

Table S1. Relative nuclear DNA content, chromosome counts, and ploidy level determined based on DArTseq genotyping data on 236 accessions representing eight *Dioscorea* spp. and their geographical origin.

S. No.	Accession	Species	Origin	Flow Cytometry			Chromosome No.	DArTseq-Based Ploidy
				G1 Peak Position of Yam	G1 Peak Position of CRBC	PR		
1	TDr-1489	<i>D. rotundata</i>	Togo	71.02	93.85	0.76	40	2X
2	TDr-1495	<i>D. rotundata</i>	Togo	70.30	98.21	0.72	40	2X
3	TDr-1499	<i>D. rotundata</i>	Togo	73.18	101.38	0.72	40	2X
4	TDr-1500	<i>D. rotundata</i>	Togo	100.00	100.00	1.00	60	3X
5	TDr-1509	<i>D. rotundata</i>	Togo	71.51	101.92	0.70	40	2X
6	TDr-1510	<i>D. rotundata</i>	Togo	71.81	97.15	0.74	40	2X
7	TDr-1513	<i>D. rotundata</i>	Togo	73.00	101.99	0.72	40	2X
8	TDr-1536	<i>D. rotundata</i>	Togo	73.64	99.76	0.74	40	2X
9	TDr-1559	<i>D. rotundata</i>	Togo	71.65	100.64	0.71	40	2X
10	TDr-1562	<i>D. rotundata</i>	Togo	72.65	103.33	0.70	40	2X
11	TDr-1568	<i>D. rotundata</i>	Togo	70.99	99.86	0.71	40	2X
12	TDr-1569	<i>D. rotundata</i>	Togo	73.21	103.07	0.71	40	2X
13	TDr-1585 ^b	<i>D. rotundata</i>	Togo	55.94	105.02	0.53	40	2X
14	TDr-1598	<i>D. rotundata</i>	Togo	100.00	100.00	1.00	60	3X
15	TDr-1601	<i>D. rotundata</i>	Togo	73.84	104.13	0.71	40	2X
16	TDr-1622	<i>D. rotundata</i>	Togo	69.99	97.95	0.71	40	2X
17	TDr-1628	<i>D. rotundata</i>	Togo	72.21	99.49	0.73	40	2X
18	TDr-1631	<i>D. rotundata</i>	Togo	73.62	10.53	0.72	40	2X
19	TDr-1655	<i>D. rotundata</i>	Togo	69.62	95.95	0.73	40	2X
20	TDr-1657	<i>D. rotundata</i>	Togo	70.72	98.48	0.72	40	2X
21	TDr-1663	<i>D. rotundata</i>	Togo	73.98	103.51	0.71	40	2X
22	TDr-1669	<i>D. rotundata</i>	Togo	71.76	100.60	0.71	40	2X
23	TDr-1672	<i>D. rotundata</i>	Togo	75.15	100.92	0.74	40	2X
24	TDr-1676	<i>D. rotundata</i>	Togo	73.67	99.67	0.74	40	2X
25	TDr-1684	<i>D. rotundata</i>	Togo	71.98	102.23	0.70	40	2X
26	TDr-1686	<i>D. rotundata</i>	Togo	72.48	101.91	0.71	40	2X
27	TDr-1688	<i>D. rotundata</i>	Togo	71.20	101.00	0.70	40	2X
28	TDr-1707	<i>D. rotundata</i>	Togo	69.87	97.13	0.72	40	2X
29	TDr-1709	<i>D. rotundata</i>	Togo	71.74	99.47	0.72	40	2X
30	TDr-1711	<i>D. rotundata</i>	Togo	74.52	102.45	0.73	40	2X
31	TDr-1723 ^a	<i>D. rotundata</i>	Togo	100.00	100.00	1.00	40	2X
