

Electronic Supplementary Material

Title: Sugarcane landraces of Ethiopia: germplasm collection and analysis of regional diversity and distribution

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Supplemental Table 1. Passport data of sugarcane germplasm collected

No.	Vernacular name	Collector	Region/Zone/Wereda/Kebele/Village	Latitude/Longitude	Altitude (m)	Growth stage during sampling	Juice (° Brix%)
1	Nach Shenkora	Esayas Tena	SNNP/Gurage/Absege/Nachakulit/Misreta	08° 20.989'/37° 33.954'	1521	4 th ratoon/8-10 month old	17.50
2	Bicha Shenkora	Esayas Tena	SNNP/Gurage/Absege/Nachakulit/Misreta	08° 20.989'/37° 33.954'	1521	4 th ratoon/8-10 month old	15.93
3	Weliso	Esayas Tena	SNNP/Gurage/Absege/Nachakulit/Misreta	08° 20.989'/37° 33.954'	1521	4 th ratoon/8-10 month old	16.00
4	Ye Gurage Shenkora	Esayas Tena	SNNP/Gurage/Absege/Jejeba	11° 22.501'/ 036° 34.435'	1200	Plant cane 12 month old	18.00
5	Kay Shenkora	Esayas Tena	SNNP/Gurage/Meskanena	08° 20.989'/37° 33.954'	1521	3 rd ratoon/8 month old	13.00
6	Kay Shenkora	Esayas Tena	SNNP/Gurage/Meskan/Enseno	8° 3.799/ 38° 28.447'	1846	Plant cane 11 month old	17.50
7	Andegna Dereja Canada Shenkora	Esayas Tena	SNNP/Silttie/Silttie/Balokeriso	07° 58.907'/038° 22.558'	1824	Plant cane 4 month old	-
8	Abesha Shenkora	Esayas Tena	SNNP/Silttie/Silttie/Abzana	7° 46.905/38° 7.024'	2040	Plant cane 9 month old	16.30
9	Tikur Shenkora	Esayas Tena	SNNP/Silttie/Werabe/01 Kebele	7° 54.415/38° 13.781'	2228	2 nd ratoon 7 month old	15.40
10	Ye abesha Shenkora	Esayas Tena	SNNP/Gamogofa/Bonke/GeresseZala	05° 54.307'/037° 18.54'	2258	3-4 th ratoon/7-8 month old	18.00
11	Bicha Shenkora	Esayas Tena	SNNP/Gamogofa/Bonke/GeresseZala/Tsophi	05° 54.476'/037° 18.38'	2133	Plant cane 12 month old	15.17
12	Kay Sidancho	Esayas Tena	SNNP/Sidama/Borecha/Yloubancho/Agoyicho	06° 56.060'/038° 22.793'	2042	4 th ratoon/9 month old	13.00
13	Kay Shenkora	Esayas Tena	SNNP/Gamogofa/Bonke/GeresseZala/Tsophi	05° 54.476'/037° 18.38'	2133	Plant cane 12 month old	18.00
14	Nach Shenkora	Esayas Tena	SNNP/Gamogofa/Bonke/Tsophi	6° 25.469'/37° 16.267'	1048	Plant cane 12 month old	19.50
15	Gamo	Esayas Tena	SNNP/Gamogofa/Chencha/Kogo	6° 11.71'/37° 33.571'	2376	2 nd ratoon 10 month old	17.00
16	Gulisa	Esayas Tena	SNNP/Gamogofa/Chencha/Gule	6° 13.021'/37° 37.196'	1988	2 nd ratoon 9 month old	15.60
17	Kay Shenkora	Esayas Tena	SNNP/Silttie/Silttie/Balokeriso	07° 58.907'/038° 22.558'	1824	Plant cane 12 month old	16.83
18	Canada Shenkora	Esayas Tena	SNNP/Silttie/Silttie/Balokeriso	07° 58.907'/038° 22.558'	1824	Plant cane 12 month old	16.00
19	Burabure Shenkora	Esayas Tena	SNNP/Gurage/Absege/Nachakulit/Misreta	08° 20.989'/37° 33.954'	1521	2 nd ratoon/8-10 month old	11.33
20	Kay Shenkora	Esayas Tena	SNNP/Gurage/Absege/Jejeba/Jejeba	08° 16.298'/037° 43.384'	1808	4 th ratoon/3-4month old	5.00
21	Yegurage Shenkora	Esayas Tena	SNNP/Gurage/Absege/Jejeba/Jejeba	08° 16.298'/037° 43.384'	1808	4 th ratoon/3-4month old	8.00
22	Yejima Shenkora	Esayas Tena	SNNP/Gurage/Absege/Jejeba/Jejeba	08° 16.298'/037° 43.384'	1808	4 th ratoon/3-4month old	5.00
23	Kay Shenkora	Esayas Tena	SNNP/Silttie/Werabe/02 Kebele	07° 49.933'/038° 10.793'	2101	Plant cane 12 month old	17.00
24	Ye Abesha Shenkora	Esayas Tena	SNNP/South Omo/Debub Ari/Mester/Jagame	05° 59.202/036° 35.037'	1705	2 nd ratoon/7 month old	18.67
25	Nach Shenkora	Esayas Tena	SNNP/South Omo/Debub Ari/Mester/Jagame	05° 59.202/036° 35.037'	1705	2 nd ratoon/7 month old	18.00
26	Wolesh	Esayas Tena	SNNP/South Omo/Debub Ari/Bazet/Ekzek	05° 47. 213'/036° 34.900'	1436	50th ratoon 12 month old	14.67
27	Wolesh	Esayas Tena	SNNP/South Omo/Debub Ari/Bazet/Ekzek	05° 47. 213'/036° 34.900'	1436	50th ratoon 12 month old	15.50

Supplemental Table 1 continued

28	Tinkish	Esayas Tena	SNNP/South Omo/Debub Ari/Bazet/Ekzek	05° 47. 213'/036° 34.900'	1436	50th ratoon 12 month old	15.00
29	Wonji	Esayas Tena	SNNP/Gamogofa/Bonke/GeresseZala/	05° 54.307'/037° 18.54'	2258	Taken from market	
30	Nach (Arenguade) Ageda	Esayas Tena	SNNP/Konso Special Wereda/GasergeKebele	05° 96.038'/037° 21.194'	1727	4 th ratoon 10 month old	17.37
31	Burabure Shenkora	Esayas Tena	SNNP/Konso Special Wereda/BussoKebele	05° 18.495'/037° 25.28'	1357	> 10 years 12 month old	15.67
32	Wonji	Esayas Tena	SNNP/South Omo/Debub Ari/Bazet/Ekzek	05° 47. 213'/036° 34.900'	1436	4 th ratoon/6 month old	13.00
33	Wolshi	Esayas Tena	SNNP/South Omo/Debub Ari/Metser			Taken from market	
34	Wonji	Esayas Tena	SNNP/South Omo/Selamago/Aomoronbemo	5° 36.959'/36° 29.465'	1059	3 rd ratoon 8 month old	14.70
35	Tinkish	Esayas Tena	SNNP/South Omo/Selamago/Narmashiki	5° 39.419'/36° 32.432'	1403	Plant cane 14 month old	16.00
36	American	Esayas Tena	SNNP/Sidama/Borecha/Yloubancho/Agoyicho	06° 55.908'/038° 22.793'	2059	3-4 th ratoon/7-8 month old	
37	Jambo	Esayas Tena	SNNP/Sidama/Borecha/Yloubancho/Agoyicho	06° 56.060'/038° 22.793'	2042	3rd ratoon/9 month old	15.00
38	Nach Sidancho	Esayas Tena	SNNP/Sidama/Borecha/Yloubancho/Agoyicho	06° 56.060'/038° 22.793'	2042	4 th ratoon/8-9 month old	16.00
39	Bicha Shenkora	Esayas Tena	SNNP/Sidama/Borecha/AldadaDela	6° 55.258'/38° 18.065'	1951	Plant cane 13 month old	19.00
40	Engliz	Esayas Tena	SNNP/Sidama/Wondogenet/ShashaKakalo	6° 32.837'/38° 25.481'	2070	Plant cane 12 month old	18.60
41	Nach Shenkora	Esayas Tena	SNNP/Sidama/Wondogenet/WeshaSoyama	6° 32.674'/38° 29.436'	2600	Plant cane 16 month old	17.80
42	Azaro	Esayas Tena	SNNP/Amaro Special Wereda/ Jijolakebele/Kore village/Cheffa district	05° 40.446'/037° 55.669'	1410	2 nd ratoon/7 month old	17.17
43	Kollo	Esayas Tena	SNNP/Amaro Special Wereda/ Jijolakebele/Kore village/Cheffa district	05° 40.446'/037° 55.669'	1410	2 nd ratoon/7 month old	16.00
44	Wonji	Esayas Tena	SNNP/Amaro special Wereda/ Jijolakebele/Kore village/Cheffa district	05° 40.446'/037° 55.669'	1410	2 nd ratoon/7 month old	15.50
45	Moris	Esayas Tena	SNNP/Amaro special Wereda/ Korebiko	5° 39.583'/37° 36.537'	1499	Plant cane 12 month old	19.00
46	Kembata	Esayas Tena	SNNP/Gedeo/Wenago/Deko	06° 16.889'/038° 12.919'	1914	>20 years 1 12 month old	18.00
47	Sidama Shenkora	Esayas Tena	SNNP/Gedeo/Wenago/BeleBukisa	6° 17.444'/38° 16.088'	1811	2 nd ratoon 10 month old	16.80
48	Bulisa	Esayas Tena	SNNP/Gedeo/Bule/Geledacho	6° 17.608'/38° 25.316'	2799	3 rd ratoon 10 month old	15.60
49	Nach Shenkora	Esayas Tena	SNNP/Gedeo/Bule/Basura	6° 16.133'/38° 23.998'	2788	4 th ratoon 11 month old	13.60
50	Nach Shenkora	Esayas Tena	SNNP/Amaro special Wereda/ Jijolakebele/Kore village/Cheffa district	05° 40.446'/037° 55.669'	1410	2 nd ratoon/7 month old	18.00
51	Andegna Dereja Wonji	Esayas Tena	SNNP/Wolayta/Damotgale/Gacheno	07° 02.280'/037° 55.072'	1882	plant cane 1-2 month old	
52	Sidama	Esayas Tena	SNNP/Amaro special Wereda/ Jijolakebele/Kore village/Cheffa district	05° 40.446'/037° 55.669'	1410	2 nd ratoon/7 month old	17.60
53	Yegamo Shenkora	Esayas Tena	SNNP/Amaro special Wereda/ Jijolakebele/Kore village/Cheffa district	05° 40.446'/037° 55.669'	1410	2 nd ratoon/7 month old	17.00
54	Moliso	Esayas Tena	SNNP/Konta Special Wereda/ Cheka Bochakebele/Bocha village	07° 05.953'/036° 39.495'	1996	plant cane 7-8 month old	

