

## **Electronic Supplementary Material**

Title: Genetic Diversity of Qualitative Traits in Sugarcane Genotypes

Journal: Advances in Agriculture  
Hindawi Publishing Corporation

Authors: Esayas Tena<sup>1\*</sup>, Firew Mekbib<sup>2</sup> and Amsalu Ayana<sup>3</sup>

<sup>1</sup>Ethiopian Sugar Corporation, Research and Training, Eastern Shewa Zone, P.O.Box15, Wonji, Ethiopia  
E-mail:esutena11@gmail.com

<sup>2</sup>Haramaya University, College of Agriculture and Environmental Sciences, School of Plant Sciences, P.O.Box 138, DireDawa, Ethiopia,  
E-mail:firew.mekbib@gmail.com

<sup>3</sup>Integrated Seed Sector Development Ethiopia Program, Addis Ababa, Ethiopia, E-mail:ayana6a@yahoo.com

\*Corresponding author: Email: esutena11@gmail.com; Ethiopian Sugar Corporation, Research and Training; Eastern Shewa Zone, P.O.Box15, Wonji, Ethiopia

**Supplemental Table 1.** Passport data of local sugarcane germplasm collected during 2010/11 and used for the study

Code No.	Vernacular Name	Region/Zone/Wereda/Kebele/Village	Lat/Long	Altitude (m)
1	Nech Shenkora	SNNP/Gurage/Absege/Nachakulit/Misreta	08 <sup>0</sup> 20.989'/37 <sup>0</sup> 33.954'	1521
2	Bicha Shenkora/Weliso	SNNP/Gurage/Absege/Nachakulit/Misreta	08 <sup>0</sup> 20.989'/37 <sup>0</sup> 33.954'	1521
3	Kay Shenkora	SNNP/Gurage/Absege/Nachakulit/Misreta	08 <sup>0</sup> 20.989'/37 <sup>0</sup> 33.954'	1521
4	Andegna Dereja Canada Shenkora	SNNP/Silttie/Silttie/Balokeriso	07 <sup>0</sup> 58.907'/038 <sup>0</sup> 22.558'	1824
5	Ye abesha shenkora	SNNP/Gamogofa/Bonke/Geresse Zala	05 <sup>0</sup> 54.307'/037 <sup>0</sup> 18.54'	2258
6	Bicha Shenkora	SNNP/Gamogofa/Bonke/Geresse Zala/Tsophi	05 <sup>0</sup> 54.476'/037 <sup>0</sup> 18.38'	2133
7	Kay Sidancho	SNNP/Sidama/Borecha/Yloubancho/Agoyicho	06 <sup>0</sup> 56.060'/038 <sup>0</sup> 22.793'	2042
8	Kay Shenkora	SNNP/Gamogofa/Bonke/Geresse Zala/Tsophi	05 <sup>0</sup> 54.476'/037 <sup>0</sup> 18.38'	2133
9	Kay Shenkora/Huleteгна dereja canada Shenkora	SNNP/Silttie/Silttie/Balokeriso	07 <sup>0</sup> 58.907'/038 <sup>0</sup> 22.558'	1824
10	Burabure Shenkora	SNNP/Gurage/Absege/Nachakulit/Misreta	08 <sup>0</sup> 20.989'/37 <sup>0</sup> 33.954'	1521
11	Yegurage Shenkora/ Kay Shenkora	SNNP/Gurage/Absege/Jejeba/Jejeba	08 <sup>0</sup> 16.298'/037 <sup>0</sup> 43.384'	1808
12	Yejima Shenkora	SNNP/Gurage/Absege/Jejeba/Jejeba	08 <sup>0</sup> 16.298'/037 <sup>0</sup> 43.384'	1808
13	Kay Shenkora	SNNP/Silttie/Werabe/02 Kebele	07 <sup>0</sup> 49.933'/038 <sup>0</sup> 10.793'	2101
14	Ye Abesha shenkora (Nech Shenkora)	SNNP/South Omo/Debub Ari/Mester/Jagame	05 <sup>0</sup> 59.202'/036 <sup>0</sup> 35.037'	1705
15	Wolesh	SNNP/South Omo/Debub Ari/Bazet/Ekzek	05 <sup>0</sup> 47. 213'/036 <sup>0</sup> 34.900'	1436
16	Wolesh/Tinkish	SNNP/South Omo/Debub Ari/Bazet/Ekzek	05 <sup>0</sup> 47. 213'/036 <sup>0</sup> 34.900'	1436
18	Nech (Arenguade) Ageda	SNNP/Konso Special Wereda/Gaserge Kebele	05 <sup>0</sup> 96.038'/037 <sup>0</sup> 21.194'	1727
19	Burabure Shenkora	SNNP/Konso Special Wereda/Busso Kebele	05 <sup>0</sup> 18.495'/037 <sup>0</sup> 25.28'	1357
20	Wonji	SNNP/South Omo/Debub Ari/Bazet/Ekzek	05 <sup>0</sup> 47. 213'/036 <sup>0</sup> 34.900'	1436
21	Wolshi	SNNP/South Omo/Debub Ari/Metser	Collected from market	
22	American	SNNP/Sidama/Borecha/Yloubancho/Agoyicho	06 <sup>0</sup> 55.908'/038 <sup>0</sup> 22.793'	2059
23	Jambo	SNNP/Sidama/Borecha/Yloubancho/Agoyicho	06 <sup>0</sup> 56.060'/038 <sup>0</sup> 22.793'	2042
24	Nech Sidancho	SNNP/Sidama/Borecha/Yloubancho/Agoyicho	06 <sup>0</sup> 56.060'/038 <sup>0</sup> 22.793'	2042
25	Azaro, Kollo	SNNP/Amaro special Wereda/ Jijola kebele/Kore village/Cheffa district	05 <sup>0</sup> 40.446'/037 <sup>0</sup> 55.669'	1410
26	Wonji	SNNP/Amaro special Wereda/ Jijola kebele/Kore village/Cheffa district	05 <sup>0</sup> 40.446'/037 <sup>0</sup> 55.669'	1410

