

**Table S1** List of maize lines in population structure analysis (based on 5,000 SNPs) showing the subpopulations they are assigned to, their origin and their probability values of membership.

<i>sno</i>	<i>line</i>	TS	SS	NSS	state/country	<i>group</i>	<i>sno</i>	<i>line</i>	TS	SS	NSS	state/country	<i>group</i>
1	4226	0.22	0.11	0.68	Illinois	<i>mixed</i>	141	Il14H	0.00	0.04	0.96	Illinois	NSS
2	4722	0.00	0.02	0.97	Indiana	NSS	142	Il677a	0.04	0.07	0.89	Illinois	NSS
3	33-16	0.14	0.09	0.78	Indiana	<i>mixed</i>	143	K148	0.22	0.05	0.73	Kansas	<i>mixed</i>
4	38-11	0.00	0.18	0.82	Indiana	NSS	144	K4	0.21	0.15	0.65	Kansas	<i>mixed</i>
5	A188	0.19	0.12	0.70	Minnesota	<i>mixed</i>	145	K55	0.27	0.13	0.60	Kansas	<i>mixed</i>
6	A214N	0.28	0.62	0.10	Minnesota	<i>mixed</i>	146	K64	0.20	0.13	0.67	Kansas	<i>mixed</i>
7	A239	0.02	0.21	0.77	Minnesota	<i>mixed</i>	147	Ki11	0.81	0.05	0.14	Thailand	TS
8	A272	0.53	0.04	0.42	South Africa	<i>mixed</i>	148	Ki14	0.93	0.07	0.01	Thailand	TS
9	A441-5	0.44	0.09	0.47	Tennessee	<i>mixed</i>	149	Ki2021	0.93	0.02	0.05	Thailand	TS
10	A554	0.08	0.12	0.80	Minnesota	NSS	150	Ki21	0.50	0.00	0.50	Thailand	<i>mixed</i>
11	A556	0.21	0.12	0.67	Minnesota	<i>mixed</i>	151	Ki3	0.99	0.01	0.00	Thailand	TS
12	A6	0.95	0.02	0.03	Minnesota	TS	152	Ki43	0.89	0.02	0.09	Thailand	TS
13	A619	0.00	0.18	0.82	Minnesota	NSS	153	Ki44	0.87	0.06	0.08	Thailand	TS
14	A632	0.00	0.82	0.18	Minnesota	SS	154	Ky21	0.18	0.15	0.67	Kentucky	<i>mixed</i>
15	A634	0.02	0.78	0.20	Minnesota	<i>mixed</i>	155	Ky226	0.48	0.12	0.41	Kentucky	<i>mixed</i>
16	A635	0.00	0.81	0.19	Minnesota	SS	156	Ky228	0.20	0.13	0.67	Kentucky	<i>mixed</i>
17	A641	0.00	0.57	0.43	Minnesota	<i>mixed</i>	157	L317	0.12	0.10	0.78	Iowa	<i>mixed</i>
18	A654	0.14	0.12	0.74	Minnesota	<i>mixed</i>	158	L578	0.43	0.09	0.48	Louisiana	<i>mixed</i>
19	A659	0.05	0.21	0.74	Minnesota	<i>mixed</i>	159	M14	0.06	0.20	0.74	Illinois	<i>mixed</i>
20	A661	0.12	0.18	0.69	Minnesota	<i>mixed</i>	160	M162W	0.41	0.06	0.53	South Africa	<i>mixed</i>
21	A679	0.00	0.94	0.06	Minnesota	SS	161	M37W	0.52	0.07	0.41	South Africa	<i>mixed</i>
22	A680	0.00	1.00	0.00	Minnesota	SS	162	MEF156-55-2	0.03	0.06	0.92	EGYPT?	NSS
23	A682	0.00	0.00	1.00	Minnesota	NSS	163	Mo17	0.00	0.00	1.00	Missouri	NSS
24	Ab28A	0.26	0.13	0.61	Alabama	<i>mixed</i>	164	Mo18W	0.72	0.03	0.26	Missouri	<i>mixed</i>
25	B10	0.00	0.62	0.38	Iowa	<i>mixed</i>	165	Mo1W	0.34	0.09	0.57	Missouri	<i>mixed</i>
26	B103	0.00	0.25	0.75	Iowa	<i>mixed</i>	166	Mo24W	0.31	0.09	0.60	Missouri	<i>mixed</i>
