

Table S1. Hybrid and open-pollinated varieties (OPV) of maize with their traits and characteristics obtained from Ethiopia and planted in Dedessa, Uke, Bako, Ambo, Holleta, and Melkassa respectively

ID	Local Name	Release Name	Type	Color	Maturity Classes Early, Intermediate, Late (days)	Yield Potential on station (t/ha)	Yield On- farm (t/ha)	Altitude Low, Medium, High (masl)	Reaction to Diseases	Drought Tolerance
1	Kolba	AMH853	Hybrid	White	Late (179)	9-12	-	Medium to High (1800-2600)	Tolerant	-
2		AMH854	Hybrid	White	Late	9-12	6-8	Medium to High (1800-2600)	Tolerant	-
3	Webi	AMH760 Q	Hybrid	White	Late (160)	9-12	8-10	Medium to High (1700-2600)	Tolerant	-
4	Jibat	AMH851	Hybrid	White	Late (178)	8-12	7-9	Medium to High (1800-2600)	Resistant	-
5	-	BH540	Hybrid	White	Intermediate (145)	8-9	5-6.5	Low to Medium (1000-2000)	Moderate Tolerance	-
6	-	BH543	Hybrid	White	Intermediate (148)	8.5-11	5.5-6.5	Low to Medium (1000-2000)	Moderate Tolerance	-
7	-	BH546	Hybrid	White	Intermediate (145)	8.5-11.5	6.5-7.5	Low to Medium (1000-2000)	Tolerant	Tolerant
8	-	BH547	Hybrid	White	Intermediate (145)	8.5-11.5	6.5-7.5	Low to Medium (1000-2000)	Tolerant	Tolerant
9	-	BH660	Hybrid	White	Late (160)	9-12	6-8	Medium (1600- 2200)	Tolerant	-
10	-	BH661	Hybrid	White	Late (160)	9.5-12	6.5-8.5	Medium (1600- 2200)	Tolerant	Tolerant
11	-	BHQPY54 5	Hybrid	Yellow	Intermediate (144)	8-9.5	5.5-6.5	Low to Medium (1000-1800)	Moderate Tolerance	-

12	-	Gibe-2	OPV	White	Intermediate (144)	6.5-7	4.5-5t	Low to Medium (1000-1700)	Tolerant	Tolerant
13	-	Melkasa-2	OPV	White	Intermediate (130)	5.5-6.5	4.5-5.5	Low to Medium (1200-1700)	Resistant to rust & leaf blight	Tolerant
14	-	Melkasa-4	OPV	White	Early (105)	4-5	3-3.5	Low to Medium (1000-1600)	Resistant to rust & leaf blight	Tolerant
15	-	Melkasa- 6Q *	OPV	White	Intermediate (120)	4.5-5.5	3-4t	Low to Medium (1000-1750)	Resistant to rust & leaf blight	Tolerant
16	-	MH138Q	Hybrid	White	Intermediate (140)	7.5-8	5.5-6.5	Low to Medium (1000-1800)	Resistant to rust & leaf blight	Tolerant
17	-	MH140	Hybrid	White	Intermediate (140)	8.5-9.5	6.5-7.5	Low to Medium (1000-1800)	Resistant to rust & leaf blight	Tolerant
18	-	Morka	OPV	White	Late (180)	7-9	4-6t	Medium (1600-1800)	Tolerant	-
19	Limu	P3812W	Hybrid	White	Intermediate to Late (150-165)	8-10	-	Low to Medium (1200-2000)	Tolerant	-
20	Shone	PHB30- G19	Hybrid	White	Intermediate to Late (150-165)	8-9	-	Low to Medium (1000-2000)	Tolerant	-

Table S2. Hybrid and open-pollinated varieties (OPV) of maize with their traits and characteristics obtained from Nigeria and planted in Lere, Bayero University Kano (BUK), Samaru, Dambatta, Illorin, and Talata respectively.

