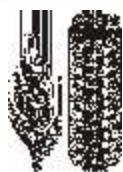


Characterization of Maize Germplasm Grown in Eastern and Southern Africa

**Results of the 2000 Regional Trials
Coordinated by CIMMYT**



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CIMMYT

The International Maize and Wheat Improvement Center (CIMMYT) is an internationally funded, non-profit scientific research and training organization. Headquartered in Mexico, the Center works with agricultural research institutions worldwide to improve the productivity and sustainability of maize and wheat systems for resource-poor farmers in developing countries. It is one of 16 similar centers supported by the Consultative Group on International Agricultural Research (CGIAR). The CGIAR comprises over 50 partner countries, international and regional organizations, and private foundations. It is co-sponsored by the Food and Agriculture Organization (FAO) of the United Nations, the International Bank for Reconstruction and Development (World Bank), the United Nations Development Programme (UNDP), and the United Nations Environment Programme (UNEP).

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1. Introduction

Maize germplasm

The trials evaluated elite pre-release and released maize germplasm supplied by CIMMYT, National Agricultural Research Programs, and private seed companies from southern Africa. CIMMYT received the germplasm, grouped it according to vigor and maturity, and formed six replicated trials:

EPOP00: early to intermediate maturing open-pollinated varieties (OPV's)

ILPOP00: intermediate to late maturing open-pollinated varieties (OPV's)

EIHYP00: early to intermediate maturing hybrids

ILHYB00: intermediate to late maturing hybrids

QPM00: quality protein maize hybrids

EAIL00: elite and advanced inbred lines

Each trial had an alpha (0,1) lattice design with three replicates. ILHYB00 contained eight dwarf maize varieties from the African Centre for Fertilizer Development (ACFD). These dwarf varieties were grouped at the beginning or the end of each replicate to prevent shading by the normal tall varieties.

Trial management

The trials were grown by CIMMYT, National Agricultural Research Programs, private seed companies and non-governmental organizations in eastern and southern Africa. Collaborators were encouraged to grow the trials under different types of conditions:

Well-fertilized/rain-fed conditions: trials were grown using optimal site-specific agronomic practices

Managed nitrogen stress: trials were grown in fields that had been depleted of nitrogen by growing unfertilized, non-leguminous crops for several seasons and removing the crop biomass after each season. Nitrogen fertilization to maize trials was designed so that yields under managed N stress averaged 20-35% of the yield of a well-fertilized maize crop at that site.

Managed drought stress: trials were grown during a rain-free period, with irrigation applied at the beginning of the season to establish a good plant stand. Afterwards, irrigation was withheld so that the crop suffered drought stress during flowering and grain-filling, resulting in average yields of about 1-3 t/ha.

Artificial inoculation/infestation of biotic stress factors: trials (mainly EAIL00) were grown under artificial inoculation/infestation of leaf diseases, stem borers, maize grain weevils and *Striga hermonthica*.

A complete list of the sites can be found in Section 4.

Data analysis

In each Table, entries are grouped by anthesis date and sorted according to the average rank for yield across all sites. Within each maturity group, best ranking entries are listed at the top.

For presenting grain yields, sites were grouped into the following seven environments:

- Lowland tropics, rainfed/well-fertilized
- Midaltitudes in eastern Africa, rainfed/well-fertilized
- Midaltitudes in southern Africa, rainfed/well-fertilized
- Temperate (Data from Lesotho)
- Managed and random drought stress
- Eastern Africa dry (for EIHYB00 only)
- Managed N stress

This grouping was done based on the location (for making the division among rainfed/well fertilized sites, see Fig.1) and the management of the sites (rainfed/well fertilized, managed drought stress, managed N stress).

Each trial is presented with two Summary Tables and individual site results.

Summary Tables

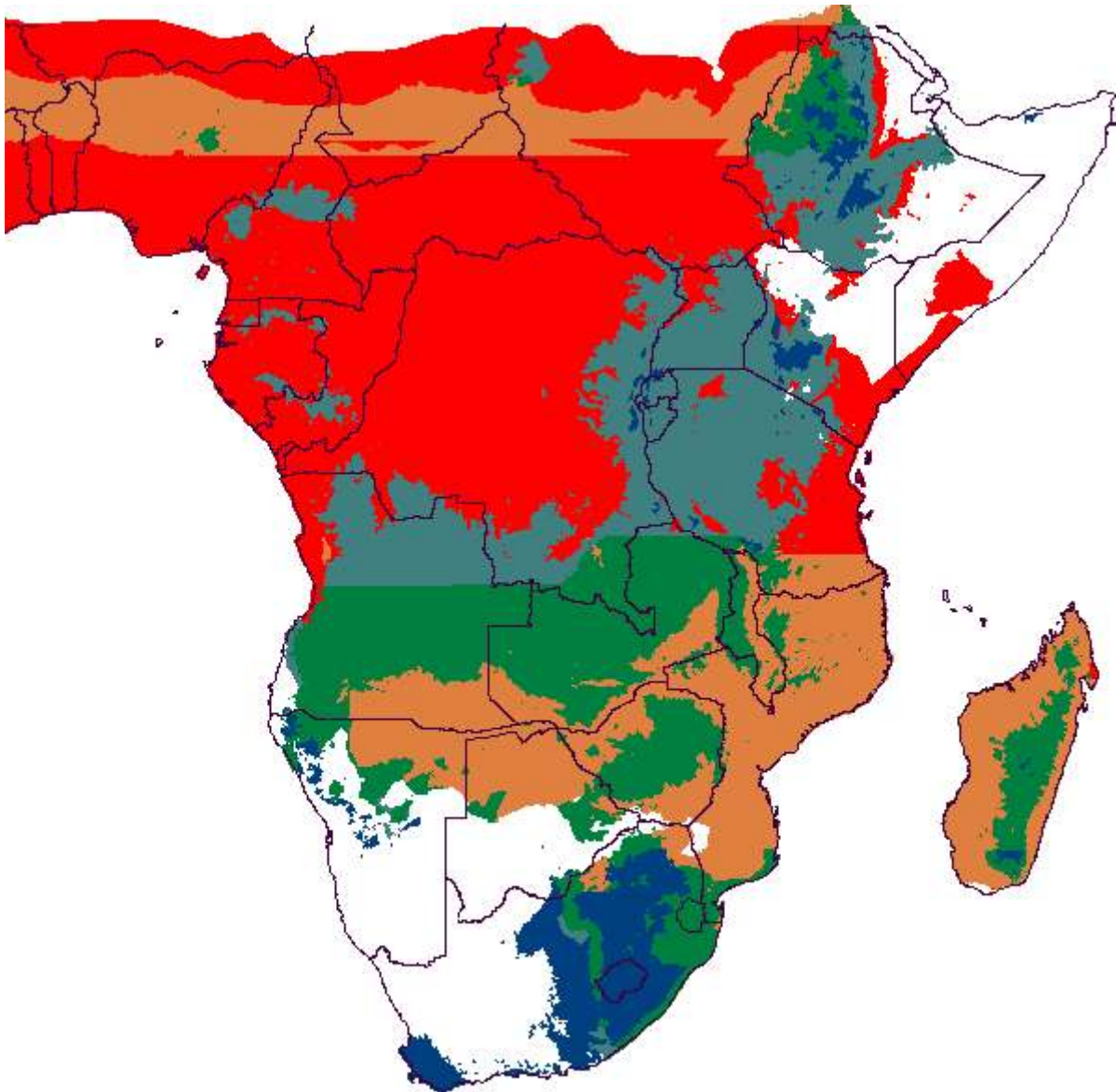
The Summary Tables present grain yields averaged across sites for each of the five to seven environments, and data on agronomic performance such as anthesis date, plant and ear height, ear position, root and stem lodging, husk cover, ear rot, leaf diseases, *Striga* counts, grain weevil and stem borer damage, grain texture and grain moisture.







Within each maturity group, **grain yields were color-coded**. Within a maturity group, colors that have no letter in common in the legend are different by at least one 'Least Significant Difference' (LSD, $P \leq 0.05$). LSDs were calculated from the mean square error that was pooled across sites. **Note: colors can only be used to compare grain yields within a certain maturity group**. For comparing grain yields between maturity groups, use the LSD listed at the bottom of the Table.

Within a maturity group, colors that have no letter in common are different by at least one LSD.	Color legend	
	A	Very good
	AB	Good
	BC	Average
	CD	Poor
	D	Very poor

Data on anthesis date, plant and ear height, ear position, leaf diseases, *Striga* infestation, grain weevil and stem borer damage, grain texture and grain moisture were averaged across those sites that provided results with significant differences between entries. If no data are presented for these traits, no trial data demonstrating significant differences for these traits was available. Data on root and stem lodging, husk cover, and ear rot were averaged across all sites. A description of all measurements can be found in Section 3.

Fig 1. CIMMYT Maize Mega-Environment classification based on day length, mean temperature, and rainfall.



	Day length	Mean Temp.	Rainfall
 Dry			≤ 200 mm
 Tropical Lowlands	$11 \leq d < 12.5$ hrs	≥ 24 °C	> 200 mm
 Tropical Midaltitudes	$11 \leq d < 12.5$ hrs	$18^{\circ}\text{C} \leq T < 24^{\circ}\text{C}$	> 200 mm
 Subtropical Lowlands	$12.5 \leq d < 13.4$ hrs	$\geq 24^{\circ}\text{C}$	> 200 mm
 Subtropical Midaltitudes	$12.5 \leq d < 13.4$ hrs	$18^{\circ}\text{C} \leq T < 24^{\circ}\text{C}$	> 200 mm
 Highlands/Temperate	$d \geq 13.4$ hrs	or $T < 18^{\circ}\text{C}$	> 200 mm

Individual site results

These Tables present grain yields for individual sites, grouped by environment. A description of the sites can be found in Section 4.

How can the results be used ...

... by National Agricultural Research Programs?

- Request seed of the very best stress-tolerant, responsive OPV's and hybrids from CIMMYT, other National Programs, and private seed companies, and further test them in the National Maize Evaluation Trials.
- Conduct National Maize Evaluation Trials not only under optimal conditions but also under the most important stresses present in farmers' fields. Consider performance under stress conditions and farmers' preferences when making decisions on release of germplasm.
- Request and use seed of best CIMMYT germplasm (inbred lines, OPV's) in your breeding program and for registration.

... by Private Seed Companies?

- Foster the distribution of cultivars that are not only high yielding under optimal conditions but as well under the most important stresses present in farmers' fields.
- Continue to submit seed of your best germplasm for evaluation in Regional Trials (to CIMMYT) and/or National Maize Evaluation Trials (to National Agricultural Research Programs of individual countries).
- Request and use seed of best CIMMYT germplasm (inbred lines, OPV's) in your breeding program and for commercialization.

... by seed-distributing agencies?

- Use data from Regional Trials (available from CIMMYT-Zimbabwe) and National Maize Evaluation Trials (available from National Agricultural Research Programs of individual countries) for making decisions on which seed to distribute to farmers.
- Distribute quality seed of the very best stress-tolerant, responsive hybrids and OPV's that are currently available.

Conclusion: Foster the availability and distribution of quality seed of the very best maize cultivars - those that are not only high yielding under optimal conditions but as well under the stresses present in farmers' fields.

EPOP00: Results of early & intermediate maturing OPVs from CIMMYT, Malawi, Tanzania, Zambia, SEMOC & Botswana across 48 sites in eastern & southern Africa, 1999/00. Individual site results on pages 28-34.

Entry	Pedigree	Origin	Across			Lowlands	MidAlt	Mid Alt	Temperate	N	Drought	Anth
			Rel GY	Rank	Sidev	t/ha	EA	SA	t/ha	t/ha	Stress	t/ha
			%	Avg	Sidev	t/ha	t/ha	t/ha	t/ha	t/ha	t/ha	d
OPVs with anthesis date between 56 and 58 days												
19	POP 101 x KATUMANI	Zambia	75	23	7	2.54	2.72	2.59	2.28	1.26	1.30	57.3
17	POP 101	Zambia	56	25	6	1.92	1.86	1.90	1.91	0.86	0.82	56.5
Maturity group mean						2.23	2.29	2.24	2.09	1.06	1.06	
OPVs with anthesis date between 63 and 67 days												
4	[EARLY-MID1/KATUMANI-SR]-#	CIMMYT	98	15	6	3.70	5.03	4.46	2.33	1.47	1.73	65.9
22	KATUMANI-ST	Tanzania	100	15	6	3.74	5.67	4.53	2.15	1.40	1.77	65.2
14	POOL 16 SR	Zambia	89	19	6	3.24	4.19	3.70	2.02	1.55	1.57	63.2
5	[Z98EDRSYN]F2	CIMMYT	86	20	6	3.21	3.68	3.87	1.97	1.29	1.62	66.1
16	POOL 16 SEQ	Zambia	85	20	7	3.08	3.89	3.33	2.36	1.24	1.50	65.6
Maturity group mean						3.39	4.49	3.98	2.16	1.39	1.64	
OPVs with anthesis date between 67 and 69 days												
6	ZM421	CIMMYT	121	7	6	4.92	6.32	5.25	2.38	1.95	2.31	69.1
2	ZM303	CIMMYT	109	11	6	4.39	5.60	4.97	2.17	1.73	1.91	68.9
10	ZM421 F2	CIMMYT	108	11	6	4.21	5.46	4.72	2.28	1.70	1.86	68.3
1	ZM301	CIMMYT	101	13	6	4.21	5.22	4.97	1.97	1.48	1.84	68.6
3	[TEWDSRDRTOLSYN[NAW5867/P30SR]]##	CIMMYT	102	14	6	4.06	4.84	4.18	2.39	1.57	1.76	68.0
24	MATUBA	SEMOC	102	14	6	4.15	4.84	4.90	2.14	1.75	1.55	68.8
23	KITO-ST	Tanzania	96	17	6	3.61	5.27	4.07	2.16	1.38	1.72	68.6
15	MMV400	Zambia	90	19	6	3.44	4.33	3.86	2.30	1.30	1.55	67.6
Maturity group mean						4.12	5.24	4.61	2.22	1.61	1.81	
OPVs with anthesis date between 70 and 73 days												
7	SADV1 F1	CIMMYT	127	6	6	5.43	6.70	5.88	2.45	2.06	2.17	71.2
8	SADV2 F1	CIMMYT	123	7	6	4.67	6.43	6.16	2.15	2.20	2.11	70.7
11	SADV1 F2	CIMMYT	120	8	6	4.80	6.17	5.72	2.33	1.83	2.12	71.6
9	ZM521	CIMMYT	118	8	7	4.92	6.32	5.56	1.96	1.99	1.96	70.5
12	SADV2 F2	CIMMYT	115	9	7	5.03	5.95	5.44	2.08	1.96	1.77	71.7
26	KEP	Botswana	106	12	7	4.33	5.80	5.37	2.43	1.49	1.65	72.5
27	LOCAL CHECK 1	Various	104	12	9	4.32	6.24	5.73	2.26	1.40	1.74	71.5
28	LOCAL CHECK 2	Various	104	13	8	4.18	5.83	5.97	1.98	1.32	1.83	71.7
20	MATINDIRI	Malawi	101	14	7	4.52	5.63	4.24	2.27	1.47	1.67	71.1
25	SEMOC1	SEMOC	94	16	7	3.92	5.82	4.46	1.90	1.46	1.41	72.7
13	Pop 10	Zambia	93	17	6	3.92	5.40	3.97	2.01	1.31	1.68	71.5
21	CCD	Malawi	89	19	5	3.91	4.59	3.78	2.13	1.25	1.44	71.2
Maturity group mean						4.44	5.81	5.07	2.15	1.60	1.76	
OPVs with anthesis date at 77 days												
18	POP 25 (Zambia)	Zambia	83	20	7	3.78	4.60	3.59	2.02	1.08	1.34	77.0
Mean			100	14	6	3.95	5.07	4.47	2.17	1.51	1.69	68.7
LSD (0.05)						0.42	0.69	0.59	0.51	0.24	0.31	0.6
Min			56	6	5	1.92	1.86	1.90	1.90	0.86	0.82	56.5
Max			127	25	9	5.43	6.70	6.16	2.45	2.20	2.31	77.0

Color legend	
A	Very good
AB	Good
BC	Average
CD	Poor
D	Very poor

Within a maturity group, colors that have no letter in common are different by at least one LSD.

LSDs were calculated from the mean square error that was pooled across sites.

EPOP00: Results of early & intermediate maturing OPVs from CIMMYT, Malawi, Tanzania, Zambia, SEMOC & Botswana across 48 sites in eastern and southern Africa, 1999/00

Entry	Pedigree	Origin	Across			Anth Date	Plant Height	Ear Pos	Lodging		Husk Cover	Ear Rot	GLS	Pucc sorg	E. tunc	Grain Text	Grain Moist	MSV	Weevil	
			Rel GY	Rank	Stdev				Root	Stem									TotalF1	WLoss
			%	Avg	Stdev	d	cm	0-1	%	%	%	%	1-5	1-5	1-5	1-5	%	1-5	#	%
OPVs with anthesis date between 56 and 58 days																				
19	POP 101 x KATUMANI	Zambia	75	23	7	57.3	146	0.40	23	27	9	23	2.2	2.8	3.0	2.9	13.5	2.0	165	14
17	POP 101	Zambia	56	25	6	56.5	127	0.35	30	26	3	21	1.9	2.8	3.2	3.2	12.8	1.8	87	12
OPVs with anthesis date between 63 and 67 days																				
4	[EARLY-MID1/KATUMANI-SR]-#	CIMMYT	98	15	6	65.9	175	0.46	18	16	14	17	2.1	2.4	2.5	3.1	15.5	2.4	76	7
22	KATUMANI-ST	Tanzania	100	15	6	65.2	180	0.46	19	20	6	12	2.1	2.5	2.8	2.7	16.5	2.1	72	4
14	POOL 16 SR	Zambia	89	19	6	63.2	155	0.41	14	14	6	14	2.0	2.6	2.8	3.3	14.3	1.6	45	5
5	[Z98EDRSYN]F2	CIMMYT	86	20	6	66.1	155	0.37	14	15	7	16	2.4	2.8	2.6	2.5	15.0	2.9	81	10
16	POOL 16 SEQ	Zambia	85	20	7	65.6	153	0.43	17	20	10	21	2.0	3.1	2.7	2.9	14.6	1.9	90	10
OPVs with anthesis date between 67 and 69 days																				
6	ZM421	CIMMYT	121	7	6	69.1	175	0.45	11	11	13	12	1.7	2.6	2.3	2.7	16.6	1.7	90	10
2	ZM303	CIMMYT	109	11	6	68.9	173	0.44	16	12	10	16	1.9	2.4	2.3	3.2	16.4	2.3	78	9
10	ZM421 F2	CIMMYT	108	11	6	68.3	168	0.45	10	12	16	14	1.7	2.4	2.4	2.9	16.2	2.2	91	9
1	ZM301	CIMMYT	101	13	6	68.6	176	0.44	14	15	12	17	1.8	2.6	2.3	3.1	15.9	2.1	48	7
3	[TEWDSRDRTOLSYN][NAW5867/P30SR]###	CIMMYT	102	14	6	68.0	168	0.44	15	15	11	22	2.2	2.6	2.7	2.9	15.2	2.4	144	13
24	MATUBA	SEMOC	102	14	6	68.8	176	0.48	13	15	9	12	2.2	2.6	2.3	2.5	14.9	1.7	70	7
23	KITO-ST	Tanzania	96	17	6	68.6	175	0.46	16	12	7	13	1.9	3.0	2.7	2.9	16.6	2.5	157	11
15	MMV400	Zambia	90	19	6	67.6	172	0.40	14	10	7	10	2.0	2.5	2.6	2.2	15.2	2.1	60	6
OPVs with anthesis date between 70 and 73 days																				
7	SADVI1 F1	CIMMYT	127	6	6	71.2	185	0.47	11	8	16	3	1.5	2.1	1.8	2.8	16.9	1.5	86	11
8	SADVI2 F1	CIMMYT	123	7	6	70.7	183	0.45	10	11	21	17	1.6	2.4	2.1	3.2	17.0	2.3	75	9
11	SADVI1 F2	CIMMYT	120	8	6	71.6	182	0.48	9	7	20	16	1.7	2.5	2.0	2.9	16.5	1.9	94	9
9	ZM521	CIMMYT	118	8	7	70.5	180	0.45	9	11	15	15	1.5	2.3	2.0	2.9	17.1	2.0	51	8
12	SADVI2 F2	CIMMYT	115	9	7	71.7	183	0.46	9	7	16	13	1.7	2.4	2.1	2.8	17.1	2.3	39	7
26	KEP	Botswana	106	12	7	72.5	193	0.49	11	11	10	26	1.9	2.9	2.3	4.1	17.9	3.5	48	7
27	LOCAL CHECK 1	Various	104	12	9	71.5	190	0.48	12	12	15	14	1.5	2.9	2.1	3.2	17.1	3.0	59	6
28	LOCAL CHECK 2	Various	104	13	8	71.7	184	0.49	10	11	7	17	2.0	2.8	2.4	3.1	17.4	2.7		
20	MATINDIRI	Malawi	101	14	7	71.1	171	0.46	15	13	13	27	1.8	2.4	2.2	2.1	16.1	3.1	48	6
25	SEMOC1	SEMOC	94	16	7	72.7	184	0.47	14	10	13	12	1.9	2.6	2.2	1.9	17.1	1.8	74	8
13	Pop 10	Zambia	93	17	6	71.5	173	0.44	7	4	11	26	2.1	2.7	2.1	2.1	16.8	2.0	81	8
21	CCD	Malawi	89	19	5	71.2	175	0.46	13	13	12	15	1.7	2.8	2.6	2.4	16.0	3.4	37	2
OPVs with anthesis date at 77 days																				
18	POP 25 (Zambia)	Zambia	83	20	7	77.0	178	0.48	9	10	5	12	1.6	2.9	2.1	3.3	17.0	3.1	109	10
Mean			100	14	6	68.7	173	0.45	14	13	11	16	1.9	2.6	2.4	2.9	16.0	2.3	80	8
LSD (0.05)						0.6	5	0.02	4	3	5	9	0.3	0.3	0.3	0.4	0.6	0.6	52	5
Min			56	6	5	56.5	127	0.35	7	4	3	3	1.5	2.1	1.8	1.9	12.8	1.5	37	2
Max			127	25	9	77.0	193	0.49	30	27	21	27	2.4	3.1	3.2	4.1	17.9	3.5	165	14

ILPOP00: Results of intermediate and late maturing OPVs from CIMMYT, Malawi, and Tanzania across 37 sites in eastern and southern Africa, 1999/00. Individual site results on pages 35-39.

Entry	Pedigree	Origin	Across			Low	MidAlt	MidAlt	N	Drought	Anth
			Rel GY	Rank	Stdev	lands	SA	EA	Stress	t/ha	Date
			%	Avg		t/ha	t/ha	t/ha	t/ha	t/ha	d
OPVs with anthesis date between 68 and 73 days											
9	P501-SR/P502-SR-F1	CIMMYT	126	6	7	5.52	6.40	6.25	2.56	2.75	72.0
18	MASIKA	Malawi	106	11	6	5.17	5.68	5.17	2.04	2.24	72.4
4	ZM607c4F2	CIMMYT	108	12	7	5.00	5.28	4.84	2.21	2.53	71.3
5	ZM605c4F2	CIMMYT	103	12	7	4.50	5.65	5.17	2.10	2.10	71.2
6	EV98ZM607-F2	CIMMYT	102	14	8	4.53	5.09	4.59	1.97	2.41	71.3
7	EV98ZM605-F2	CIMMYT	100	14	7	4.51	5.47	4.92	1.77	2.25	72.0
21	CHITIBU	Malawi	95	15	8	4.26	5.26	4.49	1.95	1.77	72.6
11	S91SIWQ	CIMMYT	100	16	8	3.96	4.87	4.55	1.87	2.26	70.4
25	SYN C	Zambia	94	17	7	4.06	4.97	4.63	1.85	1.95	70.8
27	MMI	Zambia	81	18	7	4.38	5.19	5.07	1.71	2.25	69.9
26	POP BH	Zambia	95	18	6	4.31	5.06	4.64	1.87	2.08	71.5
22	TMV-1 SR	Tanzania	94	18	7	4.05	4.71	4.41	1.82	2.28	71.3
20	SUNDWE	Malawi	87	19	6	4.00	5.18	4.67	1.64	1.70	71.0
Maturity group average						4.48	5.29	4.88	1.95	2.20	
OPVs with anthesis date between 73 and 75 days											
12	ZM621	CIMMYT	116	6	5	5.13	6.60	5.91	2.20	2.63	73.1
13	ZM621 F2	CIMMYT	113	7	6	5.47	6.30	5.56	2.24	2.33	74.5
8	WEEVILAxB-F1	CIMMYT	109	10	7	5.11	6.29	6.00	2.02	1.91	74.9
2	[TSEQZIM]C2F2	CIMMYT	104	12	6	4.57	5.47	5.01	2.29	2.19	73.5
1	Z97SYNGLS-F2-#	CIMMYT	105	13	8	4.60	5.65	5.53	2.12	1.94	74.5
16	SYNTHETIC NUE-SR-#	CIMMYT	101	15	8	5.05	5.34	5.20	1.90	2.11	74.9
15	SYNTHETIC DR-SR-#	CIMMYT	100	16	8	4.92	4.98	4.54	1.74	2.34	74.3
19	KAKHOMERA	Malawi	95	16	6	4.10	5.29	4.84	1.66	2.04	73.2
10	OBATAMPA-#		95	17	7	4.57	4.98	4.55	1.66	2.48	73.3
Maturity group average						4.83	5.66	5.24	1.98	2.22	
OPVs with anthesis date between 75 and 78 days											
3	AC969A-SR]F2	CIMMYT	93	15	9	3.23	5.79	5.42	1.87	1.86	75.9
17	TASEQ-#	CIMMYT	97	15	8	4.64	5.26	4.67	1.96	2.13	77.5
28	LOCAL CHECK	CIMMYT	91	17	10	3.84	6.06	4.99	1.70	1.74	75.3
24	KILIMA SR	Tanzania	92	18	8	4.14	5.28	5.06	1.65	1.71	75.6
23	STAHA SR	Tanzania	89	18	7	4.69	5.11	4.64	1.59	1.68	75.7
14	LA-POSTA-SEQC6-SR	CIMMYT	91	19	7	4.95	4.44	3.99	1.80	2.16	77.8
Maturity group average						4.25	5.32	4.79	1.76	1.88	
Mean			99	15	7	4.55	5.42	4.98	1.92	2.14	73.3
LSD (0.05)						0.69	0.41	0.53	0.31	0.50	0.6
Min			81	6	5	3.23	4.44	3.99	1.59	1.68	69.9
Max			126	19	10	5.52	6.60	6.25	2.56	2.75	77.8

Color legend

A	Very good
AB	Good
BC	Average
CD	Poor
D	Very poor

Within a maturity group, colors that have no letter in common are different by at least one LSD.

LSDs were calculated from the mean square error that was pooled across sites.