Supplemental Table 1 continued

27	Kembata	SNNP/Gedeo/Wenago/Deko	06° 16.889'/038° 12.919'	1914
28	Nech Shenkora	SNNP/Amaro special Wereda/ Jijola kebele/Kore village/Cheffa district	05° 40.446'/037° 55.669'	1410
29	Andegna dereja Wonji	SNNP/Wolayta/Damotgale/Gacheno	07° 02.280'/037° 55.072'	1882
30	Sidama/Yegamo Shenkora	SNNP/Amaro special Wereda/ Jijola kebele/Kore village/Cheffa district	05° 40.446'/037° 55.669'	1410
31	Huletegna dereja Jambo kay	Oromia/West Arsi/Wondo/Shesha kebele	07° 05.662'/038° 36.203'	1705
32	Andegna dereja Jambo kay	Oromia/West Arsi/Wondo/Shesha kebele	07° 05.662'/038° 36.203'	1705
33	Sostegna dereja Jambo kay/ Metfo Shenkora	Oromia/West Arsi/Wondo/Shesha kebele	07° 05.662'/038° 36.203'	1705
34	Moliso	SNNP/Konta Special Wereda/ Cheka Bocha kebele/Bocha village	07° 05.953'/036° 39.495'	1996
35	Nech Shenkora	SNNP/Konta Special Wereda/ Cheka Bocha kebele	07° 06.244'/036° 40.164'	2105
36	Tazma/Burabure	SNNP/Konta Special Wereda/ Cheka Bocha kebele/Bocha village	07° 05.953'/036° 39.495'	1996
37	Wolayta	SNNP/Wolayta/Damotgale/Gacheno	07° 02.280'/037° 55.072'	1882
38	Kay Shenkora	SNNP/Dawro/Mareka/MedaKuli/Wushay	07° 00.612'/037° 12.285'	2163
39	Kay Shenkora	SNNP/Konta Special Wereda/ Cheka Bocha kebele/Bocha village	07° 05.953'/036° 39.495'	1996
40	Atena Moris	SSNP/Kembata Tembaro/Kacha Bira/Mesena	07° 10.944'/037° 46.746'	1838
41	Dolche	SNNP/Wolayta/Damotgale/Gacheno	07° 02.280'/037° 55.072'	1882
42	Kay Ageda Shenkora	SNNP/Halaba kulito Special Wereda/Alemtena	07° 22.433'/038° 06.433'	1797
43	Moris	SNNP/Halaba kulito Special Wereda/Alemtena	07° 22.433'/038° 06.433'	1797
44	Bolfe	SSNP/Kembata Tembaro/Kacha Bira/Mesena	07° 10.944'/037° 46.746'	1838
45	Abesha	SSNP/Kembata Tembaro/Kacha Bira/Mesena	07° 10.944'/037° 46.746'	1838
46	Wotete	SSNP/Kembata Tembaro/Kacha Bira/Mesena	07° 10.944'/037° 46.746'	1838
47	Tazma/Burabure	SNNP/Dawro/Mareka/MedaKuli/Gendomeda	06° 58.977'/037° 11.493'	1803
48	Betam nech Shenkora	SNNP/Konta Special Wereda/ Cheka Bocha kebele	07° 06.244'/036° 40.164'	2105
49	Wonji-1	SSNP/Kembata Tembaro/ Kacha Bira/Wonko	07° 12.316'/037° 50.843'	1952
50	Bishoftu	SSNP/Kembata Tembaro/ Kacha Bira/Wonko	07° 12.316'/037° 50.843'	1952
51	Wotet	SNNP/Wolayta/Damotgale/ Gacheno	07° 02.280'/037° 55.072'	1882
53	Yeferenj shenkora	SNNP/Dawro/Mareka/MedaKuli/ Gendomeda	06° 58.977'/037° 11.493'	1803
54	Yemaytafit Shenkora	Oromia/Bale/Agarfa/Wabe	Collected from market	
55	Kay Shenkora	Oromia/Arsi/Tena/Kereyuharzuna/ Debenshe	07° 42.648'/039° 35.844'	1848
56	Wotete	Oromia/Arsi/Tio/Bosha	Collected from market	
57	Shenkora Dima/Kay Shenkora	Oromia/Bale/Agarfa/Alochefo	07° 23.154'/039° 46.271'	1497
58	Nech Shenkora/Shenkora Adi	Oromia/Arsi/Tena/Kereyuharzuna/ Debenshe	07° 42.648'/039° 35.844'	1848
59	Nech Shenkora	Oromia/Bale/Agarfa/Alochefo/ Odachefo	07° 23.154'/039° 46.271'	1497

Supplemental Table 1 continued

60	Moris	Oromia/Arsi/Tena/Kereyuharzuna/ Debenshe	07° 42.648'/039° 35.844'	1848
61	Kay Shenkora	Oromia/Bale/Goro/Melkabuta/ Gadula Gola Dhertu	06° 58.539'/040° 35.398'	1611
62	Ye Abesha Shenkora/ Ye Oromo Shenkora	Oromia/West Shewa/Ambo/ Harutiro	09° 07.613'/037° 47.724'	2370
63	Kay Shenkora/Wonji	Amhara/North Shewa/Debresina market	10° 04.978'/039° 53.606'	1276
64	Nech Shenkora	Amhara/North Shewa/Debresina market	10° 04.978'/039° 53.606'	1276
65	Tikur Ageda	Amhara/North Shewa/Kewet/Yelen	10° 04.978'/039° 53.606'	1235
66	Nech Ageda	Amhara/North Shewa/Kewet/Yelen	10° 04.978'/039° 53.606'	1235
67	Nech Kechacha Shenkora/ Getr	Amhara/North Shewa/Kewet/Yelen	10° 04.978'/039° 53.606'	1235
68	Ye Bako Shenkora	Oromia/West Shewa/Ambo/ Harutiro	09° 07.613'/037° 47.724'	2370
69	Bula Shenkora	SNNP/Sheka/Masha/Shibo	07° 44.641'/035° 28.511'	2277
70	Kay Shenkora/Kadiken	Gambella/Agnwak/Abobo/Aberimeti	07° 55.825'/034° 43.133'	507
71	Bicha Shenkora	SNNP/Sheka/Masha/Beto	07° 44.641'/035° 28.511'	2277
72	Shenkora Dima/Kay Shenkora	Oromia/Illubabor/Bure/Wengawobe	08° 09.189'/035° 27.382'	1758
73	Kay Shenkora Ageda	Oromia/Illubabor/Huka/Abyuadrere	08° 13.781'/035° 15.796'	1600
74	Nech Shenkora/Kadiken	Gambella/Agnwak/Abobo/Aberimeti	07° 55.825'/034° 43.133'	507
75	Shenkora	Gambella/Agnwak/Gog/Badabado	07° 38.955'/034° 15.386'	454
76	Tikur Ageda	SNNP/Sheka/Yeki/Addisbirhan	07° 11.212'/035° 26.095'	1164
77	Ye Kenya Ageda	SNNP/Sheka/Masha/Keja	07° 50.149'/035° 28.159'	1827
78	Kay Ageda	SNNP/Sheka/Yeki/Addisbirhan	07° 11.212'/035° 26.095'	1164
79	Kay Shenkora/ Dima	Oromia/Jima Zone/ Sekoru Wereda/ Habedode Kebele	Collected from market	
80	Ye Kenya Shenkora	SNNP/Sheka/Masha/Masha 01	07° 44.641'/035° 28.511'	2277
81	Kay Ageda	SNNP/Kefa/Gimbo/Bonga 01	07° 15.225'/036° 15.303'	1792
82	Tikur Ageda	SNNP/ Bench Majii /Mizan Teferi/ Hibret kebele	07° 00.061'/035° 35.802'	1356
83	Shembeko Ageda	SNNP/Kefa/Gimbo/Bonga 01	07° 15.225'/036° 15.303'	1792
84	Tikur Ageda	Oromia/Illubabor/Bilonopa/Suli	08° 26.252'/035° 36.267'	1417
85	Nech Shenkora	Oromia/Illubabor/Bilonopa/Dizy	08° 23.138'/035° 36.249'	1559
87	Dalecha Shenkora	Oromia/Illubabor/Bilonopa/Suli	08° 26.252'/035° 36.267'	1417
89	Kay Shenkora Ageda	Oromia/Illubabor/Bilonopa/Suli	08° 26.252'/035° 36.267'	1417
90	Kay Shenkora	Oromia/Illubabor/Dureni/ Betelegebecha/Hadere	08° 29.860'/035° 45.110'	1754
91	Barbados	Oromia/Gimbi/Laloasabe/ Harochserdo Kebele	Collected from market	
92	Ye Bako Shenkora	Oromia/Gimbi/Laloasabe/ Dengoro 01/Golbe	09° 16.130'/035° 40.804'	1730
93	Kay shenkora	Oromia/Gimbi/Laloasabe/ Dengoro 01/Golbe	09° 16.130'/035° 40.804'	1730