ID	Variety release Name	Original Name (Before release)	Type	Color	Maturity Classes (Early, Intermediate, Late)	Ecology	Reaction to Striga	Reaction to Disease & Pest & Nitrogen	Drought tolerance
1	SAMMA Z 11	TZL COMP1-W	OPV	White	Intermediate to Late (100-120)	Lowland topic and savanna	Moderate resistance	Resistant maize streak virus	-
2	SAMMA Z 12	95 TZEE-W 2009TZEEWDTS TR	OPV	Yellow	Extra-early (55-80)	Lowland topic and savanna	Resistant	Resistant to speak virus & susceptible to hermonthica	-
3	SAMMA Z 13	95 TZEE-Y	OPV	Yellow	Early (80-85)	Lowland topic and savanna	Susceptible	Resistant to streak virus,	-
4	SAMMA Z 14	OBATANPA	OPV	White	Intermediate (106-110)	Savanna zones	-	Tolerant to streak virus & stem borers	-
5	SAMMA Z 15	IWD C2 Syn F ₂ IWDC2	OPV	White	Intermediate to late (100-110)	Northern-Southern Guinea Savanna	-	Resistant to hermonthica & Streak virus	-
6	SAMMA Z 16	TZL COMP1 SYNW-1	OPV	White	Late (120)	Savanna zones	Susceptible	Tolerant to hermonthica & streak virus	-
7	SAMMA Z 17	ACR SAKATIFU C4	OPV	White	Early (90-95)	Low land tropic	Tolerant	Tolerant to streak virus	-
8	SAMMA Z 18	TILLERING MAIZE	OPV	White	Early (85-90)	Low land tropic	-	Tolerant to hermonthica and streak virus	-
9	SAMMA Z 19	S.14DKD DT	OPV	White	Early (90-95)	Southern Northern Guinea Savanna (Low land tropic)	Tolerant	Tolerant to Streak virus	-
10	SAMMA Z 20	TZE COMP 3 DT TZECOMP 3 DTC3	OPV	White	Early (95)	Northern-Southern Guinea & Sudan Savanna	-	-	Tolerant

11	SAMMA Z 21	TZE COMP 5-W	OPV	White	Intermediate (90-105)	-	Susceptible	Diseases/pest tolerance	Tolerant
12	SAMMA Z 22	M0826-1	Hybrid	White	Intermediate to Late (100-120)	Northern Guinea savanna	-	-	Tolerant
13	SAMMA Z 23	M0826-3	Hybrid	White	Intermediate to Late (100-120)	Northern Guinea savanna	-	Resistance to streak virus	Tolerant
14	SAMMA Z 24	M0826-7	Hybrid	White	Intermediate to Late (100-120)	Northern Guinea savanna	-	Resistance to streak virus	Tolerant
15	SAMMA Z 25	M0826-11	Hybrid	White	Intermediate to Late (100-120)	Northern Guinea savanna	-	Resistance to streak virus	Tolerant
16	SAMMA Z 26	DTSR-WC1 DTSTRW	OPV	White	Intermediate (95-110)	Northern-Southern Guinea & Sudan Savanna	-	Resistance to streak virus	-
17	SAMMA Z 27	EV99DT W STR	OPV	White	Intermediate (90-95)	Sudan Savanna and Northern Guinea	-	Tolerant to streak virus, <i>Curvularia</i> leaf spot & leaf blight	-
18	SAMMA Z 28	99TZEE-Y-STR	OPV	Yellow	Early (80-85)	Lowland tropic	-	Tolerant to hermonthica & streak virus	-
19	SAMMA Z 29	2000SynEE-W-STR	OPV	White	Early (80-85)	Lowland tropic	-	Pest/Disease Tolerance	-
20	SAMMA Z 30	LNTPxLNTP-WC3	OPV	White	Intermediate (100-110)	Middle belt zone	-	Tolerance to low soil Nitrogen	-
21	SAMMA Z 31	LNTP-Y-C5	OPV	Yellow	Intermediate (100-110)	Northern-Southern Guinea & Sudan Savanna	-	Resistance to streak	-
22	SAMMA Z 32	99TZEE-Y pop STR QPM CO	OPV	Yellow	Early (85)	Sudan Savanna and Northern Guinea	Tolerant	Tolerant to streak virus	-
23	SAMMA Z 33	2000 syn EE-W STR QPM CO	OPV	White	Early (85)	Sudan savanna and Northern Guinea Savanna	Tolerant	Tolerant to streak virus	-
24	SAMMA Z 34	IAR MULTI-COB EARLY DT	OPV	White	Intermediate (95)	Sudan savanna and Transition zones between savanna	-	Tolerant to streak virus	-
25	SAMMA Z 35	2000 EVDT Y STR C4	OPV	White	Intermediate (95)	Sudan savanna and transition zones between	-	Tolerant to streak virus	-

