

Table S1a. List of cocoa genotypes from Sierra Leone with clone name, GPS information, district name, chiefdom name and village/farm name

Clone name	GPS Information	GPS Information	District	Chiefdom	Village/Farm
AM 1/8 [POU]	08°06.487'	012°04.960'	Moyamba	Njala University	Mokonde 1
AM 1/95 [POU]	08°06.488'	012°04.952'	Moyamba	Njala University	Mokonde 2
AM 2/19 [POU]	08°06.551'	012°04.234'	Moyamba	Njala University	Mokonde 3
AMAZ 3/2 [CHA]	08°06.492'	012°04.953'	Moyamba	Njala University	Lower Nursery
AMAZ 5/2 [CHA]	08°06.493'	012°04.950'	Moyamba	Njala University	Lower Nursery
AMAZ 6/3 [CHA]	08°06.484'	012°04.961'	Moyamba	Njala University	Lower Nursery
C20	07°39.095'	011°05.460'	Kenema	SLARI-KCG	Plot 3
C20	08°08.939'	010°47.854'	Kailahun	Peje Bongre	Pujehun
C20	08°57.095'	010°39.747'	Kono	Gorama Kono	Bassikoro
C20	08°46.085'	010°06.410'	Kono	Sandor	Kamanyema
C21	08°57.081'	010°39.757'	Kono	Toli	Yorgbema
C23	07°40.016'	011°01.105'	Kenema	OFIR-Gaura C/dom	Seed Production plot
C25	07°40.021'	011°01.093'	Kenema	OFIR-Gaura C/dom	Seed Production plot
C25	08°05.277'	010°40.444'	Kailahun	SLARI-PCG	Plot 2
C25	08°25.234'	011°06.456'	Kono	Gorama Kono	Bassikoro
C26	07°40.020'	011°01.089'	Kenema	OFIR-Gaura C/dom	Seed Production plot
C26	08°08.071'	010°52.315'	Kailahun	Peje West	Jokibu
C26	08°25.235'	011°06.447'	Kono	Gorama Kono	Bassikoro
C35	08°07.459'	011°14.112'	Kenema	Dodo	Guala
C36	08°19.215'	011°03.794'	Kenema	Dodo	Guala
C37	08°19.207'	011°03.819'	Kenema	Lower Bambara	Taninahun
C38	08°19.203'	011°03.816'	Kenema	Lower Bambara	Taninahun
C40	07°39.988'	011°01.032'	Kenema	OFIR-Gaura C/dom	Seed Production plot
C41	08°07.453'	011°14.111'	Kenema	Dodo	Guala

C41	07°39.996'	011°01.028'	Kenema	OFIR-Gaura C/dom	Seed Production plot
C42	07°38'938'	011°05.465'	Kenema	SLARI-KCG	Plot 3
C42	07°40.004'	011°01.029'	Kenema	OFIR-Gaura C/dom	Seed Production plot
C43	07°40.011'	011°01.027'	Kenema	OFIR-Gaura C/dom	Seed Production plot
C44	07°40.020'	011°01.025'	Kenema	OFIR-Gaura C/dom	Seed Production plot
C45	08°21.711'	010°26.475'	Kailahun	Kissi Kama	Konkomar
C45	08°57.057'	010°39.765'	Kono	Toli	Yorgbema
C5	08°07.452'	011°14.114'	Kenema	Leppia Kaindu	Gbongboma
C5	08°05.714'	010°15.335'	Kenema	Malegohun	Bendu
C5	07°39.990'	011°01.047'	Kenema	OFIR-Gaura C/dom	Seed Production plot
C51	07°40.044'	011°01.026'	Kenema	OFIR-Gaura C/dom	Seed Production plot
C53	08°05.717'	010°15.353'	Kenema	Malegohun	Bendu
C54	07°40.816'	011°26.485'	Kenema	Malegohun	Bendu
C55	07°40.815'	011°26.485'	Kenema	Langurama	Menima
C57	07°30.819'	011°29.554'	Pujehun	Barrie	Laguah
C58	07°57.862'	010°40.526'	Kailahun	Dea	Dodo
C58	08°50.323'	010°41.404'	Kono	Toli	Yorgbema
C58	07°19.916'	011°20.805'	Pujehun	Barrie	Laguah
C58	07°19.911'	011°20.810'	Pujehun	Makpele	Vaama koitu
C60	08°50.375'	010°41.368'	Kono	Lei	Tunbaidu
C60	07°19.917'	011°20.809'	Pujehun	Makpele	Vaama koitu
C66	08°21.573'	010°23.466'	Kailahun	Kissi Teng	Gboko
C67	07°40.019'	011°01.080'	Kenema	OFIR-Gaura C/dom	Seed Production plot
C67	08°05.289'	010°40.399'	Kailahun	SLARI-PCG	Plot 2
C67	08°39.035'	010°31.451'	Kono	Mafindor	Densambadu
C68	07°40.011'	011°01.060'	Kenema	OFIR-Gaura C/dom	Seed Production plot

C68	08°07.613'	010°39.538'	Kailahun	Upper Bambara	Nagbena
C68	08°05.259'	010°40.350'	Kailahun	SLARI-PCG	Plot 3
C70	07°40.825'	011°26.473'	Kenema	Langurama	Menima
C71	08°17.668'	011°20.141'	Kenema	Langurama	Menima
C72	08°17.661'	011°20.143'	Kenema	Wandor	Gokoma
C73	08°17.668'	011°20.129'	Kenema	Wandor	Gokoma
C74	08°22.838'	011°19.972'	Kenema	Wandor	Gokoma
C74	08°21.571'	010°23.471'	Kailahun	Kissi Teng	Gboko
C74	08°05.297'	010°40.417'	Kailahun	SLARI-PCG	Plot 3
C74	08°08.092'	011°27.599'	Bo	Badja	Kpetema
C75	08°22.843'	011°19.961'	Kenema	Gorama Mende	Konta
C75	08°05.261'	010°40.349'	Kailahun	SLARI-PCG	Plot 3
C76	07°58.029'	011°19.370'	Kenema	Leppia Kaindu	Gbongboma
C76	08°22.848'	011°19.956'	Kenema	Gorama Mende	Konta
C77	07°38.634'	011°05.794	Kenema	Gorama Mende	Konta
C77	07°40.006'	011°01.059'	Kenema	OFIR-Gaura C/dom	Seed Production plot
C77	08°21.729'	010°26.489'	Kailahun	Kissi Kama	Konkomar
C77	07°55.548'	010°50.092'	Kailahun	Kissi Tongi	Fenesu
C77	07°57.879'	010°40.513'	Kailahun	Luawa	Taninihun
C77	08°07.606'	010°39.547'	Kailahun	Malema	Gawama
C77	08°25.239'	011°06.441'	Kailahun	SLARI-PCG	Plot 3
C77	08°39.045'	010°31.457'	Kono	Kamara	Bendu II
C80	07°39.111'	011°05.469'	Kenema	Kpuwabu	Bockarie
C80	08°46.090'	010°06.388'	Kono	Lei	Tunbaidu
C80	07°08.698'	011°22.654'	Pujehun	Makpele	Vaama koitu
C81	07°39.107'	011°05.476'	Kenema	SLARI-KCG	Plot 1
C82	07°39.102'	011°05.480'	Kenema	SLARI-KCG	Plot 1
C83	07°39.138'	011°05.587'	Kenema	SLARI-KCG	Plot 2
C84	07°39.132'	011°05.585'	Kenema	SLARI-KCG	Plot 2
C85	07°39.130'	011°05.577'	Kenema	SLARI-KCG	Plot 2
CC137	08°15.420'	010°50.242'	Kailahun	Yawei	Maaka
CC137	08°05.266'	010°40.448'	Kailahun	SLARI-PCG	Plot 1
CC137	08°37.137'	011°12.646'	Kono	Nimiyama	Sumbedu
CCN51	08°05.720'	010°15.348'	Kenema	Lower Bambara	Taninahun

CCN51	07°39.528'	010°59.617'	Kenema	OFIR-Gaura C/dom	Seed Production plot
CCN51	08°40.441'	010°56.207'	Kono	Gbane	Bendu
CCN51	08°06.489'	012°04.963'	Moyamba	Njala University	Lower Nursery
CL 19/10	08°01.923'	010°57.524'	Kailahun	Njaluahun	Baoma
CL 19/10	08°10.418'	010°39.546'	Kailahun	Luawa	Taninihun
CL 19/10	08°37.148'	011°12.658'	Kono	Nimiyama	Sumbedu
COCA 3308/1 [CHA]	08°06.489'	012°04.951'	Moyamba	Njala University	Lower Nursery
COCA 3348/52 [CHA]	08°06.314'	012°04.322'	Moyamba	Njala University	Lower Nursery
CRU 12			Moyamba	Njala University	Lower Nursery
EET 162 [ECU]	07°39'136'	011°05.406'	Kenema	SLARI-KCG	Plot 3
EET 233 [ECU]	07°38'953'	011°05.475'	Kenema	SLARI-KCG	Plot 3
EET 399 [ECU]	07°38.954'	011°05.473'	Kenema	SLARI-KCG	Plot 3
EET 59 [ECU]	07°39.135'	011°05.571'	Kenema	SLARI-KCG	Plot 3
EET 75 [ECU]	07°39.133'	011°05.576'	Kenema	SLARI-KCG	Plot 3
EET 95 [ECU]	08°18.374'	010°22.421'	Kailahun	Kissi Tongi	Fenesu
EET272	08°16.531'	010°42.180'	Kailahun	Penguia	Nyadehun
EET272	08°21.570'	010°23.477'	Kailahun	Kissi Kama	Konkomar
EET272	07°55.546'	010°50.089'	Kailahun	Jawei	Koituma
EET272	08°05.135'	010°40.455'	Kailahun	Upper Bambara	Nagbena
EET272	08°32.874'	011°05.594'	Kono	Nimiyama	Sumbedu
GU- 147/H	07°55.543'	010°50.090'	Kailahun	Jawei	Koituma
GU- 147/H	07°55.177'	010°48.457'	Kailahun	Dea	Dodo
GU- 261/P	08°08.832'	010°47.806'	Kailahun	Peje Bongre	Pujehun
GU- 261/P	08°05.278'	010°40.442'	Kailahun	SLARI-PCG	Plot 2
GU-147/H	08°32.880'	011°05.594'	Kono	Nimikoro	Jaiama
GU-261/P	08°32.880'	011°05.589'	Kono	Nimikoro	Jaiama
ICS 10	07°39.695'	011°01.040'	Kenema	OFIR-Gaura C/dom	Seed Production plot
ICS 15	07°39.686'	011°01.034'	Kenema	OFIR-Gaura C/dom	Seed Production plot
ICS 35	07°39.679'	011°01.029'	Kenema	OFIR-Gaura C/dom	Seed Production plot

