

Supplementary Table S1. List of the nineteen bottle gourd accessions used in the study with description of collection sites: origin, region and location.

Code	Scientific name	Country of origin	Province/Region	Location
G1	<i>L. siceraria</i> var. <i>siceraria</i>	South Africa	Limpopo	Ga-Phasa
G2	<i>L. siceraria</i> var. <i>siceraria</i>	South Africa	Limpopo	Kgohloane
G8	<i>L. siceraria</i> var. <i>siceraria</i>	South Africa	Limpopo	Kgohloane
G9	<i>L. siceraria</i> var. <i>siceraria</i>	South Africa	Limpopo	Ga-Rapitsi
G14	<i>L. siceraria</i> var. <i>siceraria</i>	South Africa	Limpopo	Moletjie-Mabokelele
G15	<i>L. siceraria</i> var. <i>siceraria</i>	South Africa	KwaZulu-Natal	La Lucia
G19	<i>L. siceraria</i> var. <i>hispida</i>	India		
G20	<i>L. siceraria</i> var. <i>siceraria</i>	Japan		
G21	<i>L. siceraria</i> var. <i>hispida</i>	Philippines		
G23	<i>L. siceraria</i> var. <i>siceraria</i>	Chile	Coquimbo	Illapel
G25	<i>L. siceraria</i> var. <i>siceraria</i>	Chile	Osorno	Loncoche
J2	<i>L. siceraria</i> var. <i>hispida</i>	Japan	Kioto	Kioto
J6	<i>L. siceraria</i> var. <i>hispida</i>	Swiss		
J7	<i>L. siceraria</i> var. <i>hispida</i>	India		
J10	<i>L. siceraria</i> var. <i>hispida</i>	Taiwan		
J12	<i>L. siceraria</i> var. <i>hispida</i>	Thailand		
J13	<i>L. siceraria</i> var. <i>hispida</i>	Bangladesh		
J15	<i>L. siceraria</i> var. <i>hispida</i>	Japan	Ibaraki	Kanto
J17	<i>L. siceraria</i> var. <i>siceraria</i>	Japan	Tochigi	Tochigi

Supplementary Table S2. Averages for each cluster for root and morpho-agronomic traits.

Cluster	RL	SA	RV	AvD	NT	DFF	DMF	NL	NPrB	PH
J6, J10, J12	930.2a	465.8a	18.8a	1.6a	2268.1a	47.0a	50.0a	22.1b	4.4c	60.3b
G19, J13, J15, J7, G14, G2, G20, J17	754.8b	357.6b	14.2b	1.5a	1833.5b	36.8c	38.5c	30.0a	6.7a	86.4a
G21, J2, G1, G15, G23, G25, G8, G9	560.7c	249.5c	9.1c	1.5a	1391.1c	40.6b	40.6b	26.9ab	5.7b	71.6ab

Number of leaves (NL); plant height (PH); number of primary branches (NPrB); days to first female and male flowering (DFF and DMF, respectively); root length (RL); root surface area (SA); mean root diameter (AvD); number of tips (NT); root volume (RV). Means with different letters within a column are significantly different at p-value < 0.01 according to Fisher's LSD test.

Supplementary Table S3. Averages for each variety (hispidia and siceraria) for root and morpho-agronomic traits.

Cluster	RL	SA	RV	AvD	NT	DFF	DMF	NL	NPrB	PH
Siceraria	662.7	303.3	11.4	1.5	1671.2	39.7	39.7	28.3	6.0	79.5
Hispidia	743.0	357.9	14.3	1.6	1765.4	40.3	42.9	26.5	5.8	72.2

Number of leaves (NL); plant height (PH); number of primary branches (NPrB); days to first female and male flowering (DFF and DMF, respectively); root length (RL); root surface area (SA); mean root diameter (AvD); number of tips (NT); root volume (RV).