EVDTY2000STR					savanna				
26	SAMMA Z 36	IAR POOL QPM-Y CM 2007 POOL QPM -Y	OPV	White	Intermediate (107)	Savanna zones	-	Tolerant to streak virus	-
27	SAMMA Z 37	Pop66 SR/Acr 91 SUWAN -1-SR	OPV	Yellow	Intermediate (115)	Savanna zones	Tolerant	Tolerant to streak virus	-
28	SAMMA Z 40	DTSTR Y SYN2	OPV	Yellow	Intermediate to Late (110-120)	Savanna zones	-	Tolerant to maize streak virus, <i>Curvularia</i> leaf spot & leaf blight	-
29	SAMMA Z 41	EHY-29 TZEI124 x TZE25	Hybr id	Yellow	Intermediate (90-95)	Northern Guinea and Sudan Savanna	-	Tolerant to maize streak virus, <i>Curvularia</i> leaf spot & leaf blight	-
30	SAMMA Z 42	TZEYPOPDST RC4 x TZEI13	Hybr id	Yellow	Intermediate (90- 95)	Northern Guinea and Sudan Savanna	-	Tolerant to maize streak virus, <i>Curvularia</i> leaf spot & leaf blight	-
31	SAMMA Z 45	AFLATOXIN R SYN-Y2	OPV	Yellow	Intermediate to Late (110 -120)	Northern Guinea and Sudan Savanna ecologies	-	Tolerant to maize streak virus, rust, leaf blight & <i>Curvularia</i> leaf spot	-
32	SAMMA Z 46	EWB 29	Hybr id	White	Intermediate (90-95)	Northern Guinea and Sudan Savanna	-	Tolerant to streak, rust, leaf blight & <i>Curvularia</i> leaf spot	-
33	SAMMA Z 47	EWB 34	Hybr id	White	Intermediate (90- 95)	Northern Guinea and Sudan Savanna	-	Tolerant to streak, rust, leaf blight & <i>Curvularia</i> leaf spot	-
34	SAMMA Z 48	2011TZEWDST RSYN	OPV	White	Intermediate (90- 95)	Northern Guinea and Sudan Savanna	-	Tolerant to streak, rust, leaf blight & <i>Curvularia</i> leaf spot	-
35	SAMMA Z 50	M1026-8	Hybr id	White		-	-	-	-
36		2013DTEYSTR	-	-	-	-	-	-	-
37		2009TZEWDTS TR	-	-	-	-	-	-	-

38		2013TZEEWPOP DTSTR	-	-	-	-	-	-	-
39		TZLCOMP4DTC 2	-	-	-	-	-	-	-
40	NARZO- 29	TZBSR	-	-	-	-	-	-	-
41	SC651	M1026-10	Hybr id	White	Intermediate to Late (115-120)	Guinea savanna	Tolerant	Tolerance to leaf blight, leaf spot, <i>Curvularia</i> leaf spot, & streak virus disease	-
42		M1227-12	-	-	-	-	-		-
43	OBA SUPER1	-	Hybr id	White	Intermediate to Late (110 -120)	Southern and Northern Guinea Savanna	-	Tolerant to streak, rust, leaf blight & <i>Curvularia</i> leaf spot	-
44	OBA SUPER II	-	Hybr id	Yellow	Intermediate to Late (110 -120)	Southern and Northern Guinea Savanna	-	Tolerant to streak, rust, leaf blight, <i>Curvularia</i> leaf spot	-
45	OBA SUPER 13	M0926-8	Hybr id	White	Intermediate (100 -110)	Southern and Northern Guinea Savanna zones	-	Tolerant to maize streak virus, rust, leaf blight, and <i>Curvularia</i> leaf spot	-
46	DK 818	BIG 717	Hybr id	Yellow	Intermediate to Late (110 -120)	Southern and Northern Guinea Savanna	-	Tolerant to streak virus, rust, leaf blight & <i>Curvularia</i> leaf spot	-
47	DK 920	PRABAL	Hybr id	Yellow	Intermediate to Late (110 -120)	Southern and Northern Guinea Savanna	-	Tolerant to streak virus, rust, leaf blight & <i>Curvularia</i> leaf spot	-
48	DK 234	DK234	Hybr id	White	Intermediate to Late (110 -120)	Southern and Northern Guinea Savanna	-	Tolerant to streak virus, rust, leaf blight & <i>Curvularia</i> leaf spot	-
49	DK 777	DK777	Hybr id	White	Intermediate to Late (110 -120)	Forest and Northern Guinea Savanna	-	Tolerant to streak virus, rust, leaf	-