ILPOP00: Results of intermediate and late maturing OPVs from CIMMYT, Malawi, and Tanzania across 37 sites in eastern and southern Africa, 1999/00.

Entry	Pedigree	Origin	Across			Anth Date	Plant Height	Ear Pos	Lodging		Husk Cov	Ear Rot	GLS	Pucc sorg	E. turc	Grain Tex	MSV	Pests	Weevil	
			RelGY	Rank	Stdev				Root	Stem									TotalF1	Wt Loss
			%	Avg		d	cm	0-1	%	%	%	%	1-5	1-5	1-5	1-5	1-5	1-5	#	%
OPVs with anthesis date between 68 and 73 days																				
9	P501-SR/P502-SR-F1	CIMMYT	126	6	7	72.0	184	0.43	3	4	18	11	2.5	1.9	1.8	3.0	1.2	2.3	49	7
18	MASIKA	Malawi	106	11	6	72.4	189	0.47	6	16	12	15	2.7	2.2	2.4	3.0	1.9	1.2	85	10
4	ZM607c4F2	CIMMYT	108	12	7	71.3	189	0.46	7	18	17	3	2.7	2.5	2.3	3.4	1.7	1.0	106	10
5	ZM605c4F2	CIMMYT	103	12	7	71.2	186	0.44	8	11	13	14	2.5	2.1	2.2	2.6	2.1	1.9	61	5
6	EV98ZM607-F2	CIMMYT	102	14	8	71.3	188	0.45	6	17	13	11	2.8	2.5	2.2	3.5	1.7	1.0	77	8
7	EV98ZM605-F2	CIMMYT	100	14	7	72.0	186	0.45	8	12	11	3	2.4	2.2	2.4	2.9	1.7	2.4	76	9
21	CHITIBU	Malawi	95	15	8	72.6	195	0.50	21	15	11	17	2.9	3.0	2.4	2.4	2.3	1.2	72	9
11	S91SIWQ	CIMMYT	100	16	8	70.4	180	0.40	7	14	9	16	2.7	2.5	2.5	2.7	3.0	1.8	69	7
25	SYN C	Zambia	94	17	7	70.8	181	0.44	3	17	9	9	2.7	2.4	2.6	3.5	2.1	1.3	78	8
27	MMI	Zambia	81	18	7	69.9	212	0.48	3	17	5	0	2.5	2.9	2.6	3.0	2.0	0.6	118	8
26	POP BH	Zambia	95	18	6	71.5	190	0.44	7	16	10	15	2.6	2.4	2.2	3.8	3.1	1.5	87	11
22	TMV-1 SR	Tanzania	94	18	7	71.3	188	0.46	9	18	11	9	2.9	3.2	2.4	1.4	1.4	1.9	76	6
20	SUNDWE	Malawi	87	19	6	71.0	187	0.46	16	13	12	16	2.8	2.7	2.2	3.0	1.8	1.7	44	6
OPVs with anthesis date between 73 and 75 days																				
12	ZM621	CIMMYT	116	6	5	73.1	201	0.46	5	9	13	6	2.4	2.3	2.1	2.9	2.5	1.1	93	12
13	ZM621 F2	CIMMYT	113	7	6	74.5	199	0.48	6	15	14	7	2.7	2.4	2.2	3.1	1.9	2.3	98	11
8	WEEVILAxB-F1	CIMMYT	109	10	7	74.9	196	0.46	5	14	11	4	2.9	2.2	2.0	2.7	1.5	2.0	67	8
2	[TSEQZIM]C2F2	CIMMYT	104	12	6	73.5	184	0.44	4	13	11	9	2.4	2.4	2.2	3.2	2.2	1.0	106	11
1	Z97SYNGLS-F2-#	CIMMYT	105	13	8	74.5	186	0.47	6	11	15	3	2.6	2.1	1.9	2.5	1.5	1.3	84	6
16	SYNTHETIC NUE-SR-#	CIMMYT	101	15	8	74.9	184	0.51	6	13	6	14	2.0	3.3	2.4	2.2	1.6	1.1	103	12
15	SYNTHETIC DR-SR-#	CIMMYT	100	16	8	74.3	191	0.46	11	16	11	10	2.4	3.3	2.3	2.3	1.3	2.8	76	8
19	KAKHOMERA	Malawi	95	16	6	73.2	197	0.45	8	12	10	15	2.5	2.2	2.0	2.7	2.5	2.4	119	11
10	OBATAMPA-#		95	17	7	73.3	201	0.45	14	17	8	8	2.5	3.0	2.7	3.0	2.0	1.5	89	11
OPVs with anthesis date between 75 and 78 days																				
3	AC969A-SR]F2	CIMMYT	93	15	9	75.9	193	0.49	17	10	11	11	2.5	1.7	1.9	3.1	2.5	1.1	46	6
17	TASEQ-#	CIMMYT	97	15	8	77.5	197	0.49	12	14	16	10	2.3	3.2	2.8	2.6	2.0	0.9	156	14
28	LOCAL CHECK	CIMMYT	91	17	10	75.3	206	0.49	12	14	15	5	2.9	2.3	2.0	2.1	1.6	1.2	108	11
24	KILIMA SR	Tanzania	92	18	8	75.6	194	0.46	8	13	9	6	2.6	2.3	2.5	2.5	1.8	1.3	97	8
23	STAHA SR	Tanzania	89	18	7	75.7	203	0.49	13	12	11	17	2.5	3.0	2.5	2.4	1.3	1.1	67	6
14	LA-POSTA-SEQC6-SR	CIMMYT	91	19	7	77.8	196	0.49	8	18	10	1	2.5	3.4	2.9	3.0	1.7	1.4		
Mean			99	15	7	73.3	192	0.46	9	14	12	10	2.6	2.6	2.3	2.8	1.9	1.5	85	9
LSD (0.05)						0.6	5	0.02	6	5	3	10	0.3	0.2	0.2	0.3	0.5	1.1	52	5
Min			81	6	5	69.9	180	0.40	3	4	5	0	2.0	1.7	1.8	1.4	1.2	0.6	44	5
Max			126	19	10	77.8	212	0.51	21	18	18	17	2.9	3.4	2.9	3.8	3.1	2.8	156	14

EIHYB00: Results of early & intermediate maturing hybrids from CIMMYT, Seed-Co, Monsanto, Pannar, Pioneer, and Zambia across 40 sites in eastern and southern Africa 1999/00. For individual site results see pages 40-44. For the color legend see pages 6, 8, or 14.

Entry	Name	Pedigree	Origin	Across			Low	MidAlt	MidAlt	N	Drought	EA dry	Anth Date
				Rel GY	Rank	Stdev	lands	t/ha	t/ha	t/ha	t/ha	t/ha	
													%
Hybrids with anthesis date between 66 and 69 days													
5	CZH99005	CZL00007/CZL00008/CML312/CZL99014	CIMMYT	108	13	28	4.94	6.24	5.53	1.72	2.53	3.68	68.3
23	SC403	SC403	Seed Co	103	13	27	5.12	5.49	5.50	2.29	2.53	3.16	67.9
25	SC407	SC407	Seed Co	103	15	26	4.35	5.58	5.72	2.37	2.39	3.18	68.9
7	CZH99007	CZL00034/CZL99014//CZL00007/CZL00008	CIMMYT	104	16	24	4.52	4.63	5.03	2.27	2.66	3.47	69.0
3	CZH99003	CZL00007/CZL00033//CML312/CZL99014	CIMMYT	101	16	24	4.30	5.11	5.46	2.05	2.55	3.46	68.9
6	CZH99006	CZL00007/CZL00008//CZL99014	CIMMYT	98	18	24	4.32	4.93	4.90	1.89	2.70	3.51	67.4
4	CZH99004	CZL00007/CZL00033//CZL99014	CIMMYT	91	20	24	4.58	4.44	4.67	1.75	1.88	3.28	68.2
24	SC405	SC405	Seed Co	84	23	24	4.68	5.88	4.21	1.36	2.02	2.44	68.0
12	CZH99012	CZL00033/CML205//CZL99008	CIMMYT	84	25	21	3.84	4.97	4.01	1.58	2.25	2.93	68.4
22	SC401	SC401	Seed Co	73	26	20	3.80	4.22	3.76	1.45	1.50	2.47	66.7
Maturity group mean							4.44	5.15	4.88	1.87	2.30	3.16	
Hybrids with anthesis date between 69 and 71 days													
21	C8031	C8031	Monsanto	115	11	29	5.38	6.65	5.71	2.08	2.75	3.56	70.6
15	CZH99015	CML395/CML312//CML440	CIMMYT	113	12	27	4.68	6.39	5.39	2.55	2.57	3.47	70.5
2	CZH99002	CZL00007/CZL99014//CML312	CIMMYT	104	14	29	4.41	7.05	6.12	1.92	2.10	3.56	69.2
9	CZH99009	CZL99013/CML312//CZL00007/CZL00008	CIMMYT	105	15	27	4.50	6.09	5.51	2.06	2.71	3.46	70.0
8	CZH99008	CZL00034/CZL99014//CZL00008	CIMMYT	104	15	26	4.47	5.84	5.51	1.94	2.70	3.60	69.9
29	SC5201	SC5201	Seed Co	98	18	24	4.54	5.19	4.80	1.92	2.23	3.14	69.5
1	CZH99001	CZL00007/CZL99014//CZL99013/CML312	CIMMYT	99	18	25	4.06	5.74	5.14	1.67	2.26	3.77	69.8
28	SC515	SC515	Seed Co	91	19	25	4.82	5.42	5.09	1.60	1.90	3.17	69.1
17	CZH99017	CML216/K64R/CML440	CIMMYT	99	19	24	4.61	4.79	4.67	2.27	2.56	3.08	69.1
26	SC501	SC501	Seed Co	88	19	24	4.56	5.84	4.68	1.59	1.73	2.77	71.0
13	CZH99013	CML144/CML159//PL15QPM	CIMMYT	85	23	21	3.71	5.16	3.93	1.81	2.33	2.99	70.6
Maturity group mean							4.52	5.83	5.14	1.95	2.35	3.32	
Hybrids with anthesis date between 71 and 74 days													
20	PAN31	PAN31	Pannar	109	12	30	5.16	7.13	5.78	1.80	2.71	3.17	72.0
10	CZH99010	CZL99013/CML312//CZL00006	CIMMYT	110	12	30	5.03	6.85	6.50	2.12	1.93	3.67	72.8
18	CZH99018	CML395/CML442//CML441	CIMMYT	107	13	27	4.41	6.09	6.06	2.07	2.83	3.81	73.8
14	CZH99014	CML444/CML395//CML440	CIMMYT	92	13	24	4.86	5.25	5.49	2.34	2.86	3.73	71.4
30	PHB30R93	PHB30R93	Pioneer	104	14	29	4.87	7.12	6.04	1.70	2.06	3.31	73.1
32	LOCAL CHECK2		Various	105	14	29	4.30	7.74	5.42	1.72	2.54	3.82	72.9
31	LOCAL CHECK1		Various	105	15	28	4.43	7.09	5.48	1.97	2.38	3.20	71.5
11	CZH99011	CZL99005/CZL99014//CML205	CIMMYT	101	16	26	4.00	6.89	5.12	2.03	2.54	3.30	71.1
27	SC513	SC513	Seed Co	99	16	28	4.61	6.98	5.47	1.95	1.99	3.22	71.6
16	CZH99016	CML395/CML216//CML440	CIMMYT	102	17	24	4.54	5.46	4.87	2.40	2.23	3.38	71.1
19	GV512	GV512	ZAMBIA	88	21	24	4.42	5.47	4.97	1.59	1.85	2.96	72.0
Maturity group mean							4.60	6.55	5.56	1.97	2.36	3.42	
Mean				99	16	26	4.53	5.84	5.19	1.93	2.34	3.30	70.1
LSD (0.05)							0.58	0.88	0.53	0.35	0.66	0.47	0.6
Min				73	11	20	3.71	4.22	3.76	1.36	1.50	2.44	66.7
Max				115	26	30	5.38	7.74	6.50	2.55	2.86	3.82	73.8

EIHVB00: Results of early & intermediate maturing hybrids from CIMMYT, Seed-Co, Monsanto, Pannar, Pioneer, and Zambia across 40 sites in eastern and southern Africa 1999/00.

Entry	Name	Pedigree	Origin	Across			Anth Date	Plant Height	Ear Pos	Lodging		Husk Cov	Ear Rot	GLS 1-5	Pucc sorg 1-5	E. turb 1-5	Grain Text 1-5	MSV 1-5	Weevil		Striga #/sq m
				Rel GY	Rank	Stdev				Root	Stem								TotalF1	WtLoss	
				%	Avg		d	cm	0-1	%	%	%	%	1-5	1-5	1-5	1-5	1-5	#	%	
Hybrids with anthesis date between 66 and 69 days																					
5	CZH99005	CZL00007/CZL00008//CML312/CZL99014	CIMMYT	108	13	28	68.3	209	0.45	10	14	17	7	1.7	2.7	2.1	2.3	1.6	27	4	31.0
23	SC403	SC403	Seed Co	103	13	27	67.9	206	0.44	6	12	12	7	2.0	2.9	1.9	2.5	1.1	80	11	37.2
25	SC407	SC407	Seed Co	103	15	26	68.9	206	0.44	27	18	15	8	1.8	2.7	1.9	2.8	1.7	78	10	58.6
7	CZH99007	CZL00034/CZL99014//CZL00007/CZL00008	CIMMYT	104	16	24	69.0	197	0.46	14	19	14	15	1.7	2.9	2.1	2.2	1.2	83	11	43.3
3	CZH99003	CZL00007/CZL00033//CML312/CZL99014	CIMMYT	101	16	24	68.9	216	0.44	12	12	12	7	1.9	3.0	2.1	2.5	1.1	89	12	60.1
6	CZH99006	CZL00007/CZL00008//CZL99014	CIMMYT	98	18	24	67.4	204	0.46	11	20	18	10	1.6	3.0	2.2	2.7	1.1	77	9	46.3
4	CZH99004	CZL00007/CZL00033//CZL99014	CIMMYT	91	20	24	68.2	214	0.46	10	15	13	9	1.7	3.0	2.1	3.0	1.3	63	9	48.0
24	SC405	SC405	Seed Co	84	23	24	68.0	195	0.44	8	12	15	15	1.7	2.8	2.2	3.5	3.0	102	12	40.2
12	CZH99012	CZL00033/CML205//CZL99008	CIMMYT	84	25	21	68.4	199	0.46	19	11	11	8	2.0	3.2	2.0	2.9	1.3	125	12	46.6
22	SC401	SC401	Seed Co	73	26	20	66.7	177	0.43	16	15	11	12	3.0	3.3	2.6	3.9	3.0	115	14	58.5
Hybrids with anthesis date between 69 and 71 days																					
21	C8031	C8031	Monsanto	115	11	29	70.6	212	0.48	9	9	10	10	1.6	2.8	1.7	4.3	1.7	80	9	36.2
15	CZH99015	CML395/CML312//CML440	CIMMYT	113	12	27	70.5	199	0.46	12	8	9	5	1.7	2.3	1.8	2.3	2.0	79	10	40.0
2	CZH99002	CZL00007/CZL99014//CML312	CIMMYT	104	14	29	69.2	211	0.45	10	9	14	8	1.9	2.6	2.0	2.4	2.0	70	7	45.4
9	CZH99009	CZL99013/CML312//CZL00007/CZL00008	CIMMYT	105	15	27	70.0	207	0.46	15	11	18	11	1.6	2.9	1.9	1.7	1.6	87	12	36.6
8	CZH99008	CZL00034/CZL99014//CZL00008	CIMMYT	104	15	26	69.9	201	0.47	11	15	18	14	1.6	2.8	2.2	2.6	2.1	108	12	47.3
29	SC5201	SC5201	Seed Co	98	18	24	69.5	198	0.49	15	12	17	12	1.6	3.1	2.4	4.1	2.5	69	8	46.5
1	CZH99001	CZL00007/CZL99014//CZL99013/CML312	CIMMYT	99	18	25	69.8	208	0.46	14	12	14	10	1.6	2.9	1.9	2.5	1.9	98	9	36.6
28	SC515	SC515	Seed Co	91	19	25	69.1	209	0.48	8	8	11	11	1.4	3.2	2.2	3.4	2.3	62	7	41.3
17	CZH99017	CML216/K64R/CML440	CIMMYT	99	19	24	69.1	186	0.47	12	13	10	13	1.7	2.5	2.3	2.6	2.0	72	11	32.1
26	SC501	SC501	Seed Co	88	19	24	71.0	223	0.49	15	18	16	19	2.6	2.9	2.1	4.2	3.3	142	15	44.5
13	CZH99013	CML144/CML159//PL15QPM	CIMMYT	85	23	21	70.6	193	0.44	21	12	12	8	1.8	2.6	2.1	1.9	3.0	104	9	33.6
Hybrids with anthesis date between 71 and 74 days																					
20	PAN31	PAN31	Pannar	109	12	30	72.0	204	0.45	13	12	15	9	1.7	2.7	1.8	4.0	2.0	116	12	51.3
10	CZH99010	CZL99013/CML312//CZL00006	CIMMYT	110	12	30	72.8	226	0.46	9	6	12	12	1.8	2.7	2.0	2.6	1.8	75	11	47.0
18	CZH99018	CML395/CML442//CML441	CIMMYT	107	13	27	73.8	215	0.47	10	6	8	4	2.1	2.1	2.2	2.6	1.6	68	9	38.4
14	CZH99014	CML444/CML395//CML440	CIMMYT	92	13	24	71.4	197	0.47	8	9	8	7	1.6	2.4	2.0	2.5	1.3	79	9	49.2
30	PHB30R93	PHB30R93	Pioneer	104	14	29	73.1	191	0.49	12	5	14	16	1.6	1.8	1.6	2.8	3.8	110	9	60.2
32	LOCAL CHECK2		Various	105	14	29	72.9	217	0.49	20	19	11	8	2.2	2.6	1.7	1.9	1.9	60	7	44.3
31	LOCAL CHECK1		Various	105	15	28	71.5	216	0.48	16	12	12	12	2.0	2.9	1.7	2.8	1.9	95	9	33.1
11	CZH99011	CZL99005/CZL99014//CML205	CIMMYT	101	16	26	71.1	207	0.48	20	17	10	8	1.5	3.0	2.1	3.0	1.5	61	9	46.3
27	SC513	SC513	Seed Co	99	16	28	71.6	214	0.48	23	16	13	10	1.6	2.9	1.7	3.6	2.4	76	10	50.8
16	CZH99016	CML395/CML216//CML440	CIMMYT	102	17	24	71.1	192	0.45	16	11	9	9	1.6	2.5	2.1	2.1	1.8	83	8	30.1
19	GV512	GV512	ZAMBIA	88	21	24	72.0	220	0.44	12	7	10	11	1.9	2.5	1.7	4.0	1.6	98	10	66.8
Mean				99	16	26	70.1	205	0.46	14	12	13	10	1.8	2.8	2.0	2.9	2.0	85	10	44.6
LSD (0.05)							0.6	5	0.02	7	5	4	4	0.2	0.3	0.2	0.4	0.5	52	5	24.3
Min				73	11	20	66.7	177	0.43	6	5	8	4	1.4	1.8	1.6	1.7	1.1	27	4	30.1
Max				115	26	30	73.8	226	0.49	27	20	18	19	3.0	3.3	2.6	4.3	3.8	142	15	66.8

ILHYB00: Results of intermediate & late maturing hybrids from CIMMYT, Seed-Co, Monsanto, Pannar, Pioneer, ACFD and Zambia across 36 sites in eastern and southern Africa 1999/00. Individual site results on pages 45-51. Color legend on pages 6, 8, or 14.

Entry	Name	Pedigree	Origin	Across			MidAlt	MidAlt	N	Drought	Anth Date
				Rel GY	Rank		EA	SA	Stress	t/ha	
				%	Avg	Stdev	t/ha	t/ha	t/ha	t/ha	d
Hybrids with anthesis date between 74 and 78 days											
10	CZH99028	CML312/CML206//DRB-F2-60-1-Sn	CIMMYT	109	19	11	6.47	7.26	3.33	3.30	77.8
18	CZH99036	CML395/CML312//CZL00035	CIMMYT	111	21	13	6.25	6.69	3.61	3.51	77.6
29	C8001	C8001	Monsanto	109	24	14	6.38	6.32	3.31	3.60	74.9
28	PAN67	PAN67	Pannar	97	26	12	6.52	6.19	3.07	2.70	77.3
17	CZH99035	CML441/CML395//CZL00001	CIMMYT	100	27	10	6.01	6.27	2.90	3.14	76.9
21	CZH99039	CZL00010/CML395//CML443	CIMMYT	101	27	10	6.05	6.18	3.40	2.81	77.9
36	PHB30H83	PHB30H83	Pioneer	83	29	15	6.08	6.65	2.47	1.78	78.0
48	LOCAL CHECK3		Various	86	29	14	5.59	6.95	3.05	2.02	77.7
27	GV722	GV722	ZAMBIA	92	30	12	5.74	6.26	2.86	2.46	77.3
31	SC621	SC621	Seed Co	91	31	12	5.84	5.73	3.20	2.49	77.8
16	CZH99034	CZL00039/CZL00001//CML441	CIMMYT	87	32	10	5.36	6.08	2.14	2.87	76.4
42	CCP136	CCP136	ACFD	73	40	8	4.61	5.20	2.12	2.13	77.8
Maturity group average							5.91	6.32	2.96	2.73	
Hybrids with anthesis date between 78 and 80 days											
12	CZH99030	CML216/CML395//CML312	CIMMYT	124	11	10	7.42	7.41	3.93	3.65	78.9
3	CZH99021	CML202/CML395//CML312	CIMMYT	120	13	9	7.91	7.19	3.80	3.31	78.7
7	CZH99025	CML202/CML395//CML197//CML312	CIMMYT	112	15	11	7.78	7.28	3.50	2.86	79.8
25	CZH99043	CZL00036/CML442//CML444	CIMMYT	118	15	11	7.27	7.34	3.46	3.68	79.7
19	CZH99037	CML444/CML395//CML443	CIMMYT	117	16	10	7.39	7.08	3.59	3.65	79.4
1	CZH99019	CML202/CML395//CML390	CIMMYT	109	18	11	7.57	6.62	3.58	2.67	78.6
5	CZH99023	CML202/CML395//CZL00025	CIMMYT	104	19	10	7.18	6.90	3.36	2.59	78.3
4	CZH99022	CML202/CML395//CZL00026	CIMMYT	103	21	10	6.89	6.70	3.40	2.50	79.1
14	CZH99032	CML216/CML395//CZL00025	CIMMYT	105	22	13	7.47	6.51	3.30	2.75	80.0
13	CZH99031	CML216/CML395//CML390	CIMMYT	102	23	12	7.05	6.46	3.39	2.41	79.1
34	SC713	SC713	Seed Co	99	25	13	6.17	6.90	2.84	3.13	79.4
8	CZH99026	CML202/CML216//CZL00025	CIMMYT	98	25	10	6.16	6.73	3.08	2.66	78.6
32	SC627	SC627	Seed Co	96	26	13	6.62	6.42	2.95	2.64	78.1
37	PHB30G97	PHB30G97	Pioneer	92	26	11	6.49	6.74	2.76	2.42	78.4
11	CZH99029	CML312/CML206//CZL00037	CIMMYT	108	27	12	5.99	6.24	3.16	3.48	79.0
47	LOCAL CHECK2		Various	88	28	15	5.97	6.31	3.21	2.17	79.0
35	SC715	SC715	Seed Co	87	29	13	5.85	6.62	2.90	1.88	79.8
46	LOCAL CHECK1		Various	80	32	13	5.49	6.12	2.81	2.25	79.4
40	AC71	AC71	ACFD	84	35	10	5.37	5.56	2.39	2.67	78.7
39	AC33	AC33	ACFD	82	36	9	5.02	5.66	2.25	2.70	79.4
38	AC31	AC31	ACFD	80	37	12	5.12	5.22	1.78	2.96	79.6
44	DPC361	DPC361	ACFD	81	38	11	4.74	5.26	2.12	2.76	78.6
43	DMC211	DMC211	ACFD	68	42	8	4.13	4.70	1.86	2.17	79.0
Maturity group average							6.39	6.43	3.02	2.78	
Hybrids with anthesis date between 80 and 83 days											
20	CZH99038	CML444/CML197//CML443	CIMMYT	122	11	10	8.07	8.13	3.60	3.50	80.5
26	CZH99044	CML442//CML444	CIMMYT	128	12	9	7.31	7.69	3.56	4.12	80.6
2	CZH99020	CML202/CML395//CML197	CIMMYT	110	15	13	8.09	7.72	3.32	2.36	82.2
24	CZH99042	CML442/CML443//CML444	CIMMYT	121	15	12	7.20	7.65	3.34	4.13	80.5
23	CZH99041	CZL00038/CML443//CML395	CIMMYT	115	17	9	6.92	7.01	3.75	3.26	80.1
9	CZH99027	CML312/CML206//CML197	CIMMYT	109	18	12	7.48	7.15	3.15	2.82	81.5
22	CZH99040	CML395/CML197//CML443	CIMMYT	109	18	10	6.92	7.21	3.27	3.11	80.2
33	SC709	SC709	Seed Co	100	18	14	7.41	7.64	3.10	2.22	80.6
30	C8027	C8027	Monsanto	110	20	12	6.92	7.14	3.70	2.78	80.4
15	CZH99033	CML216/CML395//CML312//CML206	CIMMYT	103	22	12	7.08	6.61	3.56	2.38	80.7
6	CZH99024	CML202/CML395//CML390//CML206	CIMMYT	102	23	9	6.74	6.82	3.14	2.71	80.1
41	CCD131	CCD131	ACFD	80	34	11	5.76	5.92	2.20	2.26	80.6
45	NCK331	NCK331	ACFD	82	35	11	5.34	5.63	2.48	2.55	80.2
Maturity group average							7.02	7.10	3.24	2.94	
Mean				100	24	11	6.43	6.58	3.06	2.81	79.0
LSD (0.05)							0.64	0.49	0.51	0.62	0.5
Min				68	11	8	4.13	4.70	1.78	1.78	74.9
Max				128	42	15	8.09	8.13	3.93	4.13	82.2

QPM00: Results of quality protein maize hybrids from CIMMYT and Quality Seed across 37 sites in eastern and southern Africa, 1999/00. Individual site results on pages 52-56.