27	B104	0.00	0.74	0.25	Iowa	<i>mixed</i>	167	Mo44	0.06	0.16	0.78	Missouri	<i>mixed</i>
28	B105	0.09	0.43	0.48	Iowa	<i>mixed</i>	168	Mo45	0.21	0.21	0.59	Missouri	<i>mixed</i>
29	B109	0.00	0.93	0.07	Iowa	SS	169	Mo46	0.17	0.20	0.63	Missouri	<i>mixed</i>
30	B115	0.13	0.12	0.75	Iowa	<i>mixed</i>	170	Mo47	0.32	0.19	0.49	Missouri	<i>mixed</i>
31	B14A	0.00	1.00	0.00	Iowa	SS	171	MoG	0.14	0.11	0.75	Missouri	<i>mixed</i>
32	B164	0.10	0.24	0.65	Minnesota	<i>mixed</i>	172	Mp339	0.42	0.11	0.47	Mississippi	<i>mixed</i>
33	B2	0.12	0.19	0.70	Missouri	<i>mixed</i>	173	MS1334	0.15	0.12	0.72	Michigan	<i>mixed</i>
34	B37	0.00	0.62	0.38	Iowa	<i>mixed</i>	174	MS153	0.06	0.15	0.80	Michigan	NSS
35	B46	0.01	0.38	0.61	Iowa	<i>mixed</i>	175	MS71	0.01	0.15	0.84	Michigan	NSS
36	B52	0.03	0.20	0.78	Iowa	<i>mixed</i>	176	Mt42	0.13	0.17	0.70	Minnesota	<i>mixed</i>

37	B57	0.21	0.09	0.70	Iowa	<i>mixed</i>	177	N192	0.00	1.00	0.00	Nebraska	SS
38	B64	0.28	0.68	0.04	Iowa	<i>mixed</i>	178	N28Ht	0.09	0.37	0.54	Nebraska	<i>mixed</i>
39	B68	0.15	0.85	0.00	Iowa	SS	179	N6	0.12	0.10	0.78	Nebraska	<i>mixed</i>
40	B73	0.00	1.00	0.00	Iowa	SS	180	N7A	0.01	0.49	0.50	Nebraska	<i>mixed</i>
41	B73Htrhm	0.00	1.00	0.00	Iowa	SS	181	NC222	0.25	0.09	0.67	North Carolina	<i>mixed</i>
42	B75	0.12	0.20	0.68	Iowa	<i>mixed</i>	182	NC230	0.26	0.09	0.65	North Carolina	<i>mixed</i>
43	B76	0.01	0.50	0.49	Iowa	<i>mixed</i>	183	NC232	0.40	0.05	0.55	North Carolina	<i>mixed</i>
44	B77	0.15	0.11	0.74	Iowa	<i>mixed</i>	184	NC236	0.21	0.13	0.66	North Carolina	<i>mixed</i>
45	B79	0.00	0.34	0.66	Iowa	<i>mixed</i>	185	NC238	0.39	0.06	0.55	North Carolina	<i>mixed</i>
46	B84	0.00	0.76	0.24	Iowa	<i>mixed</i>	186	NC250	0.25	0.48	0.27	North Carolina	<i>mixed</i>
47	B97	0.05	0.13	0.82	Iowa	NSS	187	NC258	0.00	0.00	1.00	North Carolina	NSS
48	C103	0.00	0.00	1.00	Conneticut	NSS	188	NC260	0.12	0.11	0.77	North Carolina	<i>mixed</i>
49	C123	0.06	0.00	0.94	Conneticut	NSS	189	NC262	0.00	0.00	1.00	North Carolina	NSS
50	C49A	0.10	0.15	0.75	Minnesota	<i>mixed</i>	190	NC264	0.56	0.04	0.40	North Carolina	<i>mixed</i>
51	CH701-30	0.07	0.18	0.75	Canada - Harrow	<i>mixed</i>	191	NC290A	0.00	0.00	1.00	North Carolina	NSS
52	CH9	0.14	0.14	0.72	Canada - Harrow	<i>mixed</i>	192	NC294	0.00	0.96	0.04	North Carolina	SS
53	CI.7	0.11	0.12	0.76	USDA	<i>mixed</i>	193	NC296	1.00	0.00	0.00	North Carolina	TS
54	CI187-2	0.00	0.14	0.86	USDA	NSS	194	NC296A	1.00	0.00	0.00	North Carolina	TS