								blight & <i>Curvularia</i> leaf spot	
50	IFE HYBRID 5	TZEEI29 x TZEEI21	Hybr id	White	Early (78-80)	Forest and Savanna zones	-	Tolerant to streak virus, rust & leaf blight	-
51	IFE HYBRID 6	TZEEWPOPSTR C5 x TZEE16	Hybr id	White	Early (80-85)	Forest and Savanna zones	-	Tolerant to streak virus, rust & leaf blight	-
52	OBA 98	-	Hybr id	White	Intermediate to Late (110 -120)	Southern and Northern Guinea Savanna	-	Tolerant to streak, rust, leaf blight & <i>Curvularia</i> leaf spot	-
53	NEW KADUN A	-	-	-	-	-	-	-	-
54		TZEE-SR-W/Y	-	-	-	-	-	-	-
55		ACR.97.TZL COMP.1-W-STR	-	-	-	-	-	-	-

Table S3. Hybrid and open-pollinated varieties (OPV) of maize with their traits and characteristics obtained from Tanzania and planted in Igeri, Mitalula, Seatondale, Suluti, Oyole, Sari, Monduli juu, Miwaleni, Minja and Siha respectively.

ID	Variety Name	Type (Release status)	Color	Maturity Classes Early, Intermediate, Late (Day)	Potential Yield (t/ha)	Altitude Low, Medium, High (masl)	Reaction to Disease & Pest & Nitrogen	Drought Tolerance
1	DK 8031	Hybrid	White	Early (90)	5 – 7	Low (100-110)	Tolerance to grey leaf spot & leaf rust	-
2	DKC 8033	Hybrid	White	Intermediate to late	6 - 8	Medium (900-1500)	Resistant to turcicum, blight & leaf rust	-
3	DKC 9089	Hybrid	White	Intermediate (115 – 120)	4 – 6	Medium (900-1500)	Tolerant to gray leaf spot & leaf rust	-
4	EX-UYL1	Hybrid (not yet released)	White	Intermediate	9 – 10	Low to Medium (800-1600)	Tolerant to streak virus, rusts, gray leaf spot turcicum, blight & cob rots	-
5	EX-UYL2	Hybrid (not yet released)	White	Intermediate	8 - 9	Low to Medium (800-1600)	Tolerant to gray leaf spot, rust & turcicum blight	-
6	KH 600-15A	Hybrid	White	Late	8 – 10	High (2000 - 3000)	Tolerant to leaf rusts, streak virus & gray leaf spot	-
7	KITALE H614 D	Hybrid	White	Intermediate to late (135-150)	7	Medium to High (>1500)	No tolerance/ resistance	-
8	KITALE H625	Hybrid	White	Late (140-150)	9 – 10	Medium to High (1500 - 2400)	Tolerant to gray leaf spot & turcicum blight	-
9	KITALE HB 04	Hybrid	White	Early 90	7	Low (0-800)	Partially resistant to streak virus	Tolerant
10	MERU HB 513	Hybrid	White	Intermediate (90-100)	10	Low to Medium (800 - 1400)	Resistant to streak virus & gray leaf spot	-
11	MERU HB 515	Hybrid	White	Intermediate (100-120)	10	Low to Medium (800-1400)	Resistant to streak virus & gray leaf spot	-
12	MERU HB 623	Hybrid	White	Intermediate to late	10	Low to Medium (100-1600)	Resistant to streak virus & gray leaf spot	-
13	PAN 4M-19	Hybrid	White	Early to intermediate (90-100)	4 - 7	Low to Medium (0-1500)	Tolerant to turcicum blight, cob rots & leaf rust	-

