

Supplementary Table S1: List of cowpea genotypes used in the study and their origin.

Genotype code	Genotype Code	Accession name	Origin	Growth habit	Seed shape	Seed coat color
G1	Acc-Cowp2	ARC002	South Africa	Prostrate	Kidney	Red
G2	Acc-Cowp3	ARC003	South Africa	Prostrate	Kidney	Brown
G3	Acc-Cowp4	ARC004	South Africa	Prostrate	Kidney	Red
G4	Acc-Cowp5	ARC005	South Africa	Prostrate	Rhomboid	Black
G5	Acc-Cowp6	ARC006	South Africa	Prostrate	Kidney	Brown
G6	Acc-Cowp9	ARC009	South Africa	Semi-erect	Rhomboid	Cream
G7	Acc-Cowp10	ARC010	South Africa	Prostrate	Rhomboid	Purple
G8	Acc-Cowp11	ARC011	South Africa	Climbing	Kidney	Light brown
G9	Acc-Cowp12	ARC012	South Africa	Prostrate	Rhomboid	Brown
G10	Acc-Cowp13	ARC013	South Africa	Prostrate	Kidney	Brown
G11	Acc-Cowp14	ARC014	South Africa	Erect	Ovoid	Red
G12	Acc-Cowp15	ARC015	South Africa	Prostrate	Ovoid	Red
G13	Acc-Cowp16	ARC016	South Africa	Prostrate	Rhomboid	Black
G14	Acc-Cowp17	ARC017	South Africa	Erect	Ovoid	Cream
G15	Acc-Cowp18	ARC018	South Africa	Erect	Rhomboid	Red-speckled
G16	Acc-Cowp19	ARC019	South Africa	Erect	Globose	Light brown
G17	Acc-Cowp20	ARC020	South Africa	Erect	Rhomboid	Red
G18	Acc-Cowp21	ARC021	South Africa	Erect	Kidney	Cream
G19	Acc-Cowp22	ARC022	South Africa	Prostrate	Rhomboid	Brown
G20	Acc-Cowp23	ARC023	South Africa	Unknown	Rhomboid	Brown
G21	Acc-Cowp24	ARC024	South Africa	Climbing	Rhomboid	Black
G22	Acc-Cowp25	ARC025	South Africa	Climbing	Rhomboid	Red
G23	Acc-Cowp26	ARC026	South Africa	Semi-erect	Kidney	Grey-speckled
G24	Acc-Cowp27	ARC027	South Africa	Semi-erect	Kidney	Red-speckled
G25	Acc-Cowp28	ARC028	South Africa	Prostrate	Kidney	Red
G26	Acc-Cowp29	ARC029	South Africa	Prostrate	Kidney	Brown
G27	Acc-Cowp30	ARC030	South Africa	Semi-erect	Globose	Black
G28	Acc-Cowp31	ARC031	South Africa	Prostrate	Globose	Cream
G29	Acc-Cowp32	ARC032	South Africa	Prostrate	Kidney	Red
G30	Acc-Cowp33	ARC033	South Africa	Prostrate	Kidney	Red
G31	Acc-Cowp34	ARC034	South Africa	Semi-erect	Rhomboid	Light red
G32	Acc-Cowp35	ARC035	South Africa	Climbing	Kidney	Light brown
G33	Acc-Cowp36	ARC036	South Africa	Climbing	Kidney	Light brown
G34	Acc-Cowp37	ARC037	South Africa	Prostrate	Kidney	Light brown
G35	Acc-Cowp38	ARC038	South Africa	Climbing	Globose	Black
G36	Acc-Cowp39	ARC039	South Africa	Semi-erect	Kidney	Red
G37	Acc-Cowp40	ARC040	South Africa	Semi-erect	Kidney	Black
G38	Acc-Cowp41	ARC041	South Africa	Erect	Ovoid	Cream
G39	Acc-Cowp42	ARC042	South Africa	Unknown	Kidney	Brown