ICS 40	07°39.710'	011°01.056'	Kenema	OFIR-Gaura C/dom	Seed Production plot
ICS 43	07°39.712'	011°01.058'	Kenema	OFIR-Gaura C/dom	Seed Production plot
ICS 43	08°07.616'	010°39.538'	Kailahun	Upper Bambara	Nagbena
ICS 48	07°39.715'	011°01.064'	Kenema	OFIR-Gaura C/dom	Seed Production plot
ICS 5	08°10.416'	010°39.546'	Kenema	SLARI-KCG	Plot 3
ICS 60	07°39.731'	011°01.048'	Kenema	OFIR-Gaura C/dom	Seed Production plot
ICS 63	07°39.746'	011°01.055'	Kenema	OFIR-Gaura C/dom	Seed Production plot
ICS 70	07°39.748'	011°01.049'	Kenema	OFIR-Gaura C/dom	Seed Production plot
ICS 75	07°38.356'	011°15.807'	Kenema	Koya	Pawaima
ICS 75	07°39.724'	011°01.060'	Kenema	OFIR-Gaura C/dom	Seed Production plot
ICS 75	07°39.755'	011°01.048'	Kenema	OFIR-Gaura C/dom	Seed Production plot
ICS 84	07°39.762'	011°01.050'	Kenema	OFIR-Gaura C/dom	Seed Production plot
ICS 84	08°21.720'	010°26.478'	Kailahun	Peje West	Kigbai
ICS 95	07°39.757'	011°01.054'	Kenema	OFIR-Gaura C/dom	Seed Production plot
ICS1	08°01.929'	010°57.525'	Kailahun	Njaluahun	Baoma
ICS29	08°05.135'	010°40.452'	Kailahun	SLARI-PCG	Plot 1
ICS29	08°36.207'	010°56.459'	Kono	Nimikoro	Jaiama
ICS43	08°36.189'	010°56.470'	Kono	Tankoro	Konkowakor
IMC 2	07°39.730'	011°01.073'	Kenema	OFIR-Gaura C/dom	Seed Production plot
IMC 6	07°39.716'	011°01.065'	Kenema	OFIR-Gaura C/dom	Seed Production plot
IMC47	08°16.518	010°42.189'	Kailahun	Penguia	Woloma

IMC47	08°05.265'	010°40.444'	Kailahun	SLARI-PCG	Plot 1
IMC47	08°36.190'	010°56.459'	Kono	Tankoro	Konkowakor
MA 12	08°08.592'	010°51.866'	Kailahun	Peje Bongre	Pujehun
MA 12 [BRA]	07°39.716'	011°01.064'	Kenema	OFIR-Gaura C/dom	Seed Production plot
MA12	08°38.109'	010°46.852'	Kono	Tankoro	Konkowakor
MAN15/2	08°38.096'	010°46.859'	Kono	Fiama	Waiima
MAN15/60	08°38.099'	010°47.235'	Kono	Fiama	Waiima
MO 109	07°39.534'	010°59.638'	Kenema	OFIR-Gaura C/dom	Seed Production plot
MO 9	07°39.698'	011°01.055'	Kenema	OFIR-Gaura C/dom	Seed Production plot
MO20	08°08.594'	010°51.866'	Kailahun	Peje West	Massao
MO20	08°14.259'	010°50.653'	Kailahun	Yawei	Maaka
MO20	08°35.974'	010°35.042'	Kono	Fiama	Saindekor
N 38 [T38]	07°39.541'	010°59.640'	Kenema	OFIR-Gaura C/dom	Seed Production plot
NA 111	07°39.540'	010°59.648'	Kenema	OFIR-Gaura C/dom	Seed Production plot
NA 149	07°39.540'	010°59.650'	Kenema	OFIR-Gaura C/dom	Seed Production plot
NA 232	07°39.515'	010°59.635'	Kenema	OFIR-Gaura C/dom	Seed Production plot
NA 26	07°39.542'	010°59.635'	Kenema	OFIR-Gaura C/dom	Seed Production plot
NA 399	07°39.508'	010°59.631'	Kenema	OFIR-Gaura C/dom	Seed Production plot
NA 70	07°39.545'	010°59.644'	Kenema	OFIR-Gaura C/dom	Seed Production plot
Na32	08°37.154'	011°12.662'	Kono	Sandor	Kamanyema
Na32	08°06.485'	012°04.949'	Pujehun	SorroGbema	Laguah
Na33	07°57.864'	010°40.533'	Kailahun	Dea	Dodo
NA33	08°35.962'	010°35.053'	Kono	Gbane Kandu	Gbangbador
Na34	07°54.748'	010°46.595'	Kailahun	Mandu	Tinkonko

Na34	07°08.707'	011°22.648'	Pujehun	SorroGbema	Laguah
PA 7	07°38.350'	011°15.813'	Kenema	Koya	Pawaima
PA121	08°35.578'	010°35.946'	Kono	Gbane Kandu	Gbangbador
Pa13	08°10.438'	010°39.534'	Kailahun	Njaluahun	Baoma
PA13	08°13.797'	010°44.019'	Kono	Gbane Kandu	Gbaidu
Pa150	07°54.753'	010°46.596'	Kailahun	Malema	Gawama
Pa35	07°55.152'	010°48.448'	Kailahun	Mandu	Tinkonko
Pa35	07°08.701'	011°22.649'	Pujehun	SorroGbema	Laguah
PA7	08°27.784'	010°44.018'	Kono	Gbane	Seimidu
Pa70	07°55.163'	010°48.457'	Kailahun	Mandu	Tinkonko
PA70	08°40.444'	010°56.207'	Kono	Gbense	Kongoteh
PA88	08°29.299'	010°46.254'	Kono	Gbane	Seimidu
PA88	08°40.427'	010°56.204'	Kono	Gbense	Kongoteh
PBC123	08°28.541'	010°43.702'	Kono	Gbense	Kongoteh
POUND 10/B	08°08.382'	010°49.254'	Kailahun	Penguia	Nyadehun
POUND 10/B	08°28.541'	010°43.709'	Kono	Soa	Konoma
POUND 4/B	08°01.923'	010°57.513'	Kailahun	Yawei	Levuma
POUND 4/B	08°29.670'	010°45.723'	Kono	Soa	Konoma
POUND 7/B	08°18.386'	010°22.413'	Kailahun	Kissi Teng	Gboko
POUND 7/B	08°41.456'	011°00.909'	Kono	Soa	Delyoh
POUND16	08°14.263'	010°50.652'	Kailahun	Jawei	Koituma
POUND16	08°10.432'	010°39.548'	Kailahun	Luawa	Taninihun
Pound7	07°39.701'	011°01.072'	Kenema	OFIR-Gaura C/dom	Seed Production plot
S72	08°18.373'	010°22.419'	Kailahun	Kissi Tongi	Fenesu
S72	07°54.746'	010°46.593'	Kailahun	Malema	Gawama
S72	08°46.082'	010°06.430'	Kono	Sandor	Kamanyema
S72	08°10.648'	011°41.739'	Bo	Valunya	Yambama
S72	08°10.636'	011°41.736'	Bo	Valunya	Yambama
S72	08°08.069'	011°27.598'	Bo	Valunya	Yambama
SC 1	07°39.513'	010°59.629'	Kenema	OFIR-Gaura C/dom	Seed Production plot
SC 9	07°39.519'	010°59.623'	Kenema	OFIR-Gaura C/dom	Seed Production plot
SC20	07°53.145'	011°11.280.	Kenema	OFIR-Gaura C/dom	Seed Production plot
SCA 9	08°50.343'	010°41.377'	Kono	Lei	Tunbaidu