32	TDr-1734	<i>D. rotundata</i>	Togo	73.74	100.64	0.73	40	2X
33	TDr-1760	<i>D. rotundata</i>	Togo	71.76	97.69	0.73	40	2X
34	TDr-1762	<i>D. rotundata</i>	Togo	71.00	99.75	0.71	40	2X
35	TDr-1764	<i>D. rotundata</i>	Togo	71.04	94.92	0.75	40	2X
36	TDr-1765	<i>D. rotundata</i>	Togo	72.67	101.11	0.72	40	2X
37	TDr-1769	<i>D. rotundata</i>	Togo	71.31	100.00	0.71	40	2X
38	TDr-1772	<i>D. rotundata</i>	Togo	72.59	102.00	0.71	40	2X
39	TDr-1775	<i>D. rotundata</i>	Togo	100.00	100.00	1.00	60	3X
40	TDr-1799	<i>D. rotundata</i>	Togo	72.75	99.97	0.73	40	2X
41	TDr-1813	<i>D. rotundata</i>	Togo	70.04	99.15	0.71	40	2X
42	TDr-1818	<i>D. rotundata</i>	Togo	68.97	98.31	0.70	40	2X
43	TDr-1825	<i>D. rotundata</i>	Togo	58.50	101.39	0.58	40	2X
44	TDr-1828	<i>D. rotundata</i>	Togo	68.51	96.61	0.71	40	2X
45	TDr-1829	<i>D. rotundata</i>	Togo	72.17	98.86	0.73	40	2X
46	TDr-1839	<i>D. rotundata</i>	Togo	73.69	103.38	0.71	40	2X
47	TDr-1852	<i>D. rotundata</i>	Togo	100.00	100.00	1.00	60	3X
48	TDr-1858	<i>D. rotundata</i>	Togo	72.03	99.21	0.73	40	2X
49	TDr-1881	<i>D. rotundata</i>	Ghana	72.13	101.14	0.71	40	2X
50	TDr-1888	<i>D. rotundata</i>	Cote d'Ivoire	70.33	99.22	0.71	40	2X

51	TDr-1905	<i>D. rotundata</i>	Ghana	75.44	102.70	0.73	40	2X
52	TDr-1907	<i>D. rotundata</i>	Togo	71.63	101.96	0.70	40	2X
53	TDr-1913	<i>D. rotundata</i>	Cote d'Ivoire	72.66	103.96	0.70	40	2X
54	TDr-1922 ^b	<i>D. rotundata</i>	Cote d'Ivoire	70.96	97.44	0.73	60	3X
55	TDr-1937	<i>D. rotundata</i>	Benin	72.26	101.72	0.71	40	2X
56	TDr-1939	<i>D. rotundata</i>	Togo	70.40	100.35	0.70	40	2X
57	TDr-1943	<i>D. rotundata</i>	Benin	71.20	100.38	0.71	40	2X
58	TDr-1949	<i>D. rotundata</i>	Ghana	72.32	101.50	0.71	40	2X
59	TDr-1953	<i>D. rotundata</i>	Ghana	71.71	98.03	0.73	40	2X
60	TDr-1956	<i>D. rotundata</i>	Cote d'Ivoire	71.19	98.85	0.72	40	2X
61	TDr-1966	<i>D. rotundata</i>	Ghana	74.33	102.45	0.73	40	2X
62	TDr-2000	<i>D. rotundata</i>	Cote d'Ivoire	69.42	99.50	0.70	40	2X
63	TDr-2009	<i>D. rotundata</i>	Cote d'Ivoire	67.95	95.58	0.71	40	2X
64	TDr-2015	<i>D. rotundata</i>	Togo	100.00	100.00	1.00	60	3X
65	TDr-2017	<i>D. rotundata</i>	Cote d'Ivoire	70.35	100.85	0.70	40	2X
66	TDr-2018	<i>D. rotundata</i>	Cote d'Ivoire	72.73	102.46	0.71	40	2X
67	TDr-2028	<i>D. rotundata</i>	Togo	100.00	100.00	1.00	60	3X