Supplemental Table 1 continued

94	Ageda Adi	Oromia/Kelem Welega/Sayo/ Gelanometi/Sembo	08° 32.704'/034° 43.594'	1730
96	Nech Shenkora	Oromia/Gimbi/Laloasabe/ Dengoro 01/Golbe	09° 16.130'/035° 40.804'	1730
97	Tabor Shenkora	Oromia/Gimbi/Guliso/Wereseyo/ Kobera	09° 10.256'/035° 31.592'	1484
98	Nech Shenkora/Ye Jima Shenkora	Benshangulgumuz/Asosa/Bambasi Mender 49 (Sefera Tabia)	09° 49.520'/034° 41.766'	1415
99	Shilmu	Oromia/Kelem Welega/Dale Wabera/ Chanka Burore	08° 49.268'/035° 03.747'	1470
100	Nech Shenkora	Oromia/Kelem Welega/Hawagelan/ Haromechara	08° 43.544'/034° 59.141'	1444
101	Kay Shenkora	Oromia/West Shewa/Bakotibe/ Dembigobu	09° 07.616'/037° 04.565'	1620
103	Nech Shenkora	Oromia/Kelem Welega/Hawagelan/ Haromechara	08° 43.544'/034° 59.141'	1444
104	Burabure Shenkora	Benshangulgumuz/Asosa/ Megele 32 (Sefera Tabia)	10° 01.179'/034° 32.705'	1478
105	Nech Shenkora	Benshangulgumuz/Asosa/ Megele 32(Sefera Tabia)	10° 01.179'/034° 32.705'	1478
106	Abesha Shenkora/Adi	Oromia/West Shewa/Bakotibe/ Dembigobu	09° 07.616'/037° 04.565'	1620
107	Nech Shenkora	Amhara/Debub Gondar/Derra/ Mashenkoru/Misgano	11° 42.976'/037° 36.908'	1993
110	Yegojam Shenkora	Amhara/Debub Gondar/Fogera/Wagtera	11° 54.574'/037° 33.371'	1797
111	Tikur Shenkora	Amhara/West Gojam/Bahirdar Zuria/ Tis Abay/Gebere Mahiber	11° 29.128'/037° 34.331'	1642
113	Shilmlm Sora	Amhara/West Gojam/Bahirdar Zuria/ Tis Abay/Gebere Mahiber	11° 29.128'/037° 34.331'	1642
114	Ye Bure Shenkora	Amhara/West Gojam/Bahirdar Zuria/ Tis Abay/Gebere Mahiber	11° 29.128'/037° 34.331'	1642
115	Nech Ageda	Amhara/West Gojam/Jabitehnan/ Mankusa Abdegom/Endalah	10° 41.075'/037° 11.357'	1941
116	Tikur Shenkora	Amhara/West Gojam/Jabitehnan/ Mankusa Abdegom/Endalah	10° 41.075'/037° 11.357'	1941
117	Nech Shenkora/Sendel	Amhara/West Gojam/Debub Achefer/ Lalibela/Azena	11° 28.590'/036° 57.027'	1883
118	Nech Yemailat Shenkora/ CO 1001	Amhara/West Gojam/Debub Achefer/ Lalibela/Azena	11° 28.590'/036° 57.027'	1883
119	Bule/ B52	Amhara/West Gojam/Debub Achefer/ Lalibela/Azena	11° 28.590'/036° 57.027'	1883
121	Nech Shenkora/Sendel	Amhara/West Gojam/Debub Achefer/ Lalibela/Azena	11° 28.590'/036° 57.027'	1883
122	Nech Shenkora	BenshangulGumuz/Metekel/Pawe/ Mender 28/29	11° 16.526'/036° 27.233'	1097
123	Kay Shenkora	Amhara/Awi/Guangua/Mota/ Menta Wuha	10° 50.310'/036° 20.642'	1532
124	Kay Shenkora	BenshangulGumuz/Metekel/Pawe/ Mender 28/29	11° 16.526'/036° 27.233'	1097
126	Nech Shenkora	Amhara/Awi/Guangua/Mota/ Menta Wuha	10° 50.310'/036° 20.642'	1532
127	Nech Shenkora/Bishoftu/ China	Amhara/East Gojam/Dejen/Kurar/ Dengel	10° 06.578'/038° 09.202'	1820
128	Gojame/Ye Gojam Ageda	Amhara/East Gojam/Dejen/Kurar/ Ambayamit	10° 06.490'/038° 09.185'	1804
129	Nech Shenkora	Amhara/East Gojam/Dejen/Kurar/ Dengel	10° 06.578'/038° 09.202'	1820
131	Kay Shenkora/Bishoftu	Amhara/East Gojam/Dejen/Kurar/ Dengel	10° 06.578'/038° 09.202'	1820
132	Abadir	Amhara/East Gojam/Dejen/Kurar/ Ambayamit	10° 06.490'/038° 09.185'	1804