SCA11	07°53.141'	011°11.280.	Kenema	TradinOrganic	Experimental Plot
SCA12	07°53.141'	011°11.273.	Kenema	TradinOrganic	Experimental Plot
SCA19	07°53.141'	011°11.272.	Kenema	TradinOrganic	Experimental Plot
SCA6	07°58.024'	011°19.368'	Kenema	Leppia Kaindu	Gbongboma
SCA6	07°53.144'	011°11.282.	Kenema	TradinOrganic	Experimental Plot
SCA6	08°41.465'	011°00.906'	Kono	Kamara	Bendu II
SCA9	07°53.145'	011°11.281.	Kenema	TradinOrganic	Experimental Plot
SCA9	08°41.445'	011°00.928'	Kono	Kamara	Bendu II
SPEC 41/6-18	08°15.521'	010°42.607'	Kenema	TradinOrganic	Experimental Plot
SPEC 41/6-18	08°12.080'	011°28.229'	Kono	Mafindor	Densambadu
SPEC 54/1	08°12.076'	011°28.220'	Bo	Komboya	Njala
T12	08°02.799'	011°02.032'	Kenema	Nongowa	Tallia
T16	08°02.303	011°02.030	Kenema	Nongowa	Tallia
T17	07°42.712'	011°04.981'	Kenema	Nongowa	Mano Kontouhun
T17	08°39.454'	010°31.555'	Kono	Mafindor	Densambadu
T17	08°10.655'	011°41.729'	Bo	Komboya	Njala
T17	08°08.079'	011°27.603'	Bo	Badja	Kpetema
T17	08°06.601'	012°04.273'	Moyamba	Njala University	Lower Nursery
T60	07°42.728'	011°04.976'	Kenema	Dama	Kabaima
T60	08°12.068'	011°28.211'	Bo	Komboya	Njala
T60	07°30.815'	011°29.554'	Pujehun	Barrie	Laguah
T60	08°06.481'	012°04.952'	Moyamba	Njala University	Lower Nursery
T63	07°42.728'	011°04.986'	Kenema	Dama	Kabaima
T65	07°39.957'	011°04.706'	Kenema	Dama	Kabaima
T72	07°39.972'	011°04.707'	Kenema	Gaura	Perrie
T73	07°39.980'	011°04.707'	Kenema	Gaura	Perrie
T76	07°38.456'	011°10.745'	Kenema	Gaura	Perrie
T79	07°38.458'	011°10.757'	Kenema	Tonkia	Fiema
T79	07°30.805'	011°29.564'	Bo	Badja	Kpetema
T82	07°38.465'	011°10.763'	Kenema	Tonkia	Fiema
T85	07°38.352'	011°15.804'	Kenema	Tonkia	Fiema
WAE 11	07°51.498'	011°20.248'	Kenema	Small Bo	Yaweima
WAE 3	07°51.504'	011°20.247'	Kenema	Small Bo	Yaweima

WAE 5	07°32.775'	011°01.450'	Kenema	Koya	Pawaima
WBE 2	07°32.766'	011°01.446'	Kenema	Nomo	Lowoma
WBE 3	07°32.778'	011°01.435'	Kenema	Nomo	Lowoma
WBE 4	07°41.556'	011°24.858'	Kenema	Nomo	Lowoma
WBE 6	08°06.103'	011°19.964'	Kenema	Small Bo	Yaweima
WE 4	07°51.493'	011°20.255'	Kenema	Niawa	Ngolahun Menila
WE 6	07°41.569'	011°24.857'	Kenema	Niawa	Ngolahun Menila
WEA 2	08°06.095'	011°19.966'	Kenema	Simbaru	Payeala
WEB 1	07°41.574'	011°24.862'	Kenema	Niawa	Ngolahun Menila
WEB 2	07°58.015'	011°19.386'	Kenema	Simbaru	Payeala
WEB 3	08°06.101'	011°19.966'	Kenema	Simbaru	Payeala

Table S1b. List of cocoa genotypes from Togo with clone name, GPS information, district name, chiefdom name and village/farm name

Clone name	GPS Information	GPS Information	District	Chiefdom	Village/Farm
A13	6° 49' 23,08 "	0° 52' 06,6 "	Agou	Agou	Zozokondji
A14	7° 35' 49,79 "	0° 42' 55,29 "	Wawa	Litimé	Bethel- Djigbidi
A19	6° 49' 41,56 "	0° 43' 05,64 "	Danyi	Kakpa	Koudzravi
A19	7° 26' 49,57 "	0° 53' 47,01 "	Wawa	Litimé	Bethel- Djigbidi
A19	7° 26' 50,72 "	0° 53' 50,21 "	Wawa	Litimé	Ikpini
A19	7° 26' 50,15 "	0° 53' 49,68 "	Wawa	Litimé	Ikpini
A19	7° 26' 51,7 "	0° 53' 50,08 "	Wawa	Litimé	Ikpini
A3	7° 12' 41,63 "	0° 42' 06,4 "	Kloto	Tove	Station CRAF
A5	6° 51' 05,71 "	0° 38' 56,34 "	Kloto	Tove	Station CRAF
A65	6° 51' 04,82 "	0° 38' 55,52 "	Kloto	Tove	Station CRAF
A68	6° 49' 12,21 "	0° 38' 15,25 "	Kloto	Fiokpo	Kpadapé
A7	6° 49' 21,35 "	0° 52' 06,68 "	Agou	Agou	Zozokondji
A7	6° 50' 24,87 "	0° 38' 47,36 "	Kloto	Tove	Station CRAF
A8	7° 12' 30,73 "	0° 41' 54,4 "	Kloto	Tove	Station CRAF

C14	6° 49' 17,86"	0° 52' 05,38"	Agou	Agou	Zozokondji
C14	6° 51' 04,82"	0° 38' 55,52"	Agou	Agou	Zozokondji
C14	6° 49' 11,38"	0° 38' 15,71"	Kloto	Tove	Station CRAF
C18	6° 49' 17,02"	0° 52' 05,15"	Agou	Agou	Zozokondji
C18	6° 49' 18,04"	0° 52' 04,98"	Agou	Agou	Zozokondji
C18	6° 49' 20"	0° 52' 06"	Agou	Agou	Zozokondji
C20	6° 49' 11,87"	0° 36' 39,35"	Kloto	Tove	Station CRAF
C23	6° 49' 39,81"	0° 43' 06,27"	Agou	Agou	Zozokondji
C26	7° 12' 41,27"	0° 42' 05,92"	Kloto	Fiokpo	Kpadapé
C26	7° 12' 41,27"	0° 42' 05,92"	Kloto	Tove	Station CRAF
C26 X SCA6	6° 51' 05,33"	0° 38' 55,06"	Agou	Agou	Zozokondji
C26 X SCA6	6° 49' 12,54"	0° 38' 15,12"	Kloto	Fiokpo	Kpadapé
C27	7° 12' 41,63"	0° 42' 06,4"	Kloto	Fiokpo	Kpadapé
C27	6° 49' 11,67"	0° 36' 41,29"	Kloto	Tove	Station CRAF
C42	7° 26' 51,26"	0° 53' 48,11"	Wawa	Litimé	Bethel-Djigbidi
C63	7° 26' 51,35"	0° 53' 50,44"	Wawa	Litimé	Ikpini
C63	6° 49' 12,54"	0° 38' 15,12"	Kloto	Tove	Station CRAF
C64	6° 49' 42,68"	0° 49' 42,68"	Danyi	Kakpa	Koudzravi
C64	6° 49' 41,2"	0° 43' 07,68"	Agou	Agou	Zozokondji
C64	6° 49' 07,19"	0° 52' 22,61"	Agou	Agou	Zozokondji
C64	7° 12' 30,98"	0° 41' 53,98"	Kloto	Fiokpo	Kpadapé
C64	7° 35' 58,78"	0° 43' 05,99"	Wawa	Litimé	Bethel-Djigbidi
C65	6° 49' 42,35"	0° 43' 07,2"	Danyi	Kakpa	Koudzravi
C65	6° 49' 18,14"	0° 52' 05,38"	Danyi	Kakpa	Koudzravi
C65	7° 26' 52,21"	0° 53' 50,04"	Wawa	Litimé	Ikpini
C65	6° 50' 23,58"	0° 38' 47,28"	Kloto	Tove	Station CRAF
C65	6° 50' 23,44"	0° 38' 47,43"	Kloto	Tove	Station CRAF
C65	6° 49' 12,01"	0° 36' 40,41"	Kloto	Tove	Station CRAF
C65	7° 12' 41,78"	0° 42' 05,94"	Kloto	Tove	Station CRAF