68	TDr-2033	<i>D. rotundata</i>	Nigeria	62.78	94.42	0.66	40	2X
69	TDr-2034	<i>D. rotundata</i>	Nigeria	100.00	100.00	1.00	60	3X
70	TDr-2040	<i>D. rotundata</i>	Nigeria	73.14	100.47	0.73	40	2X
71	TDr-2050	<i>D. rotundata</i>	Nigeria	100.00	100.00	1.00	60	3X
72	TDr-2071	<i>D. rotundata</i>	Nigeria	100.00	100.00	1.00	60	3X
73	TDr-2084	<i>D. rotundata</i>	Nigeria	72.50	100.75	0.72	40	2X
74	TDr-2126	<i>D. rotundata</i>	Nigeria	75.38	104.00	0.72	40	2X
75	TDr-2167	<i>D. rotundata</i>	Nigeria	100.00	100.00	1.00	60	3X
76	TDr-2266	<i>D. rotundata</i>	Nigeria	73.01	99.40	0.74	40	2X
77	TDr-2269	<i>D. rotundata</i>	Nigeria	69.83	99.94	0.70	40	2X
78	TDr-2291	<i>D. rotundata</i>	Nigeria	70.64	97.27	0.73	40	2X
79	TDr-2348	<i>D. rotundata</i>	Nigeria	71.49	98.96	0.72	40	2X
80	TDr-2363	<i>D. rotundata</i>	Nigeria	73.44	103.40	0.71	40	2X
81	TDr-2439	<i>D. rotundata</i>	Nigeria	71.47	99.02	0.72	40	2X
82	TDr-2564	<i>D. rotundata</i>	Nigeria	64.58	86.43	0.75	40	2X
83	TDr-2572	<i>D. rotundata</i>	Nigeria	71.28	100.18	0.71	40	2X
84	TDr-2575	<i>D. rotundata</i>	Nigeria	69.27	98.29	0.70	40	2X
85	TDr-2582	<i>D. rotundata</i>	Nigeria	74.30	103.42	0.72	40	2X
86	TDr-2664	<i>D. rotundata</i>	Nigeria	100.00	100.00	1.00	60	3X
87	TDr-2678	<i>D. rotundata</i>	Nigeria	70.11	101.98	0.70	unknown	2X
88	TDr-2688	<i>D. rotundata</i>	Nigeria	100.00	100.00	1.00	60	3X
89	TDr-2701	<i>D. rotundata</i>	Nigeria	73.62	103.49	0.71	40	2X
90	TDr-2763	<i>D. rotundata</i>	Nigeria	69.46	96.55	0.72	40	2X
91	TDr-2916	<i>D. rotundata</i>	Nigeria	71.50	97.94	0.73	40	2X
92	TDr-2946	<i>D. rotundata</i>	Nigeria	52.22	80.22	0.65	40	2X
93	TDr-2968	<i>D. rotundata</i>	Nigeria	73.64	102.32	0.72	40	2X
94	TDr-2974	<i>D. rotundata</i>	Nigeria	100.00	100.00	1.00	60	3X
95	TDr-3287	<i>D. rotundata</i>	Nigeria	70.96	97.33	0.73	40	2X
96	TDr-3296	<i>D. rotundata</i>	Nigeria	69.37	97.27	0.71	40	2X
97	TDr-3310	<i>D. rotundata</i>	Nigeria	72.09	101.27	0.71	40	2X
98	TDr-3320	<i>D. rotundata</i>	Nigeria	72.82	100.13	0.73	40	2X
99	TDr-3374	<i>D. rotundata</i>	Nigeria	71.03	100.20	0.71	40	2X
100	TDr-3402	<i>D. rotundata</i>	Nigeria	72.61	100.82	0.72	40	2X
101	TDr-3430	<i>D. rotundata</i>	Nigeria	70.98	100.31	0.71	40	2X
102	TDr-3466	<i>D. rotundata</i>	Nigeria	70.40	97.94	0.73	40	2X