Supplemental Table 1 continued

133	Ye Fincha Shenkora	Amhara/East Gojam/Basoliben/ Entemen Dejat	10° 03.504'/037° 50.264'	2360
134	Kay Ageda	Amhara/East Gojam/Dejen/Dejen Town	Collected from market	
136	Bicha Shenkora	Amhara/East Gojam/Dejen/Kurar/ Dengel	10° 06.578'/038° 09.202'	1820
138	Kay Ageda	Tigray/Semen Mierab Tigray/Tach Koraro/ Semena/ Maymesreb	14° 11.602'/038° 20.897'	1927
139	Kay Shenkora	Tigray/Central Tigray/Tahtay Maychew/ Mayatsmi	14° 04.680'/038° 33.366'	1993
140	Kay Ageda	Tigray/Semen Mierab Tigray/Tach Koraro/ Semena/ Maymesreb	14° 11.602'/038° 20.897'	1927
141	Nech Shenkora	Tigray/Central Tigray/Tahtay Maychew/ Mayatsmi	14° 04.680'/038° 33.366'	1993
142	Kay Ageda	Tigray/Semen Mierab Tigray/Tach Koraro/ Semena/ Maymesreb	14° 11.602'/038° 20.897'	1927
143	Nech Ageda/ Shenkora	Amhara/Semen Welo/Gubalafto/ Woynye 011/Medakit	11° 53.630'/039° 28.136'	2030
144	Kay Ageda/ Shenkora	Amhara/Semen Welo/Gubalafto/ Woynye 011/Medakit	11° 53.630'/039° 28.136'	2030
145	Kay Shenkora (Burabure)	Amhara/Semen Welo/Habru/09 kebele/ Ante	11° 41.085'/039° 38.325'	1695
146	Nech Ye Abesha Shenkora	Amhara/Semen Welo/Habru/09 kebele/ Ante	11° 41.085'/039° 38.325'	1695
149	Nech Tilik Shenkora	Amhara/Debub Welo/Werebabo/02 kebele/Bulbulo/Aselel Prim. School	11° 19.354'/039° 45.074'	2072
150	Nech Shenkora	Amhara/ Oromia special Zone/Kemissie/02 kebele/Ergi	10° 42.491'/039° 51.712'	1422
151	Nech Ageda	Amhara/Debub Welo/Borena/04 kebele/ Jimaye	10° 45.172'/038° 45.974'	2687
152	Nech Tinish Shenkora	Amhara/Debub Welo/Werebabo/02 kebele/Bulbulo/Aselel Prim. School	11° 19.354'/039° 45.074'	2072
153	Ye Beskula Shenkora	Amhara Region/South Welo Zone/ Legambo Wereda/Beskula Kebele	Collected from market	
154	Nech Shenkora	Amhara/ Oromia special Zone/Kemissie/02 kebele/Ergi	10° 42.491'/039° 51.712'	1422
155	Nech Ye Abesha Shenkora	Amhara/Semen Welo/Meket/013 kebele/ Emamoz Fikrte Kirstos Gedam	Brought by monks from Monastery	
156	Nech Ageda/ Shenkora	Amhara/Waghmra/Sekota/02 kebele/ Tiya	12° 30.391'/039° 05.795'	1978
157	Kay Ageda/Shenkora	Tigray/Debub Tigray/Ofla/Zata	12° 30.924'/039° 16.477'	2134
158	Ancha	Tigray/Debub Tigray/Ofla/Zata	12° 30.924'/039° 16.477'	2134
159	Nech Shenkora	Oromia/East Hararghe/Gurawa/01 Kebele/ Kera Sefer	09° 08.392'/041° 50.424'	2401
160	Shenkora Adi	Oromia/East Hararghe/Kurfachele/Dawe/	09° 17.423'/041° 52.611'	1713
161	Nech Shenkora	Oromia/East Hararghe/Meta/Chelenko 02 kebele	09° 23.875'/041° 33.670'	2179
162	Shenkora Dima	Oromia/East Hararghe/Kurfachele/Dawe/	09° 17.423'/041° 52.611'	1713
163	Nech Shenkora/Wonji	Oromia/East Hararghe/Meta/Chelenko 02 kebele	09° 23.875'/041° 33.670'	2179
164	Yemilat Nech Shenkora	Oromia/East Hararghe/Meta/Chelenko 02 kebele	09° 23.875'/041° 33.670'	2179
165	Nech Shenkora	Harari/Erer Wereda/Dodota Kebele/ Mudir Village	09° 19.353'/042° 13.030'	1376
166	Burabure Shenkora	Harari/Erer Wereda/Dodota Kebele/ Mudir Village	09° 19.353'/042° 13.030'	1376

Supplemental Table 1 continued

167	Kay Shenkora	Oromia/East Hararghe/Babile/Ererguda/ Megida	09° 14.783'/042° 15.022'	1315
169	Guracha Shenkora/Tikur	Oromia/East Hararghe/Babile/Ererguda/ Megida	09° 14.783'/042° 15.022'	1315
170	Kay Shenkora	Oromia/East Hararghe/Kombolcha/Sibilu/ Gende Wedo Usman	09° 25.248'/042° 06.965'	2113
171	Kay Shenkora/Burabure	Oromia/East Hararghe/Gorogutu/ Erermedanchine/Ginge	09° 24.966'/041° 29.590'	1728
172	Nech Shenkora	Oromia/East Harerge/Babile/Ererguda/ Megida	09° 14.783'/ 042° 15.022'	1315
173	Misrah	Oromia/West Hararghe/Gemechis/ Wemecho Dayo/Dekadabu	08° 45.408'/040° 53.285'	1496
174	Wonji	Oromia/West Hararghe/Gemechis/ Wemecho Dayo/Dekadabu	08° 45.408'/040° 53.285'	1496
175	Wonji/Bula/Shenkora Adi	Oromia/West Hararghe/Gubakoricha/ Oda Aneni 05 kebele/Nanofaro	08° 56.717'/040° 33.308'	1972
176	Shekole	Oromia/West Hararghe/Gubakoricha/ Oda Aneni 05 kebele/Nanofaro	08° 56.717'/040° 33.308'	1972
177	Holland	Oromia/West Hararghe/Darolebu	08° 36.352'/040° 19.278'	1751
178	Bure	Oromia/West Hararghe/Gubakoricha/ Oda Aneni 05 kebele/Nanofaro	08° 56.717'/040° 33.308'	1972
179	Shenkora Dima	Oromia/West Hararghe/Mesela/Lubudekeb/ Deneba	09° 05.913'/041° 08.151'	1647
180	Wonji	Oromia/West Hararghe/Mesela/Lubudekeb/ Deneba	09° 05.913'/041° 08.151'	1647
181	Gende Lega	Oromia/West Hararghe/Gubakoricha/ Oda Aneni 05 kebele/Nanofaro	08° 56.717'/040° 33.308'	1972
182	Dikala	Oromia/East Hararghe/Deder/Kiyo (Nedi Gelan Sedi)/Tulu	09° 15.638'/041° 23.451'	1812
183	Alaa	Oromia/East Hararghe/Deder/Kiyo (Nedi Gelan Sedi)/Tulu	09° 15.638'/041° 23.451'	1812
184	Bure	Somali/Shinele/Erer/Bila	09° 31.774'/041° 24.965'	1192
185	Bure	Somali/Shinele/Erer/ Gota	Collected from market	
186	Shenkora Dima	Somali/Shinele/Erer/Bila	09° 31.774'/041° 24.965'	1192
187	Shenkora Adi	Oromia/East Haraghe Zone/ Meta/ Ramis	Collected from market	
188	Aladi	Oromia/East Hararghe/Deder/Kiyo (Nedi Gelan Sedi)/Tulu	09° 15.638'/041° 23.451'	1812
189	Erero	Oromia/East Hararghe/Deder/Kiyo (Nedi Gelan Sedi)/Tulu	09° 15.638'/041° 23.451'	1812
190	Engda	Oromia/West Hararghe/Anchar/Chorchora/ Megala Deye Market	08° 47.508'/040° 17.063	1690
191	Kay Shenkora	Oromia/West Hararghe/Anchar/Chorchora/ Megala Deye Market	08° 47.508'/040° 17.063	1690