C70	6° 49' 17,76"	0° 52' 04,97"	Agou	Agou	Zozokondji
CF62	6° 49' 21,06"	0° 52' 06,32"	Agou	Agou	Zozokondji
CF62 X T20/21	6° 49' 21,07"	0° 52' 06,30"	Agou	Agou	Zozokondji
CF62 X T20/21	6° 51' 05,29"	0° 38' 55,5"	Agou	Agou	Zozokondji
CF62 X T20/21	7° 26' 51,36"	0° 53' 46,84"	Wawa	Litimé	Ikpini
CF62 X T20/21	7° 26' 51,26"	0° 53' 48,11"	Kloto	Tove	Station CRAF
GS36	6° 49' 11,87"	0° 36' 39,35"	Kloto	Fiokpo	Kpadapé
ICS16	6° 49' 12,03"	0° 38' 19,29"	Kloto	Tove	Station CRAF
ICS6	6° 49' 40,14"	0° 43' 06,98"	Agou	Agou	Zozokondji
ICS6	6° 50' 24,95"	0° 38' 47,22"	Kloto	Fiokpo	Kpadapé
ICS6	6° 52' 32,59"	0° 43' 33,04"	Kloto	Tove	Station CRAF
ICS6 X NA33	6° 49' 42,02"	0° 43' 06,31"	Danyi	Kakpa	Koudzravi
ICS6 X NA33	6° 49' 21,89"	0° 52' 06,71"	Agou	Agou	Zozokondji
ICS60	6° 49' 04,7"	0° 52' 22,49"	Agou	Agou	Zozokondji
ICS75	7° 12' 30,73"	0° 41' 54,4"	Kloto	Fiokpo	Kpadapé
IFC1	6° 49' 23,08"	0° 52' 06,6"	Agou	Agou	Zozokondji
IFC1	6° 49' 17,49"	0° 52' 05,4"	Agou	Agou	Zozokondji
IFC1	7° 12' 30,01"	0° 41' 53,95"	Kloto	Tove	Station CRAF
IFC1	7° 26' 51,36"	0° 53' 46,84"	Kloto	Tove	Station CRAF
IFC1 X SNK13	6° 49' 12,03"	0° 38' 19,29"	Kloto	Fiokpo	Kpadapé
IFC1 X SNK13	7° 12' 41,78"	0° 42' 05,94"	Kloto	Fiokpo	Kpadapé
IFC1 X SNK13	6° 52' 34,45"	0° 43' 32,85"	Kloto	Tove	Station CRAF
IFC1057	6° 51' 05,23"	0° 38' 55,52"	Agou	Agou	Zozokondji
IFC1057	7° 12' 41,58"	0° 42' 05,74"	Kloto	Fiokpo	Kpadapé
IFC1057	7° 26' 51,16"	0° 53' 46,24"	Wawa	Litimé	Ikpini
IFC2	7° 26' 51,48"	0° 53' 49,83"	Wawa	Litimé	Ikpini
IFC409	6° 49' 18,3"	0° 52' 05,46"	Danyi	Kakpa	Koudzravi
IFC409	6° 49' 12,22"	0° 36' 40,07"	Kloto	Tove	Station CRAF
IFC410	7° 26' 50,76"	0° 53' 47,86"	Wawa	Litimé	Bethel- Djigbidi
IFC410	7° 35' 49,07"	0° 42' 54,54"	Wawa	Litimé	Bethel- Djigbidi
IFC412	6° 51' 05,71"	0° 38' 56,34"	Agou	Agou	Zozokondji

IMC23	6° 49' 42,68"	0° 43' 06,97"	Danyi	Kakpa	Koudzravi
IMC23	7° 26' 50,77"	0° 53' 50,81"	Wawa	Litimé	Ikpini
IMC47	6° 50' 23,58"	0° 38' 46,85"	Kloto	Tove	Station CRAF
IMC67	6° 52' 34,52"	0° 43' 32,63"	Danyi	Kakpa	Koudzravi
IMC67	7° 26' 51,09"	0° 53' 47,09"	Wawa	Litimé	Ikpini
IMC67	7° 12' 30,98"	0° 41' 53,98"	Kloto	Tove	Station CRAF
IMC67 X IMC40	6° 49' 42,4"	0° 43' 07,22"	Danyi	Kakpa	Koudzravi
IMC67 X IMC40	6° 49' 07,85"	0° 52' 22,89"	Agou	Agou	Zozokondji
Lost label	6° 52' 31,27"	0° 43' 32,49"	Kloto	Tove	Station CRAF
Lost label (probably clone A19)	6° 49' 18,13"	0° 52' 05,14"	Agou	Agou	Zozokondji
Lost label (probably clone PA7)	6° 49' 22,03"	0° 52' 07,04"	Agou	Agou	Zozokondji
Lost label (probably clone PA7)	7° 35' 49,08"	0° 42' 55,76"	Wawa	Litimé	Ikpini
Lost label (probably clone PA7)	6° 49' 12,65"	0° 36' 41,26"	Kloto	Tove	Station CRAF
NA2	6° 50' 23,58"	0° 38' 47,28"	Agou	Agou	Zozokondji
Na34	6° 52' 31,27"	0° 43' 32,49"	Danyi	Kakpa	Koudzravi
Na79	6° 49' 41,56"	0° 43' 06,31"	Danyi	Kakpa	Koudzravi
Na79	6° 49' 06,86"	0° 52' 22,19"	Agou	Agou	Zozokondji
P30	6° 49' 07,17"	0° 52' 22,13"	Agou	Agou	Zozokondji
Pa35	7° 35' 49,19"	0° 42' 56"	Wawa	Litimé	Bethel- Djigbidi
Pa39	6° 49' 22,77"	0° 52' 06,37"	Agou	Agou	Zozokondji
Pa39	7° 26' 50,7"	0° 53' 46,99"	Wawa	Litimé	Ikpini
PA56	6° 50' 23,44"	0° 38' 47,43"	Agou	Agou	Zozokondji
PA56	6° 49' 12,65"	0° 36' 41,26"	Kloto	Fiokpo	Kpadapé
PA7	6° 49' 12,88"	0° 38' 15,34"	Kloto	Fiokpo	Kpadapé
PA7	7° 26' 50,01"	0° 53' 50,51"	Wawa	Litimé	Bethel- Djigbidi

PA7	7° 26' 50,17"	0° 53' 46,15"	Wawa	Litimé	Bethel-Djigbidi
Pound7	7° 26' 50,02"	0° 53' 46,83"	Wawa	Litimé	Bethel-Djigbidi
SCA12 X NA32	6° 49' 18,52"	0° 52' 04,96"	Agou	Agou	Zozokondji
SCA12 X NA32	6° 49' 12,01"	0° 36' 40,41"	Kloto	Fiokpo	Kpadapé
SNK12	6° 49' 21,34"	0° 52' 06,11"	Agou	Agou	Zozokondji
SNK48	7° 26' 50,49"	0° 53' 51,13"	Wawa	Litimé	Ikpini
SPA9	6° 49' 12,21"	0° 38' 15,25"	Kloto	Tove	Station CRAF
T100/34	6° 49' 12,22"	0° 36' 40,07"	Kloto	Fiokpo	Kpadapé
T100/34	6° 52' 31,27"	0° 43' 32,17"	Kloto	Tove	Station CRAF
T50/12	6° 49' 40,37"	0° 43' 08,68"	Danyi	Kakpa	Koudzravi
T50/13	6° 50' 23,58"	0° 38' 46,85"	Agou	Agou	Zozokondji
T57/22	6° 49' 06,86"	0° 52' 22,49"	Kloto	Tove	Station CRAF
T63/43	6° 49' 41,53"	0° 43' 06,35"	Danyi	Kakpa	Koudzravi
T63/43	6° 51' 05,23"	0° 38' 55,52"	Kloto	Tove	Station CRAF
T65/238	6° 49' 11,67"	0° 36' 41,29"	Kloto	Fiokpo	Kpadapé
T85/15	7° 12' 30,01"	0° 41' 53,95"	Kloto	Fiokpo	Kpadapé
T86/2	6° 50' 24,95"	0° 38' 47,22"	Kloto	Tove	Station CRAF
T9/15	6° 51' 07,6"	0° 38' 55,89"	Agou	Agou	Zozokondji
UPA134	N:6° 49' 06,71"	E:0° 52' 21,91"	Agou	Agou	Zozokondji
UPA143	7° 12' 41,12"	0° 42' 06,41"	Kloto	Fiokpo	Kpadapé
UPA405	6° 49' 23,01"	0° 52' 06,16"	Kloto	Agou	Zozokondji
UPA405	6° 49' 17,79"	0° 52' 05,12"	Agou	Agou	Zozokondji
UPA405	7° 26' 50,83"	0° 53' 46,62"	Wawa	Litimé	Bethel-Djigbidi
UPA409	6° 49' 42,24"	0° 43' 07,23"	Danyi	Kakpa	Koudzravi
UPA409	6° 49' 21,87"	0° 52' 07,09"	Agou	Agou	Zozokondji
UPA603	6° 52' 32,59"	0° 43' 33,04"	Danyi	Kakpa	Koudzravi
UPA603	7° 35' 48,58"	0° 42' 55,67"	Wawa	Litimé	Ikpini
UPA710	7° 35' 55,71"	0° 43' 05,72"	Wawa	Litimé	Bethel-Djigbidi
W4/406	6° 49' 11,38"	0° 38' 15,71"	Kloto	Fiokpo	Kpadapé
W4/566	6° 49' 18,43"	0° 52' 05,18"	Danyi	Kakpa	Koudzravi
W4/566	6° 49' 21,4"	0° 52' 06,71"	Agou	Agou	Zozokondji

W4/61	7° 12' 41,12"	0° 42' 06,41"	Kloto	Tove	Station CRAF
W4/622	6° 52' 31,27"	0° 43' 32,17"	Danyi	Kakpa	Koudzravi
W4/622	7° 35' 48,58"	0° 42' 55,67"	Wawa	Litimé	Ikpini
W5/587	6° 52' 34,45"	0° 43' 32,85"	Danyi	Kakpa	Koudzravi
W5/678	7° 26' 51,27"	0° 53' 49,77"	Wawa	Litimé	Bethel-Djigbidi
W6/379	6° 49' 18,42"	0° 52' 04,84"	Agou	Agou	Zozokondji
W6/379	6° 49' 06,86"	0° 52' 22,49"	Agou	Agou	Zozokondji
W6/379	6° 50' 24,87"	0° 38' 47,36"	Kloto	Fiokpo	Kpadapé
W6/56	6° 49' 12,88"	0° 38' 15,34"	Kloto	Tove	Station CRAF
W6/56	7° 12' 41,58"	0° 42' 05,74"	Kloto	Tove	Station CRAF
W6/712	6° 49' 07,4"	0° 52' 21,93"	Agou	Agou	Zozokondji

Table S2. Details of 20 KASP-SNPs with their ID's and their position in each linkage group.

