





Figure S2.

Table S2.

Region	Country, Locality	Isolate	ITS	<i>tef-1α</i>	<i>tub2</i>	<i>rpb2</i>	ITS+ <i>tef1α</i>
North America	Hawaii	CBS111530	H1	H1	H1	H1	H1
	Mexico	BOM230	H1	H1			H1
	Mexico	BOS104	H1	H1			H1
	Mexico	BOT112	H1	H1			H1
	Mexico	BOT359	H1	H1			H1
	Mexico	LAM118	H1	H1			H1
	Puerto Rico	K286	H1	H2	H1		H12
	Puerto Rico	K8	H1	H2	H1		H12
	Puerto Rico	PHLO10	H1	H2	H1		H12
	Puerto Rico	PHLO9	H1	H2	H1		H12
	USA	CBS124.13	H1	H2	H1	H1	H12
	USA, Florida	CMW34107	H1	H1			H1
	USA, Florida	SEFL3	H8	H7	H9		H8
	USA, Florida, Apopka	UF05161	H9	H2			H9
	USA, Florida, Alaucha Country	WFF92	H1	H2			H12
	Western South America	Colombia, Andes	CMW34303	H1	H1		
Ecuador		CMW4694	H1	H8	H1	H1	H17
Ecuador		CMW4695	H1	H1	H1	H1	H1
Ecuador		CMW4696	H1	H1	H1		H1
Ecuador		CMW9273	H1	H2	H1	H1	H12
Ecuador, Esmeraldas		CMW22924	H1	H2	H1	H1	H12
Ecuador, Esmeraldas		CMW22926	H1	H2	H1	H1	H12
Peru		CMW31861	H1	H2	H1		H12
Peru		CMW31867	H1	H1	H12	H1	H1
Peru		CMW31899	H1	H1	H1	H1	H1
Peru, Cieneguillo Norte, Piura		LA-SJ1	H1	H1			H1
Peru, Sol-Sol, Piura		LA-SOL1	H1	H1			H1
Peru, San Vicente, Piura		LA-SV1	H1	H1			H1
Venezuela, Guayana		A10	H1	H1	H1		H1
Venezuela, Guayana		A13	H1	H1	H1		H1
Venezuela, Acarigua		CMW13490	H1	H2	H1	H1	H12
Venezuela, Cojedes		CMW13501	H1	H1	H11	H1	H1
Venezuela, Falcon State		CMW13519	H6	H1	H1	H1	H6
Venezuela, Falcon State		CMW13527	H1	H1	H1	H1	H1
Eastern South America		Brazil	ARM122	H1	H2		

Brazil, Vicosa, MG	CDA 425	H1	H1	H1	H1
Brazil, Vicosa, MG	CDA 444	H1	H1	H1	H1
Brazil, Vicosa, MG	CDA 450	H1	H2	H1	H12
Brazil, Vicosa, MG	CDA 455	H1	H4	H1	H14
Brazil, Juazeiro, BA	CDA 465	H1	H3	H1	H13
Brazil, Juazeiro, BA	CDA 467	H1	H2	H1	H12
Brazil, Juazeiro, BA	CDA 472	H1	H2	H1	H12
Brazil, Sao Francisco Valley	CMM 0307	H1	H1		H1
Brazil, Sao Francisco Valley	CMM 0310	H1	H1		H1
Brazil, Sao Francisco Valley	CMM 0384	H1	H1		H1
Brazil, Sao Francisco Valley	CMM 0455	H1	H1		H1
Brazil, Sao Francisco Valley	CMM 0820	H1	H1		H1
Brazil	CMM1476	H1	H1		H1
Brazil	CMM1481	H1	H1		H1
Brazil	CMM1517	H1	H1		H1
Brazil	CMM2168	H1	H1		H1
Brazil	CMM2179	H1	H1		H1
Brazil	CMM2183	H1	H1		H1
Brazil	CMM2190	H1	H2		H12
Brazil	CMM2193	H1	H1		H1
Brazil	CMM2208	H1	H1		H1
Brazil	CMM2209	H1	H1		H1
Brazil	CMM2210	H1	H1		H1
Brazil	CMM2231	H1	H2		H12
Brazil	CMM2232	H1	H2		H12
Brazil	CMM2235	H1	H1		H1
Brazil	CMM2237	H1	H2		H12
Brazil	CMM2238	H1	H2		H12
Brazil	CMM2239	H1	H2		H12
Brazil	CMM2241	H1	H1		H1
Brazil	CMM2261	H1	H1		H1
Brazil	CMM2262	H1	H1		H1
Brazil	CMM2265	H1	H1		H1
Brazil	CMM2267	H1	H1		H1
Brazil	CMM2268	H1	H1		H1
Brazil	CMM2269	H1	H1		H1
Brazil	CMM2276	H1	H2		H12
Brazil	CMM2278	H1	H2		H12
Brazil	CMM2280	H1	H2		H12
Brazil	CMM2282	H1	H2		H12