Entry	Name	Pedigree	Origin	Across			MidAlt	MidAlt	N	Drought
				Rel GY	Rank		SA	EA	Stress	
				%	Avg	Stdev	t/ha	t/ha	t/ha	t/ha
Hybrids with anthesis date between 65 and 68 days										
10	CZH99054	CML182/CML175//S91SIWQ	CIMMYT	109	11	7	5.94	5.67	1.98	3.49
13	CZH99057	CML181/CML175//S91SIWQ	CIMMYT	105	11	5	5.69	5.83	1.90	3.13
11	CZH99055	CML182/CML175//Obatampa	CIMMYT	113	12	6	5.44	5.81	2.07	4.18
19	CZH99062	CML175/CML176//S91SIWQ	CIMMYT	97	12	6	5.64	5.65	1.85	2.51
15	CZH99059	CML181/CML175//PL15QPM	CIMMYT	105	12	6	5.53	5.36	2.14	3.19
12	CZH99056	CML182/CML175//PL15QPM	CIMMYT	100	13	6	5.02	5.30	2.08	2.91
18	CZH99013	CML144/CML159//PL15QPM	CIMMYT	88	16	5	5.04	4.90	1.74	2.44
21	CZH99064	CML175/CML176//PL15QPM	CIMMYT	84	17	5	5.08	4.74	1.82	1.87
Maturity group average							5.42	5.41	1.95	2.97
Hybrids with anthesis date between 68 and 72 days										
7	CZH99051	CML144/CML159//CML182	CIMMYT	116	7	5	6.62	6.66	2.31	3.04
6	CZH99050	CML144/CML159//CML181	CIMMYT	111	7	6	7.11	6.92	2.01	2.53
5	CZH99049	CML181/CML175//CML176	CIMMYT	109	9	6	6.15	6.02	2.20	2.87
17	CZH99061	CML144/CML159//Obatampa	CIMMYT	110	9	5	6.17	6.38	1.91	3.09
14	CZH99058	CML181/CML175//Obatampa	CIMMYT	101	10	6	6.16	5.15	2.15	2.53
16	CZH99060	CML144/CML159//S91SIWQ	CIMMYT	112	11	6	5.88	5.52	2.17	3.89
23	Various	Local check 1	Various	105	11	8	6.28	6.07	1.44	3.36
24	Various	Local check 2	Various	108	11	8	6.26	5.67	1.40	4.14
20	CZH99063	CML175/CML176//Obatampa	CIMMYT	107	12	6	5.66	5.69	1.82	3.53
3	CZH99047	CML175/CML176	CIMMYT	96	13	6	5.71	5.59	1.65	2.48
4	CZH99048	CML182/CML175//CML176	CIMMYT	69	22	4	3.64	3.55	1.43	2.04
Maturity group average							5.97	5.75	1.86	3.05
Hybrids with anthesis date between 72 and 74 days										
1	CZH99045	CML142/CML176	CIMMYT	96	11	8	5.74	6.04	1.75	2.35
8	CZH99052	CML144/CML159//CML176	CIMMYT	96	13	6	5.58	5.41	1.96	2.38
22	QS7705	QS7705	Quality Seed	101	14	7	5.15	4.94	1.95	3.41
2	CZH99046	CML149/CML176	CIMMYT	80	17	6	5.03	4.43	1.57	2.21
9	CZH99053	CML141/CML144//CML176	CIMMYT	75	17	6	4.96	4.44	1.52	1.55
Maturity group average							5.29	5.05	1.75	2.38
Mean				100	12	6	5.65	5.50	1.87	2.89
LSD (0.05)							0.45	0.61	0.37	0.81
Min				69	7	4	3.64	3.55	1.40	1.55
Max				116	22	8	7.11	6.92	2.31	4.18

Color legend	
A	Very good
AB	Good
BC	Average
CD	Poor
D	Very poor

Within a maturity group, colors that have no letter in common are different by at least one LSD.

LSDs were calculated from the mean square error that was pooled across sites.

OPM00: Results of quality protein maize hybrids from CIMMYT and Quality Seed across 37 sites in eastern and southern Africa, 1999/00.

Entry	Name	Pedigree	Origin	Across			Anth Date	Plant Height	Ear Pos	Lodging		Husk Cover	Ear Rot	GLS	Pucc sorghi	E. turc	Grain Text	Grain Moist	DM	Weevil	
				Rel GY	Rank	Stdev				Root	Stem									TotalF1	WtLoss
				%	Avg		d	cm	0-1	%	%	%	%	1-5	1-5	1-5	1-5	%	1-5	#	%
Hybrids with anthesis date between 65 and 68 days																					
10	CZH99054	CML182/CML175//S91SIWQ	CIMMYT	109	11	7	65.5	202	0.42	34	5	13	12	2.7	2.9	2.2	3.3	19.6	1.9	83	9
13	CZH99057	CML181/CML175//S91SIWQ	CIMMYT	105	11	5	67.2	205	0.45	9	6	6	19	2.7	2.8	1.9	3.7	21.6	2.5	114	13
11	CZH99055	CML182/CML175//Obatampa	CIMMYT	113	12	6	67.9	209	0.47	13	7	14	10	2.7	3.5	2.2	3.3	20.2	1.0	74	12
19	CZH99062	CML175/CML176//S91SIWQ	CIMMYT	97	12	6	66.6	197	0.46	19	9	7	9	2.6	3.2	1.9	3.4	20.3	1.0	109	11
15	CZH99059	CML181/CML175//PL15QPM	CIMMYT	105	12	6	65.8	192	0.43	21	5	13	14	2.9	3.1	2.1	3.3	20.1	2.0	94	10
12	CZH99056	CML182/CML175//PL15QPM	CIMMYT	100	13	6	65.0	193	0.45	15	5	15	14	2.6	3.2	1.8	2.7	19.2	1.5	71	9
18	CZH99013	CML144/CML159//PL15QPM	CIMMYT	88	16	5	67.7	194	0.43	23	7	8	11	3.1	3.9	2.5	2.5	20.0	3.0	87	9
21	CZH99064	CML175/CML176//PL15QPM	CIMMYT	84	17	5	65.2	193	0.45	20	10	8	12	2.8	3.5	2.3	2.7	18.9	1.0	201	9
Hybrids with anthesis date between 68 and 72 days																					
7	CZH99051	CML144/CML159//CML182	CIMMYT	116	7	5	69.7	202	0.46	12	6	24	9	2.9	2.6	1.5	2.9	20.4	1.5	98	10
6	CZH99050	CML144/CML159//CML181	CIMMYT	111	7	6	71.6	217	0.45	10	2	11	15	2.6	2.7	1.6	3.9	20.1	1.0	78	8
5	CZH99049	CML181/CML175//CML176	CIMMYT	109	9	6	69.5	210	0.46	9	6	4	18	2.5	3.1	1.6	3.4	19.9	1.5	142	16
17	CZH99061	CML144/CML159//Obatampa	CIMMYT	110	9	5	68.7	205	0.43	12	2	11	11	2.8	3.0	1.8	3.1	20.0	1.1	73	9
14	CZH99058	CML181/CML175//Obatampa	CIMMYT	101	10	6	69.1	212	0.49	21	5	6	13	2.5	3.3	1.9	3.8	20.2	1.1	94	11
16	CZH99060	CML144/CML159//S91SIWQ	CIMMYT	112	11	6	70.5	209	0.47	24	11	6	9	2.7	3.4	2.0	3.1	19.9	1.5	86	4
23	Various	Local check 1	Various	105	11	8	70.0	217	0.51	13	6	8	5	3.0	2.8	1.9	3.2	21.5	1.9	88	10
24	Various	Local check 2	Various	108	11	8	70.7	230	0.49	25	5	14	13	3.3	2.6	2.1	2.1	21.2	4.4	52	7
20	CZH99063	CML175/CML176//Obatampa	CIMMYT	107	12	6	68.7	211	0.47	9	7	4	9	2.5	3.5	3.0	3.5	19.8	1.1	87	10
3	CZH99047	CML175/CML176	CIMMYT	96	13	6	70.5	207	0.46	15	25	2	7	2.4	3.4	1.9	3.5	20.9	2.0	128	15
4	CZH99048	CML182/CML175//CML176	CIMMYT	69	22	4	71.4	190	0.44	18	12	6	20	2.2	3.6	2.2	2.7	18.6	2.1	78	12
Hybrids with anthesis date between 72 and 74 days																					
1	CZH99045	CML142/CML176	CIMMYT	96	11	8	73.8	225	0.50	2	12	4	24	1.9	3.2	2.1	2.5	20.5	1.5	66	8
8	CZH99052	CML144/CML159//CML176	CIMMYT	96	13	6	72.5	207	0.45	15	11	5	8	2.3	3.4	2.6	2.5	20.2	1.1	70	9
22	QS7705	QS7705	Quality Seed	101	14	7	72.5	205	0.47	27	22	9	8	2.9	3.5	2.3	2.7	22.2	1.0	77	11
2	CZH99046	CML149/CML176	CIMMYT	80	17	6	73.0	211	0.46	20	8	13	21	2.4	3.6	2.2	3.4	20.5	1.5	64	7
9	CZH99053	CML141/CML144//CML176	CIMMYT	75	17	6	73.6	202	0.48	21	27	7	14	2.8	3.8	2.4	2.4	20.9	1.3	136	16
Mean				100	12	6	69.4	206	0.46	17	9	9	13	2.7	3.2	2.1	3.1	20.3	1.6	94	10
LSD (0.05)							0.6	7	0.02	10	9	5	5	0.3	0.4	0.4	0.3	0.9	0.8	52	5
Min				69	7	4	65.0	190	0.42	2	2	2	5	1.9	2.6	1.5	2.1	18.6	1.0	52	4
Max				116	22	8	73.8	230	0.51	34	27	24	24	3.3	3.9	3.0	3.9	22.2	4.4	201	16

EAIL00: Results of elite inbred lines from CIMMYT across eastern & southern Africa, 1999/00. Caution: very large grain yields of inbred lines may result from outcrosses or volunteers. Plant ht, lodging & diseases can be affected by the presence of full-vigor plants.

Entry	Name	Origin	Across			Grain yield									
			Rel GY		Rank	Rattray Zim		Kasama Zam		Sussundenga Moz		Potchefstroom RSA		Chitedze Mal	
			%	Avg	Stdev	Optimal t/ha	Rank	low pH t/ha	Rank	LowN t/ha	Rank	Drought t/ha	Rank	E. turc t/ha	Rank
Hybrids with anthesis date between 72 and 74 days															
33	CZ99017	CIMMYT	125	15	11	4.14	14	1.71	13	6.70	6	0.96	7	0.26	47
32	CZ99016	CIMMYT	105	21	11	3.83	21	2.41	2	0.77	27	0.94	8	1.20	6
40	CZ99024	CIMMYT	112	22	10	3.23	28	1.78	12	0.50	38	0.80	20	0.91	14
28	CZ99012	CIMMYT	110	22	16	2.14	46	0.79	37	3.80	7	0.35	40	0.67	24
44	CML440	CIMMYT	108	23	16	2.27	44	1.69	14	0.70	32	1.01	5	0.34	43
21	CML205	CIMMYT	88	25	11	2.16	45	1.36	25	0.44	44	0.58	28	0.53	32
41	CZ99025	CIMMYT	84	29	12	5.07	4	1.48	23	7.13	4	0.81	19	0.59	30
17	CML394	CIMMYT	77	30	8	2.72	39	1.24	31	0.74	30	0.32	41	0.62	27
24	CZ99008	CIMMYT	81	30	15	1.55	48	0.19	47	0.87	22	0.08	47	0.59	30
3	CZ99003	CIMMYT	65	33	13	4.02	18	1.99	9	0.82	25	0.56	30	0.68	23
25	CZ99009	CIMMYT	41	42	11	2.80	38	-0.05	48	0.46	42	0.36	39	0.38	42
Hybrids with anthesis date between 74 and 77 days															
4	CZ99004	CIMMYT	160	9	12	3.34	27	0.80	36	1.05	19	1.18	4	0.50	35
46	CML442	CIMMYT	172	10	16	5.58	2	2.26	5	0.45	43	0.48	34	1.31	3
38	CZ99022	CIMMYT	162	11	11	4.17	13	2.33	4	8.06	2	1.00	6	0.43	39
35	CZ99019	CIMMYT	138	13	8	3.77	22	1.34	26	3.63	9	0.63	24	0.84	16
39	CZ99023	CIMMYT	132	14	11	3.63	24	1.62	17	1.59	14	0.59	26	0.38	41
48	LOCAL CHECK:		181	22	17	2.98	33	1.25	28	0.48	41	1.20	3	0.56	31
42	CZ99026	CIMMYT	108	22	9	3.52	25	1.63	16	7.16	3	0.88	11	0.73	22
1	CZ99001	CIMMYT	98	23	12	4.27	12	2.13	8	0.56	36	1.30	1	1.69	2
36	CZ99020	CIMMYT	90	25	12	4.55	10	0.78	38	3.02	11	0.58	27	0.46	38
2	CZ99002	CIMMYT	92	25	14	3.15	30	0.41	44	1.49	15	0.57	29	1.08	10
37	CZ99021	CIMMYT	96	26	11	3.73	23	1.21	32	0.38	46	0.84	15	0.79	19
31	CZ99015	CIMMYT	80	28	15	2.53	41	1.83	11	0.84	23	0.83	16	0.30	45
27	CZ99011	CIMMYT	89	29	13	2.46	42	0.40	45	2.57	12	0.78	21	0.81	17
5	CML390	CIMMYT	73	29	12	4.32	11	1.54	22	0.77	28	0.85	13	0.66	25
30	CZ99014	CIMMYT	75	31	8	3.05	32	1.24	30	0.63	34	0.83	17	0.32	44
26	CZ99010	CIMMYT	69	33	12	2.07	47	0.99	34	0.53	37	0.94	9	0.90	15
43	CML441	CIMMYT	63	33	11	2.80	38	1.38	24	0.71	31	0.09	45	0.26	46
Hybrids with anthesis date between 78 and 83 days															
10	CML386	CIMMYT	164	10	10	4.59	8	2.53	1	0.77	27	0.82	18	1.23	5
19	CZ99007	CIMMYT	150	13	14	4.01	19	1.87	10	1.40	16	0.08	48	0.52	34
45	CML444	CIMMYT	118	16	8	5.89	1	1.60	18	2.12	13	0.91	10	1.08	11
18	CZ99006	CIMMYT	131	17	13	5.33	3	2.38	3	9.64	1	0.63	25	0.61	28
6	CML395	CIMMYT	139	18	15	4.95	5	2.15	6	6.91	5	0.29	42	1.00	13
13	CML389	CIMMYT	104	20	12	2.56	40	0.87	35	0.87	21	0.41	36	1.11	8
15	CML392	CIMMYT	105	21	12	4.86	6	1.56	19	0.60	35	0.13	44	2.84	1
23	CML216	CIMMYT	99	24	11	3.89	20	0.69	40	1.14	17	0.22	43	0.79	21
9	CZ99005	CIMMYT	93	24	11	4.12	15	1.56	21	0.94	20	0.84	14	1.09	9
8	CML312	CIMMYT	103	25	12	3.08	31	0.65	41	0.38	47	0.66	22	0.47	36
47	CML443	CIMMYT	88	25	15	2.86	35	1.01	33	0.83	24	1.28	2	0.40	40
12	CML388	CIMMYT	87	25	14	2.94	34	1.56	20	0.37	48	0.49	33	1.29	4
14	CML391	CIMMYT	75	29	13	3.50	26	2.14	7	0.70	33	0.64	23	0.62	26
7	CML202	CIMMYT	77	29	11	4.55	9	1.68	15	1.06	18	0.47	35	1.01	12
20	CML197	CIMMYT	78	30	13	4.70	7	0.43	43	0.42	45	0.51	32	0.81	18
16	CML393	CIMMYT	59	32	16	3.15	30	0.39	46	0.49	39	0.86	12	0.03	48
34	CZ99018	CIMMYT	63	33	14	4.07	16	0.50	42	0.48	40	0.38	37	1.11	8
29	CZ99013	CIMMYT	61	35	11	2.42	43	1.25	29	3.74	8	0.54	31	0.46	37
22	CML206	CIMMYT	63	35	9	4.06	17	1.33	27	0.75	29	0.37	38	0.79	21
11	CML387	CIMMYT	60	36	10	2.81	36	0.78	39	3.15	10	0.09	46	0.52	34
Mean			100	24	12	3.59		1.35		1.95		0.64		0.76	.
LSD (0.05)						1.32		0.73		4.15		1.04		0.92	.
Min			41	9	8	1.55		-0.05		0.37		0.08		0.03	.
Max			181	42	17	5.89		2.53		9.64		1.30		2.84	.

EAIL00: Results of elite inbred lines from CIMMYT across eastern & southern Africa, 1999/00. Caution: very large grain yields of inbred lines may result from outcrosses or volunteers. Plant ht, lodging & diseases can be affected by the presence of full-vigor plants.

Entry	Name	Across			Grain yield									
		Rel GY	Rank		Harare Zim		Kakamega Ken		Kakamega Ken		Kitale Ken		Bako Eth	
				MSV		Striga		Striga		Optimal		Optimal		
				%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
Hybrids with anthesis date between 72 and 74 days														
33	CZ99017	125	15	11	3.91	19	1.43	16	1.00	30	4.11	12	3.38	15
32	CZ99016	105	21	11	3.62	23	1.35	20	1.13	27	2.13	32	4.08	6
40	CZ99024	112	22	10	4.11	12	1.82	13	1.20	24	2.84	24	4.14	5
28	CZ99012	110	22	16	1.94	41	0.58	37	0.66	41	4.58	9	0.27	48
44	CML440	108	23	16	0.51	46	0.18	46	0.40	46	2.00	33	0.47	46
21	CML205	88	25	11	2.28	39	0.46	43	1.15	25	4.62	8	2.84	23
41	CZ99025	84	29	12	4.11	11	1.00	28	0.92	32	1.84	37	3.25	16
17	CML394	77	30	8	2.62	35	1.61	15	0.94	31	1.77	38	1.82	40
24	CZ99008	81	30	15	1.71	43	1.01	27	0.43	45	4.76	7	1.89	39
3	CZ99003	65	33	13	4.06	14	0.58	38	1.39	20	5.34	3	1.17	45
25	CZ99009	41	42	11	3.26	29	0.97	29	1.72	11	2.86	23	2.08	37
Hybrids with anthesis date between 74 and 77 days														
4	CZ99004	160	9	12	3.63	22	1.87	10	2.70	1	5.17	5	3.84	10
46	CML442	172	10	16	3.08	31	2.19	6	2.64	2			1.82	41
38	CZ99022	162	11	11	4.42	6	2.23	5	2.49	4	2.50	29	2.95	19
35	CZ99019	138	13	8	3.33	28	2.08	7	1.45	19	2.90	22	4.21	4
39	CZ99023	132	14	11	4.09	13	2.24	4	2.64	3	6.05	1	2.76	25
48	LOCAL CHECK:	181	22	17	1.68	44	1.37	18	1.47	18	4.40	11	12.84	1
42	CZ99026	108	22	9	4.37	7	1.91	8	1.38	21	3.91	15	3.48	13
1	CZ99001	98	23	12	2.79	32	1.85	12	1.64	15	3.90	16	4.37	3
36	CZ99020	90	25	12	3.93	18	0.40	44	1.65	14			3.91	8
2	CZ99002	92	25	14	1.94	42	0.79	32	0.86	36	1.57	41	3.01	18
37	CZ99021	96	26	11	2.77	33	1.18	24	0.85	37	2.71	27	2.11	34
31	CZ99015	80	28	15	1.45	45	0.84	30	0.22	47	5.46	2	2.44	30
27	CZ99011	89	29	13	2.61	36	0.47	42	1.14	26	1.94	34	2.00	38
5	CML390	73	29	12	4.51	5	0.73	33	0.59	42	1.84	36	3.87	9
30	CZ99014	75	31	8	2.54	38	0.22	45	0.84	38	2.52	28	2.28	32
26	CZ99010	69	33	12	2.62	34	1.07	26	0.90	34	1.54	42	0.28	47
43	CML441	63	33	11	2.00	40	0.11	47	1.01	29	1.18	43	2.86	21
Hybrids with anthesis date between 78 and 83 days														
10	CML386	164	10	10	4.28	9	1.19	23	0.92	33	4.43	10	2.76	24
19	CZ99007	150	13	14	5.21	2	2.38	3	2.07	6	2.80	26	2.08	36
45	CML444	118	16	8	4.06	15	1.65	14	1.77	9	3.27	20	4.05	7
18	CZ99006	131	17	13	5.71	1	2.65	1	2.23	5	3.62	17	5.19	2
6	CML395	139	18	15	5.17	3	1.90	9	1.21	23	5.25	4	2.64	27
13	CML389	104	20	12	3.61	24	1.33	21	1.68	13	4.10	13	2.57	29
15	CML392	105	21	12	4.35	8	1.13	25	1.68	12	3.02	21	3.74	11
23	CML216	99	24	11	3.67	21	0.51	40	1.29	22	2.44	30	3.43	14
9	CZ99005	93	24	11	4.02	16	2.53	2	1.64	16	5.14	6	1.30	44
8	CML312	103	25	12	0.18	47	1.35	19	0.88	35	2.32	31	2.08	35
47	CML443	88	25	15			0.48	41	0.71	40	1.17	44	3.57	12
12	CML388	87	25	14	4.26	10	1.86	11	1.85	8	3.41	19	2.22	33
14	CML391	75	29	13	3.60	25	0.71	34	0.10	48	1.01	46	1.80	42
7	CML202	77	29	11	4.01	17	1.40	17	1.87	7	2.83	25	3.20	17
20	CML197	78	30	13	3.45	27	0.54	39	0.58	43	4.03	14	2.67	26
16	CML393	59	32	16	4.75	4	0.11	48	1.61	17	1.89	35	2.92	20
34	CZ99018	63	33	14	3.90	20	0.69	35	1.76	10	3.43	18	2.63	28
29	CZ99013	61	35	11	3.19	30	0.58	36	0.51	44	1.16	45	2.85	22
22	CML206	63	35	9	2.55	37	0.79	31	0.72	39	1.76	39	1.53	43
11	CML387	60	36	10	3.60	26	1.32	22	1.10	28	1.59	40	2.42	31
Mean		100	24	12	3.35	.	1.20	.	1.28	.	3.11	.	2.92	.
LSD (0.05)					1.37	.	0.90	.	1.03	.	3.26	.	1.86	.
Min		41	9	8	0.18	.	0.11	.	0.10	.	1.01	.	0.27	.
Max		181	42	17	5.71	.	2.65	.	2.70	.	6.05	.	12.84	.

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Entry	Name	Across			Grain yield							
		Rel GY		Rank	Harare Zim		Arusha Tan		Chiredzi Zim		Arusha Tan	
		%	Avg	Stdev	Low N		Low N		Drought		Drought	
					t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
Hybrids with anthesis date between 72 and 74 days												
33	CZ99017	125	15	11	0.78	14	1.50	12	1.69	7	0.18	24
32	CZ99016	105	21	11	1.01	7	0.85	33	0.70	36	0.24	17
40	CZ99024	112	22	10	0.56	31	1.08	26	0.85	31	0.42	4
28	CZ99012	110	22	16	0.44	35	1.14	19	1.85	3	0.36	11
44	CML440	108	23	16	1.36	3	1.02	27	1.01	22	0.32	13
21	CML205	88	25	11	0.74	18	1.30	15	0.98	25	0.13	27
41	CZ99025	84	29	12	0.39	39	0.77	38	1.05	21	0.07	35
17	CML394	77	30	8	0.74	17	0.77	37	0.74	35	0.15	26
24	CZ99008	81	30	15	0.06	47	1.09	24	0.79	33	0.41	6
3	CZ99003	65	33	13	0.36	40	0.88	31	0.47	44	0.06	36
25	CZ99009	41	42	11	0.14	46	0.58	46	0.36	46	0.02	45
Hybrids with anthesis date between 74 and 77 days												
4	CZ99004	160	9	12	1.21	6	2.27	4	1.59	8	0.42	5
46	CML442	172	10	16	1.25	5	3.18	1	2.23	2	0.32	14
38	CZ99022	162	11	11	1.33	4	1.11	21	2.25	1	0.31	15
35	CZ99019	138	13	8	0.85	11	1.95	7	1.43	12	0.34	12
39	CZ99023	132	14	11	0.70	20	1.11	20	1.79	5	0.38	8
48	LOCAL CHECK:	181	22	17	0.36	41	2.46	3	0.53	43	1.09	1
42	CZ99026	108	22	9	0.70	21	0.96	28	0.69	38	0.23	19
1	CZ99001	98	23	12	0.73	19	0.91	29	0.95	27	0.08	33
36	CZ99020	90	25	12	0.68	25	0.74	39	1.07	19	0.20	21
2	CZ99002	92	25	14	0.94	8	0.52	48	1.83	4	0.09	31
37	CZ99021	96	26	11	0.67	26	0.60	45	1.77	6	0.19	23
31	CZ99015	80	28	15	0.57	29	1.26	16	0.22	48	0.23	18
27	CZ99011	89	29	13	0.29	43	2.56	2	0.89	30	0.08	34
5	CML390	73	29	12	0.52	32	0.88	30	0.92	29	0.04	38
30	CZ99014	75	31	8	0.41	37	1.11	22	0.75	34	0.18	25
26	CZ99010	69	33	12	0.30	42	0.68	42	1.38	15	0.09	32
43	CML441	63	33	11	0.76	15	0.67	43	1.00	23	0.01	47
Hybrids with anthesis date between 78 and 83 days												
10	CML386	164	10	10	1.90	1	1.84	8	1.48	11	0.37	9
19	CZ99007	150	13	14	1.58	2	1.49	13	1.41	14	0.41	7
45	CML444	118	16	8	0.41	36	1.78	9	1.51	9	0.20	20
18	CZ99006	131	17	13	0.87	10	0.66	44	1.09	17	0.27	16
6	CML395	139	18	15	0.44	34	2.09	5	0.67	40	0.50	2
13	CML389	104	20	12	0.81	12	1.99	6	1.42	13	0.03	42
15	CML392	105	21	12	0.80	13	0.83	34	1.05	20	0.19	22
23	CML216	99	24	11	0.75	16	0.86	32	0.84	32	0.37	10
9	CZ99005	93	24	11	0.51	33	1.09	25	0.92	28	0.13	28
8	CML312	103	25	12	0.56	30	1.10	23	0.98	24	0.47	3
47	CML443	88	25	15	0.94	9	0.68	41	1.48	10	0.11	29
12	CML388	87	25	14	0.60	28	1.14	18	1.23	16	0.02	46
14	CML391	75	29	13	0.69	22	1.47	14	0.95	26	-0.02	48
7	CML202	77	29	11	0.68	24	0.71	40	0.70	37	0.04	40
20	CML197	78	30	13	0.66	27	1.71	11	0.68	39	0.02	44
16	CML393	59	32	16	0.00	48	1.76	10	0.24	47	0.10	30
34	CZ99018	63	33	14	0.26	44	0.53	47	1.08	18	0.03	41
29	CZ99013	61	35	11	0.17	45	1.17	17	0.63	41	0.04	39
22	CML206	63	35	9	0.69	23	0.82	36	0.57	42	0.03	43
11	CML387	60	36	10	0.40	38	0.82	35	0.47	45	0.06	37
Mean		100	24	12	0.68		1.22	.	1.07	.	0.21	.
LSD (0.05)					0.63		1.56	.	0.56	.	0.32	.
Min		41	9	8	0.00		0.52	.	0.22	.	-0.02	.
Max		181	42	17	1.90		3.18	.	2.25	.	1.09	.

