

Supplementary Material

Development of low-phytate maize inbred lines through marker-assisted introgression of *lpa1*

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Supplementary Table S1. List of polymorphic markers used monitor the recovery of recurrent parental genome in backcross derived populations.

S. No.	Marker Name	Annealing Temperature	Bin Location	Forward Primer	Reverse Primer
1	bnlg1112	55	1.01	GTGAGAATCCTTCAGCGGAG	CTGTGGCAGATGTGGTATGG
2	bnlg1614	55	1.02	AGCGGGCGAGATCTTCAT	CCAACCCACCCAGAGGAGA
3	phi109275	55	1.03	CGGTTTCATGCTAGCTCTGC	GTTGTGGCTGTGGTGGTG
4	bnlg1811	55	1.04	GTAGTAGGAACGGGCGATGA	ACACAAGCCGACCAAAAAAC
5	umc1906	60	1.05	ACCTTTGCTGCTGCTACTGTGTC	CTAAAGAGGAATCGGTGAAGGTCC
6	bnlg1057	55	1.06	TTCACCGCCTCACATGAC	GCAACGCTAGCTAGCTTTG
7	bnlg1092	55	2	TATTCTGGTCAAGTTGGGGC	GCTTGATCTCCAATCCTTGC
8	mmc0063	50	2	ACACCCCTATCCAACATAAAT	TGCAAAATTAATTGATACATAG
9	umc2186	55	2	CTCCCGCAGTCTATGAAGCTCAC	CTCCTCTTCCTCCTCCTCGTTGT
10	bnlg125	50	2.02	GGGACAAAAGAAGAAGCAGAG	GAAATGGGACAGAGACAGACAAT
11	bnlg381	55	2.04	TCCCTCTTGAGTGTTCATCACAAA	GTTTCCATGGGCAGGTGTAT
12	phi127	60	2.08	ATATGCATTGCTGGAAGTGAAGGA	AATTCAAACACGCCTCCCGAGTGT
13	bnlg198	50	2.08	GTTTGGTCTTGCTGAAAAATAAAA	GCTGGAGGCCTACATTATTATCTC
14	umc2108	55	3	CCCGGCTAGAGCTATAAAGCAAGT	CTAGCTAGTTTGGTGCCTGGTGAT
15	umc2255	55	3.01	GCTACGCTTAAGTATCACGGCAAC	CTGCTGAGGAGAAGTGATCCTGTT
16	bnlg1523	55	3.03	GAGCACAGCTAGGCAAAGG	CTCGCACGCTCTCTCTTCTT
17	umc1729	55	3.04	GTCGTACCACACCAGCCACA	TTCACTTCCACTTGTTGAACTTGC
18	bnlg1449	55	3.06	AGTCAACGTAGCTGGCGAGT	TTCACGACGGGTCTCTCTCT
19	umc1399	55	3.07	GCTCTATGTTATTCTTCAATCGGGC	GGTCGGTCGGTACTCTGCTCTA
20	bnlg1605	60	3.07	CACCTCTGAACCCCTGTGTT	TCCTGCCCCCTTTGTTTTTC
21	bnlg1108	55	3.08	GGATTCCCTTTATGACGGGGT	AGTAACAACCAAGGCATCGG
22	bnlg1182	55	3.09	AGCCGAGTCAGTTCGAGGTA	CAGGGGCTTGAGGTGAGTTA
23	bnlg1182	55	3.09	AGCCGAGTCAGTTCGAGGTA	CAGGGGCTTGAGGTGAGTTA
24	umc1136	55	3.1	CTGCATACAGACATCCAACCAAAG	CTCTCGTCTCATCACCTTTCCCT
25	umc1136	55	3.1	CTGCATACAGACATCCAACCAAAG	CTCTCGTCTCATCACCTTTCCCT
26	umc2148	55	4.01	GGTAAGTCGTTTCAGCCTTTGCTA	AGACAGAAGAATGCTATGCGGTTC