Brazil	CMM2294	H1	H2			H12
Brazil	CMM2295	H1	H2			H12
Brazil	CMM2297	H1	H1			H1
Brazil	CMM2303	H1	H1			H1
Brazil	CMM2306	H1	H1			H1
Brazil	CMM2310	H1	H2			H12
Brazil	CMM2327	H1	H1			H1
Brazil	CMM2328	H1	H1			H1
Brazil	CMM3612	H1	H1	H12		H1
Brazil	CMM3647	H1	H1	H12		H1
Brazil	CMM3654	H1	H2	H1		H12
Brazil	CMM3831	H1	H2	H1		H12
Brazil	CMM4019	H1	H2			H12
Brazil	CMM4021	H1	H2			H12
Brazil	CMM4033	H1	H1			H1
Brazil	CMM4039	H1	H1			H1
Brazil	CMM4041	H1	H1			H1
Brazil	CMM4042	H1	H1			H1
Brazil	CMM4043	H1	H1			H1
Brazil	CMM4046	H1	H1			H1
Brazil	CMM4047	H1	H1			H1
Brazil	CMM4048	H1	H1			H1
Brazil	CMM4050	H1	H1			H1
Brazil	CMM4499	H1	H1			H1
Brazil	CMM4508	H1	H2			H12
Brazil	CMM4513	H1	H1			H1
Brazil	CMW32099	H1	H2	H1		H12
Brazil, Vicoso, MG	COAD 1788	H1	H2	H1		H12
Brazil, Vicoso, MG	COAD 1789	H1	H1	H1		H1
Brazil, Juazeiro, BA	COAD 1790	H1	H1	H1		H1
Brazil, Catuana, Ceará	IBL340	H1	H1	H1		H1
Brazil, Itapipoca, Ceara	IBL375	H1	H1	H1		H1
Brazil, Buique, Piauí	IBL404	H1	H2	H1		H12
Brazil, Buique, Piauí	IBL405	H1	H2	H1		H12
Uruguay, Paysandú	Fi2359	H1	H1			H1
Western Africa						
Benin	CMW33290	H1	H1	H1	H1	H1
Cameroon, Mbalmayo-Bilink	CMW28311	H1	H2	H1	H1	H12
Cameroon, Kribi	CMW28317	H1	H2	H1	H1	H12
Cameroon, Kribi	CMW28319	H1	H5			H15
Cameroon, Kribi	CMW28547	H1	H1	H1	H1	H1