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Entry	Name	Across			Anth Date	Plant Height	Ear Pos	Lodging		Ear Rot	GLS 1-5	Pucc sorg 1-5	E. turc 1-5	MSV 1-5	Striga ct/sqm	Drought	
		Rel GY %	Rank					Root %	Stem %							ASI d	Ears/ Plant #
			Avg	Stdev													
Hybrids with anthesis date between 72 and 74 days																	
33	CZ99017	125	15	11	72.4	141	0.46	33	26	12	1.5	1.5	1.9	2.3	36.0	0.0	0.70
32	CZ99016	105	21	11	72.6	145	0.43	33	20	25	2.3	1.4	2.3	1.8	9.0	8.5	0.41
40	CZ99024	112	22	10	73.9	126	0.41	16	22	8	1.7	1.5	1.8	1.3	26.9	5.0	0.60
28	CZ99012	110	22	16	72.4	139	0.42	15	8	47	2.6	2.6	2.7	2.3	16.5	3.5	0.75
44	CML440	108	23	16	72.0	97	0.37	42	22	47	2.0	2.1	2.6	3.7	12.1	6.5	0.67
21	CML205	88	25	11	73.0	133	0.44	29	32	15	2.0	2.5	2.9	1.8	21.3	6.0	0.64
41	CZ99025	84	29	12	73.5	138	0.39	42	11	25	1.7	2.0	2.0	2.3	13.7	5.5	0.62
17	CML394	77	30	8	73.7	120	0.49	37	15	16	2.2	1.6	2.4	2.6	14.1	6.0	0.50
24	CZ99008	81	30	15	72.7	121	0.43	41	19	32	2.5	2.2	2.2	2.7	19.7	3.5	0.81
3	CZ99003	65	33	13	73.0	117	0.45	3	16	23	1.4	1.6	2.1	1.5	18.2	2.0	0.38
25	CZ99009	41	42	11	72.4	148	0.38	47	22	24	2.7	1.8	2.2	1.8	5.0	2.0	0.43
Hybrids with anthesis date between 74 and 77 days																	
4	CZ99004	160	9	12	74.5	122	0.51	6	30	21	1.9	1.2	2.2	2.3	13.7	3.5	0.75
46	CML442	172	10	16	74.3	145	0.44	16	16	33	1.9	1.3	2.6	2.3	22.1	3.0	0.78
38	CZ99022	162	11	11	76.0	138	0.43	7	27	11	1.6	1.7	2.5	1.0	15.8	-1.0	0.79
35	CZ99019	138	13	8	76.0	130	0.53	3	28	21	2.1	1.4	2.0	2.3	11.8	3.5	0.66
39	CZ99023	132	14	11	75.1	121	0.42	14	13	18	2.0	2.9	2.2	1.8	15.7	4.5	0.74
48	LOCAL CHECK:	181	22	17	76.2	159	0.48	30	12	23	2.3	1.9	1.6	2.2	28.9	4.5	0.74
42	CZ99026	108	22	9	75.1	141	0.48	20	18	17	2.4	1.8	2.0	1.8	17.2	5.5	0.54
1	CZ99001	98	23	12	75.7	157	0.49	35	18	12	2.4	1.6	2.1	2.4	9.6	4.0	0.55
36	CZ99020	90	25	12	77.1	130	0.49	4	25	14	1.5	1.8	1.7	1.5	20.6	1.0	0.63
2	CZ99002	92	25	14	76.8	125	0.47	11	37	14	1.9	1.8	2.9	2.3	12.0	4.0	0.73
37	CZ99021	96	26	11	76.3	131	0.45	30	15	19	1.9	1.9	2.0	1.8	21.4	2.5	0.56
31	CZ99015	80	28	15	74.6	127	0.50	25	21	24	2.4	2.4	2.7	2.4	24.2	17.0	0.34
27	CZ99011	89	29	13	75.6	124	0.46	15	17	10	2.1	2.3	2.6	1.3	7.9	0.5	0.81
5	CML390	73	29	12	76.9	132	0.44	10	33	5	1.8	1.8	2.3	1.3	16.3	3.5	0.55
30	CZ99014	75	31	8	74.3	138	0.42	10	23	18	2.3	2.3	3.1	2.5	5.0	2.5	0.64
26	CZ99010	69	33	12	75.8	146	0.45	41	20	55	2.7	2.5	2.4	2.7	11.9	5.5	0.56
43	CML441	63	33	11	75.7	135	0.45	15	9	15	2.1	1.9	3.0	2.5	4.1	7.0	0.54
Hybrids with anthesis date between 78 and 83 days																	
10	CML386	164	10	10	78.7	128	0.54	2	21	27	1.9	2.7	2.0	2.3	10.2	2.5	0.71
19	CZ99007	150	13	14	80.3	138	0.50	17	12	13	1.6	2.1	1.8	1.8	17.4	6.0	0.66
45	CML444	118	16	8	82.9	135	0.54	36	18	22	1.8	2.7	2.0	2.5	10.5	0.5	0.69
18	CZ99006	131	17	13	80.2	147	0.49	23	8	11	1.8	2.0	1.8	1.9	24.2	6.0	0.76
6	CML395	139	18	15	79.5	156	0.51	38	11	11	1.8	2.1	2.0	1.9	22.7	7.0	0.73
13	CML389	104	20	12	80.0	166	0.47	14	33	10	1.2	2.5	2.1	1.9	24.3	3.5	0.94
15	CML392	105	21	12	80.5	138	0.50	36	10	15	1.7	1.4	1.9	1.7	28.3	3.5	0.64
23	CML216	99	24	11	81.2	148	0.53	29	10	25	1.7	2.1	2.3	2.5	19.5	8.5	0.67
9	CZ99005	93	24	11	78.4	136	0.43	22	13	35	2.5	2.1	2.4	1.7	16.6	5.0	0.62
8	CML312	103	25	12	79.5	150	0.38	27	15	52	1.7	2.7	2.2	3.8	26.1	7.5	0.69
47	CML443	88	25	15	79.4	119	0.55	35	19	31	1.9	1.3	1.7	4.2	15.5	2.5	0.85
12	CML388	87	25	14	78.2	162	0.47	9	23	20	1.2	2.8	2.2	2.0	18.8	4.0	0.63
14	CML391	75	29	13	78.1	133	0.44	27	23	13	1.8	2.3	2.3	1.3	12.8	6.0	0.57
7	CML202	77	29	11	80.4	137	0.47	1	26	9	1.7	1.8	1.7	2.2	11.0	8.5	0.55
20	CML197	78	30	13	82.3	154	0.54	31	9	15	1.9	1.7	2.9	3.2	7.1	6.0	0.65
16	CML393	59	32	16	80.6	148	0.47	23	28	13	2.0	2.3	1.8	1.2	18.6	11.0	0.29
34	CZ99018	63	33	14	82.3	138	0.48	16	15	16	1.9	2.1	1.8	2.3	25.2	3.5	0.56
29	CZ99013	61	35	11	79.3	139	0.51	17	25	9	1.5	2.0	1.9	2.2	8.2	5.0	0.38
22	CML206	63	35	9	82.2	132	0.44	14	12	17	2.5	1.9	3.0	2.9	18.4	8.0	0.48
11	CML387	60	36	10	79.2	140	0.44	26	26	19	1.8	2.7	1.7	1.3	17.7	8.0	0.40
Mean		100	24	12	77	137	0.47	22	19	20	2.0	2.0	2.2	2.1	16.7	4.8	0.62
LSD (0.05)					1.7	9	0.03	16.4	13.0	12	0.3	0.4	0.4			4.8	0.2
Min		41	9	8	72	97	0.37	1	8	5	1.2	1.2	1.6	1.0	4.1	-1.0	0.29
Max		181	42	17	83	166	0.55	47	37	55	2.7	2.9	3.1	4.2	36.0	17.0	0.94

3. Descriptions of Traits Recorded

Rel. GY	Relative grain yield expressed as percentage of the mean grain yield of the trial. Values above 100% indicate above-average performance; values below 100% indicate below-average performance.
Rank Avg.	Average rank for grain yield across all trials. Small values indicate superior performance; large values indicate inferior performance.
Rank Stdev.	Standard deviation of rank for grain yield across all trials. Small values indicate stable performance; large values indicate variable performance.
Grain yield	Shelled grain weight per plot adjusted to 12.5% grain moisture and converted to tons per hectare.
Anthesis date	Measured as number of days after planting when 50% of the plants shed pollen.
Plant height	Measured as height between the base of a plant to the insertion of the first tassel branch of the same plant.
Ear height	Measured as height between the base of a plant to the insertion of the top ear of the same plant.
Ear pos	A ratio of ear height to plant height. Small values indicate low ear position; large values indicate high ear position.
Root lodging	Measured as percentage of plants that show root lodging, i.e. those stems are inclining by more than 45°.
Stem lodging	Measured as percentage of plants that show stem lodging, i.e. those stems are broken below the ear.
Husk cover	Measured as percentage of plants with ears that are not completely covered by the husks.
Ear rot	Percentage of ears that are rotten.
GLS	Score for the severity of gray leaf spot (<i>Cercospora zea-maydis</i>) symptoms rated on a scale from 1 (= clean, no infection) to 5 (= severely diseased).
Pucc. sorghi	Score for the severity of common rust (<i>Puccinia sorghi</i>) symptoms rated on a scale from 1 (= clean, no infection) to 5 (= severely diseased).
E. turcicum	Score for the severity of northern leaf blight (<i>Exserohilum turcicum</i>) symptoms rated on a scale from 1 (= clean, no infection) to 5 (= severely diseased).
DM	Score for the severity of Downy Mildew (<i>Pernosclerospora</i> sp.) symptoms rated on a scale from 1 (= clean, no infection) to 5 (= severely diseased).
Striga count	Number of <i>Striga hermonthica</i> plants emerged using artificial infestation. Large values indicate susceptibility to <i>Striga</i> , small values indicate partial resistance to <i>Striga</i> .
Chilo part.	Score for the severity of <i>Chilo partellus</i> leaf damage rated on a scale from 1 (= no infestation) to 9 (= severely infested).
Grain weevil (Total F1)	Number of grain weevils hatching and emerging from an infested grain sample within a given period. Large values indicate susceptibility to grain weevils, small values indicate partial resistance to grain weevils.
Grain Weevil (Wt loss)	Loss of weight of the grain samples caused by weevil feeding during a given period of incubation. Large values indicate susceptibility to weevils.
Grain texture	Rated on a scale from 1 (= flint) to 5 (=dent).
Grain moisture	Percent water content of grain as measured at harvest.

ASI Anthesis-silking interval. Determined by (i) measuring the number of days after planting when 50% of the plants shed pollen (anthesis date, AD) and show silks (silking date, SD), respectively, and (ii) calculating: $ASI = SD - AD$. If measured under drought or N stress, small or negative values indicate stress tolerance.

EPP Number of ears per plant. Counted as number of ears with at least one fully developed grain divided by the number of harvested plants. An EPP of below 1.0 indicates partial barrenness, an EPP of above 1.0 indicates partial prolificacy. If taken under drought or N stress, values of greater or equal 1.0 indicate stress tolerance.

Leaf rolling Leaf rolling score measured under drought stress on a scale from 1 (unrolled, turgid leaves, desirable) to 5 (severely rolled leaves, undesirable).

Senescence Leaf senescence score on a scale from 1 to 10. Taken during grain-filling by estimating the percentage of dead leaf area and dividing it by 10. If taken under drought or N stress, small scores indicate stress tolerance.

1 = 10% dead leaf area	6 = 60% dead leaf area
2 = 20% dead leaf area	7 = 70% dead leaf area
3 = 30% dead leaf area	8 = 80% dead leaf area
4 = 40% dead leaf area	9 = 90% dead leaf area
5 = 50% dead leaf area	10 = 100% dead leaf area

4. Sites

Trial classification	Site	Country	Collaborator
Rainfed/Well fertilized			
Lowlands	Kilombo	Angola	F. Sito
Lowlands	Mazozo	Angola	F. Sito
Lowlands	Baka	Malawi	P. Banda
Lowlands	Bolero	Malawi	W.W. Kaunda
Lowlands	Bwanje	Malawi	
Lowlands	Chitala	Malawi	G. Nhlane
Lowlands	Ngabu	Malawi	G. Nhlane
Lowlands	Nampula	Mozambique	D. Mariote
Lowlands	Sussundenga	Mozambique	D. Mariote
Lowlands	Nanga	Zambia	T. Manda
MidAlt eastern Africa	Mvuazi	DRC	M. Mbeya
MidAlt eastern Africa	Adet-Gajjam	Ethiopia	Girma, Wordim, Temesger
MidAlt eastern Africa	Bako	Ethiopia	L. Wolde
MidAlt eastern Africa	Bungoma	Kenya	S. Ismail
MidAlt eastern Africa	Embu	Kenya	M. Gethi
MidAlt eastern Africa	Kakamega	Kenya	O. Odongo
MidAlt eastern Africa	Kitale	Kenya	G. Ombako, S. Ismail
MidAlt eastern Africa	W.Pohot	Kenya	S. Ismail
MidAlt eastern Africa	Arusha	Tanzania	Z. Mduruma, H. Akonaay
MidAlt eastern Africa	Inyala	Tanzania	
MidAlt eastern Africa	Lambo	Tanzania	Z. Mduruma, H. Akonaay
MidAlt eastern Africa	Mbimba	Tanzania	
MidAlt eastern Africa	Kamenyamiggo	Uganda	Cereals Programme
MidAlt eastern Africa	Namulonge	Uganda	Cereals Programme
MidAlt eastern Africa	Serere	Uganda	Cereals Programme
MidAlt southern Africa	Humpata	Angola	F. Sito
MidAlt southern Africa	Goodhope	Botswana	L.A. Lekgari
MidAlt southern Africa	Maseru	Lesotho	L. Moremoholo
MidAlt southern Africa	Bembeke	Malawi	H.M. Mlenga
MidAlt southern Africa	Bvumbwe	Malawi	S.D.T. Phiri
MidAlt southern Africa	Chitedze	Malawi	G. Nhlane
MidAlt southern Africa	Mbawa	Malawi	A.F. Thulu
MidAlt southern Africa	Nampula	Mozambique	P. Chauque
MidAlt southern Africa	Sussundenga	Mozambique	
MidAlt southern Africa	Greytown	SouthAfrica	P. Herbst
MidAlt southern Africa	Baynesfield	SouthAfrica	H. Gevers
MidAlt southern Africa	Malekutu	SouthAfrica	M. Anthony
MidAlt southern Africa	Nelspruit	SouthAfrica	M. Anthony
MidAlt southern Africa	Kasama-LowpH	Zambia	T. Manda
MidAlt southern Africa	LowpH Misamfu	Zambia	T. Manda
MidAlt southern Africa	Msekera	Zambia	T. Manda
MidAlt southern Africa	Mt.Makulu	Zambia	T. Manda
MidAlt southern Africa	Nanga	Zambia	T. Manda
MidAlt southern Africa	Arcturus	Zimbabwe	B. Cowley
MidAlt southern Africa	ART Farm	Zimbabwe	CIMMYT, Pioneer
MidAlt southern Africa	Kadoma	Zimbabwe	P. Rupende
MidAlt southern Africa	Mazowe	Zimbabwe	Cargill/Monsanto
MidAlt southern Africa	Ratray Arnold	Zimbabwe	P. Rupende
MidAlt southern Africa	UZ Teaching Unit	Zimbabwe	CIMMYT

Trial classification	Site	Country	Collaborator
Well fertilized			
Temperate	Leribe	Lesotho	L. Moremoholo
Temperate	Machache	Lesotho	L. Moremoholo
Temperate	Maseru	Lesotho	L. Moremoholo
Temperate	Teyateyaneng	Lesotho	L. Moremoholo.
Eastern Africa - Dry ¹	Alupe (Striga-infested)	Kenya	A. Diallo
Eastern Africa - Dry ¹	Kitale	Kenya	S. Ismail
Eastern Africa - Dry ¹	W.Pohot	Kenya	S. Ismail
Eastern Africa - Dry ¹	Arusha	Tanzania	Z. Mduruma, H. Akonaay
Eastern Africa - Dry ¹	Inyala	Tanzania	
Eastern Africa - Dry ¹	Monduli	Tanzania	Z. Mduruma, H. Akonaay
Eastern Africa - Dry ¹	Kameyanmiggo(Masaka)	Uganda	Cereals Programme NAARI
Eastern Africa - Dry ¹	Namulonge	Uganda	Cereals Programme NAARI
Drought			
Managed Drought	Mazozo	Angola	F. Sito
Random drought ²	Pelotshetlha	Botswana	L. Lekgari
Random drought ²	Kitale	Kenya	S. Ismail
Random drought ²	Chitala	Malawi	A. Chimphanba
Random drought ²	Mitkomst	Namibia	N.P. Kadhila
Managed Drought	Arusha	Tanzania	Z.O. Mduruma
Random drought ²	Monduli	Tanzania	Z. Mduruma, H. Akonaay
Random drought ²	Masaka	Uganda	J. Imanywoha
Managed Drought	Nanga	Zambia	T. Manda
Managed Drought	Chiredzi	Zimbabwe	N. Damu
N Stress			
Managed N stress	Mazozo	Angola	F. Sito
Managed N stress	Sebele	Botswana	L. Lekgari
Random N stress ³	Kitale	Kenya	G. Ombako
Random N stress ³	Leribe	Lesotho	L. Moremholo
Managed N stress	Chitedze	Lilongwe	V. Kabambe
Random N stress ³	Sussundenga	Mozambique	D. Mariote
Managed N stress	Umbeluzi	Mozambique	D. Mariote
Managed N stress	Arusha	Tanzania	Z. Mduruma, H. Akonaay
Random N stress ³	Namulonge	Uganda	Cereals Program NAARI
Random N stress ³	Msekera	Zambia	T. Manda
Managed N stress	Harare	Zimbabwe	N. Damu
Managed N stress	Harare	Zimbabwe	N. Mangombe
Random N stress ³	Kadoma	Zimbabwe	P. Rupende
Managed N stress	Makoholi	Zimbabwe	N. Mangombe

¹ When conducting a cluster analysis for EIHYB00, certain lower-yielding sites in eastern Africa clustered in a separate group. We concluded that they were sites that were most strongly affected by drought.

² When conducting a cluster analysis some lower-yielding sites were classified as being under random drought as they grouped with managed drought sites.

³ When conducting a cluster analysis some lower-yielding sites were classified as being under random N stress as they grouped with managed N stress sites.

Trial classification	Country	Site	Collaborator
Artificial inoculation and infestations			
<i>E. turcicum</i> and GLS	Ethiopia	Bako	L. Wolde
<i>Striga hermonthica</i>	Kenya	Alupe	A. Diallo
<i>Chilo partellus</i>	Kenya	Embu	M. Gethi
<i>E. turcicum</i> and GLS	Kenya	Kakamega	O. Odongo
<i>E. turcicum</i>	Kenya	Kitale	G. Ombakho
Head smut	Kenya	Muguga	J. Njuguna
MSV	Kenya	Muguga	J. Ininda
<i>E. turcicum</i>	Malawi	Chitedzi	P. Ngwira
<i>E. turcicum</i>	Uganda	Namulonge	D. Kyetere, J. Imanywoha
GLS	Uganda	Masaka	J. Imanywoha, D. Kyetere
GLS	Zimbabwe	CIMMYT, Harare	E. Tembo, K. Pixley
MSV	Zimbabwe	CIMMYT, Harare	S. Mawere, K. Pixley
Maize grain weevil	Zimbabwe	CIMMYT, Harare	M. Masukume, K. Pixley

5. Collaborators

Country	Organization	Collaborator	P.O. Box	City
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Ethiopia	Adet-Gajjam	Girma, Wordim, Temesger		
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Country	Organization	Collaborator	P.O. Box	City
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Country	Organization	Collaborator	P.O. Box	City
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EPOP00: Results of early & intermediate maturing OPVs from CIMMYT, Malawi, Tanzania, Zambia, SEMOC & Botswana across 48 sites in eastern & southern Africa, 1999/00.

Entry	Pedigree	Origin	Across			Grain yield - Lowlands																	
			Rel GY	Rank	Stdev	Across		Kilombo Ang		Mazozo Ang		Nanga Zam		Sussundenga Moz		Nampula Moz		Chitala Mal		Baka Mal		Ngabu Mal	
			%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
OPVs with anthesis date between 56 and 58 days																							
19	POP 101 x KATUMANI	Zambia	75	23	7	2.54	27	1.57	28	2.05	25	0.92	28	2.12	26	5.24	24	3.08	26	1.69	27	3.63	28
17	POP 101	Zambia	56	25	6	1.92	26	1.77	27	1.57	28	1.50	27	1.63	28	2.51	28	1.36	28	0.51	28	4.56	15
OPVs with anthesis date between 63 and 67 days																							
4	[EARLY-MID1/KATUMANI-SR]-#	CIMMYT	98	15	6	3.70	19	2.30	24	2.63	17	3.63	9	2.55	23	6.49	18	4.75	13	3.15	20	4.08	25
22	KATUMANI-ST	Tanzania	100	15	6	3.74	19	2.84	17	2.62	19	2.87	17	3.58	16	6.24	21	4.47	18	3.18	19	4.09	24
14	POOL 16 SR	Zambia	89	19	6	3.24	22	2.80	18	2.41	23	2.67	22	2.80	21	5.10	25	3.00	27	2.51	25	4.63	11
5	[Z98EDRSYN]F2	CIMMYT	86	20	6	3.21	22	2.23	26	2.58	20	1.88	26	2.60	22	4.90	26	4.08	21	2.65	24	4.73	9
16	POOL 16 SEQ	Zambia	85	20	7	3.08	21	2.51	20	3.30	6	2.16	25	1.88	27	4.78	27	3.13	25	2.23	26	4.69	10
OPVs with anthesis date between 67 and 69 days																							
6	ZM421	CIMMYT	121	7	6	4.92	5	4.50	3	3.50	5	4.35	3	5.37	3	7.21	12	5.43	4	3.83	9	5.19	3
2	ZM303	CIMMYT	109	11	6	4.39	12	3.11	15	3.15	10	4.31	4	4.74	7	7.32	9	4.62	15	3.81	11	4.06	26
10	ZM421 F2	CIMMYT	108	11	6	4.21	13	3.73	10	3.20	8	3.31	14	3.90	11	6.80	15	4.66	14	3.43	16	4.63	12
1	ZM301	CIMMYT	101	13	6	4.21	12	2.33	23	2.69	15	4.53	2	3.06	19	7.31	10	5.09	9	3.63	14	5.00	5
3	[TEWDSRDRTOLSYN][NAW5867/P30SR]###	CIMMYT	102	14	6	4.06	14	3.81	9	2.63	16	3.55	12	3.61	15	6.40	20	4.83	11	2.86	22	4.81	7
24	MATUBA	SEMOC	102	14	6	4.15	13	4.20	4	2.99	12	2.69	19	4.75	6	6.64	17	3.79	23	3.37	17	4.77	8
23	KITO-ST	Tanzania	96	17	6	3.61	19	2.48	21	2.75	14	2.69	20	2.94	20	6.41	19	4.33	19	2.68	23	4.60	13
15	MMV400	Zambia	90	19	6	3.44	21	2.25	25	2.54	21	2.90	16	3.50	17	5.34	23	3.56	24	2.90	21	4.51	18
OPVs with anthesis date between 70 and 73 days																							
7	SADVI1 F1	CIMMYT	127	6	6	5.43	3	4.62	2	3.25	7	3.76	8	6.36	1	8.91	1	6.39	1	4.69	1	5.43	2
8	SADVI2 F1	CIMMYT	123	7	6	4.67	9	4.18	6	3.64	3	2.68	21	4.69	8	8.13	6	5.22	5	4.59	3	4.25	22
11	SADVI1 F2	CIMMYT	120	8	6	4.80	7	3.91	7	3.08	11	4.71	1	5.78	2	7.39	8	4.22	20	3.88	8	5.43	2
9	ZM521	CIMMYT	118	8	7	4.92	5	4.19	5	4.02	1	3.99	6	4.12	9	8.30	5	5.62	2	4.06	7	5.07	4
12	SADVI2 F2	CIMMYT	115	9	7	5.03	6	4.77	1	3.85	2	4.13	5	5.22	4	8.34	4	5.20	6	4.37	4	4.39	19
26	KEP	Botswana	106	12	7	4.33	12	2.63	19	3.54	4	3.61	10	3.72	14	7.84	7	5.50	3	3.68	13	4.09	23
27	LOCAL CHECK 1	Various	104	12	9	4.32	13	3.25	12	1.97	26	2.49	24	3.86	12	8.87	2	5.15	8	4.69	2	4.25	21
28	LOCAL CHECK 2	Various	104	13	8	4.18	12	3.85	8	1.82	27	3.34	13	3.90	10	6.85	14	4.54	16	4.23	5	4.93	6
20	MATINDIRI	Malawi	101	14	7	4.52	11	3.53	11	2.46	22	3.57	11	5.07	5	8.37	3	4.76	12	3.82	10	4.54	16
25	SEMOC1	SEMOC	94	16	7	3.92	17	3.14	14	2.63	18	2.54	23	3.86	13	7.24	11	3.81	22	4.09	6	4.05	27
13	Pop 10	Zambia	93	17	6	3.92	16	2.91	16	2.16	24	3.24	15	3.28	18	6.65	16	5.20	7	3.52	15	4.38	20
21	CCD	Malawi	89	19	5	3.91	15	2.44	22	2.91	13	3.93	7	2.16	25	6.93	13	4.53	17	3.76	12	4.59	14
OPVs with anthesis date at 77 days																							
18	POP 25 (Zambia)	Zambia	83	20	7	3.78	16	3.23	13	3.18	9	2.79	18	2.41	24	5.91	22	5.01	10	3.20	18	4.52	17
Mean			100	14	6	4.00	15	3.18	.	2.83	.	3.17	.	3.70	.	6.73	.	4.48	.	3.39	.	4.57	.
LSD (0.05)						0.42		0.91	.	1.11	.	1.71	.	1.32	.	1.25	.	1.40	.	0.85	.	0.68	.
Min			56	6	5	1.92	3	1.57	.	1.57	.	0.92	.	1.63	.	2.51	.	1.36	.	0.51	.	3.63	.
Max			127	25	9	5.43	27	4.77	.	4.02	.	4.71	.	6.36	.	8.91	.	6.39	.	4.69	.	5.43	.

EPOP00: Results of early & intermediate maturing OPVs from CIMMYT, Malawi, Tanzania, Zambia, SEMOC & Botswana across 48 sites in eastern & southern Africa, 1999/00.