Supplemental Table 1 continued

55	Nach Shenkora	Esayas Tena	SNNP/Konta Special Wereda/ Cheka Bochakebele	07° 06.244'/036° 40.164'	2105	5 th ratoon 8 month old	17.60
56	Tazma	Esayas Tena	SNNP/Konta Special Wereda/ Cheka Bochakebele/Bocha village	07° 05.953'/036° 39.495'	1996	4-5 th ratoon 8 months old	12.50
57	Burabure Shenkora	Esayas Tena	SNNP/Konta Special Wereda/ Cheka Bochakebele/Bocha village	07° 05.953'/036° 39.495'	1996	4-5 th ratoon 8 months old	14.50
58	Jimma	Esayas Tena	SNNP/Konta Special Wereda/GenjiShasho	7° 6.054'/36° 46.439'	1775	2 nd ratoon 9 month old	17.50
59	Wolayta	Esayas Tena	SNNP/Wolayta/Damotgale/Gacheno	07° 02.280'/037° 55.072'	1882	2 nd ratoon/8 month old	14.67
60	Wolayta	Esayas Tena	SNNP/Wolayta/Damotgale/Buge	7° 6.381'/37° 55.488'	1903	Plant cane10 month old	17.80
61	Kay Shenkora	Esayas Tena	SNNP/Wolayta/DamotWoyide/Oloba	6° 49.696'/37° 42.964'	1856	2 nd ratoon 7 month old	14.60
62	Nach Shenkora	Esayas Tena	SNNP/Wolayta/DamotWoyide/Kinido Koyo	6° 50.023'/37° 40.327'	1898	Plant cane10 month old	16.00
63	Kay Shenkora	Esayas Tena	SNNP/Dawro/Loma/Wushay	07° 00.612'/037° 12.285'	2163	2 nd ratoon/5 month old	10.27
64	Kenya	Esayas Tena	SNNP/Dawro/Loma/GesaChere	6° 57.385'/37° 16.761'	1357	Plant cane10 month old	18.70
65	Wetet	Esayas Tena	SNNP/Dawro/Mareka/Batokolbo	7° 0.493'/37° 10.829'	2131	3 rd ratoon 6 month old	12.00
66	Kay Shenkora	Esayas Tena	SNNP/Konta Special Wereda/ Cheka Bochakebele/Bocha	07° 05.953'/036° 39.495'	1996	Plant cane 7-8 month old	10.10
67	Atena Moris	Esayas Tena	SSNP/KembataTembaro/KachaBira/Mesena	07° 10.944'/037° 46.746'	1838	2 nd ratoon/8 month old	12.93
68	Bshe	Esayas Tena	SSNP/KembataTembaro/Timbaro/Gaecha	7° 21.421'/37° 51.039'	2276	2 nd ratoon 8 month old	16.00
69	Kembata	Esayas Tena	SSNP/KembataTembaro/Timbaro/Beda	7° 23.546'/37° 50.215'	2205	Plant cane12 month old	18.50
70	Dolche	Esayas Tena	SNNP/Wolayta/Damotgale/Gacheno	07° 02.280'/037° 55.072'	1882	Plant cane 18 month old	15.83
71	Kay Ageda Shenkora	Esayas Tena	SNNP/Halabakulito Special Wereda/Alemtena	07° 22.433'/038° 06.433'	1797	Plantcane 12 month old	12.17
72	Moris	Esayas Tena	SNNP/Halabakulito Special Wereda/Alemtena	07° 22.433'/038° 06.433'	1797	3 rd ratoon/12 month old	20.17
73	Bolfe	Esayas Tena	SSNP/KembataTembaro/KachaBira/Mesena	07° 10.944'/037° 46.746'	1838	Plant cane 12 month old	15.67
74	Abesha	Esayas Tena	SSNP/KembataTembaro/KachaBira/Mesena	07° 10.944'/037° 46.746'	1838	2 nd ratoon/12 month old	16.33
75	Wotete	Esayas Tena	SSNP/KembataTembaro/KachaBira/Mesena	07° 10.944'/037° 46.746'	1838	Plant cane 10 month old	14.33
76	Tazma/Burabure	Esayas Tena	SNNP/Dawro/Mareka/MedaKuli/Gendomeda	06° 58.977'/037° 11.493'	1803	4 th ratoon/10 month old	17.33
77	BetamNach Shenkora	Esayas Tena	SNNP/Konta Special Wereda/ Cheka Bochakebele	07° 06.244'/036° 40.164'	2105	5 th ratoon 7-8 month old	14.00
78	Wonji-1	Esayas Tena	SSNP/KembataTembaro/ KachaBira/Wonko	07° 12.316'/037° 50.843'	1952	2 nd ratoon/6-7 month old	14.87
79	Bishoftu	Esayas Tena	SSNP/KembataTembaro/ KachaBira/Wonko	07° 12.316'/037° 50.843'	1952	2 nd ratoon/6-7 month old	16.67
80	Wotet	Esayas Tena	SNNP/Wolayta/Damotgale/ Gacheno	07° 02.280'/037° 55.072'	1882	Plant cane 18 month old	14.43
81	Wotete	Esayas Tena	SNNP/Halabakulito Special Wereda/ Bedene	07° 22.637'/038° 06.278'	1798	2 nd ratoon/6-7 month old	14.97
82	Yeferenj Shenkora	Esayas Tena	SNNP/Dawro/Mareka/MedaKuli/ Gendomeda	06° 58.977'/037° 11.493'	1803	5 th ratoon 12 month old	18.67

Supplemental Table 1 continued

83	Bula Shenkora	Esayas Tena	SNNP/Sheka/Masha/Shibo	07° 44.641'/035° 28.511'	2277	2 nd ratoon/10-12 month old	17.43
84	Bicha Shenkora	Esayas Tena	SNNP/Sheka/Masha/Beto	07° 44.641'/035° 28.511'	2277	Plantcane 12 month old	17.00
85	Tikur Ageda	Esayas Tena	SNNP/Sheka/Yeki/Addisbirhan	07° 11.212'/035° 26.095'	1164	2 nd ratoon/10-12 month old	16.27
86	Ye Kenya Ageda	Esayas Tena	SNNP/Sheka/Masha/Keja	07° 50.149'/035° 28.159'	1827	Plantcane 8 month old	12.17
87	Kay Ageda	Esayas Tena	SNNP/Sheka/Yeki/Addisbirhan	07° 11.212'/035° 26.095'	1164	2 nd ratoon/10-12 month old	15.50
88	Tepi	Esayas Tena	SNNP/Sheka/Yeki/Fide	7° 14.556'/35° 29.645'	1350	3 rd ratoon 10 month old	14.60
89	Ye Kenya Shenkora	Esayas Tena	SNNP/Sheka/Masha/Masha 01	07° 44.641'/035° 28.511'	2277	taken from market	
90	Kay Ageda	Esayas Tena	SNNP/Kefa/Gimbo/Bonga 01	07° 15.225'/036° 15.303'	1792	Plantcane 9 month old	15.00
91	Shembeko Ageda	Esayas Tena	SNNP/Kefa/Gimbo/Bonga 01	07° 15.225'/036° 15.303'	1792	2 nd ratoon/7 month old	16.37
92	Bicha Shenkora	Esayas Tena	SNNP/Kefa/Gimbo/Baka	7° 2.292'/36° 55.503'	1372	Plant cane 12 month old	17.80
93	Kaficho	Esayas Tena	SNNP/Kefa/Cheta/Aja	6° 23.831'/36° 44.297'	1152	2 nd ratoon 9 month old	17.50
94	Nach Shenkora	Esayas Tena	SNNP/Kefa/Cheta/Kolla	6° 16.297'/36° 43.638'	1965	Plant cane 13 month old	15.90
95	Tikur Ageda	Esayas Tena	SNNP/ Bench Majii /MizanTeferi/ Hibretkebele	07° 00.061'/035° 35.802'	1356	10 th ratoon/12 month old	20.00
96	Nach Ageda	Esayas Tena	SNNP/ Bench Majii /MizanTeferi/ 06 kebele	6° 55.586'/35° 35.083'	2067	2 nd ratoon 9 month old	15.00
97	Tepi	Esayas Tena	SNNP/ Bench Majii /Maji /Haro	6° 10.399'/35° 35.742'	2345	5 th ratoon 8 month old	15.80
98	Bicha Shenkora	Esayas Tena	SNNP/ Bench Majii /Maji /Adikas	5° 59.912'/35° 36.072'	1046	3 rd ratoon 10 month old	16.00
99	Huleteгна Dereja Jambo Kay	Esayas Tena	Oromia/West Arsi/Wondo/Shesha kebele	07° 05.662'/038° 36.203'	1705	Plant cane 18 months old	16.00
100	Andegna Dereja Jambo Kay	Esayas Tena	Oromia/West Arsi/Wondo/Shesha kebele	07° 05.662'/038° 36.203'	1705	Plant cane 18 months old	14.77
101	Sostegna Dereja Jambo Kay/Metfo Shenkora	Esayas Tena	Oromia/West Arsi/Wondo/Shesha kebele	07° 05.662'/038° 36.203'	1705	Plant cane 18 months old	17.50
102	Yemaytafit Shenkora	Esayas Tena	Oromia/Bale/Agarfa/Wabe			taken from market	
103	Kay Shenkora	Esayas Tena	Oromia/Arsi/Tena/Kereyuharzuna/ Debenshe	07° 42.648'/039° 35.844'	1848	Plantcane 14 month old	19.93
104	Wotete	Esayas Tena	Oromia/Arsi/Tio/Bosha		market	Plantcane 12-14 month old	17.33
105	Shenkora Dima/Kay Shenkora	Esayas Tena	Oromia/Bale/Agarfa/Alochefo/	07° 23.154'/039° 46.271'	1497	> 60 years 7-8 month old	16.67
106	Nach Shenkora/Shenkora Adi	Esayas Tena	Oromia/Arsi/Tena/Kereyuharzuna/Debenshe	07° 42.648'/039° 35.844'	1848	Plantcane 14 month old	21.30
107	Nach Shenkora	Esayas Tena	Oromia/Bale/Agarfa/Alochefo/ Odachefo	07° 23.154'/039° 46.271'	1497	> 60 years 4-5 month old	15.43
108	Moris	Esayas Tena	Oromia/Arsi/Tena/Kereyuharzuna/ Debenshe	07° 42.648'/039° 35.844'	1848	Plantcane 12 month old	16.73
109	Kay Shenkora	Esayas Tena	Oromia/Bale/Goro/Melkabuta/ Gadula Gola Dhertu	06° 58.539'/040° 35.398'	1611	Plantcane 12 month old	18.67
110	Ye Abesha Shenkora	Esayas Tena	Oromia/West Shewa/Ambo/ Harutiro	09° 07.613'/037° 47.724'	2370	2 nd ratoon/1 year old	15.03

Supplemental Table 1 continued

111	Ye Oromo Shenkora	Esayas Tena	Oromia/West Shewa/Ambo/ Harutiro	09 ^o 07.613'/037 ^o 47.724'	2370	2 nd ratoon/1 year old	15.00
112	Ye Bako Shenkora	Esayas Tena	Oromia/West Shewa/Ambo/ Harutiro	09 ^o 07.613'/037 ^o 47.724'	2370	2 nd ratoon/1 year and 6 month old	18.60
113	Shenkora Dima/Kay Shenkora	Esayas Tena	Oromia/Illubabor/Bure/Wengawobe	08 ^o 09.189'/035 ^o 27.382'	1758	Plantcane 8 month old	14.00
114	Kay Shenkora Ageda	Esayas Tena	Oromia/Illubabor/Huka/Abyuadrere	08 ^o 13.781'/035 ^o 15.796'	1600	Plantcane 12 month old	12.93
115	Kay Shenkora/ Dima	Esayas Tena	Oromia/Jima Zone/ Sekoru Wereda/Habedode Kebele			Taken from market	
116	Tikur Ageda	Esayas Tena	Oromia/Illubabor/Bilonopa/Suli	08 ^o 26.252'/035 ^o 36.267'	1417	2 nd ratoon/9 month old	14.53
117	Nach Shenkora	Esayas Tena	Oromia/Illubabor/Bilonopa/Dizy	08 ^o 23.138'/035 ^o 36.249'	1559	2 nd ratoon/11 month old	17.40
118	Nach Shenkora	Esayas Tena	Oromia/Illubabor/Dureni/	08 ^o 29.860'/035 ^o 45.110'	1754	10th ratoon/5-6 month old	11.75
119	Dalecha Shenkora	Esayas Tena	Oromia/Illubabor/Bilonopa/Suli	08 ^o 26.252'/035 ^o 36.267'	1417	2 nd ratoon/9 month old	12.60
120	Ye Abesha Shenkora	Esayas Tena	Oromia/Jimma/Agaro/Kesohiti	07 ^o 51.305'/036 ^o 38.997'	1579	4 th ratoon/8 month old	10.97
121	Kay Shenkora Ageda	Esayas Tena	Oromia/Illubabor/Bilonopa/Suli	08 ^o 26.252'/035 ^o 36.267'	1417	2 nd ratoon/9 month old	15.33
122	Kay Shenkora	Esayas Tena	Oromia/Illubabor/Dureni/ Betelegebecha/Hadere	08 ^o 29.860'/035 ^o 45.110'	1754	10th ratoon/8 month old	13.70
123	Barbados	Esayas Tena	Oromia/Gimbi/Laloasabe/Harochserdo Kebele			Taken from market	
124	Ye Bako Shenkora	Esayas Tena	Oromia/Gimbi/Laloasabe/Dengoro 01/Golbe	09 ^o 16.130'/035 ^o 40.804'	1730	2 nd ratoon/12 month old	14.90
125	Kay Shenkora	Esayas Tena	Oromia/Gimbi/Laloasabe/Dengoro 01/Golbe	09 ^o 16.130'/035 ^o 40.804'	1730	Plantcane 8 month old	15.4
126	Ageda Adi	Esayas Tena	Oromia/Kelem Welega/Sayo/ Gelanometi/Sembo	08 ^o 32.704'/034 ^o 43.594'	1730	2-3 ratoon/12 month old	13.67
127	Dalecha Shenkora	Esayas Tena	Oromia/Kelem Welega/Dale Wabera/Chanka Burore	08 ^o 49.268'/035 ^o 03.747'	1470	2 nd ratoon/6-7 month old	16.37
128	Nach Shenkora	Esayas Tena	Oromia/Gimbi/Laloasabe/ Dengoro 01/Golbe	09 ^o 16.130'/035 ^o 40.804'	1730	2 nd ratoon/12 month old	15.93
129	Tabor Shenkora	Esayas Tena	Oromia/Gimbi/Guliso/Wereseyo/ Kobera	09 ^o 10.256'/035 ^o 31.592'	1484	3 rd ratoon/12 month old	17.97
130	Shilmu	Esayas Tena	Oromia/Kelem Welega/Dale Wabera/Chanka Burore	08 ^o 49.268'/035 ^o 03.747'	1470	2 nd ratoon/6-7 month old	13.27
131	Nach Shenkora	Esayas Tena	Oromia/Kelem Welega/Hawagelan/ Haromechara	08 ^o 43.544'/034 ^o 59.141'	1444	Plantcane 12-13 month old	16.50
132	Kay Shenkora	Esayas Tena	Oromia/West Shewa/Bakotibe/ Dembigobu	09 ^o 07.616'/037 ^o 04.565'	1620	2 nd ratoon/8 month old	14.80
133	Buli	Esayas Tena	Oromia/Kelem Welega/Dale Wabera/Chanka	08 ^o 51.507'/035 ^o 04.122'	1487	2 nd ratoon/6-7 month old	12.67
134	Nach Ageda	Esayas Tena	Oromia/Kelem Welega/Hawagelan/Haromechara	08 ^o 43.544'/034 ^o 59.141'	1444	3 rd ratoon 12 month old	20.73
135	Abesha Shenkora	Esayas Tena	Oromia/West Shewa/Bakotibe/Dembigobu	09 ^o 07.616'/037 ^o 04.565'	1620	2 nd ratoon/8 month old	17.87
136	Shenkora Adi	Esayas Tena	Oromia/West Shewa/Bakotibe/Dembigobu	09 ^o 07.616'/037 ^o 04.565'	1620	2 nd ratoon/8 month old	16.00
137	Nach Shenkora	Esayas Tena	Oromia/East Hararghe/Gurawa/01 Kebele/Kera Sefer	09 ^o 08.392'/041 ^o 50.424'	2401	11 year ratoon 9 month old	17.90
138	Shenkora Adi	Esayas Tena	Oromia/East Hararghe/Kurfachele/Dawe/	09 ^o 17.423'/041 ^o 52.611'	1713	3 rd ratoon/6 month old	14.50