	Cameroon, Kribi	CMW28548	H1	H2	H1	H1	H12
	Cameroon, Kribi	CMW28550	H1	H2	H1	H1	H12
	Cameroon, Mbalmayo-Ebogo	CMW28570	H1	H2	H1	H1	H12
	Cameroon, Mbalmayo-Ebogo	CMW28571	H1	H2	H1	H1	H12
	Cameroon, Mbalmayo-Ebogo	CMW28573	H1	H1	H1	H1	H1
	Cameroon, Mbalmayo Ekombitie	CMW28625	H1	H2	H1	H1	H12
	Cameroon, Lombel	CMW36127	H1	H1	H1		H1
Southern and Eastern Africa	Madagascar, Madamo	CMW27810	H1	H1	H1	H1	H1
	South Africa, Mpumalanga	CMW18422	H1	H1			H1
	South Africa, Mpumalanga	CMW18423	H1	H1			H1
	South Africa, Mpumalanga	CMW18425	H1	H1	H1	H1	H1
	South Africa, Mpumalanga	CMW22663		H2	H1	H1	
	South Africa, Mpumalanga	CMW22664		H2			
	South Africa, Kwazulu-Natal	CMW24125	H1	H1	H1	H1	H1
	South Africa, Mpumalanga	CMW25212	H1	H1	H1		H1
	South Africa, Limpopo	CMW26616	H1	H1	H12	H1	H1
	South Africa, Limpopo	CMW26630	H1	H1	H12	H1	H1
	South Africa, Kwazulu-Natal	CMW26715	H1	H1	H1	H1	H1
	South Africa, Kwazulu-Natal	CMW32018	H1	H1	H12	H1	H1
	South Africa, Mpumalanga	CMW32498	H1	H1	H1	H1	H1
	South Africa, Mpumalanga	CMW32536	H1	H1	H1	H1	H1
	South Africa, Kwazulu-Natal	CMW32544	H1	H1	H1	H1	H1
	South Africa, Kwazulu-Natal	CMW32549	H1	H1	H1	H1	H1
	South Africa, Kwazulu-Natal	CMW32571	H1	H1	H2		H1
	South Africa, Kwazulu-Natal	CMW32603	H2	H1	H12	H1	H2
	South Africa, Kwazulu-Natal	CMW32604	H1	H1	H12	H1	H1
	South Africa, Kwazulu-Natal	CMW32606	H1	H1	H12	H1	H1
	South Africa, Kwazulu-Natal	CMW32651	H1	H1	H12	H1	H1
	South Africa, Kwazulu-Natal	CMW32666	H1	H1	H1		H1
	South Africa, Kwazulu-Natal	CMW32669	H1	H1	H1	H1	H1
	South Africa, Mpumalanga	CMW33658	H1	H1			H1
	South Africa, Gauteng	CMW38120	H1	H1	H1	H1	H1
	South Africa, Gauteng	CMW38121	H1	H1	H1		H1
	South Africa, Gauteng	CMW38122	H1	H1	H1		H1
	South Africa, Gauteng	CMW39290	H1	H1			H1
	South Africa, Gauteng	CMW39291	H4	H1			H4
	South Africa, Kwazulu-Natal	CMW41214	H1	H1	H1	H1	H1
	South Africa, Kwazulu-Natal	CMW41222	H1	H1	H1	H1	H1