103	TDr-3472	<i>D. rotundata</i>	Nigeria	70.17	98.19	0.71	40	2X
104	TDr-3497	<i>D. rotundata</i>	Nigeria	73.99	104.74	0.71	40	2X
105	TDr-3519	<i>D. rotundata</i>	Nigeria	100.00	100.00	1.00	60	3X
106	TDr-3524	<i>D. rotundata</i>	Nigeria	73.06	101.76	0.72	40	2X

107	TDr-3551	<i>D. rotundata</i>	Nigeria	72.48	101.15	0.72	40	2X
108	TDr-3567	<i>D. rotundata</i>	Nigeria	71.08	97.74	0.73	40	2X
109	TDr-3592	<i>D. rotundata</i>	Nigeria	100.00	100.00	1.00	60	3X
110	TDr-3643	<i>D. rotundata</i>	Nigeria	69.12	95.75	0.72	40	2X
111	TDr-3671 ^a	<i>D. rotundata</i>	Nigeria	100.00	100.00	1.00	40	2X
112	TDr-3719	<i>D. rotundata</i>	Nigeria	67.78	90.96	0.75	40	2X
113	TDr-3721	<i>D. rotundata</i>	Nigeria	72.61	100.19	0.72	40	2X
114	TDr-3870	<i>D. rotundata</i>	Nigeria	74.76	104.00	0.72	40	2X
115	TDr-3882	<i>D. rotundata</i>	Nigeria	71.99	101.64	0.71	40	2X
116	TDr-4084	<i>D. rotundata</i>	Nigeria	70.79	98.70	0.72	40	2X
117	TDr-4307	<i>D. rotundata</i>	Nigeria	76.38	103.77	0.74	40	2X
118	TDr-4379	<i>D. rotundata</i>	Nigeria	73.77	103.61	0.71	40	2X
119	TDr-89/02665	<i>D. rotundata</i>	Unknown	68.10	95.55	0.71	40	2X
1	TDa-1001	<i>D. alata</i>	Togo	58.06	100.60	0.58	40	2X
2	TDa-1008	<i>D. alata</i>	Togo	86.92	98.95	0.88	60	3X
3	TDa-1009	<i>D. alata</i>	Togo	52.06	95.46	0.55	40	2X
4	TDa-1010	<i>D. alata</i>	Togo	36.83	89.96	0.41	40	2X
5	TDa-1014 ^a	<i>D. alata</i>	Togo	100.00	100.00	1.00	unknown	2X
6	TDa-1017	<i>D. alata</i>	Togo	56.70	98.40	0.58	40	2X
7	TDa-1020	<i>D. alata</i>	Togo	68.85	83.00	0.83	60	3X
8	TDa-1027	<i>D. alata</i>	Togo	56.57	95.56	0.59	40	2X
9	TDa-1030	<i>D. alata</i>	Togo	85.00	98.00	0.87	60	3X
10	TDa-1033	<i>D. alata</i>	Togo	58.02	100.41	0.60	40	2X
11	TDa-1036	<i>D. alata</i>	Togo	112.69	98.06	1.15	80	4X
12	TDa-1043	<i>D. alata</i>	Togo	54.02	93.62	0.58	40	2X
13	TDa-1056	<i>D. alata</i>	Togo	52.87	97.67	0.54	40	2X
14	TDa-1062	<i>D. alata</i>	Togo	82.92	100.73	0.82	60	3X
15	TDa-1063	<i>D. alata</i>	Togo	57.86	100.01	0.58	40	2X
16	TDa-1066	<i>D. alata</i>	Togo	54.82	94.71	0.58	40	2X
17	TDa-1078	<i>D. alata</i>	Togo	58.92	100.33	0.59	40	2X
18	TDa-1079 ^b	<i>D. alata</i>	Togo	41.96	82.84	0.51	40	2X
19	TDa-1083 ^b	<i>D. alata</i>	Togo	52.69	99.61	0.53	40	2X
20	TDa-1085	<i>D. alata</i>	Togo	56.85	101.90	0.56	40	2X