G40	Acc-Cowp43	ARC043	South Africa	Semi-erect	Kidney	Brown
G41	Acc-Cowp44	ARC044	South Africa	Erect	Kidney	Light brown
G42	Acc-Cowp46	ARC046	South Africa	Erect	Kidney	White
G43	Acc-Cowp47	ARC047	South Africa	Erect	Rhomboid	Brown
G44	Acc-Cowp48	ARC048	South Africa	Prostrate	Kidney	Cream
G45	Acc-Cowp49	ARC049	South Africa	Prostrate	Rhomboid	Brown
G46	Acc-Cowp50	ARC050	South Africa	Prostrate	Kidney	Black
G47	Acc-Cowp74	98K-5301	South Africa	Erect	Kidney	White
G48	Acc-Cowp64	Glenda	South Africa	Semi-erect	Kidney	Brown
G49	Acc-Cowp70	TVU13953	South Africa	Prostrate	Kidney	Cream
G50	Acc-Cowp62	VegCowDakCream	South Africa	Erect	Kidney	White
G51	Acc-Cowp51	CH 14	South Africa	Unknown	Kidney	Brown
G52	Acc-Cowp53	BENSOGLA	South Africa	Unknown	Rhomboid	Brown
G53	Acc-Cowp52	IT845-2246	Nigeria	Unknown	Rhomboid	Brown
G54	Acc-Cowp54	TVU 11424	Nigeria	Unknown	Kidney	Brown
G55	Acc-Cowp55	MAKATINI	South Africa	Unknown	Rhomboid	Brown
G56	Acc-Cowp56	VULI	Tanzania	Unknown	Kidney	Brown
G57	Acc-Cowp57	PAN 311	South Africa	Unknown	Kidney	Brown
G58	Acc-Cowp58	NGOJI	South Africa	Unknown	Kidney	Brown
G59	Acc-Cowp59	ENBO BUFF	South Africa	Semi-erect	Rhomboid	Brown
G60	Acc-Cowp60	IT93K 1294	Nigeria	Erect	Rhomboid	Purple
G61	Acc-Cowp61	OUKAWA	South Africa	Prostrate	Kidney	Cream
G62	Acc-Cowp63	IT90K-76	Nigeria	Unknown	Rhomboid	Brown
G63	Acc-Cowp65	IT96D-602	Nigeria	Erect	Ovoid	Cream
G64	Acc-Cowp66	Bechuana White	South Africa	Unknown	Rhomboid	Brown
G65	Acc-Cowp67	5431	South Africa	Erect	Rhomboid	Cream
G66	Acc-Cowp68	IT90K-59	Nigeria	Unknown	Rhomboid	Brown
G67	Acc-Cowp69	FAHARI	Tanzania	Semi-erect	Kidney	Brown
G68	Acc-Cowp71	TVU 6345	Nigeria	Semi-erect	Crowder	Brown
G69	Acc-Cowp72	ENCORE	South Africa	Unknown	Kidney	Brown
G70	Acc-Cowp73	TVU 12637	Nigeria	Unknown	Kidney	Black
G71	Acc-Cowp75	IT00K 1217	Nigeria	Unknown	Rhomboid	White
G72	Acc-Cowp76	Veg cowpea 1	South Africa	Semi-erect	Kidney	Purple
G73	Acc-Cowp77	Veg cowpea 2	South Africa	Semi-erect	Kidney	White
G74	Acc-Cowp78	Veg cowpea 3	South Africa	Erect	Kidney	White
G75	Acc-Cowp79	MA1	South Africa	Erect	Rhomboid	Purple
G76	Acc-Cowp80	IT89U-412	Nigeria	Unknown	Kidney	Black
G77	Acc-Cowp81	M346	South Africa	Erect	Rhomboid	Purple
G78	Acc-Cowp82	Ukaluleni	South Africa	Prostate	Kidney	Brown
G79	Acc-Cowp83	IT89D-349	Nigeria	Erect	Kidney	Brown
G80	Acc-Cowp85	Mpenbeni	South Africa	Prostrate	Rhomboid	Cream
G81	Acc-Cowp86	2460	South Africa	Prostrate	Kidney	Cream
G82	Acc-Cowp87	Vigna Onb	South Africa	Prostrate	Kidney	Purple

G83	Acc-Cowp88	MA2	South Africa	Erect	Rhomboid	White
G84	Acc-Cowp89	Meter bean piet	South Africa	Prostrate	Kidney	Cream
G85	Acc-Cowp91	Chappy	South Africa	Prostrate	Kidney	Cream
G86	Acc-Cowp92	M217	South Africa	Erect	Rhomboid	Purple
G87	Acc-Cowp93	Tatro mix	Kenya	Prostrate	Rhomboid	Brown
G88	Acc-Cowp94	TV778	Nigeria	Erect	Kidney	Cream
G89	Acc-Cowp7	New Line 2	South Africa	Unknown	Kidney	Cream
G90	Acc-Cowp1	New Line 1	South Africa	Unknown	Kidney	Brown

Note: VegCowDakCream = Vegetable cowpea Dakama Cream