	South Africa, Kwazulu-Natal	CMW41223	H1	H1	H1	H1	H1
	South Africa, Kwazulu-Natal	CMW41360	H1	H1	H8	H1	H1
	South Africa, Kwazulu-Natal	CMW42341	H1	H1	H1		H1
	South Africa, Kwazulu-Natal	MTU53	H1	H1	H1		H1
	Uganda	CMW10130	H1	H2	H1	H1	H12
	Uganda, Mbale	CMW18420	H1	H1	H12	H1	H1
	Uganda, Mbale	CMW32245	H1	H1	H12	H1	H1
	Uganda, Mbale	CMW32246	H1	H1	H12	H1	H1
	Zambia, Samfya	CMW30103	H1	H2			H12
	Zambia, Samfya	CMW30104	H1	H2			H12
	Zambia, Samfya	CMW30105	H1	H2			H12
Middle East and Europe	Egypt	BOT23	H1	H1			H1
	Egypt	BOT4	H1	H1			H1
	Egypt	BOT5	H1	H1			H1
	Egypt	BOT6	H1	H1			H1
	Egypt	BOT7	H1	H1			H1
	Egypt	BOT9	H1	H1			H1
	Iran	CJA198	H1	H1			H1
	Iran	CJA199	H1	H1			H1
	Iran	IRAN1233C	H1	H1			H1
	Iran	IRAN1496C	H1	H1			H1
	Iran	IRAN1499C	H1	H1			H1
	Italy, Foggia	B159	H1	H2			H12
	Italy, Cerignola	B202	H1	H2			H12
	Italy, Cerignola	B215	H1	H2			H12
	Italy, Cerignola	B342	H1	H2			H12
	Italy, Cerignola	B85	H1	H2			H12
Oman, Barka	CMW20506	H1	H1	H1	H1	H1	
Oman, Barka	CMW20508	H1	H1	H1	H1	H1	
Oman, Barka	CMW20511	H1	H1	H1	H1	H1	
Oman, Barka	CMW20512	H2	H1	H1	H1	H2	
Oman	CMW20537	H3	H1	H1	H1	H3	
Oman	CMW20542	H1	H1	H1		H1	
Oman	CMW20543	H1	H1	H1	H1	H1	
Oman	CMW20546	H1	H1	H1	H1	H1	
Oman	CMW20560	H1	H1	H1	H1	H1	
Oman	CMW20573	H1	H1	H1	H1	H1	
Oman	CMW20579	H1	H1	H12	H1	H1	
Asia	China, Fangshan, Pingtung	B838	H1	H2	H1		H12
	China, Guantian, Tainan	B852	H1	H1	H1		H1

China, Chiayi	B886	H1	H1	H1		H1
China, Guantian, Tainan	B902	H1	H1	H1		H1
China, Guantian, Tainan	B918	H1	H1	H1		H1
China, Guantian, Tainan	B961	H1	H1	H1		H1
China, Guantian, Tainan	B965	H1	H1	H1		H1
China	BL1331	H7	H2	H1		H8
China	CBS122127	H1	H1			H1
China, GuangDong Province	CERC1983	H1	H1	H1		H1
China, GuangDong Province	CERC1985	H1	H1	H1		H1
China, GuangDong Province	CERC1988	H1	H1	H1		H1
China, GuangDong Province	CERC1989	H1	H1	H1		H1
China, GuangDong Province	CERC1991	H1	H1	H1		H1
China, GuangDong Province	CERC1996	H1	H1	H1		H1
China, GuangDong Province	CERC2049	H1	H1	H1		H1
China, GuangDong Province	CERC3820	H1	H1	H1		H1
China, GuangDong Province	CERC3821	H1	H1	H1		H1
China, GuangDong Province	CERC3822	H1	H1	H1		H1
China, GuangDong Province	CERC3823	H1	H1	H1		H1
China, GuangDong Province	CERC3824	H1	H1	H1		H1
China, GuangDong Province	CERC3825	H1	H1	H1		H1
China, Dong Men Forest Farm	CMW24701	H1	H1	H1	H1	H1
China, Dong Men Forest Farm	CMW24702	H1	H1	H1	H1	H1
China	CMW33957	H1	H1			H1
China	FXPZ	H1	H1	H1		H1
China	HD1332	H7	H2	H1		H7
China	HN74	H1	H6	H1		H16
China, Guangxi Province	L1	H1	H1	H6		H1
China, Guangxi Province	L2	H1	H1	H6		H1
China, Guangxi Province	L3	H1	H1	H6		H1
China, Guangxi Province	L4	H1	H1	H6		H1
China, Guangxi Province	L5	H1	H1	H1		H1
China, Guangxi Province	L6	H1	H1	H1		H1
China, Guangxi Province	L7	H1	H1	H3		H1
China, Guangxi Province	L8	H1	H1	H4		H1
China, Guangxi Province	L9	H1	H1	H1		H1
China, Guangxi Province	L10	H1	H1	H4		H1
China, Guangxi Province	L11	H1	H1	H6		H1
China, Guangxi Province	L15	H1	H1	H5		H1
China, Sichuan	Mht-5	H1	H2	H1		H12
China, Shanghai	SHYAG	H5	H1	H7		H5