SNP ID	SNP details	SNP position
snpTC00001	TtCTTCAtAGCTGGTATTCTCTGATATTAGaGATATC GAGCTTGGCCGCTTtATTAATGG[A/C]AGAGATGG GCTCTCTAGCTGAGGAAGctCTACGAACTGATCA GAGTGGATGAAGTTTAGA	LG 1
snpTC00002	CAAAATTTTTTAACTATATGATGGACCATATAGCCT AAATAAATATAGCAAAAATG[A/C]ATAACAACAAAT TATATGGCTGGCTTGCAAAAAGACTATAAGGGCTT GTGGCTAGT	LG 1
snpTC00003	TGGAGAGTGTATAGAAAAGTGGCTGGATATGGGT TGCCCTATTTGCAGGTACAA[T/C]ATGCCTGTTGA TGAAGAAGAGATGGGCAACAAGAGAGATGAGGA AAGGAGAAGATGAG	LG 2

snpTC00004	TGGATGGATTATAAAGGTTGAGATGAATGACGCC GGGGAGTTGAAGAACTTGATGGGC[A/G]GAAGAA TACCAAGTTGTGAGGAAGAAGATAAAGCACTGAC CAGATGCCCTGGCC	LG 2
snpTC00005	TGAAATGGAAATGAAAATACAAAAACCAAGATGT AATAGCAAGTGATGCTTTT[C/G]TGCTGATTATAAC AGAAGTTGTGTTAATTTTACACTTAGTTGATGTGGT TTTAAAGGG	LG 3
snpTC00006	ATGCAAGAGGGAACTGGAGAGTAGTATGCTAAG CCGCATGAAATGCTGCAAG[A/G]GACCTTGACC CTTGATGAGAAGAACCACGGGATTTGAGGGTG AGGCTTT	LG 3
snpTC00007	GGAAATTGAAGATTGTGAAGGAGAACTGATTAGA CCTGGAATGATTTAAA[A/T]CTTGATTAAGAGGGG TGGCAATGGCAGGTTTTGAAGACTGCTGCCTAT GGGCATTTT	LG 4
snpTC00008	GGGTAAATGGCACTTGAGGTTGCCAGAGATAAAG CTATATGCCAAGCCAA[A/T]TTTGGGCATCAGGG AAACACCAAAAAACAAGTTTTTATGGCAAAATG	LG 4
snpTC00009	AATTCGACCCCTCATCGTATAGTTCCGGGTCAGG TACGTCTTCGTCTTCTTCTTCATCAGACTCCGCGT CTTCAATCCACAAAGGACATCAATACCCTTCGAC GACTACTGCTGACTTGGGAACACCCACCAGCGT TTTGCCGGCAACATC[T/G]GGTGA CTGGTCTGATT TTTCCTCTAATTTTTATCTAGAACTTTGTCAAG	LG 5
snpTC00010	AACAAGAACAAGGGAATGGGGACAATATGACCA CTAGACATGATGGCTTCC[A/G]TAGTAGTGAGAA AGGAATAACATAGAATAAGCTGACAGATGCACTG CAACCT	LG 5

snpTC00011	GAACAAAAATTGTAAATTAATTATGCATGGAGTAAT GACCCACAGCTTTGCAACACC[T/C]CAAAAATG GTGGTTGCCTTTGTACATAATGATTGGGATGAAAT TTGTTTGT	LG 6
snpTC00012	GGTCGGACTTTGTGGATCGGAGATTGCAGTATT ATATGGATGAGAATTATCTCTTGGG[T/C]TGTTTG CCCAAAGTGGAGAGGTTGTTTCAGTGAAAGTTAT CCGTAACAAGCAAACAGGC	LG 6
snpTC00013	TACGATGCTGAAGGTGCTTGGCCTTATCTTATAGA TGAGTTTGTGGAATACTTGAACGAGAATGGCATC ATTCAGAATAGCCAGTTGACTGATTGGAGCCAAA AACGATGAAGG[A/G]CTGCTGGATGATAAATTGTT GTGAAGTCTTCACAATTTGTCTTGAGTGTGGTTTCT CTTGTGATGCCAATGTGAAGTACCTATTC	LG 7
snpTC00014	AGCCATGGCCGAGAAAAAGCCAGCCCGGTTAA CCCGATTGACCCGACTCAG[A/G]GAGACGTTA CCGCGGCGTGAAAGCGCCCATGGGGCCGTTAC GCGGCGGAGACGG	LG 7
snpTC00015	GGCGCTATTTACAGTTACAAGACGGCTGCTAGC GGTCGCCAAGCTTACCCGA[A/G]CAGGTTGCG GAAAGAAGCAACCCGGCGTTAGGTTGCCGAGC AGGAC	LG 8
snpTC00016	ACTGCCTAAATATATATGATGAAGAAAAAGCTTTG GAGAAAACAAGGAAGGTTGAC[T/C]GAGAAGATT GCAGCTGAACTGCTATTGACGATGTTTGCAGCCG AACTGAA	LG 8
snpTC00017	GCATAGAAATTACGACAGCCCAATTTCTTGTTAAA AGTTCTGTTTAAT[A/C]GTTTCATCTGAAAATGTGAT CAAGCTTTTGGCAGCCGCCGCGAGCAA	LG 9

snpTC00018	CACTTGCCACAAGTCACTAAAGCATTGAAACCAG CAAGAAGTGATTTA[T/G]ATTACCAGCACTTAAAA CTTTAAAGGATAGGTGAGTAAAGAAATGAGGCGC T	LG 9
snpTC00019	ACCGACACAGGATACCGTGAATGGGGAACCTATG AAGGCAGCTTGCTATGTGTGGGA[A/C]ATTGCA CTTTGGGTCCAATAAGTTTAAATTACCCGACAGCT TATA	LG 10
snpTC00020	AAATTGGAACCCACCAAACCATGCATGGCCAT GGATACTAGCAATGATGCTGCTT[T/G]GTTACCTT GCAGGCTGCCTTGGCTGCTTAGTGTGTTGACAATG CTAAAAAC	LG 10

Table S3. Cacao accessions from Sierra Leone and Togo, their grouping based on population structure, DAPC and Hierarchical Clustering (HC), and the source of introductions of cacao germplasm in the two countries.

Clone name	Source of Introduction	Country	HC	Admixed Group	DAPC
IMC67	Ghana	Togo	3	3	2
W5/587	Nigeria	Togo	2	3	2
UPA603	Cote d'Ivoire	Togo	1	2	3
W4/622	Nigeria	Togo	3	3	2
Na34	Nigeria	Togo	3	3	2
IMC23	Cote d'Ivoire	Togo	3	3	2
C64	Ghana	Togo	1	2	3
IMC67 X IMC40	Ghana	Togo	1	3	3
T63/43	Nigeria	Togo	1	3	2
Na79	Ghana	Togo	3	3	2
C65	Ghana	Togo	1	2	3
UPA409	Cote d'Ivoire	Togo	1	2	3
T50/12	Unknown	Togo	2	3	2
ICS6 X NA33	Cameroon/Ghana	Togo	1	2	3
A19	Togo	Togo	1	3	3
IFC409	Cote d'Ivoire	Togo	3	3	2
W4/566	Nigeria	Togo	2	4	3
C65	Ghana	Togo	2	Admixed	3

Lost label (probably clone A19)	Togo	Togo	4	Admixed	2
C18	Ghana	Togo	3	4	4
C23	Nigeria/Ghana	Togo	4	3	2
C70	Ghana	Togo	1	Admixed	3
A13	Togo	Togo	1	2	3
C64	Ghana	Togo	4	3	2
C14	Ghana	Togo	1	Admixed	1
Pa39	Nigeria	Togo	1	2	3
ICS6	Nigeria	Togo	1	2	3
Lost label (probably clone PA7)	Nigeria	Togo	1	2	3
UPA405	Cote d'Ivoire	Togo	1	2	3
UPA409	Cote d'Ivoire	Togo	3	3	2
A7	Togo	Togo	4	3	2
CF62	Nigeria	Togo	3	Admixed	4
SNK12	Cameroon	Togo	4	Admixed	2
W6/379	Nigeria	Togo	2	Admixed	3
IFC1	Cote d'Ivoire	Togo	2	4	3
CF62 X T20/21	Nigeria	Togo	2	3	3
C18	Ghana	Togo	2	Admixed	3
W4/566	Nigeria	Togo	1	2	3
SCA12 X NA32	Ghana/Nigeria	Togo	4	1	4
ICS6 X NA33	Nigeria/Cameroon/Ghana	Togo	2	Admixed	3
C18	Ghana	Togo	2	4	3
UPA405	Cote d'Ivoire	Togo	2	Admixed	3
C64	Ghana	Togo	3	3	2
IMC67 X IMC40	Ghana	Togo	3	Admixed	4
IFC1	Cote d'Ivoire	Togo	1	Admixed	3
Na79	Ghana	Togo	1	Admixed	3
W6/712	Nigeria	Togo	4	Admixed	2
P30	Ghana	Togo	1	2	3
UPA134	Cameroon	Togo	1	2	3
C26 X SCA6	Nigeria/Ghana	Togo	2	2	3
ICS60	Nigeria	Togo	4	3	2
CF62 X T20/21	Nigeria	Togo	2	Admixed	3
T9/15	Nigeria	Togo	3	3	2
IFC412	Cote d'Ivoire	Togo	1	2	3