Supplemental Table 1 continued

139	Nach Shenkora	Esayas Tena	Oromia/East Hararghe/Meta/Chelenko 02 kebele	09° 23.875'/041° 33.670'	2179	4 th ratoon/9 month old	15.07
140	Shenkora Dima	Esayas Tena	Oromia/East Hararghe/Kurfachele/Dawe/	09° 17.423'/041° 52.611'	1713	Taken from market	
141	Nach Shenkora/Wonji	Esayas Tena	Oromia/East Hararghe/Meta/Chelenko 02 kebele	09° 23.875'/041° 33.670'	2179	4 th ratoon/9 month old	17.70
142	Yemilat Nach Shenkora	Esayas Tena	Oromia/East Hararghe/Meta/Chelenko 02 kebele	09° 23.875'/041° 33.670'	2179	4 th ratoon/9 month old	20.50
143	Kay Shenkora	Esayas Tena	Oromia/East Hararghe/Babile/Ereguda/Megida	09° 14.783'/042° 15.022'	1315	2 nd ratoon/6 month old	12.34
144	Nach Shenkora	Esayas Tena	Oromia/East Hararghe/Babile/Ereguda/Megida	09° 14.783'/042° 15.022'	1315	3 rd ratoon/7 month old	13.34
145	Kay Shenkora/Burabure	Esayas Tena	Oromia/East Hararghe/Babile/Ereguda/Megida	09° 14.783'/042° 15.022'	1315	2 nd ratoon/6 month old	12.48
146	Kay Shenkora	Esayas Tena	Oromia/East Hararghe/Kombolcha/Sibilu/Gende Wedo Usman	09° 25.248'/042° 06.965'	2113	Plant cane/6 month old	13.84
147	Kay Shenkora/Burabure	Esayas Tena	Oromia/East Hararghe/Gorogutu/Erermedanchine	09° 24.966'/041° 29.590'	1728	6 th ratoon 6 month old	16.83
148	Guracha Shenkora/Tikur	Esayas Tena	Oromia/East Hararghe/Babile/Ereguda/Megida	09° 14.783'/042° 15.022'	1315	2 nd ratoon/9 month old	13.56
149	Misrah	Esayas Tena	Oromia/West Hararghe/Gemechis/Wemecho Dayo/Dekadabu	08° 45.408'/040° 53.285'	1496	2 nd ratoon/10 month old	16.57
150	Wonji	Esayas Tena	Oromia/West Hararghe/Gemechis/Wemecho Dayo/Dekadabu	08° 45.408'/040° 53.285'	1496	2 nd ratoon/6 month old	15.40
151	Wonji/Bula/Shenkora Adi	Esayas Tena	Oromia/West Hararghe/Gubakoricha/ Oda Aneni 05 kebele/Nanofaro	08° 56.717'/040° 33.308'	1972	Plantcane 12 month old	15.03
152	Shekole	Esayas Tena	Oromia/West Hararghe/Gubakoricha/ Oda Aneni 05 kebele/Nanofaro	08° 56.717'/040° 33.308'	1972	6 th ratoon 9 month old	13.90
153	Holland	Esayas Tena	Oromia/West Hararghe/Darolebu	08° 36.352'/040° 19.278'	1751	3 rd ratoon/6 month old	15.37
154	Bure	Esayas Tena	Oromia/West Hararghe/Gubakoricha/ Oda Aneni 05 kebele/Nanofaro	08° 56.717'/040° 33.308'	1972	Plantcane 8 month old	13.47
155	Shenkora Dima	Esayas Tena	Oromia/West Hararghe/Mesela/Lubudekeb/Deneba	09° 05.913'/041° 08.151'	1647	2 nd ratoon/12 month old	14.90
156	Wonji	Esayas Tena	Oromia/West Hararghe/Mesela/Lubudekeb/Deneba	09° 05.913'/041° 08.151'	1647	2 nd ratoon/12 month old	16.03
157	Gende Lega	Esayas Tena	Oromia/West Hararghe/Gubakoricha/ Oda Aneni 05 kebele/Nanofaro	08° 56.717'/040° 33.308'	1972	Plantcane 8 month old	15.40
158	Dikala	Esayas Tena	Oromia/East Hararghe/Deder/Kiyo (Nedi Gelan Sedi)/Tulu	09° 15.638'/041° 23.451'	1812	4 th ratoon/12 month old	16.27
159	Alaa	Esayas Tena	Oromia/East Hararghe/Deder/Kiyo	09° 15.638'/041° 23.451'	1812	Plantcane 12 month old	15.13
160	Shenkora Adi	Esayas Tena	Oromia/East Hararghe Zone/ Meta/ Ramis			Bought at Kulubi market	
161	Aladi	Esayas Tena	Oromia/East Hararghe/Deder/Kiyo (Nedi Gelan Sedi)/Tulu	09° 15.638'/041° 23.451'	1812	2 nd ratoon/6 month old	13.25

Supplemental Table 1 continued

162	Erero	Esayas Tena	Oromia/East Hararghe/Deder/Kiyo (Nedi Gelan Sedi)/Tulu	09° 15.638'/041° 23.451'	1812	Plant cane 9 month old	15.84
163	Engda	Esayas Tena	Oromia/West Hararghe/Anchar/Chorchora/Megala Deye Market	08° 47.508'/040° 17.063	1690	2 nd ratoon/8 month old	14.48
164	Kay Shenkora	Esayas Tena	Oromia/West Hararghe/Anchar/Chorchora/ Megala Deye Market	08° 47.508'/040° 17.063	1690	2 nd ratoon/12 month old	17.93
165	NachShenkora/Shenkora Adi	Esayas Tena	Oromia/Jimma/Agaro/Kesohiti	07° 51.305'/ 036° 38.997'	1579	10th ratoon/5-6 month old	11.75
166	Kay Shenkora/Shenkora Dimma	Esayas Tena	Oromia/Jimma/Agaro/Kesohiti	07° 51.305'/ 036° 38.997'	1579	10th ratoon/8 month old	13.70
167	Kay Ageda/Shenkora Dimma	Esayas Tena	Oromia/Gimbi/Laloasabe/Dengoro 01/Golbe	09° 16.130'/ 035° 40.804'	1730	3 rd ratoon/9 month old	16.87
168	Arebia	Esayas Tena	Oromia/West Shewa/Bakotibe/ Dembigobu	09° 07.616'/ 037° 04.565'	1620	2 nd ratoon/8 month old	14.65
169	Dikala	Esayas Tena	Oromia/West Shewa/Bakotibe/ Dembigobu	09° 07.616'/ 037° 04.565'	1620	2 nd ratoon/8 month old	15.00
170	Ageda Adi	Esayas Tena	Oromia/Borena/Yabelo	4° 53.543' / 38° 06.654'	1856	2 nd ratoon/8 month old	15.45
171	Shenkora Guracha	Esayas Tena	Oromia/Borena/Yabelo	4° 53.543' / 38° 06.654'	1856	2 nd ratoon/8 month old	14.51
172	Kay Shenkora/Wonji	Esayas Tena	Amhara/North Shewa/Debresina	10° 04.978'/039° 53.606'	1276	taken from market	
173	Nach Shenkora	Esayas Tena	Amhara/North Shewa/Debresina	10° 04.978'/039° 53.606'	1276	taken from market	
174	Tikur Ageda	Esayas Tena	Amhara/North Shewa/Kewet/Yelen	10° 04.978'/039° 53.606'	1235	Plantcane 8 month old	16.73
175	Nach Ageda	Esayas Tena	Amhara/North Shewa/Kewet/Yelen	10° 04.978'/039° 53.606'	1235	Plantcane 8 month old	14.70
176	Nach Kechacha Shenkora	Esayas Tena	Amhara/North Shewa/Kewet/Yelen	10° 04.978'/039° 53.606'	1235	3 rd ratoon/8 month old	16.00
177	Getr	Esayas Tena	Amhara/North Shewa/Kewet/Yelen	10° 04.978'/039° 53.606'	1235	3 rd ratoon/8 month old	14.00
178	Nach Shenkora	Esayas Tena	Amhara/Debub Gondar/Derra/ Mashenkoro/Misgano	11° 42.976'/037° 36.908	1993	Plantcane 10 month old	14.93
179	Yeferenj Shenkora	Esayas Tena	Amhara/Debub Gondar/Fogera/ Wereta	11° 55.550'/037° 41.751'	1820	Taken from market	
180	Mogn Aybelash	Esayas Tena	Amhara/Debub Gondar/Fogera/ Wereta	11° 55.550'/037° 41.751'	1820	Taken from market	
181	Kay Shenkora/Shilmlim/Burabure	Esayas Tena	Amhara/Debub Gondar/Fogera/ Wereta	11° 55.550'/037° 41.751'	1820	Taken from market	
182	Yegojam Shenkora	Esayas Tena	Amhara/Debub Gondar/Fogera/Wagtera	11° 54.574'/037° 33.371'	1797	7th ratoon/12 month old	13.83
183	Tikur Shenkora	Esayas Tena	Amhara/West Gojam/Bahirdar Zuria/ Tis Abay/Gebere Mahiber	11° 29.128'/037° 34.331'	1642	3 rd ratoon/10 month old	22.57
184	Yeferenj Shenkora/Mogn Aybela	Esayas Tena	Amhara/West Gojam/Bahirdar Zuria/ Tis Abay/Gebere Mahiber	11° 29.128'/037° 34.331'	1642	Plantcane 11 month old	16.87
185	Shilmlm Sora	Esayas Tena	Amhara/West Gojam/Bahirdar Zuria/ Tis Abay/Gebere Mahiber	11° 29.128'/037° 34.331'	1642	Plantcane 11 month old	14.20
186	Ye Bure Shenkora	Esayas Tena	Amhara/West Gojam/Bahirdar Zuria/ Tis Abay/Gebere Mahiber	11° 29.128'/037° 34.331'	1642	3 rd ratoon/11-12 month old	21.03

