 1000 | 8000 | 8 | 2000 | 16000 |
| 9 | 100 | 900 | 9 | 1000 | 9000 | 9 | 2000 | 18000 |
| 10 | 100 | 1000 | 10 | 1000 | 10000 | 10 | 2000 | 20000 |
| 15 | 100 | 1500 | 15 | 1000 | 15000 | 15 | 2000 | 30000 |
| 20 | 100 | 2000 | 20 | 1000 | 20000 | 20 | 2000 | 40000 |
| 0.1 | 500 | 50 | 0.1 | 1500 | 150 | 0.1 | 3000 | 300 |
| 0.5 | 500 | 250 | 0.5 | 1500 | 750 | 0.5 | 3000 | 1500 |
| 1 | 500 | 500 | 1 | 1500 | 1500 | 1 | 3000 | 3000 |
| 1.1 | 500 | 550 | 1.1 | 1500 | 1650 | 1.1 | 3000 | 3300 |
| 1.2 | 500 | 600 | 1.2 | 1500 | 1800 | 1.2 | 3000 | 3600 |
| 1.3 | 500 | 650 | 1.3 | 1500 | 1950 | 1.3 | 3000 | 3900 |
| 1.4 | 500 | 700 | 1.4 | 1500 | 2100 | 1.4 | 3000 | 4200 |
| 1.5 | 500 | 750 | 1.5 | 1500 | 2250 | 1.5 | 3000 | 4500 |
| 1.6 | 500 | 800 | 1.6 | 1500 | 2400 | 1.6 | 3000 | 4800 |
| 1.7 | 500 | 850 | 1.7 | 1500 | 2550 | 1.7 | 3000 | 5100 |
| 1.8 | 500 | 900 | 1.8 | 1500 | 2700 | 1.8 | 3000 | 5400 |
| 1.9 | 500 | 950 | 1.9 | 1500 | 2850 | 1.9 | 3000 | 5700 |
| 2 | 500 | 1000 | 2 | 1500 | 3000 | 2 | 3000 | 6000 |
| 2.1 | 500 | 1050 | 2.1 | 1500 | 3150 | 2.1 | 3000 | 6300 |
| 2.2 | 500 | 1100 | 2.2 | 1500 | 3300 | 2.2 | 3000 | 6600 |
| 2.3 | 500 | 1150 | 2.3 | 1500 | 3450 | 2.3 | 3000 | 6900 |
| 2.4 | 500 | 1200 | 2.4 | 1500 | 3600 | 2.4 | 3000 | 7200 |
| 2.5 | 500 | 1250 | 2.5 | 1500 | 3750 | 2.5 | 3000 | 7500 |
| 2.6 | 500 | 1300 | 2.6 | 1500 | 3900 | 2.6 | 3000 | 7800 |
| 2.7 | 500 | 1350 | 2.7 | 1500 | 4050 | 2.7 | 3000 | 8100 |
| 2.8 | 500 | 1400 | 2.8 | 1500 | 4200 | 2.8 | 3000 | 8400 |
| 2.9 | 500 | 1450 | 2.9 | 1500 | 4350 | 2.9 | 3000 | 8700 |
| 3 | 500 | 1500 | 3 | 1500 | 4500 | 3 | 3000 | 9000 |
| 3.1 | 500 | 1550 | 3.1 | 1500 | 4650 | 3.1 | 3000 | 9300 |
| 3.2 | 500 | 1600 | 3.2 | 1500 | 4800 | 3.2 | 3000 | 9600 |
| 3.3 | 500 | 1650 | 3.3 | 1500 | 4950 | 3.3 | 3000 | 9900 |
| 3.4 | 500 | 1700 | 3.4 | 1500 | 5100 | 3.4 | 3000 | 10200 |
| 3.5 | 500 | 1750 | 3.5 | 1500 | 5250 | 3.5 | 3000 | 10500 |
| 3.6 | 500 | 1800 | 3.6 | 1500 | 5400 | 3.6 | 3000 | 10800 |
| 3.7 | 500 | 1850 | 3.7 | 1500 | 5550 | 3.7 | 3000 | 11100 |
| 3.8 | 500 | 1900 | 3.8 | 1500 | 5700 | 3.8 | 3000 | 11400 |
| 3.9 | 500 | 1950 | 3.9 | 1500 | 5850 | 3.9 | 3000 | 11700 |
| 4 | 500 | 2000 | 4 | 1500 | 6000 | 4 | 3000 | 12000 |
| 4.1 | 500 | 2050 | 4.1 | 1500 | 6150 | 4.1 | 3000 | 12300 |
| 4.2 | 500 | 2100 | 4.2 | 1500 | 6300 | 4.2 | 3000 | 12600 |
| 4.3 | 500 | 2150 | 4.3 | 1500 | 6450 | 4.3 | 3000 | 12900 |

| | | | | | | | | |
|-----|-----|-------|-----|------|-------|-----|------|-------|
| 4.4 | 500 | 2200 | 4.4 | 1500 | 6600 | 4.4 | 3000 | 13200 |
| 4.5 | 500 | 2250 | 4.5 | 1500 | 6750 | 4.5 | 3000 | 13500 |
| 4.6 | 500 | 2300 | 4.6 | 1500 | 6900 | 4.6 | 3000 | 13800 |
| 4.7 | 500 | 2350 | 4.7 | 1500 | 7050 | 4.7 | 3000 | 14100 |
| 4.8 | 500 | 2400 | 4.8 | 1500 | 7200 | 4.8 | 3000 | 14400 |
| 4.9 | 500 | 2450 | 4.9 | 1500 | 7350 | 4.9 | 3000 | 14700 |
| 5 | 500 | 2500 | 5 | 1500 | 7500 | 5 | 3000 | 15000 |
| 6 | 500 | 3000 | 6 | 1500 | 9000 | 6 | 3000 | 18000 |
| 7 | 500 | 3500 | 7 | 1500 | 10500 | 7 | 3000 | 21000 |
| 8 | 500 | 4000 | 8 | 1500 | 12000 | 8 | 3000 | 24000 |
| 9 | 500 | 4500 | 9 | 1500 | 13500 | 9 | 3000 | 27000 |
| 10 | 500 | 5000 | 10 | 1500 | 15000 | 10 | 3000 | 30000 |
| 15 | 500 | 7500 | 15 | 1500 | 22500 | 15 | 3000 | 45000 |
| 20 | 500 | 10000 | 20 | 1500 | 30000 | 20 | 3000 | 60000 |

^a: Bottleneck severity;

^b: Duration of domestication;

^c: Bottleneck population size.

TABLE S5. Genetic diversity statistics for eco-populations of wild (*Glycine soja*) and landrace soybean (*G. max*) inferred from the STRUCTURE2.2 program

| Species | Eco-region | N | UH_E | N_R |
|----------------|------------|-----|--------|-------|
| <i>G. soja</i> | NEs | 49 | 0.830 | 4.2 |
| | NCs | 73 | 0.780 | 4.0 |
| | SCs | 94 | 0.846 | 4.4 |
| | Ks | 5 | 0.644 | 2.9 |
| | Js | 5 | 0.723 | 3.4 |
| | Rs | 5 | 0.710 | 3.2 |
| <i>G. max</i> | NEm | 6 | 0.558 | 2.6 |
| | NCm | 20 | 0.660 | 3.2 |
| | SCm | 34 | 0.673 | 3.3 |
| | Km | 5 | 0.610 | 2.8 |
| | Jm | 14 | 0.626 | 3.0 |

N : Number of individuals;

UH_E : unbiased expected heterozygosity;

N_R : allelic richness based on the smallest population size.