W6/379	Nigeria	Togo	4	3	2
C14	Ghana	Togo	2	3	2
T50/13	Nigeria	Togo	1	2	3
IFC1057	Cote d'Ivoire	Togo	2	3	2
NA2	Ghana/Cote d'Ivoire	Togo	1	Admixed	3
PA56	Ghana	Togo	1	4	3
W6/379	Nigeria	Togo	1	2	3
GS36	Ghana	Togo	2	Admixed	3
T100/34	Nigeria	Togo	4	3	2
ICS6	Nigeria	Togo	1	2	3
SCA12 X NA32	Ghana/Nigeria	Togo	2	3	3
PA7	Nigeria	Togo	1	2	3
C26 X SCA6	Nigeria/Ghana	Togo	2	2	3
PA56	Ghana	Togo	1	2	3
T65/238	Nigeria	Togo	1	2	3
A68	Togo	Togo	3	4	4
W4/406	Nigeria	Togo	1	2	3
IFC1 X SNK13	Cote d'Ivoire/Cameroon	Togo	1	3	3
C64	Ghana	Togo	1	2	3
IFC1057	Cote d'Ivoire	Togo	1	2	3
IFC1 X SNK13	Cote d'Ivoire/Cameroon	Togo	1	Admixed	1
T85/15	Nigeria	Togo	1	2	3
C26	Nigeria	Togo	1	2	3
C27	Ghana	Togo	2	3	3
ICS75	Ghana	Togo	1	2	3
UPA143	Cameroon	Togo	3	3	2
C42	Nigeria	Togo	2	Admixed	3
CF62 X T20/21	Nigeria	Togo	2	3	3
IFC1057	Cote d'Ivoire	Togo	3	3	2
IMC67	Ghana	Togo	2	2	3
Pa39	Nigeria	Togo	2	Admixed	3
UPA405	Cote d'Ivoire	Togo	3	3	2
Pound7	Ghana	Togo	1	Admixed	3
IFC410	Cote d'Ivoire	Togo	1	2	3
PA7	Nigeria	Togo	4	Admixed	4
PA7	Nigeria	Togo	3	3	2
IFC2	Cote d'Ivoire	Togo	1	2	3
C63	Nigeria	Togo	1	2	3
IMC23	Cote d'Ivoire	Togo	1	Admixed	3

SNK48	Cameroon	Togo	4	1	1
W5/678	Nigeria	Togo	3	4	4
A19	Togo	Togo	3	3	2
A19	Togo	Togo	3	3	2
A19	Togo	Togo	3	4	4
A19	Togo	Togo	3	4	4
C65	Ghana	Togo	3	4	4
C64	Ghana	Togo	4	1	1
IFC410	Cote d'Ivoire	Togo	3	4	4
A14	Togo	Togo	3	4	4
Pa35	Nigeria	Togo	3	3	2
UPA710	Cote d'Ivoire	Togo	3	4	4
UPA603	Cote d'Ivoire	Togo	3	4	4
W4/622	Nigeria	Togo	3	3	2
Lost label (probably clone PA7)	Nigeria	Togo	3	3	2
A5	Togo	Togo	3	4	4
T57/22	Nigeria	Togo	3	4	4
A65	Togo	Togo	3	4	4
IMC47	Ghana	Togo	3	4	4
T63/43	Nigeria	Togo	3	3	2
C65	Ghana	Togo	3	3	2
C65	Ghana	Togo	4	1	1
A7	Togo	Togo	3	3	2
C20	Ghana	Togo	3	4	4
IFC409	Cote d'Ivoire	Togo	3	3	2
T86/2	Nigeria	Togo	3	3	2
C65		Togo	3	4	4
W6/56	Nigeria	Togo	2	4	3
C63	Nigeria	Togo	3	3	2
Lost label (probably clone PA7)	Nigeria	Togo	3	4	4
C27	Ghana	Togo	3	4	4
SPA9	Ghana	Togo	2	Admixed	3
C14	Ghana	Togo	3	3	2
ICS16	Ghana/Cameroon	Togo	3	3	2
IMC67	Ghana	Togo	1	2	3
W6/56	Nigeria	Togo	3	3	2
C65	Ghana	Togo	2	Admixed	3

IFC1	Cote d'Ivoire	Togo	2	4	4
C26	Nigeria	Togo	2	2	3
A3	Togo	Togo	1	Admixed	3
A8	Togo	Togo	3	3	2
W4/61	Nigeria	Togo	3	3	2
CF62 X T20/21	Nigeria	Togo	1	2	3
IFC1	Cote d'Ivoire	Togo	3	3	2
IFC1 X SNK13	Cameroon	Togo	1	2	3
ICS6	Nigeria	Togo	2	3	3
T100/34	Nigeria	Togo	3	3	2
Lost label	Unknown	Togo	3	4	4
T12	Ghana	Sierra Leone	1	3	3
T16	Ghana	Sierra Leone	1	3	1
T17	Ghana	Sierra Leone	2	1	2
T60	Ghana	Sierra Leone	2	2	3
T63	Ghana	Sierra Leone	2	2	3
T65	Ghana	Sierra Leone	1	1	3
T72	Ghana	Sierra Leone	1	3	1
T73	Ghana	Sierra Leone	3	1	2
T76	Ghana	Sierra Leone	1	3	1
T79	Ghana	Sierra Leone	3	1	2
T82	Ghana	Sierra Leone	1	3	1
T85	Ghana	Sierra Leone	1	3	1
ICS 75	University of Reading	Sierra Leone	1	3	1
PA 7	University of Reading	Sierra Leone	1	3	1
WAE 5	Ghana	Sierra Leone	1	3	1
WBE 2	Ghana	Sierra Leone	1	3	3
WBE 3	Ghana	Sierra Leone	2	1	2

WBE 4	Ghana	Sierra Leone	1	3	1
WE 6	Ghana	Sierra Leone	2	1	2
WEB 1	Ghana	Sierra Leone	1	3	3
WE 4	Ghana	Sierra Leone	1	3	1
WAE 11	Ghana	Sierra Leone	3	2	3
WAE 3	Ghana	Sierra Leone	1	3	1
WBE 6	Ghana	Sierra Leone	1	3	1
WEB 3	Ghana	Sierra Leone	2	1	3
WEA 2	Ghana	Sierra Leone	3	1	2
WEB 2	Ghana	Sierra Leone	2	Admixed	3
SCA6	University of Reading	Sierra Leone	1	3	1
C76	Ghana	Sierra Leone	1	3	1
C5	Ghana	Sierra Leone	1	2	3
C41	Ghana	Sierra Leone	1	3	1
C35	Ghana	Sierra Leone	1	3	1
C36	Ghana	Sierra Leone	1	3	1
C37	Ghana	Sierra Leone	2	1	2
C38	Ghana	Sierra Leone	3	1	2
CCN51	University of Reading	Sierra Leone	2	1	2
C5	Ghana	Sierra Leone	1	3	1
C53	Ghana	Sierra Leone	2	1	2
C54	Ghana	Sierra Leone	1	3	1
C55	Ghana	Sierra Leone	1	3	3

C70	Ghana	Sierra Leone	1	3	3
C71	Ghana	Sierra Leone	1	3	1
C72	Ghana	Sierra Leone	1	3	3
C73	Ghana	Sierra Leone	1	3	1
C74	Ghana	Sierra Leone	1	3	1
C75	Ghana	Sierra Leone	1	3	3
C76	Ghana	Sierra Leone	1	3	1
C77	Ghana	Sierra Leone	3	3	3
C80	Ghana	Sierra Leone	1	1	3
C81	Ghana	Sierra Leone	1	3	3
C82	Ghana	Sierra Leone	2	1	3
C83	Ghana	Sierra Leone	1	1	2
C84	Ghana	Sierra Leone	1	3	3
C85	Ghana	Sierra Leone	1	3	3
EET 59 [ECU]	University of Reading	Sierra Leone	1	3	3
EET 75 [ECU]	University of Reading	Sierra Leone	1	3	1
C20	Ghana	Sierra Leone	2	2	3
EET 162 [ECU]	University of Reading	Sierra Leone	2	1	2
EET 399 [ECU]	University of Reading	Sierra Leone	3	1	2
EET 233 [ECU]	University of Reading	Sierra Leone	3	1	2
C42	Ghana	Sierra Leone	1	3	1
ICS 5	University of Reading	Sierra Leone	1	1	3
ICS 10	University of Reading	Sierra Leone	1	Admixed	3