21	TDa-1092	<i>D. alata</i>	Togo	56.92	98.08	0.58	40	2X
22	TDa-1096	<i>D. alata</i>	Togo	57.42	99.53	0.58	40	2X
23	TDa-11/00010	<i>D. alata</i>	Unknown	58.08	101.74	0.57	40	2X
24	TDa-1104	<i>D. alata</i>	Togo	112.01	99.01	1.13	80	4X
25	TDa-1122	<i>D. alata</i>	Togo	60.12	99.94	0.60	40	2X
26	TDa-1124	<i>D. alata</i>	Togo	85.03	99.89	0.85	60	3X
27	TDa-1125	<i>D. alata</i>	Togo	55.15	96.88	0.57	40	2X
28	TDa-1137	<i>D. alata</i>	Togo	118.12	99.23	1.19	80	4X
29	TDa-1142	<i>D. alata</i>	Togo	56.60	97.01	0.58	40	2X
30	TDa-1143	<i>D. alata</i>	Togo	50.74	88.40	0.57	40	2X
31	TDa-1145 ^b	<i>D. alata</i>	Togo	51.20	99.26	0.52	40	2X
32	TDa-1167	<i>D. alata</i>	Benin	59.54	99.54	0.60	40	2X
33	TDa-1176	<i>D. alata</i>	Benin	59.63	102.41	0.58	40	2X
34	TDa-1177 ^a	<i>D. alata</i>	Benin	87.24	98.69	0.88	40	2X
35	TDa-1187 ^b	<i>D. alata</i>	Benin	95.65	196.90	0.49	40	2X
36	TDa-1189 ^a	<i>D. alata</i>	Benin	50.01	97.06	0.51	80	4X
37	TDa-1196	<i>D. alata</i>	Cote d'Ivoire	62.75	102.24	0.61	40	2X
38	TDa-1207	<i>D. alata</i>	Togo	56.47	93.99	0.60	40	2X
39	TDa-1217 ^b	<i>D. alata</i>	Togo	47.48	96.25	0.49	40	2X
40	TDa-1221	<i>D. alata</i>	Cote d'Ivoire	59.65	101.62	0.59	40	2X
41	TDa-1236	<i>D. alata</i>	Togo	57.28	100.92	0.57	40	2X
42	TDa-1240 ^b	<i>D. alata</i>	Benin	48.39	95.65	0.51	40	2X

43	TDa-1244	<i>D. alata</i>	Togo	60.20	105.19	0.57	40	2X
44	TDa-1253	<i>D. alata</i>	Cote d'Ivoire	57.79	101.79	0.57	40	2X
45	TDa-1258	<i>D. alata</i>	Benin	54.70	97.93	0.56	40	2X
46	TDa-1270	<i>D. alata</i>	Togo	57.15	95.91	0.60	40	2X
47	TDa-1277 ^b	<i>D. alata</i>	Benin	52.78	106.31	0.50	40	2X
48	TDa-1282	<i>D. alata</i>	Togo	79.27	99.30	0.80	60	3X
49	TDa-1285	<i>D. alata</i>	Nigeria	112.98	99.57	1.13	80	4X
50	TDa-1287	<i>D. alata</i>	Nigeria	56.60	93.40	0.61	40	2X
51	TDa-1290	<i>D. alata</i>	Togo	57.71	99.00	0.58	40	2X
52	TDa-1299	<i>D. alata</i>	Togo	58.21	99.10	0.59	40	2X
53	TDa-1315	<i>D. alata</i>	Nigeria	58.23	100.80	0.58	40	2X
54	TDa-1316	<i>D. alata</i>	Ghana	48.91	88.66	0.55	40	2X
55	TDa-1319 ^b	<i>D. alata</i>	Nigeria	100.00	100.00	1.00	80	4X
56	TDa-1328	<i>D. alata</i>	Ghana	56.14	99.01	0.57	40	2X
57	TDa-1347	<i>D. alata</i>	Nigeria	58.21	98.32	0.59	40	2X
58	TDa-1351	<i>D. alata</i>	Nigeria	86.44	99.40	0.87	60	3X