14	PAN 4M-21	Hybrid	White	Intermediate (120)	7.5	Low to Medium (400 - 1200)	Tolerant to leaf rust, streak virus & gray leaf spot	-
15	PAN 67	Hybrid	White	Intermediate	7	Low to Medium	Tolerant to leaf rusts & Turcicum blight	-
16	PAN 691	Hybrid	White	Late (150-160)	7	Medium to High (>1500)	Moderate resistant to streak virus & grey leaf spot	-
17	PHB 30G 19	Hybrid	White	Intermediate to late (130-140)	7 - 10	Medium (1200-1800)	Resistant to gray leaf spot	-
18	PHB 3253	Hybrid	White	Extra early	4 - 6	Low to Medium		-
19	SC 403	Hybrid	White	Early (90-100)	1 - 6	Low to Medium (500-1400)	Resistant to streak virus & leaf rusts	Tolerant
20	SC 513	Hybrid	White	Intermediate 120	4 - 9	Low to Medium (500-1400)	Moderate resistance to cob rots, gray leaf spot turcicum blight & leaf rust	Tolerant
21	SC 627	Hybrid	White	Intermediate (100-120)	5 - 10	Low to Medium (500-1400)	Resistant to grey leaf spot, maize streak virus & rust	-
22	SC 719	Hybrid	White	Late	9 - 10	High	Resistant to gray leaf spot, maize streak virus & turcicum blight	-
23	TAN 250	OPV	White	Early to intermediate	3 - 5	Low to Medium (0-1000)	Resistant to streak virus, gray leaf spot, , turcicum blight, cob rots & common rust	-
24	TAN H600	Hybrid	White	Early to intermediate	7	Low to Medium (0-1500)	Tolerant to leaf rusts	-
25	TMV 1	OPV	White	Extra early	5 - 7	Low to Medium (<1500)	Tolerant to streak virus & rust	-
26	TMV 2	OPV	White	Late	8 - 10	Medium to High (>1500)	Tolerant to turcicum blight & leaf rusts	-
27	TZH 536	Hybrid	White	Intermediate	9 - 11	Medium (900-1500)	Tolerant to turcicum blight, streak virus & gray leaf spot	-
28	TZH 538	Hybrid	White	Intermediate (100-130)	9 - 14	Medium (900-1500)	Resistant to gray leaf spot, streak virus & turcicum blight	-
29	TZM 523	OPV	White	Intermediate	6 - 8	Medium (800-1500)	Tolerant to leaf spot, streak & turcicum blight	-
30	UH 615	Hybrid	White	Intermediate to late	8 - 10	Medium to High (1200-2200)	Resistant to grey leaf spot, & turcicum blight	Tolerant
31	UH 6303	Hybrid	White	Intermediate	9 - 10	Medium (1200-1800)	Resistant to gray leaf spot & turcicum blight	Tolerant

32	UHS 401	Hybrid	White	Extra early to intermediate	5 - 8	Low to High (400-2000)	Resistant to streak virus & turcicum blight Nitrogen efficient	-
33	UHS 5210	Hybrid	White	Intermediate	9 - 10	Medium (1200-1600)	Resistant to streak virus & gray leaf spot	-
34	UHS 5350	Hybrid	White	Intermediate	8 - 9	Medium (1200-1600)	Resistant to streak virus, gray leaf spot & turcicum blight	-
35	ZMS 402	Hybrid	White	Early to intermediate	5 - 7	Low -Medium (500 - 1700)	Resistant to maize streak virus, gray leaf spot, turcicum blight & leaf rust	-
36	ZMS 606	Hybrid	White	Intermediate to late 120days	8 - 10	Low to Medium (500 - 1700)	Resistant to leaf rusts, streak virus, gray leaf spot & cob rots	-
37	DKC 8053	Hybrid	White	Early maturity 90-100days	9 - 10	Low to Medium	Resistant to rust, streak virus, gray leaf spot & diplodia tolerance	-
38	KILAMA	OPV	White	Late maturity (100-120)	7	Medium	Resistance to streak virus	-
39	KITALE 628	Hybrid	White	Late (150-170)	10	High	Resistance to streak virus	-
40	P2859W	Hybrid	White	Late (130-140)	9 -10	Medium	Resistance to streak virus	-
41	SITUKA M1	OPV	White	Late 100-120)	6 - 7	Medium	Resistance to gray leaf spot	-
42	VUMILIA K1	OPV	White	Intermediate (100 -120)	7	Medium	Resistance to streak virus	-