ICS 15	University of Reading	Sierra Leone	1	1	3
ICS 35	University of Reading	Sierra Leone	1	3	1
ICS 40	University of Reading	Sierra Leone	1	3	1
ICS 43	University of Reading	Sierra Leone	1	3	1
ICS 48	University of Reading	Sierra Leone	1	3	1
ICS 75	University of Reading	Sierra Leone	1	1	3
ICS 60	University of Reading	Sierra Leone	2	Admixed	2
ICS 63	University of Reading	Sierra Leone	1	Admixed	3
ICS 70	University of Reading	Sierra Leone	3	1	2
ICS 75	University of Reading	Sierra Leone	3	1	2
ICS 84	University of Reading	Sierra Leone	1	3	1
ICS 95	University of Reading	Sierra Leone	1	3	1
IMC 2	University of Reading	Sierra Leone	1	3	1
IMC 6	University of Reading	Sierra Leone	1	3	1
MA 12 [BRA]	University of Reading	Sierra Leone	1	3	1
Pound7	University of Reading	Sierra Leone	1	3	1
MO 9	University of Reading	Sierra Leone	2	1	2
C23	Ghana	Sierra Leone	2	2	3
C25	Ghana	Sierra Leone	3	1	3
C26	Ghana	Sierra Leone	1	1	3
C67	Ghana	Sierra Leone	1	3	1
C68	Ghana	Sierra Leone	2	1	2
C77	Ghana	Sierra Leone	1	3	1

C5	Ghana	Sierra Leone	2	1	2
C40	Ghana	Sierra Leone	2	1	2
C41	Ghana	Sierra Leone	1	3	1
C42	Ghana	Sierra Leone	2	1	2
C43	Ghana	Sierra Leone	1	3	3
C44	Ghana	Sierra Leone	3	1	2
C51	Ghana	Sierra Leone	1	3	3
MO 109	University of Reading	Sierra Leone	1	3	1
N 38 [T38]	University of Reading	Sierra Leone	1	3	3
NA 26	University of Reading	Sierra Leone	1	3	1
NA 70	University of Reading	Sierra Leone	3	1	2
NA 111	University of Reading	Sierra Leone	1	3	1
NA 149	University of Reading	Sierra Leone	1	3	1
NA 232	University of Reading	Sierra Leone	1	3	1
NA 399	University of Reading	Sierra Leone	1	3	3
SC 1	University of Reading	Sierra Leone	1	1	3
SC 9	University of Reading	Sierra Leone	3	1	2
CCN51	University of Reading	Sierra Leone	3	1	2
SC20	University of Reading	Sierra Leone	2	1	3
SCA6	University of Reading	Sierra Leone	1	3	1
SCA9	University of Reading	Sierra Leone	1	3	1
SCA11	University of Reading	Sierra Leone	1	3	1
SCA12	University of Reading	Sierra Leone	1	Admixed	3

SCA19	University of Reading	Sierra Leone	1	3	1
SPEC 41/6-18	University of Reading	Sierra Leone	1	3	3
IMC47	University of Reading	Sierra Leone	1	3	1
EET272	University of Reading	Sierra Leone	1	3	1
POUND 10/B	University of Reading	Sierra Leone	1	3	1
C20	Ghana	Sierra Leone	2	1	2
GU- 261/P	University of Reading	Sierra Leone	3	1	3
MA 12	University of Reading	Sierra Leone	3	2	3
MO20	University of Reading	Sierra Leone	3	1	3
C26	Ghana	Sierra Leone	3	1	2
ICS 84	University of Reading	Sierra Leone	3	2	3
C77	Ghana	Sierra Leone	1	3	3
C45	Ghana	Sierra Leone	2	2	3
EET272	University of Reading	Sierra Leone	1	3	1
C74	Ghana	Sierra Leone	2	1	2
C66	Ghana	Sierra Leone	3	2	3
POUND 7/B	University of Reading	Sierra Leone	2	2	3
S72	Ghana	Sierra Leone	2	1	3
EET 95 [ECU]	University of Reading	Sierra Leone	2	1	2
C77	Ghana	Sierra Leone	3	1	3
GU- 147/H	University of Reading	Sierra Leone	3	2	3
EET272	University of Reading	Sierra Leone	3	1	2
POUND16	University of Reading	Sierra Leone	1	3	3

MO20	University of Reading	Sierra Leone	1	3	1
CC137	University of Reading	Sierra Leone	2	1	2
POUND 4/B	University of Reading	Sierra Leone	1	3	3
ICS1	University of Reading	Sierra Leone	1	3	1
CL 19/10	University of Reading	Sierra Leone	1	1	3
Pa13	University of Reading	Sierra Leone	1	3	1
POUND16	University of Reading	Sierra Leone	1	3	1
CL 19/10	University of Reading	Sierra Leone	1	3	1
C77	Ghana	Sierra Leone	1	3	3
C58	Ghana	Sierra Leone	2	1	2
Na33	University of Reading	Sierra Leone	1	1	3
GU- 147/H	University of Reading	Sierra Leone	1	3	1
Pa70	Ghana	Sierra Leone	1	3	1
Pa35	University of Reading	Sierra Leone	1	3	1
Na34	University of Reading	Sierra Leone	1	3	3
Pa150	University of Reading	Sierra Leone	1	1	3
S72	Ghana	Sierra Leone	1	3	1
C77	Ghana	Sierra Leone	2	1	2
ICS 43	University of Reading	Sierra Leone	2	1	2
C68	Ghana	Sierra Leone	1	3	1
EET272	University of Reading	Sierra Leone	1	Admixed	3
ICS29	University of Reading	Sierra Leone	2	1	2
CC137	University of Reading	Sierra Leone	2	1	2

IMC47	University of Reading	Sierra Leone	3	2	2
C25	Ghana	Sierra Leone	2	1	2
GU- 261/P	University of Reading	Sierra Leone	3	2	3
C67	Ghana	Sierra Leone	2	1	2
C68	Ghana	Sierra Leone	2	1	2
C75	Ghana	Sierra Leone	3	1	2
C74	Ghana	Sierra Leone	3	1	3
C77	Ghana	Sierra Leone	2	2	2
C26	Ghana	Sierra Leone	1	3	2
C25	Ghana	Sierra Leone	3	1	2
C20	Ghana	Sierra Leone	2	1	2
C21	Ghana	Sierra Leone	2	1	2
C45	Ghana	Sierra Leone	2	1	3
C58	Ghana	Sierra Leone	2	1	3
SCA 9	University of Reading	Sierra Leone	1	1	2
C60	Ghana	Sierra Leone	3	1	2
C80	Ghana	Sierra Leone	1	1	2
S72	Ghana	Sierra Leone	3	1	2
C20	Ghana	Sierra Leone	1	3	1
Na32	University of Reading	Sierra Leone	2	2	3
CC137	University of Reading	Sierra Leone	1	3	3
CL 19/10	University of Reading	Sierra Leone	3	2	3
EET272	University of Reading	Sierra Leone	2	1	2

GU-147/H	University of Reading	Sierra Leone	2	1	2
GU-261/P	University of Reading	Sierra Leone	3	2	2
ICS29	University of Reading	Sierra Leone	2	1	2
ICS43	University of Reading	Sierra Leone	1	1	2
IMC47	University of Reading	Sierra Leone	1	1	3
MA12	University of Reading	Sierra Leone	1	Admixed	3
MAN15/2	University of Reading	Sierra Leone	3	1	2
MAN15/60	University of Reading	Sierra Leone	2	1	2
MO20	University of Reading	Sierra Leone	2	1	2
NA33	University of Reading	Sierra Leone	2	2	3
PA121	University of Reading	Sierra Leone	1	3	3
PA13	University of Reading	Sierra Leone	2	1	2
PA7	University of Reading	Sierra Leone	2	1	2
PA88	University of Reading	Sierra Leone	3	1	2
CCN51	University of Reading	Sierra Leone	2	2	3
PA70	University of Reading	Sierra Leone	3	1	2
PA88	University of Reading	Sierra Leone	2	2	3
PBC123	University of Reading	Sierra Leone	2	2	3
POUND 10/B	University of Reading	Sierra Leone	2	2	3
POUND 4/B	University of Reading	Sierra Leone	3	1	2
POUND 7/B	University of Reading	Sierra Leone	1	1	3
SCA6	University of Reading	Sierra Leone	3	1	2
SCA9	University of Reading	Sierra Leone	2	2	3

C77	Ghana	Sierra Leone	3	1	3
C67	Ghana	Sierra Leone	3	1	2
T17	Ghana	Sierra Leone	1	3	3
SPEC 41/6-18	University of Reading	Sierra Leone	1	3	3
SPEC 54/1	University of Reading	Sierra Leone	1	Admixed	3
T60	Ghana	Sierra Leone	1	1	3
T17	Ghana	Sierra Leone	1	1	2
S72	Ghana	Sierra Leone	2	1	3
S72	Ghana	Sierra Leone	1	3	3
S72	Ghana	Sierra Leone	3	1	2
T17	Ghana	Sierra Leone	2	1	2
C74	Ghana	Sierra Leone	1	3	1
T79	Ghana	Sierra Leone	2	2	3
T60	Ghana	Sierra Leone	1	1	3
C57	Ghana	Sierra Leone	2	1	2
C58	Ghana	Sierra Leone	2	1	2
C58	Ghana	Sierra Leone	2	1	2
C60	Ghana	Sierra Leone	2	1	2
C80	Ghana	Sierra Leone	1	Admixed	3
Pa35	University of Reading	Sierra Leone	2	2	3
Na34	University of Reading	Sierra Leone	2	2	3
Na32	University of Reading	Sierra Leone	3	2	3
AM 1/8 [POU]	University of Reading	Sierra Leone	3	2	3

AM 1/95 [POU]	University of Reading	Sierra Leone	2	Admixed	3
AM 2/19 [POU]	University of Reading	Sierra Leone	1	3	1
AMAZ 3/2 [CHA]	University of Reading	Sierra Leone	2	1	2
AMAZ 5/2 [CHA]	University of Reading	Sierra Leone	1	3	1
AMAZ 6/3 [CHA]	University of Reading	Sierra Leone	2	1	2
CCN51	University of Reading	Sierra Leone	2	1	2
COCA 3308/1 [CHA]	University of Reading	Sierra Leone	3	1	2
COCA 3348/52 [CHA]	University of Reading	Sierra Leone	2	1	2
T60	Ghana	Sierra Leone	2	1	2
T17	Ghana	Sierra Leone	2	1	3
CRU 12	University of Reading	Sierra Leone	2	Admixed	2
Note: The genotype names in YELLOW color are probable duplicate accessions.					

