

Table S1: Wild and cultivated *Cicer* accessions used in the study and their inferred ancestry coefficients in population genetic structure analysis

Sl. No.	<i>Cicer</i> species	Accession No.	Cultivar types	Geographical origin	Inferred ancestry among <i>Cicer</i> accessions					
					Population I (POP I)	Population II (POP II)	Population III (POP III)	Population IV (POP IV)	Population V (POP V)	Population VI (POP VI)
1	<i>C. arietinum</i> (annual cultivated)	ICCX810800	<i>desi</i>	India	0.999	0	0	0	0	0
2		IC296132	<i>desi</i>	India	0.999	0	0	0	0	0
3		ICCV96970	<i>desi</i>	India	0.999	0	0	0	0	0
4		IC296131	<i>desi</i>	India	0.999	0	0	0	0	0
5		ICC4958	<i>desi</i>	India	0.998	0	0	0	0.001	0
6		ICC4951	<i>desi</i>	India	0.999	0	0	0	0	0
7		ICCV2	<i>kabuli</i>	India	0.999	0	0	0	0	0
8		ICCV92311	<i>kabuli</i>	India	0.999	0	0	0	0	0
9		ICCV95334	<i>kabuli</i>	India	0.999	0	0	0	0	0
10		ICCV96329	<i>kabuli</i>	India	0.999	0	0	0	0	0
11		BG2024	<i>kabuli</i>	India	0.999	0	0	0	0	0
12		PhuleG515	<i>kabuli</i>	India	0.999	0	0	0	0	0
13	<i>C. reticulatum</i> (annual wild)	ICC17160	Wild	Turkey	0.025	0	0	0.008	0.966	0
14		ILWC290	Wild	Turkey	0.001	0.001	0.005	0.001	0.99	0.001
15		ILWC233	Wild	Turkey	0.001	0	0.001	0	0.998	0
16		ILWC253	Wild	Turkey	0	0	0	0	0.998	0
17		ILWC254	Wild	Turkey	0.098	0.001	0.028	0.009	0.859	0.005
18		ILWC237	Wild	Turkey	0.084	0	0.053	0.002	0.859	0.001
19		ILWC257	Wild	Turkey	0.001	0.001	0.011	0.001	0.985	0.001
20		ILWC218	Wild	Turkey	0	0	0	0	0.998	0
21		ILWC247	Wild	Turkey	0.044	0.001	0.001	0.001	0.947	0.005
22		ILWC229	Wild	Turkey	0	0	0	0	0.998	0
23		ILWC219	Wild	Turkey	0	0	0	0.001	0.998	0
24		ILWC242	Wild	Turkey	0	0.002	0.379	0.003	0.582	0.033
25		ILWC258	Wild	Turkey	0.107	0.001	0.022	0	0.867	0.003
26		ILWC21	Wild	Turkey	0.078	0.001	0.196	0.001	0.722	0.001
27		ILWC36	Wild	Turkey	0	0.003	0.141	0.002	0.853	0.001
28		ILWC216	Wild	Turkey	0	0	0.235	0	0.764	0.001

29	<i>C. echinospermum</i> (annual wild)	ICC17159	Wild	Turkey	0.008	0.09	0.858	0.001	0.001	0.042
30		ILWC35	Wild	Turkey	0	0.001	0.914	0.083	0	0.001
31		IG135418	Wild	Syrian Arab Republic	0.001	0.006	0.991	0.001	0.001	0.001
32		ILWC239	Wild	Turkey	0.001	0	0.997	0.001	0	0
33		ILWC245	Wild	Turkey	0	0	0.998	0	0	0
34		ILWC238	Wild	Turkey	0	0	0.999	0	0	0
35		ILWC246	Wild	Turkey	0	0.003	0.995	0	0	0
36		ILWC288	Wild	Turkey	0	0	0.998	0	0	0.001
37	<i>C. judaicum</i> (annual wild)	ICC182	Wild	ICRISAT, India	0	0.001	0.001	0.001	0	0.997
38		ICC17150	Wild	Lebanon	0	0.001	0.001	0.001	0	0.997
39		ILWC95	Wild	ICRISAT, India	0	0.001	0.001	0	0	0.997
40		ILWC31	Wild	Jordan	0.001	0.002	0.001	0.001	0.395	0.601
41		ILWC185	Wild	ICRISAT, India	0.001	0	0.004	0.001	0	0.994
42		ICC17148	Wild	Lebanon	0	0	0.001	0	0	0.998
43		ILWC280	Wild	Syrian Arab Republic	0	0	0.001	0	0	0.998
44		ILWC283	Wild	Syrian Arab Republic	0.005	0.001	0.001	0.001	0.001	0.991
45		ILWC20	Wild	Israel	0	0	0.004	0	0	0.994
46		ILWC211	Wild	Syrian Arab Republic	0	0	0.001	0.001	0	0.997
47		ILWC30	Wild	Israel	0	0	0.001	0.001	0.001	0.997
48		ILWC48	Wild	Syrian Arab Republic	0	0.001	0.001	0.001	0	0.998
49		ILWC50	Wild	Syrian Arab Republic	0	0	0	0	0	0.999
50		ILWC207	Wild	Syrian Arab Republic	0	0.001	0.001	0.001	0	0.997
51		ILWC45	Wild	Syrian Arab Republic	0	0.103	0	0.001	0	0.895
52		ILWC38	Wild	Lebanon	0.001	0.001	0	0.001	0.01	0.986
53		ILWC278	Wild	Syrian Arab Republic	0	0.001	0	0.001	0	0.997
54		ILWC275	Wild	Lebanon	0	0.001	0	0.001	0	0.997
55		ILWC223	Wild	Lebanon	0.001	0.01	0.001	0.001	0.001	0.986
56		ILWC256	Wild	Jordan	0	0.005	0.001	0.006	0.001	0.987
57		ILWC273	Wild	Lebanon	0	0.002	0.001	0.001	0.001	0.996
58		ILWC4	Wild	Lebanon	0.001	0.018	0	0.004	0.001	0.976