Supplemental Table 1 continued

187	Nach Ageda	Esayas Tena	Amhara/West Gojam/Jabitehnan/ Mankusa Abdegom/Endalah	10° 41.075'/037° 11.357'	1941	2 nd ratoon/1 year and 6 month old	20.43
188	Tikur Shenkora	Esayas Tena	Amhara/West Gojam/Jabitehnan/ Mankusa Abdegom/Endalah	10° 41.075'/037° 11.357'	1941	2 nd ratoon/1 year and 6 month old	21.63
189	Nach Shenkora	Esayas Tena	Amhara/West Gojam/Debub Achefer/ Lalibela/Azena	11° 28.590'/036° 57.027'	1883	3 rd ratoon/8 month old	16.33
190	Sendel	Esayas Tena	Amhara/West Gojam/Debub Achefer/ Lalibela/Azena	11° 28.590'/036° 57.027'	1883	3 rd ratoon/8 month old	16.33
191	Nach Yemailat Shenkora	Esayas Tena	Amhara/West Gojam/Debub Achefer/ Lalibela/Azena	11° 28.590'/036° 57.027'	1883	4 th ratoon/8 month old	20.33
192	Bule	Esayas Tena	Amhara/West Gojam/Debub Achefer/ Lalibela/Azena	11° 28.590'/036° 57.027'	1883	4 th ratoon/8 month old	15.93
193	Kay Shenkora	Esayas Tena	Amhara/West Gojam/Debub Achefer/ Lalibela/Azena	11° 28.590'/036° 57.027'	1883	4 th ratoon/8 month old	20.50
194	Nach Shenkora	Esayas Tena	Amhara/West Gojam/Debub Achefer/ Lalibela/Azena	11° 28.590'/036° 57.027'	1883	3 rd ratoon/8 month old	16.00
195	Kay Shenkora	Esayas Tena	Amhara/Awi/Guangua/Mota/ Menta Wuha	10° 50.310'/036° 20.642'	1532	2 nd ratoon/6-7 month old	16.83
196	Tikur Shenkora	Esayas Tena	Amhara/Awi/Guangua/Mota/ Menta Wuha	10° 50.310'/036° 20.642'	1532	2 nd ratoon/6-7 month old	19.10
197	Nach Shenkora	Esayas Tena	Amhara/Awi/Guangua/Mota/ Menta Wuha	10° 50.310'/036° 20.642'	1532	2 nd ratoon/6-7 month old	16.77
198	Nach Shenkora	Esayas Tena	Amhara/East Gojam/Dejen/Kurar/ Dengel	10° 06.578'/038° 09.202'	1820	Plantcane 10 month old	16.27
199	Bishoftu	Esayas Tena	Amhara/East Gojam/Dejen/Kurar/ Dengel	10° 06.578'/038° 09.202'	1820	Plantcane 10 month old	15.00
200	China	Esayas Tena	Amhara/East Gojam/Dejen/Kurar/ Ambayamit	10° 06.490'/038° 09.185'	1804	26th ratoon 5 month old	13.00
201	Gojame/Ye Gojam Ageda	Esayas Tena	Amhara/East Gojam/Dejen/Kurar/ Ambayamit	10° 06.490'/038° 09.185'	1804	26th ratoon 5 month old	13.50
202	Nach Shenkora	Esayas Tena	Amhara/East Gojam/Dejen/Kurar/ Dengel	10° 06.578'/038° 09.202'	1820	2 nd ratoon/7 month old	16.10
203	Kay Shenkora	Esayas Tena	Amhara/East Gojam/Basoliben/ Yejube	10° 06.490'/037° 09.185'	1800	Taken from market	
204	Abadir	Esayas Tena	Amhara/East Gojam/Dejen/Kurar/ Ambayamit	10° 06.490'/038° 09.185'	1804	2 nd ratoon/12 month old	13.50
205	Ye Fincha Shenkora	Esayas Tena	Amhara/East Gojam/Basoliben/ Entemen Dejat	10° 03.504'/037° 50.264'	2360	Plant cane 1 year and 2 month	20.33
206	Kay Ageda	Esayas Tena	Amhara/East Gojam/Dejen/Dejen Town			Taken from Dejen market	
207	Kay Ageda	Esayas Tena	Amhara/East Gojam/Dejen/Yibeza Michael			Taken from Dejen market	
208	Bicha Shenkora	Esayas Tena	Amhara/East Gojam/Dejen/Kurar/ Dengel	10° 06.578'/038° 09.202'	1820	3 rd ratoon/9 month old	21.60
209	Nach Ageda/ Shenkora	Esayas Tena	Amhara/Semen Welo/Gubalafto/ Woynye 011/Medakit	11° 53.630'/039° 28.136'	2030	4 th ratoon/1 year and 4 month old	21.03
210	Kay Ageda/ Shenkora	Esayas Tena	Amhara/Semen Welo/Gubalafto/ Woynye 011/Medakit	11° 53.630'/039° 28.136'	2030	4 th ratoon/1 year and 4 month old	17.87
211	Kay Shenkora (Burabure)	Esayas Tena	Amhara/Semen Welo/Habru/09 kebele/ Ante	11° 41.085'/039° 38.325'	1695	Plantcane 6 month old	17.33

Supplemental Table 1 continued

212	Nach Ye Abesha Shenkora	Esayas Tena	Amhara/Semen Welo/Habru/09 kebele/ Ante	11° 41.085'/039° 38.325'	1695	7 th ratoon 5 month old	17.70
213	Kay Shenkora	Esayas Tena	Amhara/Debub Welo/Werebabo/02 kebele/Bulbulo/Aselel Prim. School	11° 19.354'/039° 45.074'	2072	2 nd ratoon/10--12 month old	13.93
214	Tikur Ageda	Esayas Tena	Amhara/Semen Welo/Habru/Mersa Town			Taken from market	
215	Nach Tilik Shenkora	Esayas Tena	Amhara/Debub Welo/Werebabo/02 kebele/Bulbulo/Aselel Prim. School	11° 19.354'/039° 45.074'	2072	5 th ratoon 12 month old	18.23
216	Nach Shenkora	Esayas Tena	Amhara/ Oromia special Zone/Kemissie/02 kebele/Ergi	10° 42.491'/039° 51.712'	1422	5 th ratoon 5-6 month old	18.10
217	Nach Shenkora	Esayas Tena	Amhara/ Oromia special Zone/Kemissie/02 kebele/Ergi	10° 42.491'/039° 51.712'	1422	5 th ratoon 5-6 month old	19.90
218	Nach Ageda	Esayas Tena	Amhara/Debub Welo/Borena/04 kebele/ Jimaye	10° 45.172'/038° 45.974'	2687	Taken from market	
219	Nach Tinish Shenkora	Esayas Tena	Amhara/Debub Welo/Werebabo/02 kebele/Bulbulo/Aselel Prim. School	11° 19.354'/039° 45.074'	2072	2 nd ratoon/10--12 month old	18.34
220	Ye Beskula Shenkora	Esayas Tena	Amhara Region/South Welo Zone/ Legambo Wereda/Beskula Kebele			Taken from market	
221	Kay Shenkora	Esayas Tena	Amhara/ Oromia special Zone/Kemissie/02 kebele/Ergi	10° 42.491'/039° 51.712'	1422	5 th ratoon 5-6 month old	21.13
222	Nach Ye Abesha Shenkora	Esayas Tena	Amhara/Semen Welo/Meket/013 kebele/ Emamoz Fikrte Kirstos Gedam			Brought by monks from the monastery	
223	Nach Ageda/ Shenkora	Esayas Tena	Amhara/Waghmra/Sekota/02 kebele/ Tiya	12° 30.391'/039° 05.795'	1978	2 nd ratoon/5 month old	15.87
224	Burabure Shenkora Ageda	Esayas Tena	Amhara/Semen Gondar/Gonder Zuria/ Enfranz	12° 15.220'/037° 38.5191'	1899	4 th ratoon/6 month old	13.76
225	Kay Shenkora	Esayas Tena	Amhara/West Gojam/Bahirdar Zuria/ Zenzelma			Taken from market	
226	Nach Shenkora	Esayas Tena	BenshangulGumuz/Metekel/Pawe/Mender 24	11° 22.501'/036° 34.435'	1197	2 nd ratoon/7 month old	14.36
227	Bale Mesmer Kay Shenkora	Esayas Tena	BenshangulGumuz/Metekel/Pawe/Mender 24	11° 22.501'/036° 34.435'	1197	3 rd ratoon/8-9 month old	17.20
228	Nach Shenkora	Esayas Tena	Amhara/East Gojam/Dejen/Dejen Town			Taken from market	
229	Kay Shenkora	Esayas Tena	Amhara/East Gojam/Dejen/Dejen Town			Taken from market	
230	Kay Shenkora	Esayas Tena	Amhara/East Gojam/Dejen/Kurar/Dengel	10° 06.578'/038° 09.202'	1820	2 nd ratoon/1 year and 6 month old	19.93
231	Bishoftu	Esayas Tena	Amhara/East Gojam/Dejen/Kurar/Dengel	10° 06.578'/038° 09.202'	1820	2 nd ratoon/1 year and 6 month old	18.00
232	Kay Ageda/Shenkora	Esayas Tena	Amhara/Semen Welo/Habru/09 kebele/ Ante	11° 41.088'/039° 38.328'	1690	Taken from market	
233	Nach Ageda/Shenkora	Esayas Tena	Amhara/Semen Welo/Habru/09 kebele/ Ante	11° 41.088'/039° 38.328'	1690	Taken from market	
234	Kay Ageda	Esayas Tena	Tigray/Semen Mierab Tigray/Tach Koraro/ Semena/ Maymesreb	14° 11.602'/038° 20.897'	1927	2 nd ratoon/12 month old	16.60
235	Kay Shenkora	Esayas Tena	Tigray/Central Tigray/Tahtay Maychew/ Mayatsmi	14° 04.680'/038° 33.366'	1993	2 nd ratoon/6 month old	23.27
236	Kay Ageda	Esayas Tena	Tigray/Semen Mierab Tigray/Tach Koraro/ Semena/ Maymesreb	14° 11.602'/038° 20.897'	1927	2 nd ratoon/12 month old	15.77
237	Nach Shenkora	Esayas Tena	Tigray/Central Tigray/Tahtay Maychew/Mayatsmi	14° 04.680'/038° 33.366'	1993	2 nd ratoon/6 month old	11.50

Supplemental Table 1 continued

238	Kay Ageda	Esayas Tena	Tigray/Semen Mierab Tigray/Tach Koraro/Semena	14 ⁰ 11.602'/038 ⁰ 20.897'	1927	2 nd ratoon/12 month old	16.23
239	Kay Ageda/Shenkora	Esayas Tena	Tigray/Debub Tigray/Ofla/Zata	12 ⁰ 30.924'/039 ⁰ 16.477'	2134	Plant cane 8 month old	16.47
240	Ancha	Esayas Tena	Tigray/Debub Tigray/Ofla/Zata	12 ⁰ 30.924'/039 ⁰ 16.477'	2134	Plant cane 8 month old	15.37
241	Ancha	Esayas Tena	Tigray/Debub Tigray/Ofla/Zata			Taken from market	
242	Nach Shenkora/Ye Jima Shenkora	Esayas Tena	Benshangulgumuz/Asosa/Bambasi Mender 49	09 ⁰ 49.520'/034 ⁰ 41.766'	1415	Plantcane 7 month old	15.43
243	Burabure Shenkora	Esayas Tena	Benshangulgumuz/Asosa/Megele 32 (Sefera Tabia)	10 ⁰ 01.179'/034 ⁰ 32.705'	1478	2 nd ratoon/7 month old	17.27
244	Nach Shenkora	Esayas Tena	Benshangulgumuz/Asosa/Megele 32(Sefera Tabia)	10 ⁰ 01.179'/034 ⁰ 32.705'	1478	2 nd ratoon/7 month old	20.30
245	Nach Shenkora	Esayas Tena	BenshangulGumuz/Metekel/Pawe/ Mender 28/29	11 ⁰ 16.526'/036 ⁰ 27.233'	1097	3 rd ratoon/8-9 month old	17.87
246	Kay Shenkora	Esayas Tena	BenshangulGumuz/Metekel/Pawe/ Mender 28/29	11 ⁰ 16.526'/036 ⁰ 27.233'	1097	3 rd ratoon/8-9 month old	16.17
247	Kay Shenkora	Esayas Tena	Benshangulgumuz/Asosa/ Megele 32(Sefera Tabia)	10 ⁰ 01.179'/ 034 ⁰ 32.705'	1478	2 nd ratoon/7 month old	18.80
248	Ye Dengoro Shenkora	Esayas Tena	Benshangulgumuz/Kemashe/Kemashe	09 ⁰ 30.200'/ 035 ⁰ 51.825'	1343	2 nd ratoon/10 month old	16.45
249	Nach Shenkora	Esayas Tena	BenshangulGumuz/Metekel/Pawe/Mender 24	11 ⁰ 22.501'/ 036 ⁰ 34.435'	1197	2 nd ratoon/7 month old	14.36
250	Bale Mesmer Kay Shenkora	Esayas Tena	BenshangulGumuz/Metekel/Pawe/Mender 24	11 ⁰ 22.501'/ 036 ⁰ 34.435'	1197	3 rd ratoon/8-9 month old	17.20
251	Nach Shenkora/Kadiken	Esayas Tena	Gambella/Agnwak/Abobo/Aberimeti	07 ⁰ 55.825'/034 ⁰ 43.133'	507	2 nd ratoon/3 month old	12.40
252	Shenkora	Esayas Tena	Gambella/Agnwak/Gog/Badabado	07 ⁰ 38.955'/034 ⁰ 15.386'	454	Taken from market	
253	Burabure Shenkora	Esayas Tena	Harari/Erer Wereda/Dodota Kebele/Mudir Village	09 ⁰ 19.353'/042 ⁰ 13.030'	1376	2 nd ratoon/3 month old	12.70
254	Kay Shenkora	Esayas Tena	Harari/Erer Wereda/Dodota Kebele/Mudir Village	09 ⁰ 19.353'/042 ⁰ 13.030'	1376	2 nd ratoon/3 month old	15.60
255	Bure	Esayas Tena	Somali/Shinele/Erer/Bila	09 ⁰ 31.774'/041 ⁰ 24.965'	1192	3 rd ratoon/4 month old	12.00
256	Bure	Esayas Tena	Somali/Shinele/Erer/ Gota			Taken from market	
257	Shenkora Dima	Esayas Tena	Somali/Shinele/Erer/Bila	09 ⁰ 31.774'/041 ⁰ 24.965'	1192	4 th ratoon/8 month old	8.23