S. No.	Marker Name	Annealing Temperature	Bin Location	Forward Primer	Reverse primer
27	bnlg1755	55	4.05	CCTAGTAGACCTCACCGCCA	GGAGTTCACCGATGGCAC
28	bnlg1265	55	4.05	GGTTGTCCGTAAAGGCAAGA	TGTGAAGGCCAGACAGTCAG
29	bnlg1137	55	4.06	ATGAGCTCAGTCACACTGTAGTG	ACTGATGACTGGTCCATGCA
30	bnlg2244	55	4.08	CAGGAAAACGAAAACCCAGA	CTACGCGGGTCTCATCTCAT
31	bnlg589	55	4.1	GGGTCGTTTAGGGAGGCACCTTTGGT	GCGACAGACAGACAGACAAGCGCATTGT
32	bnlg1337	55	4.1	TCTAGAGACGGGAAAACACAAG	AAAGCCGGTGGATAAGAAAA
33	bnlg1917	55	4.1	ACCGGAACAGACGAGCTCTA	TTTGCTTCCAACCTCACATGC
34	mmc0151	55	5	AAACCATGCATCCAACRAATG	AGACCAGAGATGATTTAGG
35	bnlg1046	55	5.03	TGAGCCGAAGCTAACCTCTC	GATGCAAAGGAGGTTTCAGGA
36	bnlg1208	65	5.04	GCTGTGATGGTGAGACGAGA	GCAGGCACTACTAAAACCGC
37	phi085	55	5.06	AGCAGAACGGCAAGGGCTACT	TTTGGCACACCACGACGA
38	umc1019	55	5.06	CCAGCCATGTCTTCTCGTTCTT	AAACAAAGCACCATCAATTCGG
39	bnlg1538	55	6.01	GTGGTGAACGAACGAGCAA	CAGCCGAAGACGAAGCC
40	umc1006	65	6.02	AATCGCTTACTTGTAAACCCACTTG	AGTTTCCGAGCTGCTTTCTCT
41	bnlg1922	55	6.05	GTCTTGGGCAGTAATCAGGC	TCGATCAAAGACGTTTCATGC
42	bnlg1154	55	6.05	GGGTGATCACATGGGTTAGG	AAATCAATGCTCCAAATCGC
43	umc1653	55	6.07	GAGACATGGCAGACTCACTGACA	GCCGCCACGTACATCTATC
44	bnlg1257	55	6.07	TTTTCTCCTTGAGTTCGTTTCG	ACAGGCAGAGCTCTCACACA
45	bnlg1740	55	6.07	TTTTCTCCTTGAGTTCGTTTCG	ACAGGCAGAGCTCTCACACA
46	umc1585	55	7.02	AAGGGAAAGAATAATCCAACCGTC	AAGGGAAAGAATAATCCAACCGTC
47	bnlg1808	55	7.02	GCATGATCGAACGAAGGC	CTTTTCTCTTCTAGTAATGAACAGTCA
48	bnlg1070	55	7.03	TTCCAGTAAGGGAGGTGCTG	TAAGCAACATATAGCCGGGC
49	phi114	55	7.03	CCGAGACCGTCAAGACCATCAA	AGCTCAAACGATTCTGAACTCGC
50	bnlg119	55	8.02	GCGTTATTAAGGCAAGCTGC	ACGTGAAGCAGAGGATCCAT
51	bnlg1863	55	8.03	GGCGTTCGTTTTGCACTAAT	CGACACAGTTGACATCAGGG
52	umc1562	55	8.05	CAAAGCAGTACAATATGACCCCAG	CGTACGTCCATAAAGATGAGAAA
53	bnlg1176	55	8.05	ACTCCTCAAACCTAGGTGACA	CACCGATGATGGTGAGTACG
54	bnlg1350	55	8.07	TGCTTCAGCGCATTAAACTG	TGCTCGTGTGAGTTCCTACG

S. No.	Marker Name	Annealing Temperature	Bin Location	Forward Primer	Reverse primer
55	bnlg2122	55	9.01	TCATCTGGCAAACCTAGCC	CTTGCCAACTTGAGGACATG
56	dupssr6	55	9.02	GATCCTACCAAATCTTATAGGC	ACAGCTAGCCAAGATCTGATT
57	bnlg244	55	9.02	GATGCTACTACTGGTCTAGTCCAGA	CTCCTCCACTCATCAGCCTTGA
58	umc2337	55	9.03	GAGTACCTCCGCCCACTCATC	CTAACGTACACACATCTTGGCTGG
59	bnlg1714	55	9.04	CATCATGGAGGCATATGTCG	ACACATTTAGACCCACCCCA
60	umc1113	55	10.02	ATCATGCGTCATCACTCTCAGAAC	GCTGGAGCTAGCTGTAGTGTAGCA
61	phi050	55	10.03	TAACATGCCAGACACATACGGACAG	ATGGCTCTAGCGAAGCGTAGAG
62	bnlg1360	55	10.07	TCTGCTCATCCACAACCTTGC	AGAACGTGAAGCTGAGCGTT