**Supplemental Table 2.** Introduced sugarcane genotypes in Ethiopia used for the study

Code No.	Genotype	Country of origin	Year of introduction	Code No.	Genotype	Country of origin	Year of introduction	Code No.	Genotype	Country of origin	Year of introduction
192	B3172	Barbados	1983	219	B 51321	Barbados	1974	246	BO 10	Bihar-Orissa (India)	1960
193	B35269	Do	1983	220	B 51410	Do	1983	247	BO 11	Bihar-Orissa	1960
194	B37172	Do	1956	221	B 51415	Do	1974	248	BO 14	Do	1974
195	B39250	Do	1983	222	B 52107	Do	1974	249	BO 29	Do	1974
196	B39254	Do	1983	223	B 52158	Do	1970	250	BO 3	Do	1970
197	B 4098	Do	1960	224	B 52298	Do	1965	251	BO60349	Do	Unknown
198	B41211	Do	1970	225	B 52313	Do	1974	252	CB 36-14	Campos (Brazil)	1974
199	B 4122	Do	Unknown	226	B 53163	Do	1974	253	CB 38-22	Do	1959
200	B 41227	Do	1957	227	B 53164	Do	1974	254	CB 38-39	Do	1959
201	B 42231	Do	1957	228	B 5364	Do	1965	255	CB 40-35	Do	1983
202	B 4362	Do	1957	229	B 54142	Do	1974	257	CB 41-76	Do	1970
203	B 4425	Do	1974	230	B 5490	Do	1974	259	CB 47-15	Do	1959
204	B 45154	Do	1974	231	B 57133	Do	1974	260	C 105-73	Cuba	2003
205	B 45154	Do	1957	232	B 57141	Do	1974	263	CO 245	Coimbatore	1970
206	B 456	Do	Unknown	233	B 80-250	Do	unknown	264	CO 331	Do	1954
207	B 47386	Do	1974	234	B 5736	Do	1974	265	CO 419	Do	1954
208	B 47419	Do	1957	235	B 5780	Do	1974	266	CO 421	Do	1954
209	B 4744	Do	1963	236	B 58230	Do	1970	267	CO 434	Do	1970
210	B 4906	Do	1974	237	B 59104	Do	1983	268	CO 440	Do	1963
211	B 49119	Do	1962	238	B 59212	Do	1974	269	CO 449	Do	1957
212	B 49224	Do	1974	239	B 59250	Do	Unknown	270	CO 453	Do	1954
213	B 49388	Do	1974	240	B 60125	Do	1974	271	C120-78	Cuba	2003
214	B 50210	Do	1974	241	B 60163	Do	1974	272	CO 467	Coimbatore	1957
215	B 51116	Do	1970	242	B 60267	Do	1974	273	CO 475	Do	1956
216	B 51129	Do	1983	243	B 6109	Do	1983	274	CO 513	Do	1960
217	B 51131	Do	1970	244	B 6113	Do	1983	275	CO 617	Do	1960
218	B 51132	Do	1974	245	B 62347	Do	1974	276	CO 622	Do	1960



Supplemental Table 2 continued

Code No.	Genotype	Country of origin	Year of introduction	Code No.	Genotype	Country of origin	Year of introduction	Code No.	Genotype	Country of origin	Year of introduction
278	CO 677	Coimbatore	1970	308	CO 1186	Coimbatore	1974	341	CP69/1059	Canal point	1983
279	CO 678	Do	1960	309	CO 1190	Do	1987				
280	CO 680	Do	1963	310	CO 1198	Do	1987	343	CP 70/321	Do	1983
281	CO 684	Do	1970	311	CO 1202	Do	1987	344	CP 71/396	Do	1983
282	CO 718	Do	1970	312	CO 1208	Do	1987	345	CP 71/421	Do	1983
283	CO 740	Do	1962	313	CO 1230	Do	1974	346	CP 1/441	Do	1983
286	CO 765	Do	1970	314	CO 6023	Do	1974	347	CP 71/443	Do	1984
287	CO 775	Do	1960	315	CO 60191	Do	Unknown	348	CP72/2083	Do	1983
288	CO 785	Do	1987	317	CP 29/291	Canal point	1954	349	CP 73/341	Do	1983
289	CO 798	Do	1963	318	CP 29/320	Do	1953	350	COS 109	Unknown	1965
290	CO 810	Do	1974	319	CP 36/105	Do	1959	351	COS 245	Do	1970
291	CO 842	Do	1974	321	CP44/101	Do	1957	353	COS 510	Do	1962
292	CO 853	Do	1974	323	CP 47/193	Do	Unknown	354	COK 30	Do	1970
										Demerara	
293	CO 911	Do	1963	324	CP 48/103	Do	1960	355	D 42/58	(Guyana)	1974
294	CO 945	Do	1970	325	CP 52/68	Do	1974	356	D 141/46	Do	1974
295	CO 954	Do	1987	326	CP 53/18	Do	1974	357	D 188/56	Do	1974
296	CO 957	Do	1965	327	M202/46	Mauritius	Unknown	359	DB 228/57	Do	Unknown
297	CO 961	Do	1970	328	H48/4605	Hawaii	1965	360	DB 377/60	Do	1974
298	CO 967	Do	1974	330	H49/3533	Do	1974	361	DB 386/60	Do	1974
299	CO 976	Do	1965	331	M442/51	Mauritius	Unknown	362	DB 414/60	Do	1974
300	CO 991	Do	1963	332	CP44/155	Canal point	Unknown	363	DB 414/66	Do	1983
301	CO 997	Do	1967	333	CP 71-400	Do	Unknown	364	Ebene 1/37	Unknown	1957
302	CO 1001	Do	1970	334	CP 60/23	Do	1974	365	E 88/56	Do	1974
303	CO 1007	Do	1974	335	CP 61/37	Do	1974	366	E 188/53	Do	1974
304	CO 1148	Do	1987	337	M165/38	Mauritius	unknown	367	E 188/56	Do	1974
										Formosa,	
305	CO 1157	Do	1987	338	CP 65/357	Canal point	1983	368	F 134	(Taiwan)	1970
306	CO 1158	Do	1987	339	CP 8/1026	Do	1984	370	H 32/8560	Hawaii (USA)	1960
307	CO 1177	Do	1974	340	CP68/1067	Do	1983	371	H 37/1933	Do	1960

Supplemental Table 2 continued

Code No.	Genotype	Country of origin	Year of introduction	Code No.	Genotype	Country of origin	Year of introduction	Code No.	Genotype	Country of origin	Year of introduction
372	CO-602	Coimbatore	unknown	398	N 7	Natal (South A.)	1983	426	NCD 349	Unknown	1970
373	H 38/4443	Hawaii (USA)	1960	399	N 8	Do	1983	427	NCD 376	Do	1956
374	H 39/3633	Do	1960	400	N 11	Do	1987	428	NCO 382	Do	1965
377	H 44/2364	Do	1974	401	N 14	Do	1980	429	PR 905	Puerto Rico	1959
378	H 44/3098	Do	1960	402	N 50/93	Do	1965	430	PR 980	Do	1965
379	HY8RID KS	Unknown	1974	403	SP70-1284	Unknown	Unknown	431	PR 1000	Do	1960
380	L 60-14	Louisiana, USA	1974	404	C86-12	Cuba	2003	432	PR 1007	Do	1970
381	L 60-25	Do	1974	405	Q 70	Natal	1965	433	PR 1013	Do	1970
						Reunion Island,					
382	L 60-35	Do	Unknown	406	R 48/3166	(France)	Unknown	434	PR 1059	Do	1974
383	L 60-40	Do	1974	407	TDRJAN	Australia	1956	435	PPQK 1604	Do	1958
										Proefstation	
										Cost Java	
384	M 31/45	Mauritius	1957	408	C90-501	Cuba	2003	436	PDJ 28/78	(Indonesia)	Unknown
				409	WD II	Local collection	1953	437	Pindar	Unknown	1957
					Yellow					Queens land	
385	M 53/263	D0	Unknown	410	Cane	Unknown	Unknown	439	Q 50	(Austaralia)	1957
386	M 112/34	Do	1960	412	C86-165	Cuba	2003	440	SP70-1284	Unknown	Unknown
388	M 147/44	Do	1957	415	S 17	Unknown	Do	441	B80-505	Barbados	Unknown
389	M 377/5	Do	Unknown	417	SP70-1284	Unknown	Unknown				
390	Mex 52/29	Mexico	1970	418	N 51/168	Natal	1974				
391	Mex 53/142	Do	1970	419	N 51/539	Do	1974				
392	Mex 54/245	Do	1970	420	N 52/219	Do	1974				
393	Mex 54/255	Do	1970	421	N 53/216	Do	1974				
394	Mex 57/197	Do	1970	422	N 55/805	Do	1983				
395	B80-250	Barbados	Unknown	423	NCD 310	Do	1953				
396	Mex 59/1828	Mexico	1983	424	NCO 334	Do	1962				
397	N 6	Natal (South A.)	1983	425	93-V1	Unknown	Unknown				