Entry	Pedigree	Across			Grain yield - MidAltitudes eastern Africa															
		Rel GY	Rank		Across		Arusha Tan		Embu Ken		Namulonge Uga		Serere Uga		Sigor Ken		Kenya		Bako Eth	
		%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
OPVs with anthesis date between 56 and 58 days																				
19	POP 101 x KATUMANI	75	23	7	2.72	26	2.68	22	2.96	28	1.74	27	1.55	27	4.29	24	4.53	27	1.31	27
17	POP 101	56	25	6	1.86	28	1.75	28	3.46	26	1.33	28	0.69	28	1.63	28	2.88	28	1.23	28
OPVs with anthesis date between 63 and 67 days																				
4	[EARLY-MID1/KATUMANI-SR]-#	98	15	6	5.03	16	3.26	13	6.80	13	4.25	13	3.59	21	5.24	14	6.59	20	5.52	20
22	KATUMANI-ST	100	15	6	5.67	13	2.93	18	8.18	6	4.03	17	4.26	15	5.12	15	7.85	14	7.34	6
14	POOL 16 SR	89	19	6	4.19	22	2.89	20	5.64	20	2.61	24	2.88	25	4.49	21	5.36	25	5.45	21
5	[Z98EDRSYN]F2	86	20	6	3.68	24	2.22	25	3.28	27	3.13	22	3.32	24	4.44	22	4.93	26	4.46	25
16	POOL 16 SEQ	85	20	7	3.89	23	2.55	24	3.64	25	2.39	26	2.59	26	4.79	19	6.72	18	4.58	24
OPVs with anthesis date between 67 and 69 days																				
6	ZM421	121	7	6	6.32	6	4.58	2	8.15	7	4.85	7	5.30	3	5.85	7	9.13	5	6.38	13
2	ZM303	109	11	6	5.60	10	3.62	6	4.62	22	4.59	9	4.66	9	5.65	9	9.54	2	6.54	10
10	ZM421 F2	108	11	6	5.46	12	3.58	7	5.40	21	4.03	16	4.95	6	5.47	11	8.72	7	6.07	16
1	ZM301	101	13	6	5.22	15	3.55	10	6.62	14	3.59	20	3.55	22	5.95	6	5.98	23	7.29	7
	[TEWDSRDRTOLSYN[NAW5867/P30SR]###	102	14	6	4.84	17	2.80	21	4.28	23	4.46	12	4.45	12	4.94	17	6.98	17	6.00	18
24	MATUBA	102	14	6	4.84	18	3.08	16	6.03	18	3.71	19	3.95	18	5.37	13	6.66	19	5.09	22
23	KITO-ST	96	17	6	5.27	16	2.22	26	6.57	15	3.80	18	3.85	19	5.85	8	7.46	16	7.17	8
15	MMV400	90	19	6	4.33	22	2.64	23	5.74	19	2.91	23	3.67	20	4.17	26	6.29	22	4.85	23
OPVs with anthesis date between 70 and 73 days																				
7	SADVI1 F1	127	6	6	6.70	4	4.51	3	8.51	4	6.45	1	5.21	4	6.04	4	8.77	6	7.43	5
8	SADVI2 F1	123	7	6	6.43	6	5.25	1	6.39	16	5.13	5	5.71	1	6.99	1	9.14	4	6.42	12
11	SADVI1 F2	120	8	6	6.17	8	3.09	15	8.53	2	6.04	2	4.88	7	6.37	3	6.43	21	7.89	3
9	ZM521	118	8	7	6.32	6	3.82	4	7.54	9	4.92	6	4.30	14	6.70	2	9.89	1	7.09	9
12	SADVI2 F2	115	9	7	5.95	8	3.76	5	7.38	10	5.54	3	4.78	8	5.97	5	8.21	11	6.02	17
26	KEP	106	12	7	5.80	12	2.90	19	8.53	3	3.37	21	5.43	2	4.30	23	8.18	12	7.88	4
27	LOCAL CHECK 1	104	12	9	6.24	9	2.97	17	8.84	1	4.71	8	4.13	16	4.95	16	9.52	3	8.58	1
28	LOCAL CHECK 2	104	13	8	5.83	11	3.56	9	7.65	8	4.09	15	5.16	5	3.36	27	8.71	8	8.25	2
20	MATINDIRI	101	14	7	5.63	12	3.57	8	7.29	11	4.19	14	4.39	13	4.89	18	8.67	9	6.44	11
25	SEMOC1	94	16	7	5.82	10	3.11	14	8.26	5	5.36	4	4.54	10	5.54	10	7.59	15	6.37	14
13	Pop 10	93	17	6	5.40	14	3.28	12	6.19	17	4.49	11	4.00	17	5.39	12	8.58	10	5.87	19
21	CCD	89	19	5	4.59	19	3.43	11	3.79	24	2.53	25	3.54	23	4.75	20	8.04	13	6.09	15
OPVs with anthesis date at 77 days																				
18	POP 25 (Zambia)	83	20	7	4.60	19	2.21	27	6.89	12	4.56	10	4.52	11	4.25	25	5.90	24	3.86	26
Mean		100	14	6	5.16	15	3.21	.	6.33	.	4.03	.	4.07	.	5.10	.	7.40	.	5.98	.
LSD (0.05)					0.69		1.22	.	2.43	.	1.22	.	1.19	.	1.44	.	2.76	.	1.84	.
Min		56	6	5	1.86	4	1.75	.	2.96	.	1.33	.	0.69	.	1.63	.	2.88	.	1.23	.
Max		127	25	9	6.70	28	5.25	.	8.84	.	6.45	.	5.71	.	6.99	.	9.89	.	8.58	.

EPOP00: Results of early & intermediate maturing OPVs from CIMMYT, Malawi, Tanzania, Zambia, SEMOC & Botswana across 48 sites in eastern & southern Africa, 1999/00.

Entry	Pedigree	Across			Grain yield - Mid Altitudes southern Africa																	
		Rel GY	Rank		Across		Humpata Ang		Goodhope Bot		Mt. Makulu Zam		Arcturus Zim		Greytown RSA		ART Farm Zim		Ezolino RSA		Friedenheim RSA	
		%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
OPVs with anthesis date between 56 and 58 days																						
19	POP 101 x KATUMANI	75	23	7	2.59	27	2.85	26	2.66	27	2.28	27	3.41	27	2.89	26	1.89	27	1.09	28	1.98	28
17	POP 101	56	25	6	1.90	28	1.11	28	2.48	28	1.55	28	2.92	28	1.79	28	1.03	28	1.33	27	2.40	25
OPVs with anthesis date between 63 and 67 days																						
4	[EARLY-MID1/KATUMANI-SR]-#	98	15	6	4.46	15	6.88	7	4.09	20	3.84	7	6.86	9	5.51	11	3.47	16	2.48	17	2.06	27
22	KATUMANI-ST	100	15	6	4.53	16	6.89	6	4.50	16	3.30	18	5.76	17	4.54	16	3.27	19	2.07	25	4.05	13
14	POOL 16 SR	89	19	6	3.70	22	4.54	16	4.12	19	2.37	26	4.91	26	3.98	24	2.51	24	1.84	26	3.28	18
5	[Z98EDRSYN]F2	86	20	6	3.87	20	5.18	11	4.39	18	3.06	22	5.86	16	4.34	19	2.96	21	2.28	22	3.05	21
16	POOL 16 SEQ	85	20	7	3.33	23	4.36	18	3.79	22	2.99	24	4.94	25	2.89	27	1.90	26	2.87	10	2.94	22
OPVs with anthesis date between 67 and 69 days																						
6	ZM421	121	7	6	5.25	9	7.41	5	4.80	13	4.40	3	6.60	11	6.17	7	4.03	10	3.48	3	2.51	24
2	ZM303	109	11	6	4.97	10	4.87	14	5.01	10	3.78	8	7.31	6	5.47	12	4.15	9	2.99	8	4.29	6
10	ZM421 F2	108	11	6	4.72	12	5.06	12	4.68	14	4.19	4	5.53	20	5.56	9	3.70	12	2.31	20	4.34	5
1	ZM301	101	13	6	4.97	12	7.42	4	4.57	15	3.26	21	6.74	10	5.30	13	3.57	13	2.50	16	4.82	2
3	[TEWDSRDRTOLSYN [NAW5867/P30SR]]###	102	14	6	4.18	17	3.52	24	4.06	21	3.30	19	5.75	18	4.36	18	3.42	18	2.32	19	4.43	4
24	MATUBA	102	14	6	4.90	12	3.99	21	4.97	11	3.29	20	5.99	15	4.76	15	7.20	4	2.89	9	4.24	8
23	KITO-ST	96	17	6	4.07	18	4.15	19	3.55	23	3.44	15	6.52	12	4.17	21	3.45	17	2.59	14	3.15	19
15	MMV400	90	19	6	3.86	19	4.83	15	3.28	26	3.65	10	5.26	23	4.77	14	2.85	23	2.34	18	3.45	17
OPVs with anthesis date between 70 and 73 days																						
7	SADVI1 F1	127	6	6	5.88	5	6.66	8	6.03	1	4.11	5	8.54	3	6.34	5	5.55	6	3.61	2	5.32	1
8	SADVI2 F1	123	7	6	6.16	4	6.28	9	5.88	3	4.49	2	7.96	4	7.00	3	7.82	3	3.42	5	4.10	10
11	SADVI1 F2	120	8	6	5.72	5	7.53	3	5.92	2	4.03	6	7.48	5	6.54	4	4.59	7	3.74	1	4.22	9
9	ZM521	118	8	7	5.56	8	6.02	10	5.15	7	4.84	1	5.11	24	5.55	10	7.94	1	2.82	12	4.09	11
12	SADVI2 F2	115	9	7	5.44	7	7.82	2	5.12	8	3.58	11	7.24	7	6.33	6	3.87	11	3.44	4	4.49	3
26	KEP	106	12	7	5.37	9	9.40	1	5.25	6	3.48	14	7.14	8	6.02	8	4.32	8	3.32	6	4.07	12
27	LOCAL CHECK 1	104	12	9	5.73	9	3.47	25	5.38	4	3.68	9	10.78	1	7.85	2	5.57	5	2.55	15	2.93	23
28	LOCAL CHECK 2	104	13	8	5.97	8	5.00	13	4.95	12	3.50	13	9.61	2	8.41	1	7.85	2	2.83	11	4.01	14
20	MATINDIRI	101	14	7	4.24	17	4.46	17	5.04	9	3.04	23	5.48	22	4.46	17	3.54	14	3.26	7	3.87	16
25	SEMOC1	94	16	7	4.46	15	3.81	22	5.30	5	3.35	17	6.46	13	4.20	20	3.13	20	2.66	13	4.01	15
13	Pop 10	93	17	6	3.97	19	4.10	20	4.40	17	3.58	12	6.32	14	4.07	22	3.48	15	2.20	24	2.17	26
21	CCD	89	19	5	3.78	21	3.69	23	3.55	24	3.40	16	5.50	21	3.75	25	2.92	22	2.30	21	3.07	20
OPVs with anthesis date at 77 days																						
18	POP 25 (Zambia)	83	20	7	3.59	22	2.82	27	3.45	25	2.66	25	5.65	19	4.03	23	2.36	25	2.23	23	4.27	7
Mean		100	14	6	4.54	15	5.15	.	4.51	.	3.44	.	6.34	.	5.04	.	4.01	.	2.63	.	3.63	.
LSD (0.05)					0.59		1.50	.	0.81	.	1.12	.	1.50	.	0.94	.	3.45	.	1.02	.	1.72	.
Min		56	6	5	1.90	4	1.11	.	2.48	.	1.55	.	2.92	.	1.79	.	1.03	.	1.09	.	1.98	.
Max		127	25	9	6.16	28	9.40	.	6.03	.	4.84	.	10.78	.	8.41	.	7.94	.	3.74	.	5.32	.

EPOP00: Results of early & intermediate maturing OPVs from CIMMYT, Malawi, Tanzania, Zambia, SEMOC & Botswana across 48 sites in eastern & southern Africa, 1999/00.

Entry	Pedigree	Across			Mid altitudes southern Africa				Grain yield - Temperate										Grain yield - N stress			
		Rel GY		Rank	ART Farm Zim		Mazowe Zim		Across		Maseru Les		Leribe Les		Machache Les		Teyateyaneng Les		Across		Sebele Bot	
		%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
OPVs with anthesis date between 56 and 58 days																						
19	POP 101 x KATUMANI	75	23	7	2.08	27	4.81	24	2.28	15	2.27	20	2.37	17	3.64	2	0.86	21	1.26	20	0.46	27
17	POP 101	56	25	6	1.31	28	3.04	28	1.91	17	1.62	28	2.83	3	2.16	23	1.02	14	0.86	26	0.54	26
OPVs with anthesis date between 63 and 67 days																						
4	[EARLY-MID1/KATUMANI-SR]#	98	15	6	3.99	17	5.43	23	2.33	10	3.16	3	2.58	12	2.49	16	1.07	8	1.47	14	1.15	8
22	KATUMANI-ST	100	15	6	4.21	14	6.73	11	2.15	17	2.54	13	2.32	21	2.79	13	0.95	20	1.40	16	0.87	15
14	POOL 16 SR	89	19	6	3.37	23	6.07	16	2.02	20	2.21	21	1.98	26	3.56	3	0.31	28	1.55	14	0.68	21
5	[Z98EDRSYN]F2	86	20	6	3.26	24	4.38	26	1.97	18	2.63	11	2.05	25	2.14	24	1.05	12	1.29	19	0.78	18
16	POOL 16 SEQ	85	20	7	2.33	26	4.26	27	2.36	13	2.65	10	2.60	10	3.51	5	0.67	27	1.24	20	0.67	22
OPVs with anthesis date between 67 and 69 days																						
6	ZM421	121	7	6	5.27	9	7.80	4	2.38	13	2.87	5	2.37	18	3.55	4	0.74	26	1.95	7	0.71	19
2	ZM303	109	11	6	5.59	8	6.23	14	2.17	16	2.41	17	2.60	11	2.91	10	0.75	25	1.73	10	1.62	1
10	ZM421 F2	108	11	6	4.94	12	6.91	9	2.28	15	3.68	1	1.98	27	2.40	20	1.05	11	1.70	9	1.01	12
1	ZM301	101	13	6	5.05	10	6.51	13	1.97	16	2.86	6	2.33	19	1.63	28	1.07	10	1.48	14	1.01	13
3	[TEWDSRDRTOLSYN][NAW5867/P30SR]###	102	14	6	4.07	16	6.54	12	2.39	7	2.70	8	2.67	6	2.85	12	1.36	2	1.57	12	0.68	20
24	MATUBA	102	14	6	4.21	15	7.47	6	2.14	17	2.06	26	2.55	13	2.97	9	0.97	19	1.75	10	1.24	6
23	KITO-ST	96	17	6	3.60	22	6.05	17	2.16	16	2.21	22	2.44	15	2.99	8	1.01	17	1.38	18	0.79	17
15	MMV400	90	19	6	3.62	20	4.51	25	2.30	11	2.55	12	2.33	20	2.88	11	1.45	1	1.30	20	0.56	25
OPVs with anthesis date between 70 and 73 days																						
7	SADV11 F1	127	6	6	6.46	3	6.22	15	2.45	12	2.67	9	2.42	16	3.87	1	0.84	22	2.06	6	1.02	11
8	SADV12 F1	123	7	6	6.71	2	7.97	2	2.15	14	2.82	7	1.93	28	2.69	14	1.17	6	2.20	5	1.41	4
11	SADV11 F2	120	8	6	5.95	5	7.23	8	2.33	9	2.93	4	2.62	9	2.44	18	1.33	3	1.83	9	0.64	23
9	ZM521	118	8	7	6.10	4	7.96	3	1.96	18	2.08	25	2.63	8	2.09	26	1.03	13	1.99	7	1.60	2
12	SADV12 F2	115	9	7	5.70	7	6.78	10	2.08	14	2.44	16	2.77	4	2.06	27	1.07	9	1.96	6	1.44	3
26	KEP	106	12	7	5.03	11	5.71	20	2.43	7	3.19	2	2.94	2	2.48	17	1.12	7	1.49	13	1.04	10
27	LOCAL CHECK 1	104	12	9	6.99	1	8.14	1	2.26	13	2.48	15	2.51	14	3.04	7	1.01	15	1.40	15	1.37	5
28	LOCAL CHECK 2	104	13	8	5.86	6	7.70	5	1.98	20	2.36	18	2.17	23	2.41	19	0.98	18	1.32	17	0.94	14
20	MATINDIRI	101	14	7	3.60	21	5.68	21	2.27	13	2.20	23	2.67	5	3.21	6	1.01	16	1.47	15	1.06	9
25	SEMOC1	94	16	7	4.28	13	7.40	7	1.90	22	2.34	19	2.12	24	2.32	21	0.81	24	1.46	18	0.64	24
13	Pop 10	93	17	6	3.73	19	5.64	22	2.01	18	2.10	24	3.03	1	2.11	25	0.81	23	1.31	20	1.20	7
21	CCD	89	19	5	3.91	18	5.74	19	2.13	14	2.50	14	2.27	22	2.49	15	1.27	4	1.25	20	0.83	16
OPVs with anthesis date at 77 days																						
18	POP 25 (Zambia)	83	20	7	2.51	25	5.90	18	2.02	15	1.99	27	2.67	7	2.24	22	1.17	5	1.08	24	0.43	28
Mean		100	14	6	4.42	.	6.24	.	2.17	15	2.52	.	2.45	.	2.71	.	1.00	.	1.53	14	0.94	.
LSD (0.05)					0.75	.	3.35	.	0.51		0.76	.	0.95	.	1.54	.	0.57	.	0.24		0.84	.
Min		56	6	5	1.31	.	3.04	.	1.90	7	1.62	.	1.93	.	1.63	.	0.31	.	0.86	5	0.43	.
Max		127	25	9	6.99	.	8.14	.	2.45	22	3.68	.	3.03	.	3.87	.	1.45	.	2.20	26	1.62	.

EPOP00: Results of early & intermediate maturing OPVs from CIMMYT, Malawi, Tanzania, Zambia, SEMOC & Botswana across 48 sites in eastern & southern Africa, 1999/00.

Entry	Pedigree	Across			Grain yield - N stress																	
		Rel GY	Rank		Sebele Bot		Harare Zim		Makoholi Zim		Msekera Zam		Umbeluzi Moz		Harare Zim		Arusha Tan		Kenya		Kenya	
		%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
OPVs with anthesis date between 56 and 58 days																						
19	POP 101 x KATUMANI	75	23	7	1.03	20	1.24	24	0.28	24	2.21	1	0.76	26	1.36	15	2.67	22	2.07	15	0.53	26
17	POP 101	56	25	6	0.62	27	1.24	23	0.20	27	1.07	27	0.93	25	1.07	23	1.21	28	1.44	27	0.28	28
OPVs with anthesis date between 63 and 67 days																						
4	[EARLY-MID1/KATUMANI-SR]-#	98	15	6	1.36	6	1.47	14	0.36	16	1.50	10	1.56	20	1.33	16	3.39	9	1.61	25	0.97	19
22	KATUMANI-ST	100	15	6	1.21	11	1.48	13	0.39	13	1.37	18	1.77	14	1.13	21	2.76	20	1.75	23	1.27	12
14	POOL 16 SR	89	19	6	1.03	21	1.43	18	0.41	12	1.45	13	1.75	15	1.75	6	3.09	14	2.41	11	1.51	8
5	[Z98EDRSYN]F2	86	20	6	0.82	26	1.82	7	0.42	10	1.20	25	1.10	24	1.16	19	2.97	17	1.69	24	0.88	23
16	POOL 16 SEQ	85	20	7	1.11	16	1.41	20	0.33	19	1.84	3	1.52	21	0.71	25	2.34	26	1.59	26	0.92	22
OPVs with anthesis date between 67 and 69 days																						
6	ZM421	121	7	6	1.74	1	1.99	6	0.44	9	2.17	2	2.71	4	1.57	12	3.89	5	2.49	8	1.83	3
2	ZM303	109	11	6	1.19	13	1.46	15	0.32	21	1.49	11	2.13	12	1.81	4	2.98	16	2.54	7	1.74	4
10	ZM421 F2	108	11	6	1.26	9	2.04	4	0.45	6	1.65	7	2.29	10	1.67	8	2.87	18	2.60	5	1.12	14
1	ZM301	101	13	6	1.29	8	1.38	21	0.41	11	1.46	12	1.86	13	1.14	20	2.79	19	2.32	13	1.12	13
3	[TEWDSRDRTOLSYN/[NAW5867/P30SR]]###	102	14	6	1.38	5	1.68	11	0.46	5	1.76	4	2.47	8	1.21	18	3.24	10	1.83	22	1.03	17
24	MATUBA	102	14	6	1.24	10	1.77	8	0.50	4	1.35	20	3.04	3	1.73	7	3.09	15	2.47	9	1.12	15
23	KITO-ST	96	17	6	1.19	14	1.15	25	0.17	28	1.34	21	1.31	22	1.29	17	2.56	23	2.58	6	1.41	10
15	MMV400	90	19	6	0.85	25	1.03	26	0.35	18	1.31	22	1.66	17	1.09	22	3.42	8	1.85	20	0.92	21
OPVs with anthesis date between 70 and 73 days																						
7	SADVI1 F1	127	6	6	1.03	19	2.08	3	0.69	1	1.63	8	3.12	2	2.47	1	4.05	3	2.99	2	1.55	6
8	SADVI2 F1	123	7	6	1.70	2	2.14	1	0.36	15	1.65	7	3.28	1	1.49	13	4.58	1	3.73	1	1.67	5
11	SADVI1 F2	120	8	6	1.20	12	2.01	5	0.35	17	1.69	5	2.60	5	1.87	3	3.73	6	2.35	12	1.88	2
9	ZM521	118	8	7	1.32	7	1.76	9	0.68	2	1.28	24	2.51	7	1.64	9	4.13	2	2.82	3	2.15	1
12	SADVI2 F2	115	9	7	1.49	3	2.09	2	0.44	7	1.38	17	2.18	11	2.32	2	4.01	4	2.79	4	1.49	9
26	KEP	106	12	7	1.41	4	1.49	12	0.36	14	1.43	14	1.61	18	0.52	28	3.56	7	2.19	14	1.28	11
27	LOCAL CHECK 1	104	12	9	1.07	17	0.60	28	0.52	3	1.36	19			1.61	10	3.14	13	2.43	10	0.46	27
28	LOCAL CHECK 2	104	13	8	0.99	22	0.72	27	0.44	8	1.39	16			1.80	5	2.75	21	1.95	18	0.93	20
20	MATINDIRI	101	14	7	1.18	15	1.73	10	0.32	20	1.53	9	2.38	9	0.66	26	2.35	25	1.98	17	1.54	7
25	SEMOC1	94	16	7	0.91	24	1.44	16	0.28	23	1.11	26	2.58	6	1.44	14	3.16	11	2.04	16	1.03	16
13	Pop 10	93	17	6	0.92	23	1.41	19	0.27	25	1.43	15	1.56	19	1.59	11	2.49	24	1.41	28	0.88	24
21	CCD	89	19	5	1.04	18	1.27	22	0.30	22	1.30	23	1.23	23	0.53	27	3.14	12	1.87	19	0.99	18
OPVs with anthesis date at 77 days																						
18	POP 25 (Zambia)	83	20	7	0.45	28	1.43	17	0.23	26	0.95	28	1.71	16	0.86	24	2.08	27	1.83	21	0.80	25
Mean		100	14	6	1.14	.	1.53	.	0.38	.	1.48	.	1.99	.	1.39	.	3.09	.	2.20	.	1.19	.
LSD (0.05)					0.56	.	0.57	.	0.26	.	0.72	.	0.82	.	0.86	.	1.01	.	0.91	.	0.68	.
Min		56	6	5	0.45	.	0.60	.	0.17	.	0.95	.	0.76	.	0.52	.	1.21	.	1.41	.	0.28	.
Max		127	25	9	1.74	.	2.14	.	0.69	.	2.21	.	3.28	.	2.47	.	4.58	.	3.73	.	2.15	.

EPOP00: Results of early & intermediate maturing OPVs from CIMMYT, Malawi, Tanzania, Zambia, SEMOC & Botswana across 48 sites in eastern & southern Africa, 1999/00.

Entry	Pedigree	Across			Grain yield - Drought																	
		Rel GY	Rank	Stdev	Across		Pelotsheltha Bot		Nanga Zam		Mitkomst Nam		Chiredzi Zim		Monduli Tan		Arusha Tan		Mazozo Ang		Kitale Ken	
		%	Avg		t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
OPVs with anthesis date between 56 and 58 days																						
19	POP 101 x KATUMANI	75	23	7	1.30	18	1.17	27	1.88	9	0.94	3	2.69	21	1.04	1	0.54	25	1.19	25	0.70	27
17	POP 101	56	25	6	0.82	23	0.71	28	1.88	10	0.47	22	1.14	28	0.56	6	0.31	28	0.34	28	0.42	28
OPVs with anthesis date between 63 and 67 days																						
4	[EARLY-MID1/KATUMANI-SR]-#	98	15	6	1.73	14	2.13	20	1.89	8	0.39	26	3.64	10	0.37	13	1.18	9	1.79	14	1.86	12
22	KATUMANI-ST	100	15	6	1.77	13	2.20	16	0.97	28	1.01	1	4.04	7	0.50	8	0.94	16	2.32	7	1.26	22
14	POOL 16 SR	89	19	6	1.57	16	1.85	24	1.62	18	0.71	12	2.99	18	0.89	2	1.13	13	1.54	20	1.02	25
5	[Z98EDRSYN]F2	86	20	6	1.62	14	2.46	8	2.18	1	0.65	14	2.61	23	0.41	10	0.94	17	1.62	18	1.82	14
16	POOL 16 SEQ	85	20	7	1.50	17	2.03	22	1.73	16	0.83	9	2.52	24	0.61	4	0.91	18	1.55	19	1.07	24
OPVs with anthesis date between 67 and 69 days																						
6	ZM421	121	7	6	2.31	7	2.63	4	1.15	25	0.60	17	4.98	2	0.57	5	1.39	5	3.28	2	3.01	1
2	ZM303	109	11	6	1.91	9	3.05	1	2.05	4	0.88	6	2.64	22	0.27	17	1.70	1	1.76	16	1.82	13
10	ZM421 F2	108	11	6	1.86	10	2.39	10	1.55	20	0.97	2	3.22	15	0.51	7	1.41	4	1.88	12	1.80	15
1	ZM301	101	13	6	1.84	12	2.76	3	1.99	7	0.49	21	3.93	8	0.17	22	1.31	7	2.45	5	1.21	23
3	[TEWDSRDRTOLSYN[NAW5867/P30SR]]###	102	14	6	1.76	13	2.34	11	1.52	21	0.72	11	3.46	13	0.36	14	1.14	12	2.20	9	1.67	17
24	MATUBA	102	14	6	1.55	17	2.27	15	2.04	5	0.42	24	2.47	25	0.29	15	1.17	10	1.46	23	1.78	16
23	KITO-ST	96	17	6	1.72	15	2.32	13	1.44	22	0.85	7	2.33	26	0.65	3	0.80	23	3.27	3	1.67	18
15	MMV400	90	19	6	1.55	17	1.97	23	1.83	12	0.45	23	3.10	16	0.41	11	1.06	14	0.69	27	1.60	19
OPVs with anthesis date between 70 and 73 days																						
7	SADVI1 F1	127	6	6	2.17	10	2.47	7	1.25	24	0.76	10	5.01	1	0.22	20	1.05	15	3.25	4	2.94	2
8	SADVI2 F1	123	7	6	2.11	9	2.44	9	1.76	15	0.63	16	3.85	9	0.23	19	1.68	2	2.38	6	2.85	3
11	SADVI1 F2	120	8	6	2.12	9	2.58	6	1.67	17	0.56	18	3.52	12	0.28	16	1.54	3	3.34	1	2.71	5
9	ZM521	118	8	7	1.96	11	2.61	5	1.78	14	0.65	15	4.14	5	0.38	12	0.89	20	2.13	10	2.11	9
12	SADVI2 F2	115	9	7	1.77	14	2.17	18	1.00	27	0.68	13	4.14	6	0.14	24	1.38	6	1.48	22	1.93	10
26	KEP	106	12	7	1.65	15	2.28	14	1.84	11	0.90	5	3.29	14	0.06	27	0.63	24	1.80	13	2.34	7
27	LOCAL CHECK 1	104	12	9	1.74	15	1.43	26	2.12	2	0.92	4	4.90	4	0.08	26	0.43	27	1.10	26	2.23	8
28	LOCAL CHECK 2	104	13	8	1.83	13	3.03	2	1.99	6	0.83	8	4.95	3	0.47	9	0.50	26	1.77	15	1.30	21
20	MATINDIRI	101	14	7	1.67	17	2.32	12	1.12	26	0.39	25	3.58	11	0.15	23	1.19	8	1.44	24	2.84	4
25	SEMOC1	94	16	7	1.41	19	2.05	21	2.10	3	0.32	27	2.04	27	0.23	18	0.90	19	1.64	17	1.90	11
13	Pop 10	93	17	6	1.68	17	2.14	19	1.42	23	0.52	19	2.97	19	0.04	28	1.15	11	2.22	8	2.46	6
21	CCD	89	19	5	1.44	20	2.18	17	1.60	19	0.52	20	2.88	20	0.21	21	0.86	21	1.53	21	1.45	20
OPVs with anthesis date at 77 days																						
18	POP 25 (Zambia)	83	20	7	1.34	21	1.68	25	1.79	13	0.29	28	3.03	17	0.13	25	0.81	22	2.05	11	0.77	26
Mean		100	14	6	1.70	15	2.20	.	1.68	.	0.66	.	3.36	.	0.37	.	1.03	.	1.91	.	1.81	.
LSD (0.05)					0.31		0.95	.	1.05	.	0.67	.	1.26	.	0.40	.	0.66	.	1.16	.	1.07	.
Min		56	6	5	0.82	7	0.71	.	0.97	.	0.29	.	1.14	.	0.04	.	0.31	.	0.34	.	0.42	.
Max		127	25	9	2.31	23	3.05	.	2.18	.	1.01	.	5.01	.	1.04	.	1.70	.	3.34	.	3.01	.

