

Table S1. Variance components for all cassava agronomic attributes.

	$\sigma_{C \times L \times Y}^2$	$\sigma_{C \times Y}^2$	$\sigma_{C \times L}^2$	σ_C^2	$\sigma_{L \times Y}^2$	σ_Y^2	σ_L^2	σ^2
LR	0.061	0	0	0.005	0	0.408	0.024	0.548
DRY	2.261	1.062	0.089	1.106	2.869	2.13	0.356	7.676
DMC	1.554	1.036	0	1.268	0.161	2.789	0	5.767
FRY	21.597	11.374	8.921	27.964	22.238	23.961	15.247	55.34
FSY	16.412	12.51	8.177	23.644	29.667	32.482	0	51.75
Vigor	-	0.204	-	0.271	-	0.002	-	0.399
NRP	-	3.959	-	1.837	-	23.108	-	6.498

leaf retention (LR), dry root yield (DRY), dry matter content (DMC), fresh root yield (FRY), fresh shoot yield (FSY), plant vigor (Vigor), number of roots per plant (NRP).

$\sigma_{C \times L \times Y}^2$ variance component of clone, location, and year interaction; $\sigma_{C \times Y}^2$ variance component of clone and year interaction; $\sigma_{C \times L}^2$ variance component of clone, and location interaction; σ_C^2 variance component of clone; $\sigma_{L \times Y}^2$ variance component of location and year interaction; σ_Y^2 variance component of year; σ_L^2 variance component of location; σ^2 variance component of residual.

Table S2. Deviance analysis for all cassava agronomic attributes.

	$\sigma_{C \times L \times Y}^2$	$\sigma_{C \times Y}^2$	$\sigma_{C \times L}^2$	σ_C^2	$\sigma_{L \times Y}^2$	σ_Y^2	σ_L^2
LR	43.1	0	0	1.06	0	2.5	0.18
DRY	112.5	11.92	0.64	70.07	17.67	0.6	0
DMC	138.67	22.47	0	145.52	1.99	2.58	0
FRY	127.63	15.37	60.33	208.26	22.73	0.94	0.13
FSY	88.87	20.26	60.22	168.42	42.96	2.05	0
Vigor	-	269.61	-	278.04	-	0.01	-
NRP	-	187.47	-	160.84	-	271.67	-

leaf retention (LR), dry root yield (DRY), dry matter content (DMC), fresh root yield (FRY), fresh shoot yield (FSY), plant vigor (Vigor), number of roots per plant (NRP).

$\sigma_{C \times L \times Y}^2$ variance component of clone, location, and year interaction; $\sigma_{C \times Y}^2$ variance component of clone and year interaction; $\sigma_{C \times L}^2$ variance component of clone, and location interaction; σ_C^2 variance component of clone; $\sigma_{L \times Y}^2$ variance component of location and year interaction; σ_Y^2 variance component of year; σ_L^2 variance component of location; σ^2 variance component of residual.

Significant effects are in bold.