	China, Zhejiang	ZHn411	H1	H1	H10		H1
	Indonesia, Sumatra	CMW22881	H1	H1	H1	H1	H1
	Indonesia, Logas	CMW23003	H1	H1	H1	H1	H1
	Indonesia, Logas	CMW23008	H1	H2	H1	H1	H12
	Indonesia, Logas	CMW23018	H1	H2	H1	H1	H12
	Indonesia, Teso	CMW23031	H1	H1	H1	H1	H1
	Indonesia, Logas	CMW23073	H1	H1	H1	H1	H1
	Korea	ML1001	H1	H1			H1
	Korea	ML1005	H1	H1			H1
	Thailand, Prajinburi	CMW15680	H1	H1	H1	H1	H1
	Thailand, Prajinburi	CMW15682	H10	H1	H1	H1	H10
	Thailand, Chiang Mai	CPC 22766	H1	H1			H1
	Thailand, Chiang Mai	CPC 22780	H1	H2			H12
	Thailand, Chiang Mai	CPC 22798	H1	H1			H1
	Thailand, Chiang Mai	MFLUCC12 0293	H1	H2	H1		H12
Australasia	Australia	CMW40630	H1	H1	H1	H1	H1
	Australia	CMW40635	H1	H1	H1		H1
	Australia	CMW40636	H1	H1	H1	H1	H1
	Australia	CMW40637	H11	H1	H1	H1	H11
	Darwin, Australia	MUCC737	H1	H1			H1
	Papua New Guinea, Madang	CBS164.96	H1	H2	H1	H1	H12

Table S3.

Region	N	ITS		<i>tef1α</i>		<i>tub2</i>		Total	
		H	H (unique)	H	H (unique)	H	H (unique)	H	H (unique)
North America	15	3	2 (H8,H9)	3	1 (H7)	2	1 (H9)	8	4
Western South America	19	2	1 (H6)	3	1 (H8)	2		7	2
Eastern South America	77	1		4	2 (H3,H4)	3	1 (H11)	9	3
Western Africa	12	1		3	1 (H5)	1		5	1
Southern and Eastern Africa	40	3	1 (H4)	2		4	2 (H2,H8)	9	3
Middle East and Europe	27	3	1 (H3)	2		2		7	1
Asia	57	4	3 (H5,H7,H10)	3	1 (H6)	7	6 (H3,H4,H5,H6,H7,H10)	14	10
Australasia	6	2	1 (H11)	2		1		5	1

Table S4.

Population 1	Population 2	Scenario 1	Scenario 2	Scenario 3
North America	South America	0.271 (0.235–0.307)	0.393 (0.351–0.434)	0.336 (0.298–0.374)
	Africa	0.357 (0.351–0.363)	0.333 (0.327–0.340)	0.310 (0.302–0.317)
	Eurasia	0.330 (0.323–0.337)	0.319 (0.312–0.325)	0.351 (0.344–0.359)
	Australasia	0.256 (0.251–0.261)	0.362 (0.356–0.367)	0.382 (0.377–0.388)
South America	Africa	0.435 (0.422–0.447)	0.355 (0.343–0.368)	0.210 (0.195–0.226)
	Eurasia	0.311 (0.288–0.334)	0.406 (0.381–0.432)	0.283 (0.259–0.306)
	Australasia	0.533 (0.507–0.559)	0.204 (0.175–0.232)	0.263 (0.244–0.282)
Africa	Eurasia	0.312 (0.292–0.332)	0.397 (0.376–0.419)	0.291 (0.271–0.311)
	Australasia	0.413 (0.383–0.444)	0.214 (0.190–0.239)	0.372 (0.345–0.400)
Eurasia	Australasia	0.261 (0.250–0.271)	0.337 (0.326–0.347)	0.403 (0.392–0.414)