Supplemental Table 2. Information on sugarcane germplasm collected from different geographic regions in Ethiopia

Regions/Zones	Harvest age		No. of ratoons	No. of saleable Stalks per clump		Pest and disease situation
	Plant cane (Months)	Ratoon (Months)		Plant cane	Ratoon	
SNNPR/Gurage	12-14	9-10	~7	9-10	17-20	Termites and sometimes borer
SNNPR/Kembata– Tembaro	12	10-12	~6	~25	~40	Termites
SNNPR/Sidama	15-16	13	6- 7	20-40	40-70	Disease called ‘Kewter’ in local language ‘Sidamigna’, a burning like symptom in the leaf margins was evident especially in the Nach Sidancho variety.
SNNPR/Gedio	12	11	5	~10	~20-30	Termites
SNNPR/Amaro	12	6-7	>10	10-15	25-40	Sometimes borer
SNNPR/Wolayita	18	12	~10	~35	~50	Jelly like fluid inside the leaf sheath during high fertility of the soil. No major insect or disease.
SNNPR/South Omo	12	10		~7	~10-15	No major pest and disease except sometimes few borers observed.
SNNPR/Sheka	12	~12	~5-10	~4-7	~12-30	Sometimes termites but they are easily controlled by application of ash to base of the clumps.
SNNPR/Keffa	12	10	5-7	~4-7	10-15	No major pest and disease except sometimes few borers was observed.
SNNPR/Gamo Gofa	12	10	~5	10-15	30-60	Sometimes borer
SNNPR/Benchi – Maji	12- 18	10-12	~5	5	10-15	No major pest and disease except few borers
SNNPR/Konso Special	12	10	>10	~5	~9	Mild attack from termite and borer sometimes
SNNPR/Dawro	12	7-8	~5	~20	~40	Sometimes borer

Supplemental Table 2 continued						
SNNPR/Konta Special Wereda	12	6-8	~5	20-25	30-40	No major disease and pest. But in one variety 'Tazma' kind of rust was observed marking the leaves starting from leaf tip and top of the plant downwards.
SNNPR/Silitie	12	10-12	~5	5-7	9-13	Sometimes borer and termites. Though mild, there was also a disease which dry the leaves and prevalent in ratoons crops which the farmers named 'Wag'
SNNPR/Alaba Special Wereda	12	12	~3	~25	~40	Sometimes borer
Oromiya/West Welega	12	12	7-15	15-20	~30	Sometimes termites and rodents
Oromiya/East Welega	9	9	4	5-7	7-10	Only sometimes borer
Oromiya/Illubabor	12	8-9	5	5	12-15	Only sometimes borer
Oromiya/Jimma	12	8-9	5	5	12-15	Only sometimes borer
Oromiya/West Shewa	9-10	8-9	4	5-6	7-10	Only sometimes borer
Oromiya/Arsi	15-20	12-16	4-5	12-16	14-25	Sometimes smut observed in some varieties like Moris when grown near swampy areas
Oromiya/West Harerge	12-16	7-12	7-10	10-20	20-30	Sometimes borer and termites when there is shortage of irrigation water
Oromiya/East Harerge	12-24	7-12	7-10	20-30	40-50	Sometimes termites and borer
Oromiya/Bale	12- 18	6-12	6-8	3-5	10-12	Sometimes borer, and there was also wild pig problem
Oromiya/Borena	12-16	7-9	7-10	5-9	15-20	Sometimes termites and borer
Oromiya/Kelem	12	8-9	7-9	15-20	25-30	Sometimes borer
Amhara/South Gondar	12-15	12	4-7	7-12	20-30	Only sometimes mild attack from borers and termites occur

Supplemental Table 2 continued						
Amhara/East Gojam	12-24	8-12	3-6	10-20	20-30	Only sometimes termites are a problem when the soil gets drier.
Amhara/Bahir Dar Zuria	12	12	3-5	6-10	10-15	No major disease and pest are reported
Amhara/West Gojam and Awi	16-18	12	2-3	10-15	18-20	Sometimes borer and termites
Amhara/North Wollo	15-18	14	7-10	15-20	25-30	No major pests but sometimes borer and termites occur though not in economic threshold level.
Amhara/South Wollo	24	12	7-10	20-25	30-40	Sometimes borers and termites
Amhara/North Shewa	8-10	8-10	9-10	8-19	15-20	Sometimes borers and 'Jart'
Amhara/Waghmra	12	8-9	7-8	5-6	15-20	Sometimes termites during the dry season
Tigray/South, Central and North West zone	11-12	7-8	4-5	3-4	10-15	Most of the time termites are a problem
Benshangul-Gumz/Pawe	12	7-9	4	5-7	22-28	The major pest in Pawe area in general was termite. Borers were few and observed occasionally.
Benshangul-Gumz/Asosa	12	7-8	7-8	10-20	12-25	Sometimes borer and termites. To prevent the termites farmers use ash and also dug a ditch around the clump to prevent crossing of the termites.
Gambella/Mezhenger, Agnwak	12	8-10	5-7	2-3	10-15	No major pests were reported but sometimes bore and termites were there though they were not economical pests.
Somali/Shinele/Erer	12	8	5-7	10-15	30-44	No major pests and diseases were reported.
Harari	9-10	7-8	13-15	8-10	16-20	Sometimes bore and termites during dry season.

Supplemental Table 3. Local sugarcane germplasm collected during 2010/11 and used for morphological diversity study

Code No.	Vernacular name	Region/Zone/Wereda/Kebele/Village	Lat/Long	Altitude (m)	Growth stage during sampling	Brix % Juice
1	Nach Shenkora	SNNP/Gurage/Absege/Nachakulit/Misreta	08 ⁰ 20.989'/37 ⁰ 33.954'	1521	4th ratoon/8-10 month old	17.50
2	Bicha Shenkora/Weliso	SNNP/Gurage/Absege/Nachakulit/Misreta	08 ⁰ 20.989'/37 ⁰ 33.954'	1521	4 th ratoon/8-10 month old	15.93
3	Kay Shenkora	SNNP/Gurage/Meskanena	08 ⁰ 20.989'/37 ⁰ 33.954'	1521	3 rd ratoon/8 month old	13.00
4	Andegna Dereja Canada Shenkora	SNNP/Silttie/Silttie/Balokeriso	07 ⁰ 58.907'/038 ⁰ 22.558'	1824	Plant cane 4 month old	-
5	Ye abesha shenkora	SNNP/Gamogofa/Bonke/Geresse Zala	05 ⁰ 54.307'/037 ⁰ 18.54'	2258	3-4 th ratoon/7-8 month old	18.00
6	Bicha Shenkora	SNNP/Gamogofa/Bonke/Geresse Zala/Tsophi	05 ⁰ 54.476'/037 ⁰ 18.38'	2133	Plant cane12 month old	15.17
7	Kay Sidancho	SNNP/Sidama/Borecha/Yloubancho/Agoyicho	06 ⁰ 56.060'/038 ⁰ 22.793'	2042	4 th ratoon/9 month old	13.00
8	Kay Shenkora	SNNP/Gamogofa/Bonke/Geresse Zala/Tsophi	05 ⁰ 54.476'/037 ⁰ 18.38'	2133	Plant cane12 month old	18.00
9	Kay Shenkora/Huleteгна dereja canada Shenkora	SNNP/Silttie/Silttie/Balokeriso	07 ⁰ 58.907'/038 ⁰ 22.558'	1824	Plant cane12 month old	16.83
10	Burabure Shenkora	SNNP/Gurage/Absege/Nachakulit/Misreta	08 ⁰ 20.989'/37 ⁰ 33.954'	1521	2 nd ratoon/8-10 month old	11.33
11	Kay Shenkora/Yegurage Shenkora	SNNP/Gurage/Absege/Jejeba/Jejeba	08 ⁰ 16.298'/037 ⁰ 43.384'	1808	4 th ratoon/3-4month old	5.00
12	Yejima Shenkora	SNNP/Gurage/Absege/Jejeba/Jejeba	08 ⁰ 16.298'/037 ⁰ 43.384'	1808	4 th ratoon/3-4month old	5.00
13	Kay Shenkora	SNNP/Silttie/Werabe/02 Kebele	07 ⁰ 49.933'/038 ⁰ 10.793'	2101	Plant cane12 month old	17.00
14	Ye Abesha shenkora (Nach Shenkora)	SNNP/South Omo/Deбub Ari/Mester/Jagame	05 ⁰ 59.202'/036 ⁰ 35.037'	1705	2 nd ratoon/7 month old	18.67
15	Wolesh	SNNP/South Omo/Deбub Ari/Bazet/Ekzek	05 ⁰ 47. 213'/036 ⁰ 34.900'	1436	50th ratoon 12 month old	14.67
16	Wolesh/Tinkish	SNNP/South Omo/Deбub Ari/Bazet/Ekzek	05 ⁰ 47. 213'/036 ⁰ 34.900'	1436	50th ratoon 12 month old	15.50
17	Wonji	SNNP/Gamogofa/Bonke/Geresse Zala/	05 ⁰ 54.307'/037 ⁰ 18.54'	2258	Taken from market	
18	Nach (Arenguade) Ageda	SNNP/Konso Special Wereda/Gaserge Kebele	05 ⁰ 96.038'/037 ⁰ 21.194'	1727	4 th ratoon 10 month old	17.37
19	Burabure Shenkora	SNNP/Konso Special Wereda/Busso Kebele	05 ⁰ 18.495'/037 ⁰ 25.28'	1357	> 10 years 12 month old	15.67
20	Wonji	SNNP/South Omo/Deбub Ari/Bazet/Ekzek	05 ⁰ 47. 213'/036 ⁰ 34.900'	1436	4 th ratoon/6 month old	13.00
21	Wolshi	SNNP/South Omo/Deбub Ari/Metser			Taken from market	
22	American	SNNP/Sidama/Borecha/Yloubancho/Agoyicho	06 ⁰ 55.908'/038 ⁰ 22.793'	2059	3-4 th ratoon/7-8 month old	
23	Jambo	SNNP/Sidama/Borecha/Yloubancho/Agoyicho	06 ⁰ 56.060'/038 ⁰ 22.793'	2042	3rd ratoon/9 month old	15.00
24	Nach Sidancho	SNNP/Sidama/Borecha/Yloubancho/Agoyicho	06 ⁰ 56.060'/038 ⁰ 22.793'	2042	4 th ratoon/8-9 month old	16.00