55	CI21E	0.17	0.28	0.55	USDA	<i>mixed</i>	195	NC298	1.00	0.00	0.00	North Carolina	TS
56	CI28A	0.31	0.13	0.56	USDA	<i>mixed</i>	196	NC300	1.00	0.00	0.00	North Carolina	TS
57	CI31A	0.20	0.17	0.63	USDA	<i>mixed</i>	197	NC279	1.00	0.00	0.00	North Carolina	TS
58	CI3A	0.12	0.13	0.75	USDA	<i>mixed</i>	198	NC304	1.00	0.00	0.00	North Carolina	TS
59	CI64	0.39	0.08	0.53	USDA	<i>mixed</i>	199	NC306	0.00	1.00	0.00	North Carolina	SS
60	CI66	0.38	0.10	0.52	USDA	<i>mixed</i>	200	NC310	0.00	1.00	0.00	North Carolina	SS
61	CI90C	0.35	0.12	0.53	USDA	<i>mixed</i>	201	NC314	0.05	0.88	0.07	North Carolina	SS
62	CI91B	0.00	0.14	0.85	USDA	NSS	202	NC318	0.55	0.04	0.41	North Carolina	<i>mixed</i>
63	CM105	0.00	0.73	0.27	Canada-Morden	<i>mixed</i>	203	NC320	0.58	0.06	0.37	North Carolina	<i>mixed</i>
64	CM174	0.00	0.72	0.28	Canada-Morden	<i>mixed</i>	204	NC324	0.09	0.84	0.06	North Carolina	SS
65	CM37	0.01	0.11	0.89	Canada-Morden	NSS	205	NC326	0.00	1.00	0.00	North Carolina	SS
66	CM7	0.16	0.11	0.72	Canada-Morden	<i>mixed</i>	206	NC328	0.00	1.00	0.00	North Carolina	SS
67	CML10	1.00	0.00	0.00	Mexico	TS	207	NC33	0.32	0.07	0.60	North Carolina	<i>mixed</i>
68	CML103	0.70	0.03	0.27	Mexico	<i>mixed</i>	208	NC336	1.00	0.00	0.00	North Carolina	TS
69	CML108	0.70	0.03	0.27	Mexico	<i>mixed</i>	209	NC338	1.00	0.00	0.00	North Carolina	TS
70	CML11	1.00	0.00	0.00	Mexico	TS	210	NC340	1.00	0.00	0.00	North Carolina	TS
71	CML14	0.94	0.01	0.05	Mexico	TS	211	NC342	0.00	0.00	1.00	North Carolina	NSS
72	CML154Q	0.96	0.02	0.02	Mexico	TS	212	NC344	0.00	0.00	1.00	North Carolina	NSS
73	CML157Q	0.93	0.00	0.07	Mexico	TS	213	NC346	1.00	0.00	0.00	North Carolina	TS
74	CML158Q	0.96	0.00	0.04	Mexico	TS	214	NC348	1.00	0.00	0.00	North Carolina	TS
75	CML218	0.93	0.01	0.06	Mexico	TS	215	NC350	1.00	0.00	0.00	North Carolina	TS

76	CML220	0.95	0.04	0.01	Mexico	TS	216	NC352	1.00	0.00	0.00	North Carolina	TS
77	CML228	0.99	0.00	0.01	Mexico	TS	217	NC354	1.00	0.00	0.00	North Carolina	TS
78	CML238	0.99	0.01	0.00	Mexico	TS	218	NC356	0.94	0.00	0.06	North Carolina	TS
79	CML247	0.99	0.01	0.00	Mexico	TS	219	NC358	0.93	0.00	0.07	North Carolina	TS
80	CML254	0.99	0.00	0.00	Mexico	TS	220	NC360	0.42	0.01	0.58	North Carolina	<i>mixed</i>
81	CML258	0.99	0.01	0.00	Mexico	TS	221	NC362	0.29	0.00	0.71	North Carolina	<i>mixed</i>
82	CML261	0.93	0.00	0.06	Mexico	TS	222	NC364	0.29	0.00	0.71	North Carolina	<i>mixed</i>
83	CML264	0.96	0.02	0.02	Mexico	TS	223	NC366	0.50	0.07	0.44	North Carolina	<i>mixed</i>
