Supplementary Materials

Genetic and molecular characterisation of subtropically adapted low-phytate genotypes for utilisation in mineral biofortification of maize (*Zea mays*)

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Table S1. Details of the *lpa1-1* based and wild type inbreds used in the study

S. No.	Genotype	Pedigree	Allelic status at *lpa1*
1.	PMI-LP1-101	(PMI-PV5///A619 lpa1-1)-⊗-⊗-⊗-⊗	Mutant
2.	PMI-LP1-102	(PMI-PV6///A632 lpa1-1)-⊗-⊗-⊗-⊗	Mutant
3.	PMI-LP1-103	(PMI-PV7///A632 lpa1-1)-⊗-⊗-⊗-⊗	Mutant
4.	PMI-LP1-104	(PMI-PV8///A619 lpa1-1)-⊗-⊗-⊗-⊗	Mutant
5.	PMI-LP1-105	(PMI-Q1///A632 lpa1-1)-⊗-⊗-⊗	Mutant
6.	PMI-LP1-106	(PMI-Q2///A619 lpa1-1)-⊗-⊗-⊗	Mutant
7.	PMI-LP1-107	(PMI-Q3///A619 lpa1-1)-⊗-⊗-⊗	Mutant
8.	PMI-LP1-108	(PMI-PV5/A619 lpa1-1)-12-5-⊗-⊗-⊗-⊗	Mutant
9.	PMI-LP1-109	(PMI-PV5/A619 lpa1-1)-33-5-⊗-⊗-⊗-⊗	Mutant
10.	PMI-LP1-110	(PMI-PV5/A619 lpa1-1)-100-2-⊗-⊗-⊗-⊗	Mutant
11.	PMI-LP1-111	(PMI-PV5/A632 lpa1-1)-7-1-⊗-⊗-⊗-⊗	Mutant
12.	PMI-LP1-112	(PMI-PV6/A632 lpa1-1)-3-3-⊗-⊗-⊗-⊗	Mutant
13.	PMI-LP1-113	(PMI-PV6/A632 lpa1-1)-38-4-⊗-⊗-⊗-⊗	Mutant
14.	PMI-LP1-114	(PMI-PV6/A632 lpa1-1)-96-4-⊗-⊗-⊗-⊗	Mutant
15.	PMI-LP1-115	(PMI-PV7/A619 lpa1-1)-60-1-⊗-⊗-⊗-⊗	Mutant
16.	PMI-LP1-116	PMI-PV7/A632 lpa1-1)-8-2-⊗-⊗-⊗-⊗	Mutant
17.	PMI-LP1-117	PMI-PV7/A632 lpa1-1)-67-2-⊗-⊗-⊗-⊗	Mutant
18.	PMI-LP1-118	(PMI-PV8/A619 lpa1-1)-31-2-⊗-⊗-⊗-⊗	Mutant
19.	PMI-LP1-119	(PMI-PV8/A619 lpa1-1)-31-5-⊗-⊗-⊗-⊗	Mutant

20.	PMI-LP1-120	(PMI-PV8/A619 lpa1-1)-100-2-⊗-⊗-⊗-⊗	Mutant
21.	PMI-LP1-121	(PMI-Q3/A619 lpa1-1)-6-1-⊗-⊗-⊗	Mutant
22.	PMI-LP1-122	(PMI-Q3/A619 lpa1-1)-63-4-⊗-⊗-⊗	Mutant
23.	PMI-LP1-123	(PMI-Q3/A619 lpa1-1)-7-2-⊗-⊗-⊗	Mutant
24.	PMI-LP1-124	(A619 lpa1-1/A632 lpa1-1)-⊗-⊗-⊗-⊗	Mutant
25.	PMI-PV1	(HKI161/// HP704-23)-⊗-⊗-⊗-⊗-⊗-⊗-⊗-⊗	Wild
26.	PMI-PV2	(HKI163///HP704-22)-⊗-⊗-⊗-⊗-⊗-⊗-⊗-⊗	Wild
27.	PMI-PV3	(HKI193-1///HP704-23)-⊗-⊗-⊗-⊗-⊗-⊗-⊗-⊗	Wild
28.	PMI-PV4	(HKI193-2///HP704-22)-⊗-⊗-⊗-⊗-⊗-⊗-⊗-⊗	Wild
29.	PMI-Q1	(HKI1105///CML161)-⊗-⊗-⊗-⊗-⊗-⊗-⊗-⊗	Wild
30.	PMI-Q2	(HKI323///HKI161)-⊗-⊗-⊗-⊗-⊗-⊗-⊗-⊗	Wild
31.	PMI-Q3	(HKI1128///HKI193-1)-⊗-⊗-⊗-⊗-⊗-⊗-⊗-⊗	Wild

Table S2. Details of the weather parameters during the crop growth season at the experimental locations

Location	Temperature (ºC)			Rainfall (mm)	RH (%)	Total EVP (mm)	AWS (km/h)
	Min.	Max.	Avg.				
Delhi (rainy season 2020)*	24.5	33.8	29.1	4.6	74.8	4.2	3.7
Hyderabad (winter season 2020-21)#	18.5	33.1	25.8	0.4	70.5	5.1	3.5

*Delhi: July-October, 2020; #Hyderabad: January-May, 2021

Fig. S1. SSR polymorphism among the 24 *lpa1-1*-based maize inbreds 1 to 24 indicate the 24 *lpa1*-based maize inbreds; L-100bp ladder.