Supplemental Table 3. Frequency distribution of different phenotypic classes for 16 qualitative characters in sugarcane by location of collection of local and country of sources of exotic genotypes

Location	Presence or absence of bud cushion		Relative degree of bud extension			Relative bud Shape													Canopy structure							
	1	2	1	2		3	1	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	8	
Amhara	0.26	0.74	0.05	0.39	0.55	0.39	0.16	0.11	0.01	0.04	0.00	0.11	0.01	0.08	0.07	0.03	0.00	0.18	0.05	0.21	0.16	0.07	0.25	0.08		
Benshangul G.	0.3	0.7	0.00	0.40	0.60	0.10	0.20	0.10	0.00	0.20	0.10	0.10	0.00	0.10	0.10	0.00	0.00	0.10	0.00	0.10	0.40	0.30	0.10	0.00		
Gambella	0.5	0.5	0.17	0.33	0.50	0.00	0.17	0.17	0.00	0.17	0.00	0.17	0.00	0.00	0.17	0.17	0.00	0.50	0.00	0.17	0.00	0.00	0.33	0.00		
Harari	0.5	0.5	0.00	0.25	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.50	0.00	0.25	0.00		
Oromia	0.31	0.69	0.03	0.42	0.54	0.36	0.19	0.14	0.01	0.08	0.03	0.09	0.03	0.00	0.07	0.00	0.02	0.07	0.10	0.14	0.25	0.04	0.40	0.01		
SNNP	0.25	0.75	0.03	0.46	0.51	0.28	0.17	0.15	0.04	0.09	0.00	0.06	0.06	0.03	0.12	0.01	0.00	0.18	0.05	0.14	0.11	0.06	0.44	0.03		
Somali	0.33	0.67	0.17	0.33	0.50	0.33	0.17	0.33	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.17	0.33	0.17	0.17	0.17	0.00		
Tigray	0.43	0.57	0.21	0.21	0.57	0.50	0.21	0.07	0.00	0.07	0.00	0.07	0.00	0.00	0.07	0.00	0.00	0.14	0.00	0.21	0.14	0.21	0.29	0.00		
Australia (Queens land)	0.25	0.75	0.00	0.50	0.50	0.25	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.50	0.00		
Barbados	0.19	0.81	0.10	0.52	0.38	0.21	0.10	0.10	0.03	0.07	0.00	0.15	0.04	0.09	0.17	0.03	0.02	0.29	0.13	0.17	0.09	0.09	0.21	0.03		
Brazil (Campos)	0.42	0.58	0.08	0.33	0.58	0.17	0.25	0.17	0.00	0.08	0.00	0.25	0.00	0.00	0.00	0.00	0.08	0.25	0.17	0.08	0.00	0.08	0.42	0.00		
Cuba	0.30	0.70	0.10	0.30	0.60	0.40	0.10	0.00	0.00	0.00	0.00	0.10	0.00	0.10	0.30	0.00	0.00	0.10	0.20	0.30	0.10	0.10	0.20	0.00		
Guyana (Demerara)	0.31	0.69	0.06	0.63	0.31	0.19	0.06	0.00	0.06	0.06	0.00	0.19	0.06	0.00	0.31	0.00	0.06	0.38	0.25	0.06	0.00	0.13	0.19	0.00		
India	0.31	0.69	0.09	0.51	0.40	0.13	0.11	0.11	0.00	0.06	0.04	0.21	0.06	0.10	0.10	0.01	0.07	0.25	0.21	0.18	0.13	0.07	0.14	0.02		
Mauritius	0.25	0.75	0.19	0.50	0.31	0.06	0.19	0.19	0.00	0.06	0.00	0.13	0.13	0.06	0.00	0.00	0.19	0.44	0.06	0.13	0.06	0.00	0.31	0.00		
Mexico	0.08	0.92	0.17	0.58	0.25	0.08	0.25	0.00	0.00	0.17	0.00	0.25	0.00	0.08	0.08	0.00	0.08	0.42	0.08	0.00	0.00	0.08	0.42	0.00		
Puertorico	0.07	0.93	0.14	0.71	0.14	0.00	0.21	0.00	0.00	0.07	0.00	0.43	0.07	0.07	0.14	0.00	0.00	0.64	0.00	0.21	0.07	0.00	0.07	0.00		
South A. Natal	0.21	0.79	0.04	0.64	0.32	0.07	0.04	0.21	0.00	0.11	0.00	0.21	0.14	0.07	0.11	0.00	0.04	0.46	0.04	0.07	0.18	0.11	0.14	0.00		
Unknown	0.18	0.82	0.05	0.55	0.39	0.13	0.16	0.03	0.00	0.03	0.08	0.18	0.05	0.00	0.16	0.00	0.18	0.29	0.13	0.21	0.11	0.11	0.13	0.03		
USA	0.36	0.64	0.10	0.56	0.34	0.13	0.20	0.09	0.01	0.04	0.03	0.19	0.10	0.01	0.17	0.00	0.03	0.23	0.24	0.20	0.13	0.03	0.16	0.01		
All	0.27	0.73	0.07	0.48	0.45	0.23	0.15	0.11	0.01	0.07	0.02	0.14	0.05	0.05	0.12	0.01	0.04	0.23	0.12	0.16	0.14	0.07	0.26	0.02		