EPOP00: Results of early & intermediate maturing OPVs from CIMMYT, Malawi, Tanzania, Zambia, SEMOC & Botswana across 48 sites in eastern & southern Africa, 1999/00.

Entry	Pedigree	Across		Drought		Low N			Drought			
		Rel GY		Chitala Mal		ASI	Ears/ Plant	Leaf Senes	ASI	Ears/ Plant	Leaf Senes	
		%	Avg	Stdev	t/ha	Rank	d	#	1-10	d	#	1-10
OPVs with anthesis date between 56 and 58 days												
19	POP 101 x KATUMANI	75	23	7	1.59	25	3.6	0.54	9.2	-0.6	0.66	7.9
17	POP 101	56	25	6	1.52	27	3.4	0.79	10.0	-2.0	0.70	10.0
OPVs with anthesis date between 63 and 67 days												
4	[EARLY-MID1/KATUMANI-SR]-#	98	15	6	2.30	14	4.7	0.72	7.3	1.0	0.50	6.0
22	KATUMANI-ST	100	15	6	2.67	9	5.4	0.77	7.2	-0.1	0.61	4.2
14	POOL 16 SR	89	19	6	2.39	13	3.8	0.86	7.7	2.6	0.73	7.0
5	[Z98EDRSYN]F2	86	20	6	1.90	21	4.2	0.87	7.8	0.8	0.64	5.5
16	POOL 16 SEQ	85	20	7	2.24	17	3.4	0.84	7.8	-0.4	0.63	6.5
OPVs with anthesis date between 67 and 69 days												
6	ZM421	121	7	6	3.15	1	4.6	0.82	6.9	2.3	0.60	3.9
2	ZM303	109	11	6	3.02	5	4.8	0.81	7.1	3.4	0.53	4.7
10	ZM421 F2	108	11	6	3.02	4	4.1	0.83	6.7	1.9	0.64	4.9
1	ZM301	101	13	6	2.26	15	4.2	0.83	6.9	2.2	0.55	4.1
3	[TEWDSRDRTOLSYN[NAW5867/P30SR]]###	102	14	6	2.46	11	4.5	0.75	7.4	2.8	0.58	5.7
24	MATUBA	102	14	6	2.04	19	4.3	0.72	7.2	3.4	0.54	5.2
23	KITO-ST	96	17	6	2.16	18	5.1	0.86	6.6	4.4	0.60	5.2
15	MMV400	90	19	6	2.87	8	4.9	0.59	7.6	4.3	0.60	4.9
OPVs with anthesis date between 70 and 73 days												
7	SADVI1 F1	127	6	6	2.54	10	5.2	0.87	6.1	1.0	0.52	3.3
8	SADVI2 F1	123	7	6	3.15	2	4.0	0.77	6.2	3.1	0.63	4.2
11	SADVI1 F2	120	8	6	2.90	7	4.4	0.91	6.3	2.4	0.60	3.8
9	ZM521	118	8	7	2.94	6	4.4	0.86	6.2	1.7	0.52	4.1
12	SADVI2 F2	115	9	7	3.04	3	5.0	0.80	6.2	2.2	0.52	3.5
26	KEP	106	12	7	1.69	23	6.3	0.69	6.3	6.8	0.40	4.0
27	LOCAL CHECK 1	104	12	9	2.45	12	5.7	0.66	7.5	1.3	0.39	3.7
28	LOCAL CHECK 2	104	13	8	1.65	24	6.4	0.71	6.9	2.6	0.56	3.7
20	MATINDIRI	101	14	7	2.03	20	6.0	0.73	7.3	2.3	0.51	5.5
25	SEMOC1	94	16	7	1.47	28	6.3	0.74	6.5	8.2	0.45	4.4
13	Pop 10	93	17	6	2.25	16	7.0	0.62	5.9	2.0	0.40	3.6
21	CCD	89	19	5	1.75	22	5.3	0.77	7.4	2.6	0.43	5.0
OPVs with anthesis date at 77 days												
18	POP 25 (Zambia)	83	20	7	1.54	26	4.3	0.67	6.2	0.8	0.40	3.5
Mean		100	14	6	2.32	.	4.8	0.76	7.1	2.2	0.55	4.9
LSD (0.05)					0.92	.	1.3	0.15	0.7	2.2	0.13	1.3
Min		56	6	5	1.47	.	3.4	0.54	5.9	-2.0	0.39	3.3
Max		127	25	9	3.15	.	7.0	0.91	10.0	8.2	0.73	10.0

ILPOP00: Results of intermediate and late maturing OPVs from CIMMYT, Malawi, and Tanzania across 37 sites in eastern and southern Africa, 1999/00.

Entry	Pedigree	Origin	Across			Grain yield - Lowlands										Grain yield - Mid altitudes southern Africa										
			RelGY	Rank		Across		Mazozo Ang		Kilombo Ang		Nampula Moz		Nanga Zam		Across		Humpata Ang		Arcturus Zim		Kasama Zam		Goodhope Bot		
				%	Avg	Sidev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
OPVs with anthesis date between 68 and 73 days																										
9	P501-SR/P502-SR-F1	CIMMYT	126	6	7	5.52	5	3.12	10	5.29	1	7.79	5	5.87	2	6.40	6	5.60	17	8.12	4	4.68	8	6.98	4	
18	MASIKA	Malawi	106	11	6	5.17	9	3.37	7	4.43	7	7.00	19	5.88	1	5.68	10	5.68	15	7.18	12	4.76	5	6.50	7	
4	ZM607c4F2	CIMMYT	108	12	7	5.00	12	3.83	4	3.69	15	6.81	22	5.69	5	5.28	15	6.48	6	6.53	21	4.41	13	5.71	20	
5	ZM605c4F2	CIMMYT	103	12	7	4.50	14	2.98	12	3.85	12	7.26	11	3.90	21	5.65	11	7.01	2	7.29	11	4.83	4	5.63	21	
6	EV98ZM607-F2	CIMMYT	102	14	8	4.53	14	3.47	6	3.45	19	7.28	9	3.93	20	5.09	17	5.99	11	5.78	27	4.68	9	6.47	8	
7	EV98ZM605-F2	CIMMYT	100	14	7	4.51	16	2.38	22	2.75	26	7.15	12	5.75	3	5.47	14	7.82	1	6.48	22	4.20	18	6.82	6	
21	CHITIBU	Malawi	95	15	8	4.26	19	2.32	23	3.77	13	6.72	24	4.25	15	5.26	15	5.42	18	6.67	19	4.87	3	5.72	19	
11	S91SIWQ	CIMMYT	100	16	8	3.96	20	2.62	17	4.02	10	6.22	27	2.98	26	4.87	18	5.95	12	5.53	28	4.28	17	6.03	14	
25	SYN C	Zambia	94	17	7	4.06	20	3.11	11	3.30	22	6.90	21	2.93	27	4.97	19	4.50	26	6.00	26	4.61	11	6.15	13	
27	MMI	Zambia	81	18	7	4.38	16	1.93	26	3.68	16	7.64	6			5.19	17	5.66	16	6.85	17	4.37	15	5.47	22	
26	POP BH	Zambia	95	18	6	4.31	19	2.91	14	2.99	24	6.74	23	4.59	13	5.06	18	6.40	8	6.34	24	3.83	26	6.28	10	
22	TMV-1 SR	Tanzania	94	18	7	4.05	18	3.16	9	3.38	21	5.03	28	4.62	12	4.71	22	5.06	19	6.38	23	3.88	25	4.88	28	
20	SUNDWE	Malawi	87	19	6	4.00	20	2.67	16	2.26	28	7.07	16	3.99	19	5.18	16	6.15	10	6.85	18	4.70	7	5.06	26	
OPVs with anthesis date between 73 and 75 days																										
12	ZM621	CIMMYT	116	6	5	5.13	9	2.83	15	4.24	9	8.65	1	4.79	9	6.60	4	6.22	9	8.47	3	4.91	2	7.39	2	
13	ZM621 F2	CIMMYT	113	7	6	5.47	5	3.35	8	5.03	2	8.38	2	5.11	6	6.30	6	6.75	4	8.97	2	4.68	10	6.95	5	
8	WEEVILAxB-F1	CIMMYT	109	10	7	5.11	7	3.71	5	4.48	6	7.28	10	4.99	8	6.29	6	6.91	3	7.89	5	4.72	6	7.40	1	
2	[TSEQZIM]C2F2	CIMMYT	104	12	6	4.57	15	2.28	24	4.81	4	7.44	8	3.76	24	5.47	13	5.78	14	7.40	6	4.00	23	6.26	11	
1	Z97SYNGLS-F2-#	CIMMYT	105	13	8	4.60	14	4.00	2	2.99	25	7.52	7	3.87	22	5.65	12	5.89	13	7.35	8	4.14	20	5.29	25	
16	SYNTHETIC NUE-SR-#	CIMMYT	101	15	8	5.05	10	2.48	20	4.89	3	7.11	13	5.71	4	5.34	16	4.54	25	6.16	25	4.35	16	6.33	9	
15	SYNTHETIC DR-SR-#	CIMMYT	100	16	8	4.92	10	4.15	1	3.70	14	7.09	15	4.74	11	4.98	18	4.58	23	7.39	7	4.15	19	5.36	23	
19	KAKHOMERA	Malawi	95	16	6	4.10	21	2.20	25	3.65	17	6.51	25	4.05	18	5.29	15	6.40	7	6.86	16	3.91	24	5.72	18	
10	OBATAMPA-#		95	17	7	4.57	14	2.58	18	3.47	18	8.00	3	4.23	16	4.98	18	4.57	24	7.15	13	4.05	22	6.01	15	
OPVs with anthesis date between 75 and 78 days																										
3	AC969A-SR F2	CIMMYT	93	15	9	3.23	27	1.44	27	2.52	27	6.50	26	2.47	28	5.79	11	4.97	20	7.33	10	5.02	1	5.35	24	
17	TASEQ-#	CIMMYT	97	15	8	4.64	13	2.92	13	3.87	11	7.97	4	3.79	23	5.26	15	4.63	22	7.13	14	4.09	21	7.24	3	
28	LOCAL CHECK	CIMMYT	91	17	10	3.84	23	1.27	28	3.43	20	7.02	17	3.62	25	6.06	17	4.09	27	10.50	1	3.82	27	6.17	12	
24	KILIMA SR	Tanzania	92	18	8	4.14	20	2.51	19	3.02	23	6.94	20	4.08	17	5.28	16	6.70	5	6.93	15	4.38	14	5.04	27	
23	STAHA SR	Tanzania	89	18	7	4.69	14	2.44	21	4.56	5	7.00	18	4.75	10	5.11	17	4.93	21	6.55	20	4.52	12	5.80	16	
14	LA-POSTA-SEQC6-SR	CIMMYT	91	19	7	4.95	10	3.98	3	4.24	8	7.11	14	4.48	14	4.44	23	3.92	28	7.34	9	3.54	28	5.78	17	
Mean			99	15	7	4.55	15	2.86	.	3.78	.	7.15	.	4.42	.	5.42	15	5.66	.	7.12	.	4.37	.	6.06	.	
LSD (0.05)						0.69		1.76	.	0.99	.	1.02	.	1.62	.	0.41		1.32	.	1.24	.	0.99	.	1.16	.	
Min			81	6	5	3.23	5	1.27	.	2.26	.	5.03	.	2.47	.	4.44	4	3.92	.	5.53	.	3.54	.	4.88	.	
Max			126	19	10	5.52	27	4.15	.	5.29	.	8.65	.	5.88	.	6.60	23	7.82	.	10.50	.	5.02	.	7.40	.	

ILPOP00: Results of intermediate and late maturing OPVs from CIMMYT, Malawi, and Tanzania across 37 sites in eastern and southern Africa, 1999/00.

Entry	Pedigree	Across			Grain yield - Mid altitudes southern Africa										Grain yield - Mid altitudes eastern Africa									
		RelGY	Rank		Chitedze Mal		Mbawa Mal		Bvumbwe Mal		ART Farm Zim		ART Farm Zim		Across		Lambo Tan		Kakamega Ken		Kitale Ken		Namulonge Uga	
		%	Avg	Siddev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
OPVs with anthesis date between 68 and 73 days																								
9	P501-SR/P502-SR-F1	126	6	7	8.17	2	4.59	24	8.22	1	5.36	5	7.07	4	6.25	4	5.26	4	5.01	17	6.72	2	7.10	3
18	MASIKA	106	11	6	7.34	9	5.49	14	6.94	6	5.13	7	6.10	8	5.17	12	5.17	7	6.26	7	4.74	10	5.59	13
4	ZM607c4F2	108	12	7	5.73	26	5.51	13	6.34	10	4.20	17	6.08	9	4.84	14	4.71	15	5.36	14	3.67	20	5.22	18
5	ZM605c4F2	103	12	7	7.37	8	4.92	22	6.13	15	4.89	8	6.58	5	5.17	12	4.77	12	6.09	10	4.62	12	5.78	11
6	EV98ZM607-F2	102	14	8	6.59	12	5.23	16	6.09	18	3.78	23	5.15	20	4.59	18	4.89	11	4.75	20	4.16	16	5.00	21
7	EV98ZM605-F2	100	14	7	6.38	17	5.55	12	5.73	22	4.38	15	6.24	7	4.92	15	4.35	24	5.77	11	4.89	8	5.06	19
21	CHITIBU	95	15	8	7.66	5	6.39	3	6.10	16	4.54	13	6.07	10	4.49	19	5.10	9	4.26	24	3.59	21	4.83	25
11	S91SIWQ	100	16	8	5.21	28	4.95	19	5.41	24	4.38	16	4.60	27	4.55	15	5.53	1	4.80	19	3.91	19	4.20	27
25	SYN C	94	17	7	6.38	16	5.74	11	5.32	25	4.05	19	4.63	26	4.63	19	4.67	18	5.68	13	4.40	14	4.89	24
27	MMI	81	18	7	5.81	25	4.93	21	5.88	20	3.74	24	5.05	21	5.07	14	5.18	5	4.66	22	4.06	18	4.97	22
26	POP BH	95	18	6	6.82	11	4.54	25	6.09	17	3.99	20	4.63	25	4.64	18	4.68	17	5.77	12	4.25	15	4.39	26
22	TMV-1 SR	94	18	7	5.98	23	5.32	15	5.23	27	3.36	28	4.64	24	4.41	20	4.50	22	4.56	23	3.21	24	5.81	10
20	SUNDWE	87	19	6	6.02	22	6.02	9	6.54	7	4.14	18	5.28	18	4.67	18	4.99	10	4.87	18	4.14	17	5.45	15
OPVs with anthesis date between 73 and 75 days																								
12	ZM621	116	6	5	8.17	3	7.56	1	8.19	2	6.37	2	7.63	1	5.91	6	5.39	2	7.27	1	5.00	6	7.41	1
13	ZM621 F2	113	7	6	8.27	1	6.92	2	7.00	5	5.75	3	7.42	2	5.56	9	5.37	3	7.18	2	4.98	7	6.44	6
8	WEEVILAxB-F1	109	10	7	7.46	6	6.29	4	7.08	4	5.41	4	5.75	14	6.00	6	4.13	26	6.60	4	5.38	4	7.31	2
2	[TSEQZIM]C2F2	104	12	6	6.91	10	5.11	17	6.19	13	5.21	6	6.05	11	5.01	14	4.74	14	6.10	9	4.65	11	5.76	12
1	Z97SYNGLS-F2-#	105	13	8	7.44	7	4.92	23	6.46	9	3.87	22	6.55	6	5.53	9	4.75	13	6.39	6	5.08	5	7.00	4
16	SYNTHETIC NUE-SR-#	101	15	8	6.47	13	6.09	7	6.08	19	3.60	25	5.61	16	5.20	14	4.32	25	6.44	5	3.26	22	6.42	7
15	SYNTHETIC DR-SR-#	100	16	8	5.95	24	6.13	6	6.25	11	3.58	27	5.01	22	4.54	18	5.17	6	3.92	28	3.10	25	4.95	23
19	KAKHOMERA	95	16	6	6.12	20	6.15	5	5.84	21	4.39	14	5.82	13	4.84	15	4.71	16	5.29	16	4.83	9	5.40	16
10	OBATAMPA-#	95	17	7	6.09	21	4.33	26	6.47	8	3.99	21	5.69	15	4.55	18	4.61	21	4.70	21	2.63	26	5.57	14
OPVs with anthesis date between 75 and 78 days																								
3	AC969A-SRJF2	93	15	9	7.98	4	4.94	20	7.51	3	4.74	9	7.13	3	5.42	12	4.04	27	6.21	8	6.34	3	5.40	17
17	TASEQ-#	97	15	8	6.41	15	6.07	8	6.14	14	4.73	10	5.57	17	4.67	17	4.66	19	4.12	26	2.33	27	6.53	5
28	LOCAL CHECK	91	17	10	6.30	18	4.09	28	5.11	28	8.43	1	6.01	12	4.99	15	3.34	28	6.64	3	9.23	1	3.85	28
24	KILIMA SR	92	18	8	6.21	19	5.08	18	5.24	26	4.62	11	5.17	19	5.06	15	4.35	23	5.30	15	4.50	13	5.93	9
23	STAHA SR	89	18	7	6.41	14	5.87	10	6.22	12	4.55	12	4.89	23	4.64	19	4.63	20	4.04	27	3.23	23	6.13	8
14	LA-POSTA-SEQC6-SR	91	19	7	5.52	27	4.31	27	5.54	23	3.58	27	4.13	28	3.99	22	5.11	8	4.26	25	1.52	28	5.02	20
Mean		99	15	7	6.68	.	5.47	.	6.26	.	4.60	.	5.73	.	4.98	15	4.75	.	5.44	.	4.37	.	5.62	.
LSD (0.05)					1.39	.	1.62	.	1.13	.	1.03	.	0.92	.	0.53		0.98	.	1.56	.	0.81	.	1.34	.
Min		81	6	5	5.21	.	4.09	.	5.11	.	3.36	.	4.13	.	3.99	4	3.34	.	3.92	.	1.52	.	3.85	.
Max		126	19	10	8.27	.	7.56	.	8.22	.	8.43	.	7.63	.	6.25	22	5.53	.	7.27	.	9.23	.	7.41	.

ILPOP00: Results of intermediate and late maturing OPVs from CIMMYT, Malawi, and Tanzania across 37 sites in eastern and southern Africa, 1999/00.

Entry	Pedigree	Across			Grain yield - Mid altitudes eastern Africa								Grain yield - N stress														
		RelGY	Rank		Kamenyamiggo Uga		Kitale Ken		Bungoma Ken		Bako Eth		Across		Msekera Zam		Makoholi Zim		Harare Zim		Umbeluzzi Moz		Sebele Bot		Chitedze Mal		
		%	Avg	Sidev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	
OPVs with anthesis date between 68 and 73 days																											
9	P501-SR/P502-SR-F1	126	6	7	3.86	1	5.80	1	7.82	2	8.42	4	2.56	7	3.91	1	0.45	10	3.31	1	1.78	22	1.18	13	2.78	10	
18	MASIKA	106	11	6	3.36	9	3.31	15	5.55	19	7.40	12	2.04	12	3.24	6	0.33	22	2.19	12	1.76	24	1.20	11	2.48	18	
4	ZM607c4F2	108	12	7	3.44	6	3.69	8	5.67	18	6.94	16	2.21	7	3.05	12	0.58	3	2.79	4	2.11	15	1.28	4	2.66	11	
5	ZM605c4F2	103	12	7	3.84	2	2.49	24	7.01	4	6.74	21	2.10	11	3.51	3	0.27	25	2.14	13	2.60	3	1.24	8	2.27	22	
6	EV98ZM607-F2	102	14	8	3.23	12	2.03	28	6.50	8	6.12	24	1.97	12	3.00	14	0.53	6	2.34	10	1.06	27	1.35	3	2.87	8	
7	EV98ZM605-F2	100	14	7	3.08	14	2.94	21	5.82	14	7.41	11	1.77	17	2.73	18	0.54	4	2.38	9	1.76	23	1.07	16	2.18	24	
21	CHITIBU	95	15	8	3.38	8	2.15	27	4.46	27	8.13	8	1.95	14	2.62	23	0.71	1	1.98	18	2.28	10	0.91	25	2.59	15	
11	S91SIWQ	100	16	8	3.60	4	3.75	7	5.67	17	4.93	28	1.87	15	2.66	19	0.28	24	2.08	14	2.58	5	1.22	9	2.88	6	
25	SYN C	94	17	7	2.92	18	3.44	11	5.18	24	5.88	26	1.85	14	3.21	8	0.34	19	1.56	24	2.41	7	1.60	1	2.62	13	
27	MMI	81	18	7	2.88	19	3.15	17	6.61	5	9.04	1	1.71	19	2.62	23	0.41	13	1.64	23	1.90	19	1.06	17	2.34	20	
26	POP BH	95	18	6	2.42	24	3.32	14	5.34	22	6.93	17	1.87	17	2.60	24	0.33	20	2.06	15	2.23	12	1.01	21	3.36	3	
22	TMV-1 SR	94	18	7	3.29	10	2.76	23	5.09	26	6.08	25	1.82	17	2.84	17	0.33	21	2.01	17	2.14	14	1.21	10	2.47	19	
20	SUNDWE	87	19	6	2.55	22	3.04	19	5.47	20	6.85	20	1.64	21	2.63	20	0.36	18	1.64	22	1.80	21	0.98	22	2.16	26	
OPVs with anthesis date between 73 and 75 days																											
12	ZM621	116	6	5	3.05	16	3.06	18	7.56	3	8.56	2	2.20	9	3.19	9	0.48	9	2.86	3	1.96	18	1.24	7	2.83	9	
13	ZM621 F2	113	7	6	2.65	21	3.43	12	6.54	7	7.87	10	2.24	7	3.21	7	0.50	8	2.66	6	1.88	20	1.37	2	3.37	2	
8	WEEVILxB-F1	109	10	7	3.60	3	4.79	4	8.01	1	8.15	7	2.02	12	3.13	11	0.42	12	2.49	7	2.60	4	1.01	19	3.02	4	
2	[TSEQZIM]C2F2	104	12	6	2.42	25	3.28	16	6.05	11	7.09	15	2.29	9	3.13	10	0.51	7	2.77	5	2.20	13	1.16	14	3.76	1	
1	Z97SYNGLS-F2-#	105	13	8	3.43	7	4.38	5	6.28	9	6.90	19	2.12	14	2.91	16	0.39	14	2.44	8	2.37	8	0.83	27	1.82	27	
16	SYNTHETIC NUE-SR-#	101	15	8	3.21	13	5.66	2	5.41	21	6.91	18	1.90	14	3.53	2	0.27	26	2.26	11	2.24	11	1.25	6	2.62	14	
15	SYNTHETIC DR-SR-#	100	16	8	3.27	11	2.98	20	5.68	16	7.26	13	1.74	16	3.37	4	0.64	2	1.68	21	1.50	26	1.15	15	2.17	25	
19	KAKHOMERA	95	16	6	2.67	20	3.50	10	5.85	13	6.46	22	1.66	19	3.05	13	0.43	11	1.78	20	1.74	25	0.93	24	2.31	21	
10	OBATAMPA-#	95	17	7	2.33	26	3.69	9	5.68	15	7.16	14	1.66	19	2.36	27	0.28	23	1.39	25	2.74	1	1.19	12	1.62	28	
OPVs with anthesis date between 75 and 78 days																											
3	AC969A-SRJF2	93	15	9	2.53	23	3.79	6	6.61	6	8.46	3	1.87	16	3.26	5	0.37	17	1.98	19	2.02	16	0.78	28	2.63	12	
17	TASEQ-#	97	15	8	3.08	15	3.39	13	5.13	25	8.15	6	1.96	15	2.55	25	0.21	28	3.02	2	2.35	9	1.28	5	2.54	16	
28	LOCAL CHECK	91	17	10	3.54	5	2.29	25	2.80	28	8.22	5	1.70	16	2.14	28	0.53	5	0.74	28	.	1.01	20	3.01	5		
24	KILIMA SR	92	18	8	2.29	27	5.61	3	6.11	10	6.34	23	1.65	19	2.44	26	0.39	15	1.31	27	2.67	2	0.93	23	2.25	23	
23	STAHA SR	89	18	7	2.93	17	2.87	22	5.29	23	7.98	9	1.59	20	2.62	21	0.38	16	1.34	26	2.46	6	0.91	26	2.88	7	
14	LA-POSTA-SEQC6-SR	91	19	7	2.26	28	2.16	26	6.00	12	5.57	27	1.80	17	2.97	15	0.23	27	2.02	16	1.98	17	1.05	18	2.48	17	
Mean		99	15	7	3.04	.	3.46	.	5.90	.	7.21	.	1.92	14	2.95	.	0.41	.	2.10	.	2.12	.	1.12	.	2.61	.	
LSD (0.05)					0.82	.	2.34	.	1.78	.	1.72	.	0.31		1.21	.	0.25	.	0.79	.	1.35	.	0.48	.	0.97	.	
Min		81	6	5	2.26	.	2.03	.	2.80	.	4.93	.	1.59	7	2.14	.	0.21	.	0.74	.	1.06	.	0.78	.	1.62	.	
Max		126	19	10	3.86	.	5.80	.	8.01	.	9.04	.	2.56	21	3.91	.	0.71	.	3.31	.	2.74	.	1.60	.	3.76	.	