Supplemental Table 3 continued

25	Azaro, Kollo	SNNP/Amaro special Wereda/ Jijola kebele/Kore village/Cheffa district	05 ⁰ 40.446'/037 ⁰ 55.669'	1410	2 nd ratoon/7 month old	17.17
26	Wonji	SNNP/Amaro special Wereda/ Jijola kebele/Kore village/Cheffa district	05 ⁰ 40.446'/037 ⁰ 55.669'	1410	2 nd ratoon/7 month old	15.50
27	Kembata	SNNP/Gedeo/Wenago/Deko	06 ⁰ 16.889'/038 ⁰ 12.919'	1914	>20 years 1 12 month old	18.00
28	Nach Shenkora	SNNP/Amaro special Wereda/ Jijola kebele/Kore village/Cheffa district	05 ⁰ 40.446'/037 ⁰ 55.669'	1410	2 nd ratoon/7 month old	18.00
29	Andegna dereja Wonji	SNNP/Wolayta/Damotgale/Gacheno	07 ⁰ 02.280'/037 ⁰ 55.072'	1882	plant cane 1-2 month old	
30	Sidama/Yegamo Shenkora	SNNP/Amaro special Wereda/ Jijola kebele/Kore village/Cheffa district	05 ⁰ 40.446'/037 ⁰ 55.669'	1410	2 nd ratoon/7 month old	17.60
31	Huleteгна dereja Jambo Kay	Oromia/West Arsi/Wondo/Shesha kebele	07 ⁰ 05.662'/038 ⁰ 36.203'	1705	Plant cane 18 months old	16.00
32	Andegna dereja Jambo Kay	Oromia/West Arsi/Wondo/Shesha kebele	07 ⁰ 05.662'/038 ⁰ 36.203'	1705	Plant cane 18 months old	14.77
33	Sostegna dereja Jambo Kay/Metfo Shenkora	Oromia/West Arsi/Wondo/Shesha kebele	07 ⁰ 05.662'/038 ⁰ 36.203'	1705	Plant cane 18 months old	17.50
34	Moliso	SNNP/Konta Special Wereda/ Cheka Bocha kebele/Bocha village	07 ⁰ 05.953'/036 ⁰ 39.495'	1996	plant cane 7-8 month old	
35	Nach Shenkora	SNNP/Konta Special Wereda/ Cheka Bocha kebele	07 ⁰ 06.244'/036 ⁰ 40.164'	2105	5 th ratoon 8 month old	17.60
36	Tazma/Burabure	SNNP/Konta Special Wereda/ Cheka Bocha kebele/Bocha village	07 ⁰ 05.953'/036 ⁰ 39.495'	1996	4-5 th ratoon 8 months old	12.50
37	Wolayta	SNNP/Wolayta/Damotgale/Gacheno	07 ⁰ 02.280'/037 ⁰ 55.072'	1882	2 nd ratoon/8 month old	14.67
38	Kay Shenkora	SNNP/Dawro/Loma/Wushay	07 ⁰ 00.612'/037 ⁰ 12.285'	2163	2 nd ratoon/5 month old	10.27
39	Kay Shenkora	SNNP/Konta Special Wereda/ Cheka Bocha kebele/Bocha village	07 ⁰ 05.953'/036 ⁰ 39.495'	1996	Plant cane 7-8 month old	10.10
40	Atena Moris	SSNP/Kembata Tembaro/Kacha Bira/Mesena	07 ⁰ 10.944'/037 ⁰ 46.746'	1838	2 nd ratoon/8 month old	12.93
41	Dolche	SNNP/Wolayta/Damotgale/Gacheno	07 ⁰ 02.280'/037 ⁰ 55.072'	1882	Plant cane 18 month old	15.83
42	Kay Ageda Shenkora	SNNP/Halaba kulito Special Wereda/Alemtena	07 ⁰ 22.433'/038 ⁰ 06.433'	1797	Plantcane 12 month old	12.17
43	Moris	SNNP/Halaba kulito Special Wereda/Alemtena	07 ⁰ 22.433'/038 ⁰ 06.433'	1797	3 rd ratoon/12 month old	20.17
44	Bolfe	SSNP/Kembata Tembaro/Kacha Bira/Mesena	07 ⁰ 10.944'/037 ⁰ 46.746'	1838	Plant cane 12 month old	15.67
45	Abesha	SSNP/Kembata Tembaro/Kacha Bira/Mesena	07 ⁰ 10.944'/037 ⁰ 46.746'	1838	2 nd ratoon/12 month old	16.33
46	Wotete	SSNP/Kembata Tembaro/Kacha Bira/Mesena	07 ⁰ 10.944'/037 ⁰ 46.746'	1838	Plant cane 10 month old	14.33
47	Tazma/Burabure	SNNP/Dawro/Mareka/MedaKuli/Gendomeda	06 ⁰ 58.977'/037 ⁰ 11.493'	1803	4 th ratoon/10 month old	17.33
48	Betam Nach Shenkora	SNNP/Konta Special Wereda/ Cheka Bocha kebele	07 ⁰ 06.244'/036 ⁰ 40.164'	2105	5 th ratoon 7-8 month old	14.00
49	Wonji-1	SSNP/Kembata Tembaro/ Kacha Bira/Wonko	07 ⁰ 12.316'/037 ⁰ 50.843'	1952	2 nd ratoon/6-7 month old	14.87
50	Bishoftu	SSNP/Kembata Tembaro/ Kacha Bira/Wonko	07 ⁰ 12.316'/037 ⁰ 50.843'	1952	2 nd ratoon/6-7 month old	16.67
51	Wotet	SNNP/Wolayta/Damotgale/ Gacheno	07 ⁰ 02.280'/037 ⁰ 55.072'	1882	Plant cane 18 month old	14.43

Supplemental Table 3 continued

52	Wotete	SNNP/Halaba kulito Special Wereda/ Bedene	07 ⁰ 22.637'/038 ⁰ 06.278'	1798	2 nd ratoon/6-7 month old	14.97
53	Yeferenj shenkora	SNNP/Dawro/Mareka/MedaKuli/ Gendomeda	06 ⁰ 58.977'/037 ⁰ 11.493'	1803	5 th ratoon 12 month old	18.67
54	Yemaytafit Shenkora	Oromia/Bale/Agarfa/Wabe			taken from market	
55	Kay Shenkora	Oromia/Arsi/Tena/Kereyuharzuna/ Debenshe	07 ⁰ 42.648'/039 ⁰ 35.844'	1848	Plantcane 14 month old	19.93
56	Wotete	Oromia/Arsi/Tio/Bosha		market	Plantcane 12-14 month old	17.33
57	Shenkora Dima/Kay Shenkora	Oromia/Bale/Agarfa/Alochefo/	07 ⁰ 23.154'/039 ⁰ 46.271'	1497	> 60 years 7-8 month old	16.67
58	Nach Shenkora/Shenkora Adi	Oromia/Arsi/Tena/Kereyuharzuna/Debenshe	07 ⁰ 42.648'/039 ⁰ 35.844'	1848	Plantcane 14 month old	21.30
59	Nach Shenkora	Oromia/Bale/Agarfa/Alochefo/ Odachefo	07 ⁰ 23.154'/039 ⁰ 46.271'	1497	> 60 years 4-5 month old	15.43
60	Moris	Oromia/Arsi/Tena/Kereyuharzuna/ Debenshe	07 ⁰ 42.648'/039 ⁰ 35.844'	1848	Plantcane 12 month old	16.73
61	Kay Shenkora	Oromia/Bale/Goro/Melkabuta/ Gadula Gola Dhertu	06 ⁰ 58.539'/040 ⁰ 35.398'	1611	Plantcane 12 month old	18.67
62	Ye Abesha Shenkora/Ye Oromo Shenkora	Oromia/West Shewa/Ambo/ Harutiro	09 ⁰ 07.613'/037 ⁰ 47.724'	2370	2 nd ratoon/1 year and	15.03
63	Kay Shenkora/Wonji	Amhara/North Shewa/Debresina	10 ⁰ 04.978'/039 ⁰ 53.606'	1276	taken from market	
64	Nach Shenkora	Amhara/North Shewa/Debresina	10 ⁰ 04.978'/039 ⁰ 53.606'	1276	taken from market	
65	Tikur Ageda	Amhara/North Shewa/Kewet/Yelen	10 ⁰ 04.978'/039 ⁰ 53.606'	1235	Plantcane 8 month old	16.73
66	Nach Ageda	Amhara/North Shewa/Kewet/Yelen	10 ⁰ 04.978'/039 ⁰ 53.606'	1235	Plantcane 8 month old	14.70
67	Nach Kechacha Shenkora/Getr	Amhara/North Shewa/Kewet/Yelen	10 ⁰ 04.978'/039 ⁰ 53.606'	1235	3 rd ratoon/8 month old	16.00
68	Ye Bako Shenkora	Oromia/West Shewa/Ambo/ Harutiro	09 ⁰ 07.613'/037 ⁰ 47.724'	2370	2 nd ratoon/1 year and 6 month old	18.60
69	Bula Shenkora	SNNP/Sheka/Masha/Shibo	07 ⁰ 44.641'/035 ⁰ 28.511'	2277	2 nd ratoon/10-12 month old	17.43
70	Kay Shenkora/Kadiken	Gambella/Agnewak/Abobo/Aberimeti	07 ⁰ 55.825'/ 034 ⁰ 43.133'	507	2nd ratoon/3 month old	18.30
71	Bicha Shenkora	SNNP/Sheka/Masha/Beto	07 ⁰ 44.641'/035 ⁰ 28.511'	2277	Plantcane 12 month old	17
72	Shenkora Dima/Kay Shenkora	Oromia/Illubabor/Bure/Wengawobe	08 ⁰ 09.189'/035 ⁰ 27.382'	1758	Plantcane 8 month old	14
73	Kay Shenkora Ageda	Oromia/Illubabor/Huka/Abyuadrere	08 ⁰ 13.781'/035 ⁰ 15.796'	1600	Plantcane 12 month old	12.93
74	Nach Shenkora/Kadiken	Gambella/Agnewak/Abobo/Aberimeti	07 ⁰ 55.825'/034 ⁰ 43.133'	507	2 nd ratoon/3 month old	12.40
75	Shenkora	Gambella/Agnewak/Gog/Badabado	07 ⁰ 38.955'/034 ⁰ 15.386'	454	Taken from market	
76	Tikur Ageda	SNNP/Sheka/Yeki/Addisbirhan	07 ⁰ 11.212'/035 ⁰ 26.095'	1164	2 nd ratoon/10-12 month old	16.27
77	Ye Kenya Ageda	SNNP/Sheka/Masha/Keja	07 ⁰ 50.149'/035 ⁰ 28.159'	1827	Plantcane 8 month old	12.17
78	Kay Ageda	SNNP/Sheka/Yeki/Addisbirhan	07 ⁰ 11.212'/035 ⁰ 26.095'	1164	2 nd ratoon/10-12 month old	15.50
79	Kay Shenkora/ Dima	Oromia/Jima Zone/ Sekoru Wereda/Habedode Kebele			Taken from market	
80	Ye Kenya Shenkora	SNNP/Sheka/Masha/Masha 01	07 ⁰ 44.641'/035 ⁰ 28.511'	2277		
81	Kay Ageda	SNNP/Kefa/Gimbo/Bonga 01	07 ⁰ 15.225'/036 ⁰ 15.303'	1792	Plantcane 9 month old	15.00

Supplemental Table 3 continued

82	Tikur Ageda	SNNP/ Bench Majii /Mizan Teferi/ Hibret kebele	07 ⁰ 00.061'/035 ⁰ 35.802'	1356	10 th ratoon/12 month old	20.00
83	Shembeko Ageda	SNNP/Kefa/Gimbo/Bonga 01	07 ⁰ 15.225'/036 ⁰ 15.303'	1792	2 nd ratoon/7 month old	16.37
84	Tikur Ageda	Oromia/Illubabor/Bilonopa/Suli	08 ⁰ 26.252'/035 ⁰ 36.267'	1417	2 nd ratoon/9 month old	14.53
85	Nach Shenkora	Oromia/Illubabor/Bilonopa/Dizy	08 ⁰ 23.138'/035 ⁰ 36.249'	1559	2 nd ratoon/11 month old	17.40
86	Nach Shenkora	Oromia/Illubabor/Dureni/	08 ⁰ 29.860'/035 ⁰ 45.110'	1754	10th ratoon/5-6 month old	11.75
87	Dalecha Shenkora	Oromia/Illubabor/Bilonopa/Suli	08 ⁰ 26.252'/035 ⁰ 36.267'	1417	2 nd ratoon/9 month old	12.60
88	Ye Abesha Shenkora	Oromia/Jimma/Agaro/Kesohiti	07 ⁰ 51.305'/036 ⁰ 38.997'	1579	4 th ratoon/8 month old	10.97
89	Kay Shenkora Ageda	Oromia/Illubabor/Bilonopa/Suli	08 ⁰ 26.252'/035 ⁰ 36.267'	1417	2 nd ratoon/9 month old	15.33
90	Kay Shenkora	Oromia/Illubabor/Dureni/ Betelegebecha/Hadere	08 ⁰ 29.860'/035 ⁰ 45.110'	1754	10th ratoon/8 month old	13.70
91	Barbados	Oromia/Gimbi/Laloasabe/Harochserdo Kebele			Taken from market	
92	Ye Bako Shenkora	Oromia/Gimbi/Laloasabe/Dengoro 01/Golbe	09 ⁰ 16.130'/035 ⁰ 40.804'	1730	2 nd ratoon/12 month old	14.90
93	Kay shenkora	Oromia/Gimbi/Laloasabe/Dengoro 01/Golbe	09 ⁰ 16.130'/035 ⁰ 40.804'	1730	Plantcane 8 month old	15.4
94	Ageda Adi	Oromia/Kelem Welega/Sayo/ Gelanometi/Sembo	08 ⁰ 32.704'/034 ⁰ 43.594'	1730	2-3 ratoon/12 month old	13.67
95	Dalecha Shenkora	Oromia/Kelem Welega/Dale Wabera/Chanka Burore	08 ⁰ 49.268'/035 ⁰ 03.747'	1470	2 nd ratoon/6-7 month old	16.37
96	Nach Shenkora	Oromia/Gimbi/Laloasabe/ Dengoro 01/Golbe	09 ⁰ 16.130'/035 ⁰ 40.804'	1730	2 nd ratoon/12 month old	15.93
97	Tabor Shenkora	Oromia/Gimbi/Guliso/Wereseyo/ Kobera	09 ⁰ 10.256'/035 ⁰ 31.592'	1484	3 rd ratoon/12 month old	17.97
98	Nach Shenkora/Ye Jima Shenkora	Benshangulgumuz/Asosa/Bambasi Mender 49	09 ⁰ 49.520'/034 ⁰ 41.766'	1415	Plantcane 7 month old	15.43
99	Shilmu	Oromia/Kelem Welega/Dale Wabera/Chanka Burore	08 ⁰ 49.268'/035 ⁰ 03.747'	1470	2 nd ratoon/6-7 month old	13.27
100	Nach Shenkora	Oromia/Kelem Welega/Hawagelan/ Haromechara	08 ⁰ 43.544'/034 ⁰ 59.141'	1444	Plantcane 12-13 month old	16.50
101	Kay Shenkora	Oromia/West Shewa/Bakotibe/ Dembigobu	09 ⁰ 07.616'/037 ⁰ 04.565'	1620	2 nd ratoon/8 month old	14.80
102	Buli	Oromia/Kelem Welega/Dale Wabera/Chanka	08 ⁰ 51.507'/035 ⁰ 04.122'	1487	2 nd ratoon/6-7 month old	12.67
103	Nach Ageda	Oromia/Kelem Welega/Hawagelan/Haromechara	08 ⁰ 43.544'/034 ⁰ 59.141'	1444	3 rd ratoon 12 month old	20.73
104	Burabure Shenkora	Benshangulgumuz/Asosa/Megele 32 (Sefera Tabia)	10 ⁰ 01.179'/034 ⁰ 32.705'	1478	2 nd ratoon/7 month old	17.27
105	Nach Shenkora	Benshangulgumuz/Asosa/Megele 32(Sefera Tabia)	10 ⁰ 01.179'/034 ⁰ 32.705'	1478	2 nd ratoon/7 month old	20.30
106	Abesha Shenkora/Adi	Oromia/West Shewa/Bakotibe/Dembigobu	09 ⁰ 07.616'/037 ⁰ 04.565'	1620	2 nd ratoon/8 month old	17.87
107	Nach Shenkora	Amhara/Debub Gondar/Derra/ Mashenkoru/Misgano	11 ⁰ 42.976'/037 ⁰ 36.908	1993	Plantcane 10 month old	14.93
108	Yeferenj Shenkora/Mogn Aybela	Amhara/Debub Gondar/Fogera/ Wereta	11 ⁰ 55.550'/037 ⁰ 41.751'	1820	Taken from market	
109	Kay Shenkora/Shilmlim/Burabure	Amhara/Debub Gondar/Fogera/ Wereta	11 ⁰ 55.550'/037 ⁰ 41.751'	1820	Taken from market	