Supplemental Table 3 continued

Location	Relative shape of dewlap										Relative plant erectness						Relative degree of internode alignment		
	1	2	4	5	6	7	8	9	10	11	4	5	6	7	8	9	1	2	3
Amhara	0.03	0.12	0.18	0.04	0.16	0.13	0.00	0.01	0.05	0.28	0.00	0.01	0.08	0.17	0.34	0.39	0.22	0.46	0.32
Benshangul G.	0.10	0.40	0.10	0.00	0.10	0.20	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.20	0.50	0.30	0.20	0.60	0.20
Gambella	0.17	0.17	0.33	0.00	0.00	0.17	0.00	0.00	0.00	0.17	0.00	0.00	0.17	0.00	0.00	0.83	0.00	0.83	0.17
Harari	0.25	0.00	0.00	0.00	0.50	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.50	0.00	0.50	0.50
Oromia	0.12	0.15	0.08	0.06	0.18	0.15	0.03	0.02	0.04	0.16	0.05	0.01	0.02	0.23	0.34	0.36	0.32	0.45	0.23
SNNP	0.12	0.18	0.05	0.04	0.06	0.22	0.02	0.04	0.02	0.25	0.03	0.00	0.04	0.15	0.39	0.39	0.32	0.43	0.25
Somali	0.00	0.00	0.33	0.00	0.33	0.17	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.17	0.33	0.50	0.67	0.17	0.17
Tigray	0.14	0.21	0.14	0.00	0.07	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.07	0.29	0.36	0.29	0.21	0.36	0.43
Australia (Queens land)	0.00	0.25	0.25	0.00	0.00	0.25	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.25	0.25	0.50	0.00	0.75	0.25
Barbados	0.07	0.17	0.08	0.00	0.13	0.20	0.04	0.04	0.03	0.25	0.06	0.02	0.01	0.08	0.21	0.62	0.24	0.52	0.24
Brazil (Campos)	0.08	0.08	0.08	0.17	0.17	0.08	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.08	0.42	0.50	0.33	0.50	0.17
Cuba	0.00	0.20	0.00	0.00	0.00	0.50	0.00	0.00	0.10	0.20	0.00	0.00	0.00	0.00	0.20	0.80	0.10	0.60	0.30
Guyana (Demerara)	0.00	0.19	0.06	0.06	0.31	0.19	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.06	0.06	0.88	0.25	0.38	0.38
India	0.08	0.14	0.10	0.04	0.13	0.29	0.04	0.04	0.00	0.13	0.02	0.00	0.01	0.08	0.19	0.71	0.31	0.48	0.21
Mauritius	0.13	0.38	0.06	0.13	0.13	0.06	0.00	0.00	0.06	0.06	0.06	0.00	0.13	0.38	0.13	0.31	0.25	0.50	0.25
Mexico	0.08	0.17	0.00	0.17	0.08	0.17	0.17	0.00	0.08	0.08	0.00	0.00	0.00	0.08	0.58	0.33	0.42	0.42	0.17
Puertorico	0.14	0.00	0.14	0.00	0.14	0.36	0.14	0.00	0.00	0.07	0.00	0.00	0.00	0.21	0.14	0.64	0.36	0.36	0.29
South A. Natal	0.07	0.07	0.14	0.00	0.14	0.18	0.00	0.07	0.00	0.32	0.00	0.00	0.00	0.00	0.25	0.75	0.36	0.43	0.21
Unknown	0.05	0.16	0.08	0.03	0.13	0.21	0.00	0.11	0.00	0.24	0.00	0.00	0.03	0.03	0.18	0.76	0.32	0.34	0.34
USA	0.07	0.17	0.10	0.10	0.13	0.21	0.03	0.06	0.00	0.13	0.00	0.00	0.01	0.10	0.23	0.66	0.19	0.59	0.23
All	0.08	0.16	0.10	0.04	0.13	0.20	0.03	0.03	0.02	0.20	0.02	0.01	0.03	0.13	0.27	0.54	0.28	0.47	0.25

Supplemental Table 3 continued

Location	Relative internode shape						Color of the leaves			Type of auricle								
	1	2	3	4	5	6	1	2	7	1	2	3	4	5	6	7	8	9
Amhara	0.33	0.16	0.04	0.11	0.00	0.37	0.32	0.55	0.13	0.12	0.26	0.01	0.03	0.05	0.00	0.01	0.30	0.21
Benshangul G.	0.20	0.20	0.00	0.00	0.10	0.50	0.10	0.80	0.10	0.30	0.00	0.00	0.10	0.20	0.00	0.00	0.20	0.20
Gambella	0.00	0.00	0.00	0.00	0.00	1.00	0.50	0.50	0.00	0.17	0.17	0.00	0.00	0.00	0.00	0.00	0.33	0.33
Harari	0.00	0.25	0.00	0.00	0.00	0.75	0.00	0.75	0.25	0.25	0.50	0.00	0.00	0.00	0.00	0.00	0.25	0.00
Oromia	0.31	0.09	0.04	0.07	0.03	0.45	0.23	0.73	0.04	0.28	0.16	0.01	0.03	0.05	0.01	0.02	0.25	0.19
SNNP	0.26	0.18	0.03	0.11	0.04	0.38	0.18	0.70	0.12	0.20	0.29	0.02	0.07	0.06	0.01	0.03	0.12	0.20
Somali	0.33	0.17	0.50	0.00	0.00	0.00	0.33	0.67	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.17	0.17	0.00
Tigray	0.29	0.14	0.00	0.00	0.00	0.57	0.21	0.71	0.07	0.14	0.07	0.00	0.14	0.21	0.00	0.00	0.21	0.21
Australia (Queens land)	0.00	0.00	0.00	0.25	0.25	0.50	0.00	0.75	0.25	0.50	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.00
Barbados	0.19	0.19	0.05	0.04	0.08	0.46	0.17	0.63	0.21	0.21	0.18	0.01	0.05	0.04	0.00	0.00	0.27	0.25
Brazil (Campos)	0.25	0.08	0.17	0.00	0.00	0.50	0.08	0.83	0.08	0.25	0.17	0.00	0.08	0.08	0.00	0.00	0.17	0.25
Cuba	0.10	0.20	0.00	0.10	0.20	0.40	0.10	0.80	0.10	0.30	0.10	0.00	0.20	0.00	0.00	0.00	0.30	0.10
Guyana (Demerara)	0.25	0.19	0.13	0.00	0.19	0.25	0.19	0.44	0.38	0.13	0.13	0.06	0.00	0.13	0.06	0.13	0.31	0.06
India	0.21	0.19	0.08	0.02	0.17	0.33	0.14	0.62	0.24	0.18	0.11	0.02	0.04	0.03	0.00	0.03	0.33	0.27
Mauritius	0.13	0.13	0.00	0.38	0.06	0.31	0.25	0.56	0.19	0.13	0.13	0.00	0.13	0.00	0.00	0.00	0.31	0.31
Mexico	0.33	0.08	0.00	0.00	0.08	0.50	0.50	0.33	0.17	0.17	0.08	0.00	0.00	0.00	0.08	0.00	0.00	0.67
Puertorico	0.21	0.14	0.00	0.00	0.14	0.50	0.14	0.36	0.50	0.21	0.43	0.00	0.07	0.00	0.00	0.00	0.14	0.14
South A. Natal	0.25	0.18	0.07	0.00	0.11	0.39	0.21	0.54	0.25	0.04	0.29	0.00	0.04	0.04	0.00	0.04	0.32	0.25
Unknown	0.21	0.24	0.03	0.11	0.08	0.34	0.13	0.63	0.24	0.11	0.08	0.00	0.11	0.00	0.00	0.08	0.37	0.26
USA	0.17	0.23	0.01	0.09	0.13	0.37	0.14	0.50	0.36	0.19	0.23	0.01	0.07	0.00	0.01	0.01	0.24	0.23
All	0.24	0.17	0.05	0.07	0.08	0.40	0.19	0.62	0.18	0.19	0.19	0.01	0.06	0.04	0.01	0.02	0.25	0.23