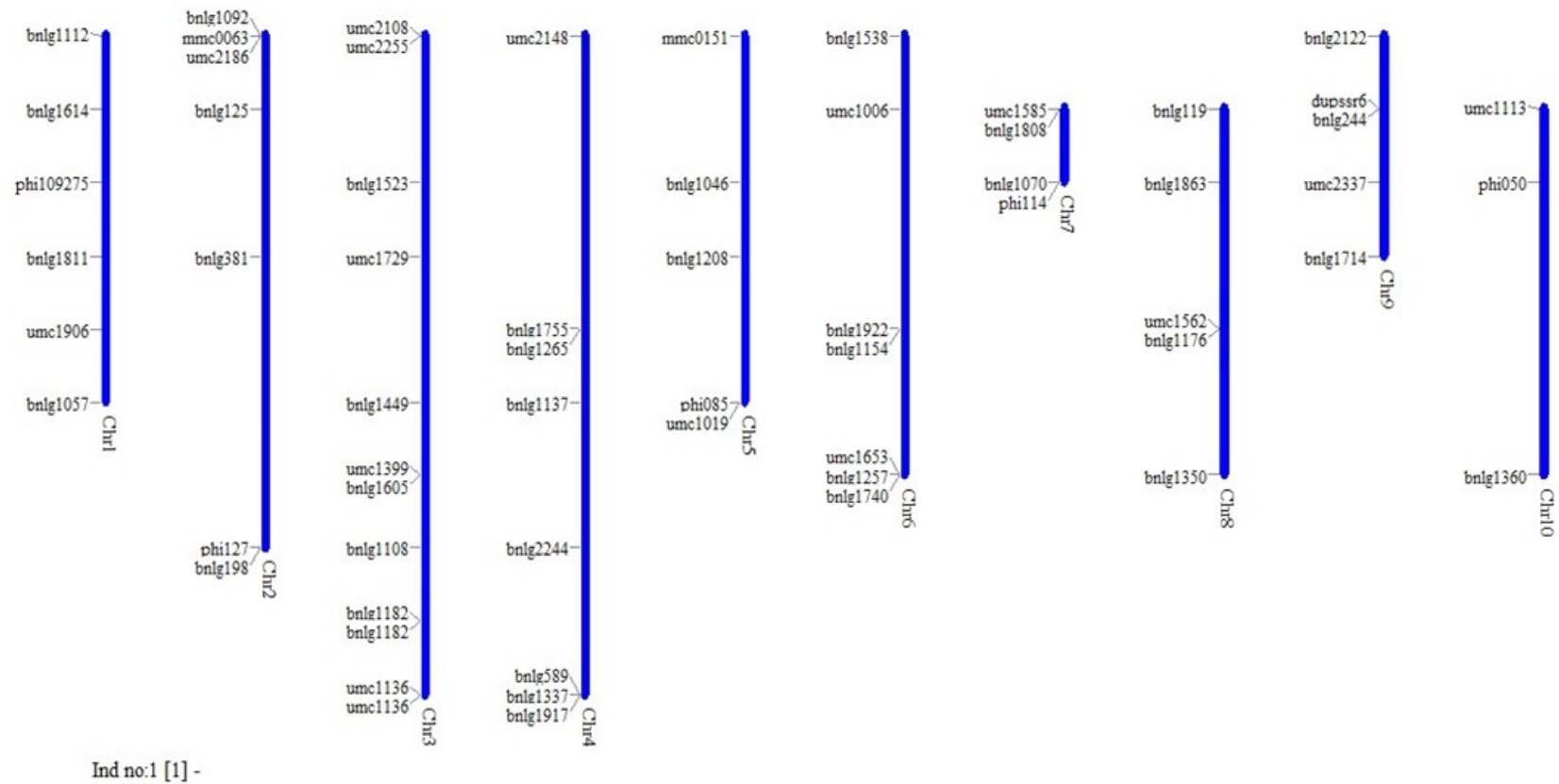


Figure S1. Graphical representation of polymorphic SSR markers used for background selection to monitor the recovery of the recurrent parental genome in backcross derived populations.