59	<i>C. bijugum</i> (annual wild)	ILWC42	Wild	Syrian Arab Republic	0	0.842	0.001	0.002	0.001	0.154	
60		IG136792	Wild	Syrian Arab Republic	0	0.998	0.001	0.001	0	0	
61		IG136786	Wild	Syrian Arab Republic	0	0.997	0	0.002	0	0	
62		ILWC277	Wild	Syrian Arab Republic	0	0.999	0	0	0	0	
63		ILWC8	Wild	Turkey	0	0.998	0	0	0	0	
64		ILWC228	Wild	Turkey	0	0.997	0	0.001	0.001	0.001	
65		ILWC240	Wild	Turkey	0	0.999	0	0	0	0	
66		ILWC241	Wild	Turkey	0	0.998	0	0	0	0	
67		ILWC260	Wild	Turkey	0	0.999	0	0	0	0	
68		ILWC217	Wild	Turkey	0	0.998	0	0	0	0	
69		ILWC209	Wild	Syrian Arab Republic	0	0.998	0	0.001	0	0	
70		ILWC227	Wild	Turkey	0	0.996	0.002	0.001	0	0.001	
71		ILWC284	Wild	Turkey	0	0.997	0.001	0.001	0	0.001	
72		ILWC7	Wild	Turkey	0	0.997	0	0.002	0	0.001	
73		ILWC220	Wild	Turkey	0.001	0.996	0.001	0.001	0	0.001	
74		IG136796	Wild	Syrian Arab Republic	0	0.78	0.001	0.218	0	0.001	
75		ILWC285	Wild	Turkey	0	0.579	0.001	0.407	0	0.012	
76		ILWC286	Wild	Turkey	0	0.486	0	0.512	0	0.001	
77		ILWC32	Wild	Turkey	0	0.423	0	0.575	0.001	0.001	
78		<i>C. pinnatifidum</i> (annual wild)	ILWC9	Wild	Turkey	0	0.001	0	0.998	0	0
79			ILWC22	Wild	Turkey	0	0	0	0.998	0	0
80			IG136820	Wild	Syrian Arab Republic	0	0	0	0.998	0	0
81			ILWC251	Wild	Turkey	0	0.001	0	0.997	0.001	0.001
82			ILWC29	Wild	Turkey	0	0.001	0	0.998	0	0
83			ILWC33	Wild	Turkey	0	0	0	0.998	0	0
84			ILWC49	Wild	Syrian Arab Republic	0	0	0.001	0.997	0	0.001
85			ILWC226	Wild	Turkey	0.001	0	0	0.998	0	0
86	ILWC248		Wild	Turkey	0	0.001	0.001	0.998	0	0.001	
87	ILWC249		Wild	Turkey	0	0.009	0.001	0.99	0	0	
88	ILWC236		Wild	Turkey	0.001	0.001	0	0.997	0	0.001	
89	ILWC225		Wild	Turkey	0	0	0	0.998	0	0	
90	ILWC51		Wild	Turkey	0	0	0	0.998	0	0.001	
91	ILWC250		Wild	Turkey	0	0	0.001	0.998	0	0	
92	ILWC261		Wild	Syrian Arab Republic	0	0	0.003	0.985	0.008	0.003	
93	ILWC289		Wild	Turkey	0.001	0.001	0.001	0.996	0.001	0	
94	<i>C. microphyllum</i> (perennial wild)	<i>microphyllum</i>	Wild	India	0.192	0.001	0.086	0.294	0.425	0.001	

Yellow highlights indicate the maximum inferred ancestry coefficient of 94 *Cicer* accessions that led to their correspondence with one model-based population as determined by STRUCTURE