Supplemental Table 3 continued

Location	Relative shape of ligule									Presence or Absence of stalk corky cracks		Presence or absence of stalk corky Patches	
	1	2	3	4	5	6	7	8	11	1	2	1	2
Amhara	0.03	0.03	0.01	0.12	0.26	0.22	0.14	0.18	0.00	0.09	0.91	0.83	0.17
Benshangul G.	0.10	0.00	0.00	0.00	0.40	0.00	0.20	0.30	0.00	0.20	0.80	1.00	0.00
Gambella	0.17	0.00	0.00	0.00	0.33	0.00	0.17	0.33	0.00	0.00	1.00	1.00	0.00
Harari	0.00	0.00	0.00	0.00	0.25	0.50	0.00	0.25	0.00	0.00	1.00	0.25	0.75
Oromia	0.10	0.07	0.02	0.07	0.26	0.25	0.04	0.18	0.02	0.13	0.87	0.76	0.24
SNNP	0.13	0.02	0.04	0.09	0.19	0.21	0.09	0.20	0.04	0.11	0.89	0.86	0.14
Somali	0.17	0.00	0.00	0.00	0.17	0.33	0.00	0.33	0.00	0.00	1.00	0.33	0.67
Tigray	0.07	0.00	0.07	0.00	0.57	0.14	0.07	0.07	0.00	0.07	0.93	1.00	0.00
Australia (Queens land)	0.00	0.00	0.25	0.00	0.50	0.00	0.00	0.25	0.00	0.00	1.00	0.75	0.25
Barbados	0.04	0.03	0.05	0.09	0.24	0.11	0.21	0.23	0.01	0.04	0.96	0.88	0.13
Brazil (Campos)	0.08	0.08	0.00	0.00	0.25	0.42	0.08	0.08	0.00	0.08	0.92	0.92	0.08
Cuba	0.00	0.00	0.00	0.10	0.30	0.30	0.10	0.20	0.00	0.00	1.00	0.80	0.20
Guyana (Demerara)	0.00	0.06	0.00	0.31	0.13	0.13	0.25	0.13	0.00	0.13	0.88	0.88	0.13
India	0.04	0.02	0.04	0.08	0.26	0.15	0.27	0.13	0.02	0.05	0.95	0.86	0.14
Mauritius	0.06	0.00	0.06	0.00	0.31	0.25	0.06	0.25	0.00	0.06	0.94	0.88	0.13
Mexico	0.00	0.00	0.00	0.00	0.42	0.17	0.33	0.08	0.00	0.25	0.75	0.75	0.25
Puertorico	0.07	0.00	0.07	0.14	0.14	0.36	0.14	0.07	0.00	0.14	0.86	0.93	0.07
South A. Natal	0.07	0.00	0.07	0.04	0.36	0.14	0.11	0.18	0.04	0.18	0.82	0.82	0.18
Unknown	0.08	0.00	0.00	0.11	0.26	0.21	0.18	0.13	0.03	0.05	0.95	0.89	0.11
USA	0.09	0.01	0.00	0.19	0.29	0.03	0.20	0.19	0.01	0.10	0.90	0.89	0.11
All	0.07	0.03	0.03	0.09	0.26	0.18	0.15	0.18	0.02	0.09	0.91	0.85	0.16

Supplemental Table 3 continued

Location	Presence or absence of stalk growth cracks		Presence or absence of bud groove		Color of the exposed rind																
	1	6	1	4	1	2	3	4	5	6	8	10	11	12	13	14	15	16	17		
Amhara	0.83	0.17	0.63	0.37	0.00	0.04	0.00	0.18	0.04	0.01	0.01	0.07	0.03	0.00	0.21	0.09	0.05	0.22	0.04		
Benshangul G	0.60	0.40	0.50	0.50	0.00	0.20	0.00	0.20	0.00	0.00	0.00	0.20	0.10	0.00	0.10	0.10	0.00	0.10	0.00		
Gambella	0.33	0.67	0.50	0.50	0.17	0.00	0.00	0.00	0.17	0.00	0.00	0.17	0.00	0.00	0.17	0.17	0.00	0.00	0.17		
Harari	0.75	0.25	0.75	0.25	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.25	0.00		
Oromia	0.85	0.15	0.53	0.47	0.02	0.06	0.01	0.08	0.04	0.00	0.01	0.20	0.14	0.00	0.08	0.10	0.01	0.25	0.00		
SNNP	0.70	0.30	0.46	0.54	0.04	0.01	0.00	0.12	0.07	0.02	0.03	0.18	0.10	0.01	0.11	0.07	0.01	0.21	0.04		
Somali	1.00	0.00	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.67	0.00		
Tigray	0.29	0.71	0.36	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.29	0.00	0.00	0.00	0.00	0.00	0.00		
Australia (Queens land)	1.00	0.00	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.25	0.00	0.00	0.25	0.00		
Barbados	0.79	0.21	0.29	0.71	0.01	0.08	0.03	0.05	0.18	0.03	0.04	0.05	0.20	0.01	0.12	0.10	0.04	0.06	0.01		
Brazil (Campos)	0.83	0.17	0.33	0.67	0.00	0.08	0.00	0.00	0.08	0.00	0.08	0.08	0.42	0.00	0.08	0.08	0.00	0.08	0.00		
Cuba	0.90	0.10	0.40	0.60	0.00	0.20	0.00	0.00	0.10	0.00	0.00	0.10	0.20	0.00	0.00	0.20	0.10	0.10	0.00		
Guyana (Demerara)	0.81	0.19	0.25	0.75	0.00	0.13	0.00	0.13	0.25	0.00	0.00	0.06	0.19	0.00	0.00	0.13	0.00	0.13	0.00		
India	0.76	0.24	0.18	0.82	0.00	0.13	0.06	0.06	0.12	0.04	0.01	0.04	0.07	0.04	0.04	0.20	0.03	0.14	0.01		
Mauritius	0.81	0.19	0.31	0.69	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.19	0.00	0.00	0.19	0.06	0.44	0.00		
Mexico	0.50	0.50	0.00	1.00	0.00	0.00	0.00	0.17	0.33	0.00	0.00	0.00	0.17	0.00	0.08	0.17	0.00	0.08	0.00		
Puertorico	0.43	0.57	0.43	0.57	0.00	0.14	0.00	0.14	0.14	0.07	0.14	0.00	0.07	0.00	0.07	0.00	0.07	0.07	0.07		
South A. Natal	0.82	0.18	0.11	0.89	0.00	0.14	0.00	0.00	0.29	0.00	0.04	0.07	0.07	0.00	0.07	0.18	0.04	0.04	0.07		
Unknown	0.82	0.18	0.26	0.74	0.00	0.08	0.00	0.03	0.18	0.03	0.03	0.08	0.16	0.05	0.08	0.11	0.03	0.16	0.00		
USA	0.81	0.19	0.26	0.74	0.03	0.10	0.03	0.01	0.16	0.03	0.00	0.04	0.23	0.03	0.07	0.16	0.01	0.10	0.00		
All	0.77	0.23	0.37	0.63	0.01	0.07	0.02	0.08	0.12	0.02	0.02	0.11	0.13	0.02	0.09	0.12	0.03	0.16	0.02		