84	CML277	0.96	0.03	0.01	Mexico	TS	224	NC368	0.08	0.92	0.00	North Carolina	SS
85	CML281	0.99	0.00	0.01	Mexico	TS	225	ND246	0.12	0.08	0.80	North Dakota	NSS
86	CML287	0.97	0.02	0.01	Mexico	TS	226	Oh40B	0.00	0.15	0.85	Ohio	NSS
87	CML311	0.87	0.01	0.12	Mexico	TS	227	Oh43	0.00	0.21	0.79	Ohio	<i>mixed</i>
88	CML314	0.94	0.04	0.02	Mexico	TS	228	Oh43E	0.00	0.17	0.83	Ohio	NSS
89	CML321	0.89	0.01	0.10	Mexico	TS	229	Oh603	0.38	0.05	0.57	Ohio	<i>mixed</i>
90	CML322	0.90	0.07	0.04	Mexico	TS	230	Oh7B	0.04	0.28	0.68	Ohio	<i>mixed</i>
91	CML323	0.73	0.08	0.20	Mexico	<i>mixed</i>	231	Os420	0.08	0.19	0.73	Iowa	<i>mixed</i>
92	CML328	0.82	0.04	0.15	Mexico	TS	232	P39	0.00	0.02	0.98	Indiana	NSS
93	CML331	0.98	0.02	0.00	Mexico	TS	233	Pa762	0.00	0.13	0.87	Pennsylvania	NSS
94	CML332	1.00	0.00	0.00	Mexico	TS	234	Pa875	0.27	0.12	0.61	Pennsylvania	<i>mixed</i>
95	CML333	0.82	0.02	0.16	Mexico	TS	235	Pa880	0.25	0.13	0.62	Pennsylvania	<i>mixed</i>
96	CML341	0.98	0.01	0.01	Mexico	TS	236	PA91	0.00	0.14	0.86	Pennsylvania	NSS
97	CML38	0.98	0.01	0.01	Mexico	TS	237	R109B	0.17	0.19	0.64	Illinois	<i>mixed</i>
98	CML45	0.99	0.00	0.00	Mexico	TS	238	R168	0.00	0.15	0.85	Illinois	NSS
99	CML5	0.95	0.01	0.04	Mexico	TS	239	R177	0.06	0.10	0.85	Illinois	NSS
100	CML52	0.96	0.04	0.00	Mexico	TS	240	R229	0.03	0.97	0.00	Illinois	SS
101	CML61	0.99	0.01	0.00	Mexico	TS	241	R4	0.00	0.20	0.79	Illinois	<i>mixed</i>
102	CML69	0.99	0.01	0.00	Mexico	TS	242	SA24	0.00	0.03	0.96	Indiana	NSS
103	CML77	0.81	0.04	0.15	Mexico	TS	243	SC213R	0.36	0.05	0.59	South Carolina	<i>mixed</i>
104	CML91	0.75	0.05	0.20	Mexico	<i>mixed</i>	244	SC357	0.38	0.12	0.51	South Carolina	<i>mixed</i>
105	CML92	0.77	0.10	0.13	Mexico	<i>mixed</i>	245	SC55	0.45	0.05	0.50	South Carolina	<i>mixed</i>
106	CMV3	0.11	0.20	0.69	Minnesota	<i>mixed</i>	246	SD40	0.03	0.41	0.56	South Dakota	<i>mixed</i>
107	CO106	0.09	0.15	0.77	Canada-Ottawa	<i>mixed</i>	247	SD44	0.13	0.18	0.69	South Dakota	<i>mixed</i>
108	CO125	0.18	0.10	0.73	Calanda-Ontario	<i>mixed</i>	248	Sg1533	0.01	0.05	0.94	Indiana	NSS
109	CO255	0.20	0.06	0.75	Canada-Ottawa	<i>mixed</i>	249	Sg18	0.00	0.08	0.92	Indiana	NSS
110	D940Y	0.25	0.10	0.65	South Africa	<i>mixed</i>	250	T232	0.33	0.19	0.48	Tennessee	<i>mixed</i>
111	DE_2	0.10	0.15	0.76	Deleware	<i>mixed</i>	251	T234	0.24	0.15	0.61	Tennessee	<i>mixed</i>
112	DE_3	0.08	0.23	0.69	Deleware	<i>mixed</i>	252	T8	0.15	0.02	0.84	Tennessee	NSS
113	DE1	0.10	0.11	0.78	Deleware	<i>mixed</i>	253	Tx303	0.56	0.06	0.38	Texas	<i>mixed</i>