ILPOP00: Results of intermediate and late maturing OPVs from CIMMYT, Malawi, and Tanzania across 37 sites in eastern and southern Africa, 1999/00.

Entry	Pedigree	Across			Grain yield - N stress						Grain yield - Drought stress											
		RelGY	Rank		Harare Zim		Arusha Tan		Kenya		Across		Pelotshettha Bot		Mazozo Ang		Monduli Tan		Arusha Tan		Chitala Mal	
		%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
OPVs with anthesis date between 68 and 73 days																						
9	P501-SR/P502-SR-F1	126	6	7	2.19	1	2.42	7	5.03	1	2.75	6	2.58	2	5.67	2	0.62	3	1.56	3	3.64	2
18	MASIKA	106	11	6	1.68	3	2.56	3	2.91	10	2.24	14	2.19	13	4.72	10	0.33	17	1.52	6	2.60	19
4	ZM607c4F2	108	12	7	1.45	7	2.49	6	3.46	3	2.53	11	2.34	6	4.26	14	0.40	12	1.27	11	3.22	7
5	ZM605c4F2	103	12	7	1.28	12	2.92	2	2.66	14	2.10	12	2.37	5	3.19	19	0.43	8	1.13	19	2.67	16
6	EV98ZM607-F2	102	14	8	1.15	18	2.10	15	3.32	4	2.41	10	1.70	22	5.57	5	0.63	2	1.87	1	3.39	4
7	EV98ZM605-F2	100	14	7	1.00	22	2.22	11	2.03	23	2.25	11	1.78	21	3.53	17	0.36	15	1.60	2	2.92	12
21	CHITIBU	95	15	8	1.14	19	2.52	5	2.75	11	1.77	16	1.09	28	2.05	25	0.34	16	1.22	14	2.70	15
11	S91SIWQ	100	16	8	1.12	20	1.89	21	2.15	17	2.26	11	2.69	1	4.27	13	1.03	1	1.40	9	2.56	20
25	SYN C	94	17	7	1.00	23	2.38	8	1.57	27	1.95	15	2.58	3	2.45	23	0.52	5	1.06	23	2.99	11
27	MMI	81	18	7	0.85	26	2.06	16	2.54	15	2.25	17	1.54	26	4.80	9	0.27	23	1.39	10		
26	POP BH	95	18	6	0.98	24	2.23	10	2.05	21	2.08	16	2.52	4	4.06	15	0.42	10	1.04	25	2.39	23
22	TMV-1 SR	94	18	7	0.93	25	2.36	9	2.05	20	2.28	11	2.30	7	4.32	12	0.36	13	1.40	8	3.18	9
20	SUNDWE	87	19	6	0.83	27	1.44	27	2.92	9	1.70	21	1.69	23	3.02	20	0.11	28	1.11	21	3.26	6
OPVs with anthesis date between 73 and 75 days																						
12	ZM621	116	6	5	1.99	2	2.04	17	3.20	6	2.63	7	2.20	12	5.61	4	0.42	9	1.52	4	3.31	5
13	ZM621 F2	113	7	6	1.58	4	2.53	4	3.04	8	2.33	13	2.30	8	3.90	16	0.20	26	1.47	7	3.16	10
8	WEEVILAxB-F1	109	10	7	1.44	8	2.02	18	2.03	22	1.91	19	1.94	17	3.49	18	0.30	21	1.13	18	2.77	13
2	[TSEQZIM]C2F2	104	12	6	1.56	5	1.89	20	3.62	2	2.19	14	2.23	10	4.34	11	0.36	14	1.52	5	2.52	21
1	Z97SYNGLS-F2-#	105	13	8	1.20	17	3.97	1	3.12	7	1.94	13	2.20	11	1.90	26	0.45	7	1.24	12	3.47	3
16	SYNTHETIC NUE-SR-#	101	15	8	1.29	11	1.89	22	1.81	25	2.11	19	1.95	16	5.43	7	0.24	25	0.91	28	2.38	24
15	SYNTHETIC DR-SR-#	100	16	8	1.23	13	1.64	24	2.31	16	2.34	14	1.82	20	5.13	8	0.55	4	1.15	17	1.90	27
19	KAKHOMERA	95	16	6	1.22	15	2.17	13	1.33	28	2.04	14	2.14	14	2.99	21	0.46	6	1.20	15	2.63	18
10	OBATAMPA-#	95	17	7	1.08	21	2.15	14	2.14	18	2.48	12	2.29	9	6.36	1	0.41	11	0.97	26	2.66	17
OPVs with anthesis date between 75 and 78 days																						
3	AC969A-SR]F2	93	15	9	1.21	16	1.93	19	2.68	13	1.86	17	1.93	18	2.10	24	0.31	20	1.08	22	2.49	22
17	TASEQ-#	97	15	8	1.41	9	1.59	26	2.70	12	2.13	17	1.88	19	5.66	3	0.30	22	1.12	20	2.01	26
28	LOCAL CHECK	91	17	10	1.23	14	1.71	23	3.23	5	1.74	18	1.17	27	1.81	27	0.32	18	1.24	13	3.79	1
24	KILIMA SR	92	18	8	1.46	6	1.64	25	1.76	26	1.71	20	1.57	24	1.61	28	0.25	24	0.93	27	2.72	14
23	STAHA SR	89	18	7	0.73	28	0.92	28	2.07	19	1.68	23	1.56	25	2.91	22	0.16	27	1.04	24	3.20	8
14	LA-POSTA-SEQC6-SR	91	19	7	1.31	10	2.18	12	1.97	24	2.16	17	2.00	15	5.48	6	0.31	19	1.15	16	2.29	25
Mean		99	15	7	1.27	.	2.14	.	2.59	.	2.14	15	2.02	.	3.95	.	0.39	.	1.26	.	2.84	.
LSD (0.05)					0.53	.	1.10	.	1.11	.	0.50		0.90	.	2.59	.	0.49	.	0.51	.	0.92	.
Min		81	6	5	0.73	.	0.92	.	1.33	.	1.68	6	1.09	.	1.61	.	0.11	.	0.91	.	1.90	.
Max		126	19	10	2.19	.	3.97	.	5.03	.	2.75	23	2.69	.	6.36	.	1.03	.	1.87	.	3.79	.

ILPOP00: Results of intermediate and late maturing OPVs from CIMMYT, Malawi, and Tanzania across 37 sites in eastern and southern Africa, 1999/00.

Entry	Pedigree	Across			Drought				Low N			Drought		
		RelGY	Rank	Stdev	Nanga Zam		Chiredzi Zim		ASI	Ears/ Plant	Leaf Senes	ASI	Ears/ Plant	Leaf Senes
					t/ha	Rank	t/ha	Rank						
OPVs with anthesis date between 68 and 73 days														
9	P501-SR/P502-SR-F1	126	6	7	1.18	25	3.98	4	7.4	0.95	3.8	5.1	0.61	4.9
18	MASIKA	106	11	6	1.17	26	3.18	10	7.4	0.90	3.7	8.0	0.49	4.6
4	ZM607c4F2	108	12	7	1.21	23	5.01	1	5.4	0.82	3.7	6.4	0.47	4.5
5	ZM605c4F2	103	12	7	1.85	7	3.06	12	7.1	0.84	3.8	4.4	0.44	5.0
6	EV98ZM607-F2	102	14	8	1.53	15	2.21	24	6.1	0.85	3.7	6.0	0.51	5.0
7	EV98ZM605-F2	100	14	7	2.31	1	3.24	9	9.0	0.73	4.3	5.7	0.43	5.7
21	CHITIBU	95	15	8	2.03	2	2.95	14	6.7	0.81	4.2	8.8	0.33	4.8
11	S91SIWQ	100	16	8	1.66	12	2.23	22	6.8	0.77	3.5	4.2	0.59	4.7
25	SYN C	94	17	7	1.26	22	2.76	17	10.8	0.78	3.3	7.2	0.45	4.8
27	MMI	81	18	7					8.7	0.74	4.0	6.4	0.40	5.0
26	POP BH	95	18	6	1.27	20	2.83	16	8.6	0.74	3.2	8.3	0.40	4.6
22	TMV-1 SR	94	18	7	1.48	16	2.90	15	9.0	0.76	4.5	4.5	0.38	4.6
20	SUNDWE	87	19	6	1.27	21	1.43	28	10.3	0.73	4.3	7.3	0.27	5.8
OPVs with anthesis date between 73 and 75 days														
12	ZM621	116	6	5	1.68	11	3.65	5	6.5	0.83	3.8	5.3	0.40	4.6
13	ZM621 F2	113	7	6	1.28	19	4.00	3	8.2	0.89	3.5	6.0	0.43	4.4
8	WEEVILAxB-F1	109	10	7	1.11	27	2.60	20	8.2	0.80	3.7	9.7	0.30	4.5
2	[TSEQZIM]C2F2	104	12	6	1.20	24	3.13	11	6.2	0.87	3.3	7.2	0.56	4.7
1	Z97SYNGLS-F2-#	105	13	8	1.70	10	2.63	19	6.5	0.81	4.2	4.6	0.48	4.0
16	SYNTHETIC NUE-SR-#	101	15	8	1.94	6	1.94	25	7.3	0.79	4.5	7.7	0.31	4.7
15	SYNTHETIC DR-SR-#	100	16	8	1.36	17	4.45	2	7.4	0.85	4.8	4.3	0.41	4.9
19	KAKHOMERA	95	16	6	1.83	8	3.05	13	9.3	0.70	4.7	7.6	0.38	4.6
10	OBATAMPA-#	95	17	7	2.00	4	2.67	18	8.3	0.83	5.2	5.9	0.47	5.0
OPVs with anthesis date between 75 and 78 days														
3	AC969A-SR]F2	93	15	9	1.70	9	3.41	6	10.0	0.76	3.3	5.7	0.24	4.5
17	TASEQ-#	97	15	8	2.02	3	1.91	26	7.7	0.87	4.5	3.0	0.39	4.6
28	LOCAL CHECK	91	17	10	1.62	14	2.23	23	9.2	0.69	3.3	5.8	0.43	4.5
24	KILIMA SR	92	18	8	1.64	13	3.25	8	9.7	0.79	4.0	6.4	0.35	4.7
23	STAHA SR	89	18	7	1.08	28	1.80	27	12.4	0.70	3.7	8.1	0.33	5.3
14	LA-POSTA-SEQC6-SR	91	19	7	1.31	18	2.59	21	4.5	0.93	4.7	3.3	0.37	4.6
Mean		99	15	7	1.56	.	2.94	.	8.0	0.81	4.0	6.2	0.41	4.8
LSD (0.05)					0.87	.	1.60	.	3.0	0.08	0.9	2.4	0.15	0.6
Min		81	6	5	1.08	.	1.43	.	4.5	0.69	3.2	3.0	0.24	4.0
Max		126	19	10	2.31	.	5.01	.	12.4	0.95	5.2	9.7	0.61	5.8

EIHYB00: Results of early & intermediate maturing hybrids from CIMMYT, Seed-Co, Monsanto, Pannar, Pioneer, and Zambia across 40 sites in eastern and southern Africa 1999/00.

Entry	Name	Pedigree	Origin	Across			Grain yield - Lowlands														Mid Altitudes eastern Africa			
				Rel GY	Rank		Across		Mazozo Ang		Nanga Zam		Chitala Mal		Baka Mal		Bwanje Mal		Bolero Mal		Across		Mbimba Tan	
					%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Avg	t/ha
Hybrids with anthesis date between 66 and 69 days																								
5	CZH99005	CZL00007/CZL00008//CML312/CZL99014	CIMMYT	108	13	28	4.94	10	3.62	2	4.08	11	6.90	7	4.51	15	7.17	2	3.34	23	6.24	14	5.82	12
23	SC403	SC403	Seed Co	103	13	27	5.12	10	2.85	13	4.04	12	7.45	3	4.18	24	7.13	3	5.07	2	5.49	18	4.53	26
25	SC407	SC407	Seed Co	103	15	26	4.35	18	2.48	18	3.12	32	4.39	32	5.63	1	6.13	16	4.36	9	5.58	18	4.97	22
7	CZH99007	CZL00034/CZL99014//CZL00007/CZL00008	CIMMYT	104	16	24	4.52	16	2.87	12	3.77	20	5.82	22	4.55	14	6.76	6	3.32	24	4.63	27	4.94	23
3	CZH99003	CZL00007/CZL00033//CML312/CZL99014	CIMMYT	101	16	24	4.30	20	2.27	20	3.91	19	6.16	17	4.35	20	5.73	23	3.38	22	5.11	23	5.65	13
6	CZH99006	CZL00007/CZL00008//CZL99014	CIMMYT	98	18	24	4.32	19	3.00	10	4.11	10	5.07	27	3.84	29	5.92	22	3.98	18	4.93	23	4.99	21
4	CZH99004	CZL00007/CZL00033//CZL99014	CIMMYT	91	20	24	4.58	17	2.85	14	4.00	14	6.68	8	3.97	27	5.64	24	4.33	12	4.44	24	5.03	20
24	SC405	SC405	Seed Co	84	23	24	4.68	15	1.94	24	3.73	21	5.67	23	4.70	13	6.56	10	5.46	1	5.88	17	4.25	28
12	CZH99012	CZL00033/CML205//CZL99008	CIMMYT	84	25	21	3.84	27	2.24	21	3.46	27	5.44	26	3.76	31	5.20	28	2.94	30	4.97	25	3.57	31
22	SC401	SC401	Seed Co	73	26	20	3.80	24	1.25	31	4.45	6	4.73	30	3.05	32	5.13	29	4.19	14	4.22	26	2.76	32
Hybrids with anthesis date between 69 and 71 days																								
21	C8031	C8031	Monsanto	115	11	29	5.38	7	3.13	7	5.63	2	7.50	2	5.05	9	6.65	8	4.35	11	6.65	13	6.65	3
15	CZH99015	CML395/CML312//CML440	CIMMYT	113	12	27	4.68	15	3.05	9	3.60	24	6.14	18	4.83	11	6.50	12	3.99	17	6.39	13	5.10	18
2	CZH99002	CZL00007/CZL99014//CML312	CIMMYT	104	14	29	4.41	19	2.17	22	3.44	28	6.54	11	4.72	12	6.44	13	3.17	26	7.05	8	5.94	9
9	CZH99009	CZL99013/CML312//CZL00007/CZL00008	CIMMYT	105	15	27	4.50	17	3.23	4	3.64	23	5.92	20	5.06	8	6.25	14	2.93	31	6.09	16	6.14	8
8	CZH99008	CZL00034/CZL99014//CZL00008	CIMMYT	104	15	26	4.47	18	3.10	8	3.70	22	5.05	28	4.26	23	6.54	11	4.15	15	5.84	17	5.57	14
29	SC5201	SC5201	Seed Co	98	18	24	4.54	17	3.41	3	3.42	29	6.59	9	4.29	22	6.03	19	3.46	21	5.19	21	4.25	27
1	CZH99001	CZL00007/CZL99014//CZL99013/CML312	CIMMYT	99	18	25	4.06	24	2.88	11	3.23	31	6.45	14	4.06	26	4.72	32	3.02	28	5.74	17	6.26	5
28	SC515	SC515	Seed Co	91	19	25	4.82	13	1.44	29	3.96	16	7.41	5	4.36	19	6.69	7	5.05	3	5.42	19	5.30	16
17	CZH99017	CML216/K64R/CML440	CIMMYT	99	19	24	4.61	15	2.27	19	3.51	25	6.11	19	5.13	6	6.07	17	4.59	5	4.79	25	3.87	30
26	SC501	SC501	Seed Co	88	19	24	4.56	16	1.05	32	3.91	18	6.28	15	4.50	16	6.63	9	4.98	4	5.84	16	3.97	29
13	CZH99013	CML144/CML159//PL15OPM	CIMMYT	85	23	21	3.71	26	1.46	28	4.19	8	4.97	29	4.09	25	4.96	31	2.58	32	5.16	23	5.11	17
Hybrids with anthesis date between 71 and 74 days																								
20	PAN31	PAN31	Pannar	109	12	30	5.16	8	2.74	15	4.88	3	7.00	6	5.30	3	6.95	4	4.12	16	7.13	7	5.88	10
10	CZH99010	CZL99013/CML312//CZL00006	CIMMYT	110	12	30	5.03	10	2.57	16	4.04	13	7.51	1	5.43	2	7.31	1	3.30	25	6.85	10	7.05	2
18	CZH99018	CML395/CML442//CML441	CIMMYT	107	13	27	4.41	19	2.56	17	3.93	17	6.56	10	4.31	21	6.01	21	3.07	27	6.09	13	6.18	7
14	CZH99014	CML444/CML395//CML440	CIMMYT	92	13	24	4.86	11	3.16	6	4.48	5	5.86	21	5.18	5	6.02	20	4.46	8	5.25	24	4.92	24
30	PHB30R93	PHB30R93	Pioneer	104	14	29	4.87	14	1.36	30	5.89	1	6.52	12	5.09	7	6.05	18	4.30	13	7.12	6	6.21	6
32	LOCAL CHECK2		Various	105	14	29	4.30	18	1.96	23	4.52	4	5.54	25	4.43	18	5.02	30	4.36	10	7.74	7	8.63	1
31	LOCAL CHECK1		Various	105	15	28	4.43	18	1.63	26	3.99	15	7.41	4	3.77	30	5.28	27	4.52	7	7.09	8	5.85	11
11	CZH99011	CZL99005/CZL99014//CML205	CIMMYT	101	16	26	4.00	25	1.70	25	3.50	26	6.51	13	3.89	28	5.42	26	2.99	29	6.89	8	6.54	4
27	SC513	SC513	Seed Co	99	16	28	4.61	13	3.75	1	4.12	9	4.67	31	4.85	10	6.77	5	3.52	20	6.98	9	5.47	15
16	CZH99016	CML395/CML216//CML440	CIMMYT	102	17	24	4.54	16	3.19	5	3.25	30	5.64	24	5.26	4	6.24	15	3.69	19	5.46	22	4.62	25
19	GV512	GV512	ZAMBIA	88	21	24	4.42	16	1.58	27	4.24	7	6.20	16	4.45	17	5.55	25	4.52	6	5.47	20	5.05	19
Mean				99	16	26	4.53	17	2.46	.	3.99	.	6.15	.	4.53	.	6.11	.	3.92	.	5.84	17	5.35	.
LSD (0.05)							0.58		1.39	.	1.50	.	2.17	.	1.12	.	1.15	.	0.84	.	0.88		0.96	.
Min				73	11	20	3.71	7	1.05	.	3.12	.	4.39	.	3.05	.	4.72	.	2.58	.	4.22	6	2.76	.
Max				115	26	30	5.38	27	3.75	.	5.89	.	7.51	.	5.63	.	7.31	.	5.46	.	7.74	27	8.63	.

EIHYB00: Results of early & intermediate maturing hybrids from CIMMYT, Seed-Co, Monsanto, Pannar, Pioneer, and Zambia across 40 sites in eastern and southern Africa 1999/00.

Entry	Name	Across			Grain yield - Mid altitudes eastern Africa								Grain yield - Mid altitudes southern Africa															
		Rel GY	Rank	Stdev	Lambo Tan	Kitale Ken	Embu Ken	Bako Eth	Arcturus Zim	Ratray Zim	Goodhope Bot	ART Farm Zim	ART Farm Zim	Mazowe Zim														
		%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank		
Hybrids with anthesis date between 66 and 69 days																												
5	CZH99005	108	13	28	5.57	19	5.20	11	6.80	18	7.83	9	5.53	12	5.00	20	4.27	16	7.27	14	4.24	5	6.08	13	7.30	13	4.53	2
23	SC403	103	13	27	6.44	4	4.54	15	7.59	14	4.37	30	5.50	15	5.83	14	5.00	6	8.99	1	3.19	27	4.88	24	7.52	10	3.10	23
25	SC407	103	15	26	6.26	6	2.45	32	7.74	11	6.50	18	5.72	12	8.70	1	4.31	14	6.74	19	4.00	6	4.84	25	7.53	9	3.94	9
7	CZH99007	104	16	24	5.10	26	3.03	28	5.92	25	4.16	31	5.03	18	5.55	17	3.92	24	5.97	27	3.85	10	5.15	20	6.88	18	3.90	11
3	CZH99003	101	16	24	4.91	30	4.31	17	5.81	26	4.86	28	5.46	14	5.60	16	3.70	27	6.46	23	4.32	3	7.11	5	7.65	7	3.41	20
6	CZH99006	98	18	24	5.60	17	2.58	29	6.53	23	4.94	27	4.90	20	4.91	23	4.19	17	6.64	20	3.38	24	4.72	26	6.52	22	3.94	8
4	CZH99004	91	20	24	6.38	5	2.51	31	4.74	31	3.55	32	4.67	21	4.17	29	4.02	20	6.35	25	3.86	9	4.14	30	5.71	28	4.48	3
24	SC405	84	23	24	7.27	1	3.94	19	5.81	27	8.12	8	4.21	27	6.20	8	3.54	30	5.10	31	2.98	28	4.35	28	5.50	30	1.75	31
12	CZH99012	84	25	21	4.93	29	3.62	24	5.74	28	6.97	15	4.01	27	4.91	21	3.53	31	4.47	32	1.97	32	4.30	29	5.26	31	3.60	14
22	SC401	73	26	20	5.62	15	3.13	27	4.12	32	5.46	25	3.76	28	4.68	25	2.88	32	5.35	29	3.55	16	3.80	32	4.09	32	1.95	29
Hybrids with anthesis date between 69 and 71 days																												
21	C8031	115	11	29	5.42	21	3.78	22	7.60	13	9.78	4	5.71	9	5.79	15	4.71	9	7.41	10	4.28	4	6.34	10	7.83	5	3.63	13
15	CZH99015	113	12	27	5.11	25	6.31	4	7.78	10	7.63	10	5.39	15	6.02	11	4.44	11	6.53	22	3.47	21	5.90	15	7.47	12	3.90	10
2	CZH99002	104	14	29	6.08	9	6.00	6	7.79	9	9.46	5	6.12	7	7.59	3	4.36	12	6.77	18	4.74	1	7.00	7	8.16	4	4.24	5
9	CZH99009	105	15	27	4.85	31	5.52	9	7.21	16	6.71	17	5.51	13	6.20	9	4.00	22	7.52	8	3.57	15	6.17	11	6.96	17	4.15	6
8	CZH99008	104	15	26	5.35	22	4.42	16	6.69	20	7.17	13	5.51	14	7.59	4	4.35	13	7.47	9	2.76	31	5.30	18	7.60	8	3.52	17
29	SC5201	98	18	24	5.70	14	2.57	30	6.18	24	7.22	12	4.80	21	5.37	18	3.94	23	5.66	28	3.81	11	5.03	21	6.39	26	3.42	19
1	CZH99001	99	18	25	5.57	18	5.01	12	6.62	22	5.24	26	5.14	17	4.35	26	4.05	18	6.54	21	3.50	18	7.01	6	6.97	16	3.59	15
28	SC515	91	19	25	5.91	10	3.63	23	5.47	29	6.77	16	5.09	17	4.26	27	4.93	7	7.34	13	4.65	2	5.94	14	6.26	27	2.22	27
17	CZH99017	99	19	24	5.21	23	3.93	20	5.37	30	5.59	24	4.67	24	4.72	24	3.78	26	6.09	26	3.40	22	4.93	23	6.76	20	3.00	25
26	SC501	88	19	24	6.22	8	4.29	18	8.29	7	6.44	20	4.68	22	4.21	28	3.62	28	6.94	17	3.94	7	5.63	16	6.46	25	1.93	30
13	CZH99013	85	23	21	4.74	32	3.17	26	6.83	17	5.93	22	3.93	29	4.03	30	3.60	29	5.16	30	2.91	29	4.09	31	5.64	29	2.10	28
Hybrids with anthesis date between 71 and 74 days																												
20	PAN31	109	12	30	6.26	7	5.86	7	8.53	4	9.13	6	5.78	11	5.92	12	5.00	5	8.58	5	3.75	12	6.72	8	7.51	11	2.98	26
10	CZH99010	110	12	30	5.45	20	7.09	2	8.40	6	6.27	21	6.50	8	6.48	6	5.35	3	8.91	2	3.20	26	8.47	1	9.56	1	3.56	16
18	CZH99018	107	13	27	5.76	12	6.59	3	7.34	15	4.57	29	6.06	10	6.66	5	5.12	4	7.38	11	3.51	17	7.26	4	9.49	2	3.00	24
14	CZH99014	92	13	24	5.07	28	3.84	21					5.49	11	6.11	10	4.28	15	7.60	7	3.74	13	5.49	17	7.68	6		
30	PHB30R93	104	14	29	5.85	11	6.16	5	8.99	2	8.40	7	6.04	10	8.01	2	4.64	10	8.85	3	3.49	19	7.34	3	8.79	3	1.15	32
32	LOCAL CHECK2	105	14	29	5.62	16	5.29	10	7.89	8	11.29	1	5.42	14	3.24	32	5.57	1	8.61	4	3.65	14	6.46	9	6.49	23	3.88	12
31	LOCAL CHECK1	105	15	28	6.55	3	8.07	1	8.50	5	6.45	19	5.48	14	3.42	31	5.45	2	7.79	6	3.28	25	7.96	2	7.02	15	3.46	18
11	CZH99011	101	16	26	5.74	13	5.60	8	9.48	1	7.07	14	5.12	17	4.91	23	4.00	21	7.14	15	3.48	20	5.24	19	7.04	14	4.02	7
27	SC513	99	16	28	6.83	2	4.75	14	7.64	12	10.18	2	5.47	14	5.83	14	4.74	8	7.01	16	3.39	23	6.14	12	6.81	19	4.35	4
16	CZH99016	102	17	24	5.07	27	3.60	25	6.68	21	7.33	11	4.87	22	6.29	7	3.85	25	6.39	24	2.89	30	5.00	22	6.48	24	3.17	21
19	GV512	88	21	24	5.13	24	4.78	13	6.75	19	5.64	23	4.97	18	5.18	19	4.04	19	7.37	12	3.94	8	4.56	27	6.54	21	3.15	22
Mean		99	16	26	5.67		4.55		7.05		6.91		5.19	17	5.56		4.29		6.95		3.58		5.73		7.00		3.37	
LSD (0.05)					1.20		2.01		1.54		3.24		0.53		1.80		0.83		1.06		1.19		2.11		0.91		1.41	
Min		73	11	20	4.74		2.45		4.12		3.55		3.76	7	3.24		2.88		4.47		1.97		3.80		4.09		1.15	
Max		115	26	30	7.27		8.07		9.48		11.29		6.50	29	8.70		5.57		8.99		4.74		8.47		9.56		4.67	

ElIHYB00: Results of early & intermediate maturing hybrids from CIMMYT, Seed-Co, Monsanto, Pannar, Pioneer, and Zambia across 40 sites in eastern and southern Africa 1999/00.