Table S4. Descriptive statistics of 20 KASP-SNPs used in the study.

SNP	A1	A2	O.HET.	E.HET.	MAF	PIC
snpTC00001	A	C	0.234	0.2383	0.1383	0.209942
snpTC00002	C	A	0.3112	0.4707	0.379	0.35993
snpTC00003	C	T	0.07979	0.08148	0.04255	0.07816
snpTC00004	A	G	0.04255	0.04165	0.02128	0.040787
snpTC00005	C	G	0.242	0.2325	0.1343	0.205493
snpTC00006	G	A	0.4096	0.4817	0.4043	0.365674
snpTC00007	T	A	0.2713	0.286	0.1729	0.24511
snpTC00008	T	A	0.1649	0.1513	0.08245	0.139858
snpTC00009	T	G	0.4043	0.4873	0.4202	0.368551
snpTC00010	A	G	0.4947	0.4912	0.4335	0.370539
snpTC00011	C	T	0.375	0.3514	0.2274	0.289645
snpTC00012	T	C	0.359	0.4801	0.4003	0.364862
snpTC00013	A	G	0.1755	0.1901	0.1064	0.172078
snpTC00014	G	A	0.1436	0.1424	0.07713	0.132228

snpTC00015	A	G	0.3856	0.4877	0.4215	0.368762
snpTC00016	T	C	0.4362	0.4932	0.4415	0.371554
snpTC00017	C	A	0.1436	0.246	0.1436	0.21571
snpTC00018	G	T	0.07713	0.08391	0.04388	0.080389
snpTC00019	A	C	0.383	0.4421	0.3298	0.344354
snpTC00020	T	G	0	0.1732	0.09574	0.158158

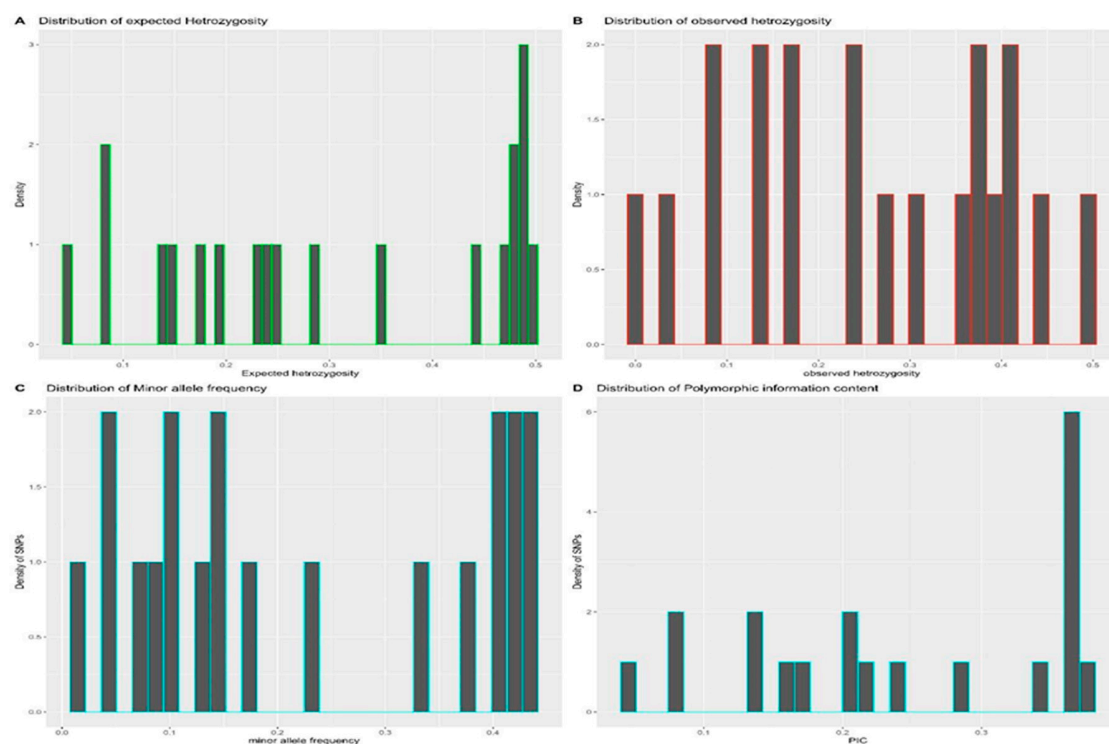


Figure S1. Distribution of He, Ho, MAF, and PIC values for the combined population (376 cacao accessions)

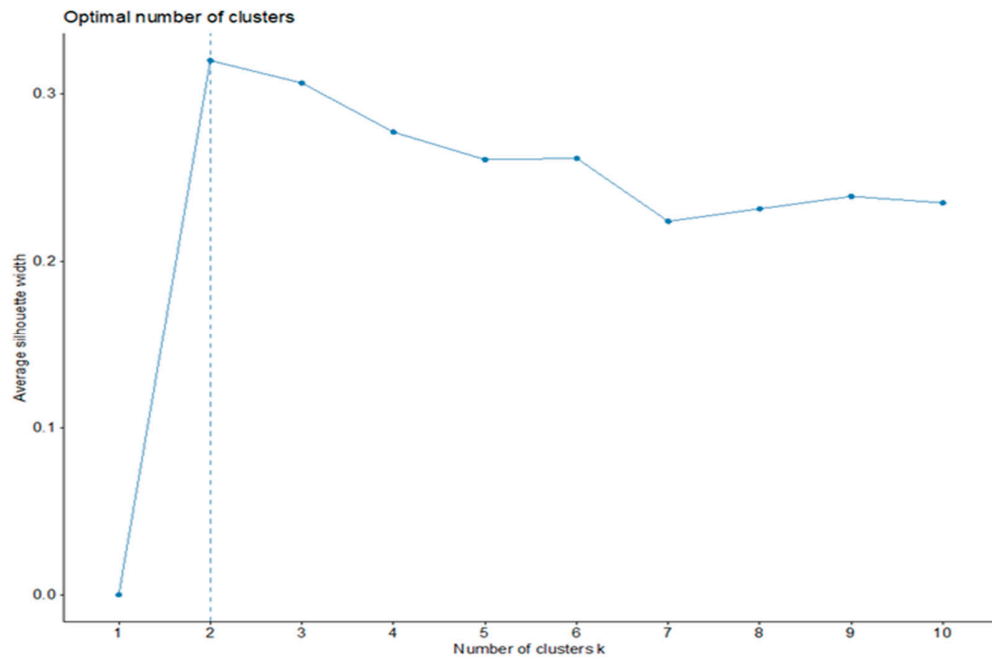


Figure S2. Graphical representation of the population structure of 376 cacao accessions. Plot of mean likelihood of delta K against the number of K groups.

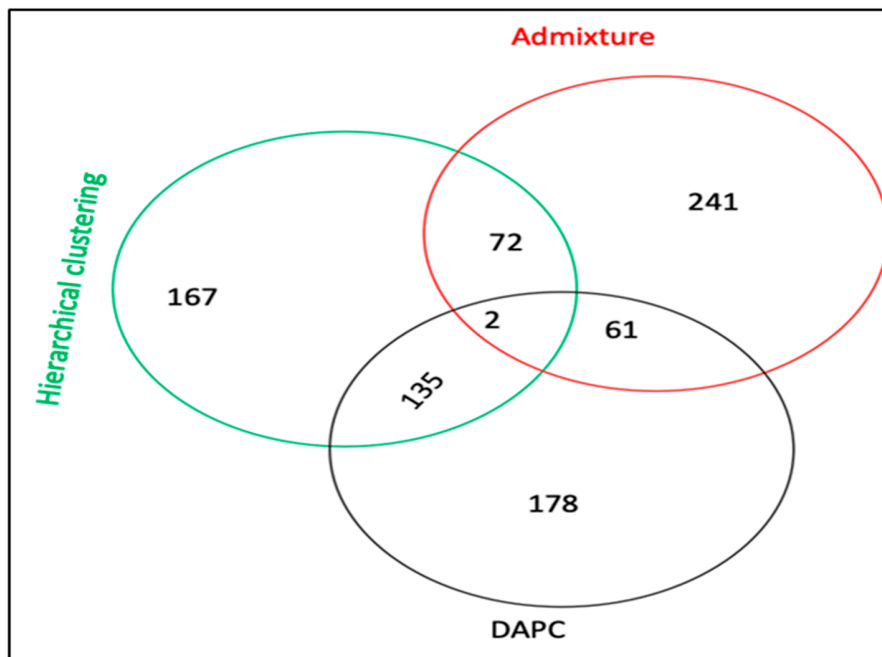


Figure S3. Comparison of three complementary approaches such as STRUCTURE, DAPC and Hierarchical Clustering for grouping of 376 cacao accessions