Supplemental Table 3 continued

110	Yegojam Shenkora	Amhara/Debub Gondar/Fogera/Wagtera	11 ⁰ 54.574'/037 ⁰ 33.371'	1797	7th ratoon/12 month old	13.83
111	Tikur Shenkora	Amhara/West Gojam/Bahirdar Zuria/ Tis Abay/Gebere Mahiber	11 ⁰ 29.128'/037 ⁰ 34.331'	1642	3 rd ratoon/10 month old	22.57
112	Yeferenj Shenkora/Mogn Aybela	Amhara/West Gojam/Bahirdar Zuria/ Tis Abay/Gebere Mahiber	11 ⁰ 29.128'/037 ⁰ 34.331'	1642	Plantcane 11 month old	16.87
113	Shilmlm Sora	Amhara/West Gojam/Bahirdar Zuria/ Tis Abay/Gebere Mahiber	11 ⁰ 29.128'/037 ⁰ 34.331'	1642	Plantcane 11 month old	14.20
114	Ye Bure Shenkora	Amhara/West Gojam/Bahirdar Zuria/ Tis Abay/Gebere Mahiber	11 ⁰ 29.128'/037 ⁰ 34.331'	1642	3 rd ratoon/11-12 month old	21.03
115	Nach Ageda	Amhara/West Gojam/Jabitehnan/ Mankusa Abdegom/Endalah	10 ⁰ 41.075'/037 ⁰ 11.357'	1941	2 nd ratoon/1 year and 6 month old	20.43
116	Tikur Shenkora	Amhara/West Gojam/Jabitehnan/ Mankusa Abdegom/Endalah	10 ⁰ 41.075'/037 ⁰ 11.357'	1941	2 nd ratoon/1 year and 6 month old	21.63
117	Nach Shenkora/Sendel	Amhara/West Gojam/Debub Achefer/ Lalibela/Azena	11 ⁰ 28.590'/036 ⁰ 57.027'	1883	3 rd ratoon/8 month old	16.33
118	Nach Yemailat Shenkora/ CO 1001	Amhara/West Gojam/Debub Achefer/ Lalibela/Azena	11 ⁰ 28.590'/036 ⁰ 57.027'	1883	4 th ratoon/8 month old	20.33
119	Bule/ B52	Amhara/West Gojam/Debub Achefer/ Lalibela/Azena	11 ⁰ 28.590'/036 ⁰ 57.027'	1883	4 th ratoon/8 month old	15.93
120	Kay Shenkora	Amhara/West Gojam/Debub Achefer/ Lalibela/Azena	11 ⁰ 28.590'/036 ⁰ 57.027'	1883	4 th ratoon/8 month old	20.50
121	Nach Shenkora	Amhara/West Gojam/Debub Achefer/ Lalibela/Azena	11 ⁰ 28.590'/036 ⁰ 57.027'	1883	3 rd ratoon/8 month old	16
122	Nach Shenkora	BenshangulGumuz/Metekel/Pawe/ Mender 28/29	11 ⁰ 16.526'/036 ⁰ 27.233'	1097	3 rd ratoon/8-9 month old	17.87
123	Kay Shenkora	Amhara/Awi/Guangua/Mota/ Menta Wuha	10 ⁰ 50.310'/036 ⁰ 20.642'	1532	2 nd ratoon/6-7 month old	16.83
124	Kay Shenkora	BenshangulGumuz/Metekel/Pawe/ Mender 28/29	11 ⁰ 16.526'/036 ⁰ 27.233'	1097	3 rd ratoon/8-9 month old	16.17
125	Tikur Shenkora	Amhara/Awi/Guangua/Mota/ Menta Wuha	10 ⁰ 50.310'/036 ⁰ 20.642'	1532	2 nd ratoon/6-7 month old	19.10
126	Nach Shenkora	Amhara/Awi/Guangua/Mota/ Menta Wuha	10 ⁰ 50.310'/036 ⁰ 20.642'	1532	2 nd ratoon/6-7 month old	16.77
127	Nach Shenkora/ Bishoftu/ China	Amhara/East Gojam/Dejen/Kurar/ Dengel	10 ⁰ 06.578'/038 ⁰ 09.202'	1820	Plantcane 10 month old	16.27
128	Gojame/Ye Gojam Ageda	Amhara/East Gojam/Dejen/Kurar/ Ambayamit	10 ⁰ 06.490'/038 ⁰ 09.185'	1804	26th ratoon 5 month old	13.50
129	Nach Shenkora	Amhara/East Gojam/Dejen/Kurar/ Dengel	10 ⁰ 06.578'/038 ⁰ 09.202'	1820	2 nd ratoon/7 month old	16.10
130	Kay Shenkora	Amhara/East Gojam/Basoliben/ Yejube	10 ⁰ 06.490'/037 ⁰ 09.185'	1800	Taken from market	

Supplemental Table 3 continued

132	Abadir	Amhara/East Gojam/Dejen/Kurar/ Ambayamit	10 ⁰ 06.490'/038 ⁰ 09.185'	1804	2 nd ratoon/12 month old	13.50
133	Ye Fincha Shenkora	Amhara/East Gojam/Basoliben/ Entemen Dejat	10 ⁰ 03.504'/037 ⁰ 50.264'	2360	Plant cane 1 year and 2 month	20.33
134	Kay Ageda	Amhara/East Gojam/Dejen/Dejen Town			Taken from Dejen market	
135	Kay Ageda	Amhara/East Gojam/Dejen/Yibeza Michael			Taken from Dejen market	
136	Bicha Shenkora	Amhara/East Gojam/Dejen/Kurar/ Dengel	10 ⁰ 06.578'/038 ⁰ 09.202'	1820	3 rd ratoon/9 month old	21.60
137	Key Shenkora/Bishoftu	Amhara/East Gojam/Dejen/Kurar/Dengel	10 ⁰ 06.578'/ 038 ⁰ 09.202'	1820	2nd ratoon/1+1/2 year old	19.93
138	Kay Ageda	Tigray/Semen Mierab Tigray/Tach Koraro/ Semena/ Maymesreb	14 ⁰ 11.602'/038 ⁰ 20.897'	1927	2 nd ratoon/12 month old	16.60
139	Kay Shenkora	Tigray/Central Tigray/Tahtay Maychew/ Mayatsmi	14 ⁰ 04.680'/038 ⁰ 33.366'	1993	2 nd ratoon/6 month old	23.27
140	Kay Ageda	Tigray/Semen Mierab Tigray/Tach Koraro/ Semena/ Maymesreb	14 ⁰ 11.602'/038 ⁰ 20.897'	1927	2 nd ratoon/12 month old	15.77
141	Nach Shenkora	Tigray/Central Tigray/Tahtay Maychew/Mayatsmi	14 ⁰ 04.680'/038 ⁰ 33.366'	1993	2 nd ratoon/6 month old	11.50
142	Kay Ageda	Tigray/Semen Mierab Tigray/Tach Koraro/Semena	14 ⁰ 11.602'/038 ⁰ 20.897'	1927	2 nd ratoon/12 month old	16.23
143	Nach Ageda/ Shenkora	Amhara/Semen Welo/Gubalafto/ Woynye 011/Medakit	11 ⁰ 53.630'/039 ⁰ 28.136'	2030	4 th ratoon/1 year and 4 month old	21.03
144	Kay Ageda/ Shenkora	Amhara/Semen Welo/Gubalafto/ Woynye 011/Medakit	11 ⁰ 53.630'/039 ⁰ 28.136'	2030	4 th ratoon/1 year and 4 month old	17.87
145	Kay Shenkora (Burabure)	Amhara/Semen Welo/Habru/09 kebele/ Ante	11 ⁰ 41.085'/039 ⁰ 38.325'	1695	Plantcane 6 month old	17.33
146	Nach Ye Abesha Shenkora	Amhara/Semen Welo/Habru/09 kebele/ Ante	11 ⁰ 41.085'/039 ⁰ 38.325'	1695	7 th ratoon 5 month old	17.70
147	Kay Shenkora	Amhara/Debub Welo/Werebabo/02 kebele/Bulbulo/Aselel Prim. School	11 ⁰ 19.354'/039 ⁰ 45.074'	2072	2 nd ratoon/10--12 month old	13.93
148	Tikur Ageda	Amhara/Semen Welo/Habru/Mersa Town			Taken from market	
149	Nach Tilik Shenkora	Amhara/Debub Welo/Werebabo/ 02 kebele/Bulbulo/Aselel Prim. School	11 ⁰ 19.354'/039 ⁰ 45.074'	2072	5 th ratoon 12 month old	18.23
150	Nach Shenkora	Amhara/ Oromia special Zone/Kemissie/02 kebele/Ergi	10 ⁰ 42.491'/039 ⁰ 51.712'	1422	5 th ratoon 5-6 month old	19.90
151	Nach Ageda	Amhara/Debub Welo/Borena/04 kebele/ Jimaye	10 ⁰ 45.172'/038 ⁰ 45.974'	2687	Taken from market	
152	Nach Tinish Shenkora	Amhara/Debub Welo/Werebabo/ 02 kebele/Bulbulo/Aselel Prim. School	11 ⁰ 19.354'/039 ⁰ 45.074'	2072	2 nd ratoon/10--12 month old	18.34
153	Ye Beskula Shenkora	Amhara Region/South Welo Zone/ Legambo Wereda/Beskula Kebele			Taken from market	
154	Kay Shenkora	Amhara/ Oromia special Zone/Kemissie/02 kebele/Ergi	10 ⁰ 42.491'/039 ⁰ 51.712'	1422	5 th ratoon 5-6 month old	21.13
155	Nach Ye Abesha Shenkora	Amhara/Semen Welo/Meket/013 kebele/ Emamoz Fikrte Kirstos Gedam			Brought by monks from the monastery	
156	Nach Ageda/ Shenkora	Amhara/Waghmra/Sekota/02 kebele/ Tiya	12 ⁰ 30.391'/039 ⁰ 05.795'	1978	2 nd ratoon/5 month old	15.87