114	DE811	0.14	0.50	0.37	Deleware	<i>mixed</i>	254	Tx601	0.94	0.01	0.05	Texas	TS

<b>115</b>	E2558W	0.38	0.08	0.55	South Africa	<i>mixed</i>	255	Tzi10	0.85	0.03	0.13	Nigeria	TS
<b>116</b>	EP1	0.23	0.03	0.74	Spain	<i>mixed</i>	256	Tzi11	0.75	0.06	0.20	Nigeria	<i>mixed</i>
<b>117</b>	F2834T	0.59	0.05	0.36	South Africa	<i>mixed</i>	257	Tzi16	0.61	0.13	0.27	Nigeria	<i>mixed</i>
<b>118</b>	F44	0.38	0.10	0.52	Florida	<i>mixed</i>	258	Tzi18	0.97	0.02	0.01	Nigeria	TS
<b>119</b>	F6	0.30	0.13	0.57	Florida	<i>mixed</i>	259	Tzi25	0.66	0.22	0.13	Nigeria	<i>mixed</i>
<b>120</b>	F7	0.21	0.04	0.75	France-Peronne	<i>mixed</i>	260	Tzi9	0.95	0.04	0.01	Nigeria	TS
<b>121</b>	GA209	0.33	0.09	0.58	Georgia	<i>mixed</i>	261	U267Y	0.41	0.05	0.54	South Africa	<i>mixed</i>
<b>122</b>	GT112	0.46	0.01	0.53	Georgia	<i>mixed</i>	262	VA102	0.11	0.01	0.88	Virginia	NSS
<b>123</b>	H105W	0.06	0.59	0.35	Indiana	<i>mixed</i>	263	Va14	0.04	0.06	0.90	Virginia	NSS
<b>124</b>	H49	0.11	0.13	0.76	Indiana	<i>mixed</i>	264	Va17	0.03	0.04	0.94	Virginia	NSS
<b>125</b>	H84	0.04	0.43	0.53	Indiana	<i>mixed</i>	265	Va22	0.05	0.04	0.91	Virginia	NSS
<b>126</b>	H91	0.00	1.00	0.00	Indiana	SS	266	Va26	0.00	0.32	0.68	Virginia	<i>mixed</i>
<b>127</b>	H95	0.15	0.19	0.66	Indiana	<i>mixed</i>	267	Va35	0.02	0.00	0.97	Virginia	NSS
<b>128</b>	H99	0.14	0.13	0.73	Indiana	<i>mixed</i>	268	Va59	0.01	0.00	0.99	Virginia	NSS
<b>129</b>	Hi27	0.77	0.21	0.02	Hawaii	<i>mixed</i>	269	Va85	0.05	0.14	0.81	Virginia	NSS
<b>130</b>	Hp301	0.00	0.00	1.00	Indiana	NSS	270	Va99	0.00	0.25	0.75	Virginia	<i>mixed</i>
<b>131</b>	Hy	0.00	0.32	0.68	Illinois	<i>mixed</i>	271	VaW6	0.24	0.18	0.58	Virginia	<i>mixed</i>
<b>132</b>	I137TN	0.51	0.04	0.45	South Africa	<i>mixed</i>	272	W117Ht	0.22	0.12	0.67	Wisconsin	<i>mixed</i>
<b>133</b>	I205	0.09	0.24	0.67	Iowa	<i>mixed</i>	273	W153R	0.11	0.13	0.76	Wisconsin	<i>mixed</i>
<b>134</b>	I29	0.18	0.12	0.70	Iowa	<i>mixed</i>	274	W182B	0.02	0.16	0.83	Wisconsin	NSS
<b>135</b>	IA2132	0.00	0.12	0.88	Iowa	NSS	275	W22	0.02	0.21	0.78	Wisconsin	<i>mixed</i>
<b>136</b>	IA5125	0.00	0.11	0.89	Iowa	NSS	276	W22_R	0.02	0.21	0.77	Wisconsin	<i>mixed</i>
<b>137</b>	IDS28	0.09	0.07	0.84	Iowa	NSS	277	WD	0.05	0.10	0.85	Wisconsin	NSS
<b>138</b>	IDS69	0.00	0.00	1.00	Iowa	NSS	278	WF9	0.00	0.12	0.88	Indiana	NSS
<b>139</b>	IDS91	0.00	0.00	1.00	Iowa	NSS	279	Yu796	0.17	0.08	0.76	Yugoslavia	<i>mixed</i>
<b>140</b>	Il101	0.00	0.04	0.96	Illinois	NSS							

Note: TS = tropical-subtropical, SS = stiff and NSS non-stiff groups.