

Supplementary Table S1 Experimental Materials and Sources

Number	Variety number	Variety name	Sample source	Latin name
1	D-1	Longyan white greater yam	Longyan, Fujian	<i>Dioscorea alata</i> L.
2	D-2	Yibin white greater yam	Yibin, Sichuan	<i>Dioscorea alata</i> L.
3	D-3	Taihe purple greater yam No. 1	Taihe, Jian, Jiangxi	<i>Dioscorea alata</i> L.
4	D-4	Taihe purple greater yam No. 2	Taihe, Jian, Jiangxi	<i>Dioscorea alata</i> L.
5	D-5	Ganbaiyu No. 1	Xingguo, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
6	D-6	Ganxueshi No. 2	Xunwu, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
7	D-7	Guangzhou purple greater yam	Zengcheng, Guangzhou	<i>Dioscorea alata</i> L.
8	D-8	Shangyou white skin greater yam	Shangyou, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
9	D-9	Yichun purple greater yam	Yichun, Jiangxi	<i>Dioscorea alata</i> L.
10	D-10	Yudu purple greater yam No. 1	Yudu, Jiangxi	<i>Dioscorea alata</i> L.
11	D-11	Zanjiang purple greater yam	Zhanjiang, Guangzhou	<i>Dioscorea alata</i> L.
12	D-13	Qujiang white greater yam	Qujiang, Yunnan	<i>Dioscorea alata</i> L.
13	D-14	Xingguo white greater yam No. 1	Xingguo, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
14	D-15	Longnan purple greater yam No. 1	Longnan, Jiangxi	<i>Dioscorea alata</i> L.
15	D-18	Longnan purple greater yam No. 2	Longnan, Jiangxi	<i>Dioscorea alata</i> L.
16	D-20	Ganxuezi No. 1	Xunwu, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
17	D-23	Ganziyun No. 1	Xunwu, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
18	D-24	Ganziyun No. 7	Xunwu, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
19	D-28	Ganbaiyu No. 1	Xingguo, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
20	D-29	Gulonggang white greater yam	Xingguo, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
21	D-31	Xingguo white greater yam No. 2	Xingguo, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
22	D-32	Xunwu white greater yam No. 1	Xunwu, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
23	D-33	Ganbaiyu No. 2	Longnan, Jiangxi	<i>Dioscorea alata</i> L.
24	D-34	Fujian purple greater yam	Fujian	<i>Dioscorea alata</i> L.
25	D-36	Yudu purple greater yam No. 2	Yudu, Jiangxi	<i>Dioscorea alata</i> L.
26	D-38	Lijiang purple greater yam	Lijiang, Yunnan	<i>Dioscorea alata</i> L.
27	D-41	Qujiang white greater yam No. 2	Qujiang, Yunnan	<i>Dioscorea alata</i> L.
28	D-264	Xunwu white greater yam No. 2	Xunwu, Ganzhou,	<i>Dioscorea alata</i> L.

			Jiangxi	
29	D-274	Xingguo white greater yam No. 3	Xingguo, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
30	D-279	Xunwu white greater yam No. 3	Xunwu, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
31	D-284	Shangyou purple greater yam	Shangyou, Jiangxi	<i>Dioscorea alata</i> L.
32	D-288	Longnan white greater yam	Longnan, Jiangxi	<i>Dioscorea alata</i> L.
33	D-294	Cunwu white greater yam No. 4	Xunwu, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
34	D-297	Sunchuan white greater yam	Suichuan, Jian, Jiangxi	<i>Dioscorea alata</i> L.
35	D-303	Longnan purple greater yam No. 3	Longnan, Jiangxi	<i>Dioscorea alata</i> L.
36	D-304	Longnan purple greater yam No. 4	Longnan, Jiangxi	<i>Dioscorea alata</i> L.
37	D-306	Longnan purple greater yam No. 5	Longnan, Jiangxi	<i>Dioscorea alata</i> L.
38	D-400	Yudu purple greater yam No. 3	Yudu, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
39	D-401	Guangdong zengcheng purple greater yam	Zengchang, Guangzhou	<i>Dioscorea alata</i> L.
40	D-402	Taihe purple greater yam No. 3	Taihe, Jian, Jiangxi	<i>Dioscorea alata</i> L.
41	D-403	Anyuan purple greater yam No. 1	Anyuan, Jiangxi	<i>Dioscorea alata</i> L.
42	D-404	Anyuan purple greater yam No. 2	Anyuan, Jiangxi	<i>Dioscorea alata</i> L.
43	D-405	Ganbaiyu No. 3	Xingguo, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
44	D-406	Longnan purple greater yam No. 6	Longnan, Jiangxi	<i>Dioscorea alata</i> L.
45	D-407	Zhanggong white greater yam	Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.
46	D-419	Xunwu white greater yam No. 5	Xunwu, Ganzhou, Jiangxi	<i>Dioscorea alata</i> L.