Supplemental Table 3 continued

157	Kay Ageda/Shenkora	Tigray/Debut Tigray/Ofla/Zata	12 ⁰ 30.924'/039 ⁰ 16.477'	2134	Plant cane 8 month old	16.47
158	Ancha	Tigray/Debut Tigray/Ofla/Zata	12 ⁰ 30.924'/039 ⁰ 16.477'	2134	Plant cane 8 month old	15.37
159	Nach Shenkora	Oromia/East Hararghe/Gurawa/01 Kebele/Kera Sefr	09 ⁰ 08.392'/041 ⁰ 50.424'	2401	11 year ratoon 9 month old	17.90
160	Shenkora Adi	Oromia/East Hararghe/Kurfachele/Dawe/	09 ⁰ 17.423'/041 ⁰ 52.611'	1713	3 rd ratoon/6 month old	14.50
161	Nach Shenkora	Oromia/East Hararghe/Meta/Chelenko 02 kebele	09 ⁰ 23.875'/041 ⁰ 33.670'	2179	4 th ratoon/9 month old	15.07
162	Shenkora Dima	Oromia/East Hararghe/Kurfachele/Dawe/	09 ⁰ 17.423'/041 ⁰ 52.611'	1713	Taken from market	
163	Nach Shenkora/Wonji	Oromia/East Hararghe/Meta/Chelenko 02 kebele	09 ⁰ 23.875'/041 ⁰ 33.670'	2179	4 th ratoon/9 month old	17.70
164	Yemilat Nach Shenkora	Oromia/East Hararghe/Meta/Chelenko 02 kebele	09 ⁰ 23.875'/041 ⁰ 33.670'	2179	4 th ratoon/9 month old	20.50
166	Burabure Shenkora	Harari/Erer Wereda/Dodota Kebele/Mudir Village	09 ⁰ 19.353'/042 ⁰ 13.030'	1376	2 nd ratoon/3 month old	12.70
167	Kay Shenkora	Oromia/East Hararghe/Babile/Ererguda/Megida	09 ⁰ 14.783'/042 ⁰ 15.022'	1315	2 nd ratoon/6 month old	12.34
168	Nach Shenkora	Oromia/East Hararghe/Babile/Ererguda/Megida	09 ⁰ 14.783'/042 ⁰ 15.022'	1315	3 rd ratoon/7 month old	13.34
169	Kay Shenkora/Burabure	Oromia/East Hararghe/Babile/Ererguda/Megida	09 ⁰ 14.783'/042 ⁰ 15.022'	1315	2 nd ratoon/6 month old	12.48
170	Kay Shenkora	Oromia/East Hararghe/Kombolcha/Sibilu/Gende Wedo Usman	09 ⁰ 25.248'/042 ⁰ 06.965'	2113	Plant cane/6 month old	13.84
171	Kay Shenkora/Burabure	Oromia/East Hararghe/Gorogutu/Erermedanchine	09 ⁰ 24.966'/041 ⁰ 29.590'	1728	6 th ratoon 6 month old	16.83
172	Guracha Shenkora/Tikur	Oromia/East Harerge/Babile/Ererguda/Megida	09 ⁰ 14.783'/042 ⁰ 15.022'	1315	2 nd ratoon/9 month old	13.56
173	Misrah	Oromia/West Hararghe/Gemechis/Wemecho Dayo/Dekadabu	08 ⁰ 45.408'/040 ⁰ 53.285'	1496	2 nd ratoon/10 month old	16.57
174	Wonji	Oromia/West Hararghe/Gemechis/Wemecho Dayo/Dekadabu	08 ⁰ 45.408'/040 ⁰ 53.285'	1496	2 nd ratoon/6 month old	15.40
175	Wonji/Bula/Shenkora Adi	Oromia/West Hararghe/Gubakoricha/Oda Aneni 05 kebele/Nanofaro	08 ⁰ 56.717'/040 ⁰ 33.308'	1972	Plantcane 12 month old	15.03
176	Shekole	Oromia/West Hararghe/Gubakoricha/Oda Aneni 05 kebele/Nanofaro	08 ⁰ 56.717'/040 ⁰ 33.308'	1972	6 th ratoon 9 month old	13.90
177	Holland	Oromia/West Hararghe/Darolebu	08 ⁰ 36.352'/040 ⁰ 19.278'	1751	3 rd ratoon/6 month old	15.37
178	Bure	Oromia/West Hararghe/Gubakoricha/Oda Aneni 05 kebele/Nanofaro	08 ⁰ 56.717'/040 ⁰ 33.308'	1972	Plantcane 8 month old	13.47
179	Shenkora Dima	Oromia/West Hararghe/Mesela/Lubudekeb/Deneba	09 ⁰ 05.913'/041 ⁰ 08.151'	1647	2 nd ratoon/12 month old	14.90
180	Wonji	Oromia/West Hararghe/Mesela/Lubudekeb/Deneba	09 ⁰ 05.913'/041 ⁰ 08.151'	1647	2 nd ratoon/12 month old	16.03
181	Gende Lega	Oromia/West Hararghe/Gubakoricha/Oda Aneni 05 kebele/Nanofaro	08 ⁰ 56.717'/040 ⁰ 33.308'	1972	Plantcane 8 month old	15.40
182	Dikala	Oromia/East Hararghe/Deder/Kiyo (Nedi Gelan Sedi)/Tulu	09 ⁰ 15.638'/041 ⁰ 23.451'	1812	4 th ratoon/12 month old	16.27
183	Alaa	Oromia/East Hararghe/Deder/Kiyo	09 ⁰ 15.638'/041 ⁰ 23.451'	1812	Plantcane 12 month old	15.13

Supplemental Table 3 continued

184	Bure	Somali/Shinele/Erer/Bila	09 ⁰ 31.774'/041 ⁰ 24.965'	1192	3 rd ratoon/4 month old	12.00
185	Bure	Somali/Shinele/Erer/ Gota			Taken from market	
186	Shenkora Dima	Somali/Shinele/Erer/Bila	09 ⁰ 31.774'/041 ⁰ 24.965'	1192	4 th ratoon/8 month old	8.23
187	Shenkora Adi	Oromia/Eastern Haraghe Zone/ Meta/ Ramis			Bought at Kulubi market	
188	Aladi	Oromia/East Hararghe/Deder/Kiyo (Nedi Gelan Sedi)/Tulu	09 ⁰ 15.638'/041 ⁰ 23.451'	1812	2 nd ratoon/6 month old	13.25
189	Erero	Oromia/East Hararghe/Deder/Kiyo (Nedi Gelan Sedi)/Tulu	09 ⁰ 15.638'/041 ⁰ 23.451'	1812	Plant cane 9 month old	15.84
190	Engda	Oromia/West Hararghe/Anchar/Chorchora/Megala Deye Market	08 ⁰ 47.508'/040 ⁰ 17.063	1690	2 rd ratoon/8 month old	14.48
191	Kay Shenkora	Oromia/West Hararghe/Anchar/Chorchora/ Megala Deye Market	08 ⁰ 47.508'/040 ⁰ 17.063	1690	2 nd ratoon/12 month old	17.93
192	Kay shenkora	Benshangulgumuz/Asosa/ Megele 32(Sefera Tabia)	10 ⁰ 01.179'/ 034 ⁰ 32.705'	1478	2 nd ratoon/7 month old	18.80
193	Ye Dengoro Shenkora	Benshangulgumuz/Kemashe/Kemashe	09 ⁰ 30.200'/ 035 ⁰ 51.825'	1343	2 rd ratoon/10 month old	16.45
194	Nach Shenkora	BenshangulGumuz/Metekel/Pawe/Mender 24	11 ⁰ 22.501'/ 036 ⁰ 34.435'	1197	2 nd ratoon/7 month old	14.36
195	Bale Mesmer Kay Shenkora	BenshangulGumuz/Metekel/Pawe/Mender 24	11 ⁰ 22.501'/ 036 ⁰ 34.435'	1197	3 rd ratoon/8-9 month old	17.20
196	NachShenkora/Shenkora Adi	Benshangulgumuz/Kemashe/Kemashe	09 ⁰ 30.200'/ 035 ⁰ 51.825'	1343	10th ratoon/5-6 month old	11.75

. Supplemental Table 4. Introduced sugarcane varieties used for morphological diversity study

Code No.	Cultivar	Country of origin	Year of introduction
200	B 41227	Barbados	1957
224	B 52298	Barbados	1965
269	CO 449	Coimbatore	1957
279	CO 678	Coimbatore	1960
280	CO 680	Coimbatore	1963
283	CO 740	Coimbatore	1962
360	DB 377/60	Demerara (Guyana)	1974
392	Mex 54/245	Mexico	1970
401	N 14	Natal (South A.)	1980
424	NCO 334	Natal (South A.)	1962
236	B 58230	Barbados	1970
238	B 59212	Barbados	1974
266	CO 421	Coimbatore	1954
355	D 42/58	Demerara (Guyana)	1974
412	C86-165	Cuba	2003

Supplemental Table 5. Frequency distribution for 16 qualitative characters in sugarcane by regions in Ethiopia and country of sources of introduced genotypes

Location	Presence or absence of bud cushion		Relative degree of bud extension			Relative bud Shape													Canopy structure							
	1	2	1	2	3	1	2	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	0.01	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.	0.38	0.63	0.06	0.38	0.56	0.06	0.00	0.19	0.13	0.00	0.19	0.06	0.13	0.00	0.06	0.13	0.06	0.00	0.25	0.00	0.13	0.25	0.19	0.19	0.00	
Introduction	0.37	0.63	0.17	0.37	0.47	0.10	0.00	0.13	0.03	0.03	0.00	0.07	0.20	0.07	0.07	0.30	0.00	0.00	0.23	0.20	0.17	0.07	0.10	0.23	0.00	
Oromia	0.31	0.69	0.03	0.42	0.54	0.36	0.01	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	
SNNPR	0.25	0.75	0.03	0.46	0.51	0.28	0.01	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	
Tigray	0.42	0.58	0.17	0.25	0.58	0.50	0.00	0.17	0.13	0.00	0.04	0.00	0.04	0.08	0.00	0.04	0.00	0.00	0.08	0.08	0.21	0.21	0.17	0.25	0.00	
All	0.30	0.70	0.06	0.41	0.53	0.31	0.01	0.17	0.12	0.02	0.07	0.02	0.09	0.04	0.03	0.10	0.01	0.01	0.15	0.08	0.16	0.17	0.07	0.35	0.01	

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.	0.13	0.31	0.19	0.00	0.06	0.19	0.00	0.00	0.00	0.13	0.00	0.00	0.06	0.13	0.31	0.50	0.13	0.69	0.19		
Introduction	0.07	0.13	0.10	0.03	0.20	0.27	0.00	0.07	0.00	0.13	0.00	0.03	0.00	0.03	0.13	0.77	0.43	0.30	0.27		
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		
SNNPR	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		
Tigray	0.13	0.13	0.17	0.00	0.21	0.08	0.00	0.00	0.00	0.29	0.00	0.00	0.04	0.25	0.33	0.38	0.29	0.33	0.38		
All	0.10	0.16	0.11	0.04	0.14	0.17	0.02	0.02	0.02	0.22	0.01	0.01	0.04	0.17	0.34	0.41	0.30	0.44	0.26		

Supplemental Table 5 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.	0.13	0.13	0.00	0.00	0.06	0.69	0.25	0.69	0.06	0.25	0.06	0.00	0.06	0.13	0.00	0.00	0.25	0.25
Introduction	0.27	0.10	0.13	0.07	0.20	0.23	0.23	0.57	0.20	0.10	0.17	0.00	0.10	0.03	0.00	0.03	0.30	0.27
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
SNNPR	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
Tigray	0.25	0.17	0.13	0.00	0.00	0.46	0.21	0.71	0.08	0.29	0.13	0.00	0.08	0.13	0.00	0.04	0.21	0.13
All	0.29	0.14	0.05	0.08	0.04	0.40	0.23	0.67	0.10	0.21	0.21	0.01	0.05	0.06	0.01	0.02	0.22	0.20

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.	0.13	0.00	0.00	0.00	0.38	0.00	0.19	0.31	0.00	0.13	0.88	1.00	0.00	
Introduction	0.03	0.10	0.03	0.03	0.40	0.13	0.07	0.17	0.03	0.07	0.93	0.80	0.20	
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	
SNNPR	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	
Tigray	0.08	0.00	0.04	0.00	0.42	0.25	0.04	0.17	0.00	0.04	0.96	0.71	0.29	
All	0.09	0.04	0.02	0.07	0.27	0.21	0.08	0.19	0.01	0.11	0.89	0.81	0.19	

Supplemental Table 5 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	0.50	0.50	0.50	0.50	0.06	0.13	0.00	0.13	0.06	0.00	0.00	0.19	0.06	0.00	0.13	0.13	0.00	0.06	0.06		
Introduction	0.70	0.30	0.2	0.8	0.00	0.20	0.00	0.20	0.23	0.03	0.00	0.03	0.07	0.07	0.00	0.07	0.07	0.03	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		
SNNPR	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		
Tigray	0.54	0.46	0.46	0.54	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.54	0.17	0.04	0.00	0.00	0.00	0.21	0.00		
All	0.75	0.25	0.50	0.50	0.02	0.05	0.00	0.12	0.07	0.01	0.01	0.17	0.10	0.01	0.11	0.08	0.02	0.20	0.02		