

Appendix SNP ID used in marker-assisted reverse breeding

No.	SNP ID	Chromosome	Physical position (bp)
1	PZE-101003115	1	3356688
2	SYN5936	1	4308707
3	PZA00447.6	1	9052677
4	SYN112	1	14039445
5	SYN28649	1	20216839
6	PZE-101045061	1	30744186
7	PUT-163a-60347143-2570	1	36159836
8	PZE-101061587	1	45365633
9	PZE-101083000	1	70581212
10	PZE-101098418	1	89771326
11	PZE-101129849	1	165989722
12	SYN29751	1	188927389
13	SYN35986	1	193321851
14	SYN39118	1	202303299
15	PZE-101166671	1	209827494
16	PUT-163a-86466287-4481	1	229898788
17	PZE-101192090	1	238542709
18	PZE-101201492	1	252339077
19	SYN271	1	260148154
20	PZE-101221555	1	272838112
21	PZE-101238979	1	286439066
22	SYN21892	1	289221029
23	PZA00991.2	1	293627565
24	SYN16574	1	298986096
25	SYN4123	2	1820566
26	SYN23271	2	3975025
27	PZA00396.9	2	4692176
28	PZE-102016867	2	7267024
29	SYN456	2	11949884
30	PZE-102028040	2	13284871
31	PZE-102037347	2	18002381
32	SYN29040	2	20723515
33	SYN2579	2	30261576
34	SYN5944	2	43558423
35	PZE-102070673	2	48823221
36	PZE-102104521	2	129611417
37	PZA00515.12	2	172144424
38	SYN23963	2	189499840
39	PZE-102153944	2	201207084
40	PZE-102158108	2	204759725
41	PZE-102166741	2	211157794

42	PZE-102171211	2	214612589
43	SYN18306	2	223310842
44	SYN31628	2	224595256
45	SYN39030	2	230618979
46	SYN20256	2	233747247
47	SYN6358	3	1552936
48	SYN34567	3	3107023
49	SYN5646	3	4680489
50	PZE-103009843	3	5437881
51	PZE-103015347	3	8264628
52	SYN10094	3	9585545
53	PZE-103019236	3	11446488
54	PZE-103027544	3	20289691
55	SYN27565	3	32403200
56	PZE-103077293	3	128090967
57	PZE-103094595	3	155668248
58	PZE-103105125	3	166389393
59	PZE-103116489	3	175965506
60	PZE-103123615	3	181279379
61	SYN23244	3	184606146
62	SYN5521	3	189985384
63	SYN17864	3	197518747
64	SYN20312	3	204663936
65	SYN34634	3	209848072
66	SYN36908	3	214899889
67	SYN31522	3	217562977
68	PZE-103177781	3	223683787
69	PZE-103180081	3	225203252
70	SYN30342	3	228370356
71	SYNGENTA0009	4	3046940
72	PZA03107.1	4	3260709
73	SYN11366	4	4244725
74	SYN29995	4	5198472
75	SYN11694	4	9739699
76	SYN28712	4	11890745
77	PZE-104018218	4	18022273
78	PZE-104028286	4	34054874
79	PZE-104112105	4	103146524
80	PZE-104079162	4	153501980
81	SYN4600	4	160111359
82	PZE-104096420	4	172833345
83	SYN18326	4	178465128
84	PZE-104106375	4	182641489
85	PHM4348.16	4	191767453

86	SYN25714	4	213036632
87	SYN27577	4	229180300
88	PZE-104146082	4	234427137
89	PZE-104150001	4	236558312
90	SYN1371	4	238468372
91	PZE-104157729	4	240464336
92	SYN35352	5	2142403
93	SYN35950	5	3726228
94	SYN30878	5	5200107
95	PZE-105016317	5	7139693
96	PZE-105020816	5	10009468
97	SYN27137	5	14073236
98	PZE-105031696	5	17229800
99	PZE-105044168	5	31657489
100	PZE-105065040	5	66074078
101	PZA03781.8	5	162836647
102	SYN35491	5	167431831
103	SYN34899	5	178043112
104	PZE-105129799	5	186840719
105	SYN29255	5	194163769
106	SYN24104	5	200466115
107	SYN24659	5	203804013
108	PUT-163a-71316087-3141	5	205340920
109	SYN21056	6	3773934
110	PZE-106008070	6	23356731
111	SYN29005	6	94646386
112	PZE-106048558	6	97512253
113	PZE-106058148	6	107038313
114	PZE-106064381	6	116024727
115	PZE-106072247	6	127894752
116	PZE-106088503	6	146121096
117	SYN25278	6	148829395
118	SYN37999	6	151442112
119	SYN22112	6	156928123
120	SYN10787	6	158474996
121	SYN24540	6	162645223
122	SYN12693	6	163977343
123	SYN28539	6	166822162
124	SYN23679	7	305828
125	PZE-107002578	7	2133651
126	SYN3805	7	5612713
127	SYN4534	7	8057496
128	PZE-107013641	7	10070810
129	PZE-107040240	7	78808679

130	SYN39188	7	109149980
131	PZE-107072999	7	129360191
132	SYN38224	7	133530294
133	SYN16900	7	145728849
134	SYN13265	7	156805230
135	SYN15451	7	161805336
136	PZE-107117400	7	164663604
137	PZE-107119968	7	165746831
138	PZE-107123571	7	167715777
139	SYN30790	7	169452570
140	SYN32824	7	172979834
141	SYN18602	7	175303038
142	SYN15862	8	2054771
143	PZE-108002910	8	3159216
144	SYN13065	8	6857451
145	PZE-108009237	8	9875278
146	SYN3396	8	12561228
147	SYN37087	8	15433174
148	PZE-108020583	8	19675834
149	SYN13585	8	26347138
150	PZE-108056415	8	101267152
151	SYN26329	8	115231269
152	PZE-108077298	8	132854286
153	SYN18336	8	161078519
154	SYN1023	8	162238524
155	SYN4437	8	165594937
156	SYN29240	8	168074849
157	SYN21958	8	169657365
158	SYN5110	8	170878986
159	SYN34198	8	172692864
160	PZE-108135907	8	175697419
161	SYN36188	9	3080081
162	PZE-109006730	9	7620752
163	SYN19752	9	8779931
164	PZE-109009220	9	10008327
165	SYN38530	9	14019118
166	SYN32736	9	15576547
167	PZE-109017457	9	17640512
168	PZE-109055139	9	95739139
169	PZE-109060129	9	101690149
170	PZE-109083108	9	131842379
171	SYN26337	9	137297625
172	PZE-109092637	9	139661789
173	SYN22241	9	144800224

174	SYN26490	9	149250543
175	PZE-109110253	9	150889722
176	PZE-109113507	9	151765039
177	SYN6090	9	153158701
178	SYN13953	9	154088892
179	SYN17612	10	2450095
180	SYN4482	10	4649550
181	PZE-110007277	10	5642784
182	PZA01451.1	10	9378309
183	PUT-163a-60340056-2396	10	82042949
184	PZE-110050798	10	95691225
185	PUT-163a-60338246-2353	10	128417510
186	SYN22979	10	132620488
187	PZE-110087958	10	138345648
188	PZE-110094849	10	142070883
189	PZE-110099681	10	144678832
190	PZE-110103156	10	146124494
191	SYN22564	10	147155426
192	PZE-110109364	10	148503394

---