59	TDa-1359	<i>D. alata</i>	Togo	32.79	69.26	0.47	40	2X
60	TDa-1361	<i>D. alata</i>	Ghana	109.87	95.79	1.15	80	4X
61	TDa-1365	<i>D. alata</i>	Togo	59.01	101.14	0.58	40	2X
62	TDa-1375	<i>D. alata</i>	Togo	53.08	93.83	0.57	40	2X
63	TDa-1404	<i>D. alata</i>	Nigeria	56.99	99.19	0.57	40	2X
64	TDa-1425	<i>D. alata</i>	Nigeria	84.36	99.15	0.85	60	3X
65	TDa-1432	<i>D. alata</i>	Nigeria	57.73	98.95	0.58	40	2X
66	TDa-1439 ^b	<i>D. alata</i>	Ghana	50.49	100.83	0.50	40	2X
67	TDa-1448	<i>D. alata</i>	Nigeria	57.93	101.34	0.57	40	2X
68	TDa-1449	<i>D. alata</i>	Ghana	84.04	98.59	0.85	60	3X
69	TDa-1459	<i>D. alata</i>	Togo	54.82	91.47	0.60	40	2X
70	TDa-1471 ^b	<i>D. alata</i>	Ghana	40.90	85.18	0.48	40	2X
71	TDa-2861 ^b	<i>D. alata</i>	Cote d'Ivoire	48.81	98.21	0.50	40	2X
72	TDa-3236	<i>D. alata</i>	Togo	81.68	95.61	0.85	60	3X
73	TDa-3271 ^b	<i>D. alata</i>	Ghana	46.45	90.45	0.51	40	2X
74	TDa-3902	<i>D. alata</i>	Benin	57.41	96.78	0.59	40	2X
75	TDa-3903	<i>D. alata</i>	Benin	84.60	97.18	0.87	60	3X
76	TDa-3914	<i>D. alata</i>	Nigeria	57.66	97.32	0.59	40	2X
77	TDa-3918	<i>D. alata</i>	Benin	57.92	97.25	0.60	40	2X
78	TDa-4042	<i>D. alata</i>	Nigeria	56.48	98.06	0.58	40	2X
79	TDa-4326	<i>D. alata</i>	Benin	44.67	91.26	0.49	40	2X
80	TDa-4335 ^b	<i>D. alata</i>	Benin	51.75	97.37	0.53	40	2X
81	TDa-4346 ^b	<i>D. alata</i>	Benin	51.13	101.87	0.50	40	2X
82	TDa-4635	<i>D. alata</i>	Togo	58.50	105.24	0.56	40	2X
1	TDc-2808	<i>D. cayenensis</i>	Cote d'Ivoire	100.00	100.00	1.00	60	3X
2	TDc-3897	<i>D. cayenensis</i>	Benin	100.00	100.00	1.00	60	3X
3	TDc-2798	<i>D. cayenensis</i>	Togo	133.76	97.10	1.38	80	4X
4	TDc-2816	<i>D. cayenensis</i>	Nigeria	135.75	101.70	1.33	80	4X
1	TDd-3909	<i>D. dumetorum</i>	Nigeria	35.68	106.91	0.33	40	2X
2	TDd-3100	<i>D. dumetorum</i>	Togo	51.15	102.98	0.50	60	3X
3	TDd-3778	<i>D. dumetorum</i>	Nigeria	52.58	103.16	0.51	60	3X
4	TDd-3806	<i>D. dumetorum</i>	Nigeria	50.54	99.66	0.51	60	3X
5	TDd-3947	<i>D. dumetorum</i>	Nigeria	51.08	102.12	0.50	60	3X
6	TDd-4118	<i>D. dumetorum</i>	Togo	53.57	108.27	0.49	60	3X
1	TDdes-2786	<i>D. esculenta</i>	Nigeria	117.65	100.71	1.17	80	4X
2	TDdes-3034	<i>D. esculenta</i>	Togo	116.70	100.34	1.16	80	4X
3	TDdes-3038 ^b	<i>D. esculenta</i>	Togo	100.00	100.00	1.00	80	4X

[illegible]