Entry	Name	Across			Grain yield - N stress																				Grain yield - Drought						
		Rel GY	Rank		Across		Mazozo Ang		Kadoma Zim		Msekera Zam		Harare Zim		Makoholi Zim		Umbeluzi Moz		Sussundenga Moz		Sebele Bot		Harare Zim		Arusha Tan		Across		Mazozo Ang		
			%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
Hybrids with anthesis date between 66 and 69 days																															
5	CZH99005	108	13	28	1.72	18	1.76	29	1.28	27	2.81	1	0.78	26	0.44	4	2.08	20	3.40	18	1.50	5	1.52	22	1.58	30	2.53	13	2.65	7	
23	SC403	103	13	27	2.29	9	4.13	6	1.62	7	2.72	2	1.11	18	0.29	9	2.54	14	4.50	1	1.35	14	1.75	12	2.92	4	2.53	13	2.30	14	
25	SC407	103	15	26	2.37	12	5.87	1	1.30	24	2.54	4	1.77	2	0.17	26	2.73	11	3.86	8	1.44	8	1.83	11	2.17	20	2.39	16	2.46	12	
7	CZH99007	104	16	24	2.27	11	3.09	14	1.31	23	2.09	24	1.44	7	0.21	17	3.85	4	3.85	11	1.54	3	2.17	5	3.13	2	2.66	12	2.29	15	
3	CZH99003	101	16	24	2.05	14	2.98	18	1.32	22	2.29	12	0.86	23	0.26	12	2.71	12	3.78	13	1.61	2	1.58	19	3.09	3	2.55	12	2.64	8	
6	CZH99006	98	18	24	1.89	19	3.30	12	1.33	21	2.24	16	0.90	21	0.18	25	2.64	13	3.35	21	1.42	9	1.41	24	2.09	23	2.70	12	3.57	2	
4	CZH99004	91	20	24	1.75	19	2.39	23	1.29	25	1.87	30	1.19	15	0.29	8	2.14	19	3.37	20	1.48	7	1.94	10	1.57	31	1.88	22	2.48	11	
24	SC405	84	23	24	1.36	28	2.62	21	0.96	32	2.11	21	0.54	32	0.04	31	1.19	26	2.75	31	1.26	22	0.48	32	1.66	29	2.02	21	0.84	31	
12	CZH99012	84	25	21	1.58	25	2.13	27	0.98	31	1.98	28	0.64	31	0.19	22	1.76	24	4.08	4	1.17	27	1.35	26	1.47	32	2.25	19	2.42	13	
22	SC401	73	26	20	1.45	24	2.67	20	1.22	28	2.02	26	0.65	29	0.27	11	0.37	30	2.78	29	1.40	11	1.12	28	1.94	25	1.50	30	0.88	30	
Hybrids with anthesis date between 69 and 71 days																															
21	C8031	115	11	29	2.08	12	3.03	16	1.33	20	2.65	3	1.55	5	0.38	7	2.51	15	4.04	5	1.25	23	1.68	16	2.39	11	2.75	9	1.51	26	
15	CZH99015	113	12	27	2.55	6	4.14	5	1.63	6	2.47	6	1.89	1	0.47	3	4.11	2	3.63	14	1.35	15	2.10	6	3.75	1	2.57	13	3.30	3	
2	CZH99002	104	14	29	1.92	17	3.15	13	1.53	11	2.17	18	0.65	30	0.21	18	2.47	16	3.91	7	1.29	19	1.69	15	2.15	22	2.10	21	2.60	10	
9	CZH99009	105	15	27	2.06	17	3.48	9	1.19	29	2.42	9	1.18	16	0.16	27	3.30	7	3.80	12	1.31	18	1.64	18	2.16	21	2.71	13	2.14	17	
8	CZH99008	104	15	26	1.94	15	2.17	25	1.46	15	2.49	5	0.83	24	0.23	15	2.98	8	4.44	3	1.48	6	1.56	20	1.78	28	2.70	15	3.97	1	
29	SC5201	98	18	24	1.92	16	3.04	15	1.35	19	2.10	22	1.62	4	0.44	5	1.65	25	3.26	24	1.28	20	1.66	17	2.77	6	2.23	17	1.69	23	
1	CZH99001	99	18	25	1.67	23	2.79	19	1.48	12	1.91	29	1.04	20	0.14	29	1.95	22	2.93	27	1.05	29	1.41	23	1.98	24	2.26	18	2.06	18	
28	SC515	91	19	25	1.60	21	2.22	24	1.28	26	2.39	10	0.81	25	0.20	20	1.12	27	2.40	32	0.95	32	2.01	8	2.60	9	1.90	22	1.10	28	
17	CZH99017	99	19	24	2.27	14	3.34	10	1.47	13	2.26	15	1.14	17	0.18	23	3.41	5	4.50	2	1.18	25	3.32	1	1.89	26	2.56	13	1.64	25	
26	SC501	88	19	24	1.59	19	1.48	30	1.40	17	2.45	7	1.27	13	0.25	13	1.06	28	3.32	22	1.64	1	1.16	27	1.89	27	1.73	25	0.51	32	
13	CZH99013	85	23	21	1.81	21	3.90	7	1.07	30	1.69	32	0.67	28	0.22	16	2.75	10	3.37	19	1.18	26	0.70	31	2.58	10	2.33	17	1.72	21	
Hybrids with anthesis date between 71 and 74 days																															
20	PAN31	109	12	30	1.80	16	1.30	31	1.77	3	2.43	8	0.89	22	0.29	10	2.41	17	3.57	15	1.26	21	1.72	13	2.32	15	2.71	11	1.71	22	
10	CZH99010	110	12	30	2.12	14	3.00	17	1.87	1	2.16	19	1.24	14	0.02	32	3.32	6	3.85	10	1.16	28	2.20	4	2.38	13	1.93	24	2.29	16	
18	CZH99018	107	13	27	2.07	13	2.50	22	1.54	10	2.12	20	1.48	6	0.20	21	2.94	9	3.40	17	1.35	13	2.52	2	2.70	8	2.83	9	2.81	6	
14	CZH99014	92	13	24	2.34	12	5.27	2	1.61	8	2.27	13	1.33	12	0.20	19	3.92	3	3.30	23	1.39	12	1.70	14	2.39	12	2.86	9	2.96	5	
30	PHB30R93	104	14	29	1.70	16	1.99	28	1.66	4	2.22	17	1.38	9	0.58	1	0.99	29	3.26	25	1.54	4	1.04	29	2.32	14	2.06	21	0.98	29	
32	LOCAL CHECK2	105	14	29	1.72	15	0.96	32	1.63	5	2.27	14	1.70	3	0.39	6	.	.	3.42	16	0.99	31	1.99	9	2.17	19	2.54	14	1.67	24	
31	LOCAL CHECK1	105	15	28	1.97	14	3.79	8	1.84	2	1.99	27	1.37	10	0.48	2	.	.	3.12	26	1.33	17	1.54	21	2.29	16	2.38	16	1.48	27	
11	CZH99011	101	16	26	2.03	14	3.31	11	1.41	16	2.09	23	1.09	19	0.25	14	2.24	18	3.93	6	1.40	10	2.26	3	2.28	17	2.54	13	2.63	9	
27	SC513	99	16	28	1.95	19	4.87	3	1.57	9	1.84	31	1.35	11	0.14	28	1.96	21	2.77	30	1.34	16	1.40	25	2.28	18	1.99	22	1.81	19	
16	CZH99016	102	17	24	2.40	11	4.31	4	1.47	14	2.32	11	1.41	8	0.18	24	4.52	1	3.85	9	1.23	24	2.02	7	2.74	7	2.23	16	3.01	4	
19	GV512	88	21	24	1.59	24	2.13	26	1.37	18	2.05	25	0.72	27	0.07	30	1.87	23	2.85	28	1.00	30	1.02	30	2.85	5	1.85	26	1.76	20	
Mean		99	16	26	1.93	16	3.04	.	1.42	.	2.23	.	1.14	.	0.25	.	2.45	.	3.52	.	1.32	.	1.67	.	2.32	.	2.34	17	2.12	.	
LSD (0.05)					0.35		2.50	.	0.30	.	0.72	.	0.57	.	0.35	.	1.06	.	1.34	.	0.52	.	1.15	.	0.82	.	0.66		0.94	.	
Min		73	11	20	1.36	6	0.96	.	0.96	.	1.69	.	0.54	.	0.02	.	0.37	.	2.40	.	0.95	.	0.48	.	1.47	.	1.50	9	0.51	.	
Max		115	26	30	2.55	28	5.87	.	1.87	.	2.81	.	1.89	.	0.58	.	4.52	.	4.50	.	1.64	.	3.32	.	3.75	.	2.86	30	3.97	.	

EIHYB00: Results of early & intermediate maturing hybrids from CIMMYT, Seed-Co, Monsanto, Pannar, Pioneer, and Zambia across 40 sites in eastern and southern Africa 1999/00.

Entry	Name	Across			Grain yield - Drought						Grain yield - Eastern Africa dry													
		Rel GY	Rank	Stdev	Nanga Zam		Chiredzi Zim		Chitala Mal		Across		Inyala Tan		Monduli Tan		Arusha Tan		Kitale Ken		Namulonge Uga		Kamenyamiggo Uga	
		%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
Hybrids with anthesis date between 66 and 69 days																								
5	CZH99005	108	13	28	3.58	13	1.37	7	2.51	23	3.68	12	5.80	5	1.00	8	5.82	1	2.83	10	4.37	11	4.23	10
23	SC403	103	13	27	4.04	5	0.83	19	2.94	13	3.16	19	4.03	30	0.33	30	4.93	12	3.14	4	3.14	24	2.79	26
25	SC407	103	15	26	3.32	19	0.96	16	2.82	15	3.18	17	4.08	28	1.15	6	5.60	2	2.19	25	2.64	26	2.60	28
7	CZH99007	104	16	24	3.64	12	2.03	1	2.66	19	3.47	13	5.08	14	0.84	10	5.30	4	2.32	20	3.22	23	4.36	8
3	CZH99003	101	16	24	3.70	11	1.17	11	2.70	18	3.46	15	5.47	10	1.32	3	5.26	5	2.13	27	4.12	15	4.05	14
6	CZH99006	98	18	24	3.47	14	0.86	18	2.89	14	3.51	14	5.51	9	0.78	11	5.00	11	1.93	29	3.63	21	4.77	3
4	CZH99004	91	20	24	2.25	31	1.04	14	1.77	32	3.28	18	5.54	8	0.57	20	4.55	19	2.34	19	3.41	22	3.84	16
24	SC405	84	23	24	3.32	18	0.50	29	3.41	7	2.44	24	4.04	29	0.91	9	3.08	32	2.23	22	2.03	30	2.60	29
12	CZH99012	84	25	21	2.99	23	0.78	22	2.81	17	2.93	23	4.36	25	0.68	18	3.44	30	1.85	30	4.22	13	4.65	6
22	SC401	73	26	20	2.63	28	0.33	32	2.16	28	2.47	27	3.11	32	0.43	27	4.06	24	2.20	24	2.02	31	3.60	20
Hybrids with anthesis date between 69 and 71 days																								
21	C8031	115	11	29	3.87	6	1.89	2	3.72	3	3.56	13	5.18	12	0.77	13	5.04	9	2.21	23	5.49	3	4.06	13
15	CZH99015	113	12	27	2.71	27	1.10	13	3.18	10	3.47	13	4.62	23	1.00	7	4.83	14	2.47	17	4.27	12	4.08	12
2	CZH99002	104	14	29	3.07	22	0.80	21	1.93	30	3.56	11	5.98	3	0.71	15	5.54	3	3.05	8	2.11	29	4.94	2
9	CZH99009	105	15	27	4.97	1	1.21	9	2.51	24	3.46	14	5.81	4	0.34	29	4.89	13	3.15	3	3.76	19	4.25	9
8	CZH99008	104	15	26	3.45	15	1.03	15	2.33	27	3.60	12	5.69	6	0.74	14	5.16	7	2.86	9	4.53	10	4.09	11
29	SC5201	98	18	24	2.49	29	1.62	4	3.10	11	3.14	18	4.10	27	0.70	17	4.42	23	1.20	32	5.04	5	2.74	27
1	CZH99001	99	18	25	3.42	17	1.13	12	2.42	26	3.77	10	6.25	2	1.37	2	3.99	25	2.36	18	4.93	6	3.81	17
28	SC515	91	19	25	3.79	8	0.81	20	1.88	31	3.17	19	4.85	18	0.46	25	3.23	31	2.64	13	5.34	4	3.40	21
17	CZH99017	99	19	24	3.71	10	1.85	3	3.05	12	3.08	21	4.79	19	0.43	26	4.69	16	1.61	31	4.02	17	3.40	22
26	SC501	88	19	24	2.92	25	0.68	25	2.81	16	2.77	21	4.15	26	0.77	12	3.65	29	2.28	21	2.30	27	2.41	32
13	CZH99013	85	23	21	3.28	20	0.75	23	3.56	5	2.99	22	4.73	21	-0.12	32	3.67	28	2.15	26	4.08	16	2.56	30
Hybrids with anthesis date between 71 and 74 days																								
20	PAN31	109	12	30	4.58	2	1.20	10	3.36	9	3.17	16	4.91	17	0.68	19	5.02	10	3.08	6	2.14	28	4.00	15
10	CZH99010	110	12	30	2.30	30	0.55	28	2.60	20	3.67	11	5.09	13	1.96	1	4.72	15	3.10	5	4.63	9	3.73	19
18	CZH99018	107	13	27	4.16	3	0.59	26	3.77	2	3.81	12	4.95	16	0.28	31	5.19	6	3.63	2	4.87	7	4.70	5
14	CZH99014	92	13	24	3.43	16	1.58	5			3.73	13	4.63	22	0.71	16	4.45	22	2.54	15	5.66	2	4.98	1
30	PHB30R93	104	14	29	2.99	24	0.55	27	3.71	4	3.31	15	5.07	15	1.24	5	5.11	8	3.87	1	1.77	32	3.18	24
32	LOCAL CHECK2	105	14	29	3.85	7	0.69	24	3.94	1	3.82	14	6.54	1	0.36	28	3.96	26	2.82	11	6.03	1	4.74	4
31	LOCAL CHECK1	105	15	28	3.27	21	1.34	8	3.42	6	3.20	18	3.71	31	0.56	22	4.62	18	3.06	7	3.92	18	3.31	23
11	CZH99011	101	16	26	4.11	4	0.90	17	2.53	21	3.30	19	5.64	7	0.57	21	4.48	21	2.07	28	4.15	14	4.54	7
27	SC513	99	16	28	3.73	9	0.38	30	2.04	29	3.22	19	4.78	20	0.52	23	4.65	17	2.50	16	2.88	25	2.50	31
16	CZH99016	102	17	24	1.85	32	1.53	6	2.52	22	3.38	16	4.43	24	0.47	24	4.54	20	2.65	12	4.71	8	3.81	18
19	GV512	88	21	24	2.80	26	0.36	31	2.46	25	2.96	20	5.22	11	1.30	4	3.81	27	2.58	14	3.75	20	2.99	25
Mean		99	16	26	3.37	.	1.01	.	2.84	.	3.30	16	4.94	.	0.74	.	4.58	.	2.53	.	3.85	.	3.74	.
LSD (0.05)					2.02	.	0.65	.	1.24	.	0.47		1.04	.	1.14	.	1.11	.	0.89	.	1.89	.	1.54	.
Min		73	11	20	1.85	.	0.33	.	1.77	.	2.44	10	3.11	.	-0.12	.	3.08	.	1.20	.	1.77	.	2.41	.
Max		115	26	30	4.97	.	2.03	.	3.94	.	3.82	27	6.54	.	1.96	.	5.82	.	3.87	.	6.03	.	4.98	.

EIHYB00: Results of early & intermediate maturing hybrids from CIMMYT, Seed-Co, Monsanto, Pannar, Pioneer, and Zambia across 40 sites in eastern and southern Africa 1999/00.

Entry	Name	Across		Eastern Africa - Dry				Low N			Drought			
		Rel GY	Rank	Sigor Ken		Alupe Ken		ASI	Ears/Plant	Leaf Senes	ASI	Ears/Plant	Leaf Senes	
				%	Avg	Stdev	t/ha	Rank	t/ha	Rank	d	#	1-10	d
Hybrids with anthesis date between 66 and 69 days														
5	CZH99005	108	13	28	4.47	22	0.95	25	5.4	0.71	5.3	4.2	0.91	3.3
23	SC403	103	13	27	5.81	4	1.12	18	4.7	0.78	5.4	3.5	0.87	3.2
25	SC407	103	15	26	6.03	3	1.15	17	3.8	0.79	5.4	4.8	0.85	3.3
7	CZH99007	104	16	24	5.58	6	1.02	21	3.8	0.80	5.5	2.3	0.91	3.3
3	CZH99003	101	16	24	4.85	17	0.50	32	7.2	0.76	5.9	4.4	0.86	3.1
6	CZH99006	98	18	24	5.21	12	1.22	15	5.6	0.62	5.7	5.0	0.86	3.6
4	CZH99004	91	20	24	5.04	14	0.93	26	4.7	0.61	5.8	4.7	0.84	3.3
24	SC405	84	23	24	3.32	30	1.35	10	8.8	0.58	4.8	7.6	0.66	3.0
12	CZH99012	84	25	21	3.29	31	0.90	27	8.2	0.64	5.7	3.6	0.82	3.5
22	SC401	73	26	20	3.47	29	0.90	28	5.7	0.58	6.0	7.7	0.74	3.4
Hybrids with anthesis date between 69 and 71 days														
21	C8031	115	11	29	3.64	28	2.08	2	5.7	0.78	5.1	3.0	0.88	2.8
15	CZH99015	113	12	27	4.87	16	1.61	6	5.3	0.89	4.9	4.1	0.94	3.1
2	CZH99002	104	14	29	4.83	19	1.31	12	7.8	0.63	5.2	4.3	0.90	3.0
9	CZH99009	105	15	27	4.10	25	1.42	9	4.6	0.80	5.0	2.1	0.94	3.2
8	CZH99008	104	15	26	4.67	20	1.01	22	5.5	0.65	4.8	4.3	0.90	3.3
29	SC5201	98	18	24	5.39	7	1.55	8	5.3	0.72	5.2	2.3	0.81	3.0
1	CZH99001	99	18	25	5.34	8	2.10	1	5.0	0.70	5.5	4.3	0.96	3.3
28	SC515	91	19	25	4.29	23	1.15	16	6.7	0.55	5.2	6.8	0.74	3.0
17	CZH99017	99	19	24	4.59	21	1.11	19	4.8	0.74	4.7	3.7	0.92	3.5
26	SC501	88	19	24	5.33	9	1.29	13	4.8	0.64	5.9	5.8	0.72	2.9
13	CZH99013	85	23	21	4.84	18	1.97	3	5.0	0.76	6.2	3.8	0.92	3.5
Hybrids with anthesis date between 71 and 74 days														
20	PAN31	109	12	30	3.84	27	1.71	5	8.2	0.72	5.2	4.7	0.96	2.8
10	CZH99010	110	12	30	4.14	24	1.97	4	5.7	0.66	5.2	4.2	0.86	3.3
18	CZH99018	107	13	27	5.78	5	1.05	20	6.6	0.65	4.6	5.6	0.87	2.8
14	CZH99014	92	13	24					5.8	0.74	5.2	3.2	0.86	3.7
30	PHB30R93	104	14	29	5.29	10	0.98	23	6.1	0.79	5.7	8.1	0.85	2.8
32	LOCAL CHECK2	105	14	29	5.25	11	0.88	29	7.0	0.79	5.5	6.7	0.78	3.1
31	LOCAL CHECK1	105	15	28	4.89	15	1.57	7	4.0	0.78	5.4	4.1	0.89	3.1
11	CZH99011	101	16	26	4.02	26	0.96	24	4.0	0.73	6.0	0.1	0.88	3.5
27	SC513	99	16	28	6.72	2	1.24	14	4.3	0.71	5.1	7.2	0.80	3.1
16	CZH99016	102	17	24	5.09	13	1.35	11	4.7	0.75	5.2	3.9	0.95	3.4
19	GV512	88	21	24	3.25	32	0.82	30	8.0	0.58	4.7	8.5	0.84	2.6
Mean		99	16	26	4.85	.	1.25	.	5.7	0.71	5.3	4.6	0.86	3.2
LSD (0.05)					1.67	.	0.96	.	1.9	0.11	0.7	2.3	0.09	0.4
Min		73	11	20	3.25	.	0.50	.	3.8	0.55	4.6	0.1	0.66	2.6
Max		115	26	30	8.12	.	2.10	.	8.8	0.89	6.2	8.5	0.96	3.7

ILHYB00: Results of intermediate & late maturing hybrids from CIMMYT, Seed-Co, Monsanto, Pannar, Pioneer, ACFD and Zambia across 36 sites in eastern and southern Africa 1999/00.

Entry	Name	Pedigree	Origin	Across			Grain yield - Mid altitudes eastern Africa							
				Rel GY	Rank		Across		Mbimba Tan		Inyala Tan		Arusha Tan	
				%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
Hybrids with anthesis date between 74 and 78 days														
10	CZH99028	CML312/CML206//CZL00002	CIMMYT	109	19	11	6.47	23	6.95	11	5.83	17	5.92	14
18	CZH99036	CML395/CML312//CZL00035	CIMMYT	111	21	13	6.25	27	5.16	41	5.87	16	5.75	16
29	C8001	C8001	Monsanto	109	24	14	6.38	27	5.21	39	5.31	27	6.58	9
28	PAN67	PAN67	Pannar	97	26	12	6.52	25	4.63	44	5.30	29	5.72	17
17	CZH99035	CML441/CML395//CZL00001	CIMMYT	100	27	10	6.01	30	6.11	27	4.68	37	4.77	30
21	CZH99039	CZL00010/CML395//CML443	CIMMYT	101	27	10	6.05	30	5.53	33	4.71	36	4.97	26
36	PHB30H83	PHB30H83	Pioneer	83	29	15	6.08	28	6.14	26	4.32	40	4.50	33
48	LOCAL CHECK3		Various	86	29	14	5.59	33	5.77	31	3.91	44	3.08	44
27	GV722	GV722	ZAMBIA	92	30	12	5.74	33	4.65	43	5.43	23	5.53	21
31	SC621	SC621	Seed Co	91	31	12	5.84	32	4.69	42	4.89	35	5.24	25
16	CZH99034	CZL00039/CZL00001//CML441	CIMMYT	87	32	10	5.36	36	5.26	38	4.90	34	4.71	31
42	CCP136	CCP136	ACFD	73	40	8	4.61	43	4.27	47	4.05	43	3.26	42
Hybrids with anthesis date between 78 and 80 days														
12	CZH99030	CML216/CML395//CML312	CIMMYT	124	11	10	7.42	12	7.27	5	6.40	4	6.61	7
3	CZH99021	CML202/CML395//CML312	CIMMYT	120	13	9	7.91	9	7.47	4	6.26	8	6.33	11
7	CZH99025	CML202/395//CML197/312	CIMMYT	112	15	11	7.78	10	7.11	8	7.03	1	6.52	10
25	CZH99043	CZL00036/CML442//CML444	CIMMYT	118	15	11	7.27	15	6.82	14	6.24	9	7.10	6
19	CZH99037	CML444/CML395//CML443	CIMMYT	117	16	10	7.39	15	6.41	22	5.93	15	7.11	5
1	CZH99019	CML202/CML395//CML390	CIMMYT	109	18	11	7.57	11	7.10	9	6.98	2	4.77	29
5	CZH99023	CML202/CML395//CZL00025	CIMMYT	104	19	10	7.18	15	7.61	3	6.11	11	4.54	32
4	CZH99022	CML202/CML395//CZL00026	CIMMYT	103	21	10	6.89	17	6.78	15	6.30	5	5.61	19
14	CZH99032	CML216/CML395//CZL00025	CIMMYT	105	22	13	7.47	15	6.05	28	5.41	24	6.00	13
13	CZH99031	CML216/CML395//CML390	CIMMYT	102	23	12	7.05	16	7.10	10	5.35	25	4.83	28
34	SC713	SC713	Seed Co	99	25	13	6.17	28	6.92	12	4.52	38	4.42	34
8	CZH99026	CML202/CML216//CZL00025	CIMMYT	98	25	10	6.16	30	5.47	36	5.81	18	4.12	37
32	SC627	SC627	Seed Co	96	26	13	6.62	23	5.92	30	5.05	31	4.85	27
37	PHB30G97	PHB30G97	Pioneer	92	26	11	6.49	26	5.47	35	6.11	10	5.62	18
11	CZH99029	CML312/CML206//CZL00037	CIMMYT	108	27	12	5.99	30	6.38	23	4.96	32	6.07	12
47	LOCAL CHECK2		Various	88	28	15	5.97	29	8.25	1	5.72	20	3.23	43
35	SC715	SC715	Seed Co	87	29	13	5.85	31	7.20	7	5.32	26	3.52	39
46	LOCAL CHECK1		Various	80	32	13	5.49	35	5.94	29	3.71	45	1.72	48
40	AC71	AC71	ACFD	84	35	10	5.37	35	5.66	32	4.91	33	3.83	38
39	AC33	AC33	ACFD	82	36	9	5.02	38	4.11	48	4.33	39	2.95	45
38	AC31	AC31	ACFD	80	37	12	5.12	39	4.39	45	3.24	46	4.15	36
44	DPC361	DPC361	ACFD	81	38	11	4.74	42	5.17	40	4.32	41	2.94	46
43	DMC211	DMC211	ACFD	68	42	8	4.13	45	4.36	46	3.04	48	3.40	40
Hybrids with anthesis date between 80 and 83 days														
20	CZH99038	CML444/CML197//CML443	CIMMYT	122	11	10	8.07	9	7.21	6	5.99	13	7.27	4
26	CZH99044	CML442//CML444	CIMMYT	128	12	9	7.31	15	6.67	16	6.28	7	8.46	1
2	CZH99020	CML202/CML395//CML197	CIMMYT	110	15	13	8.09	7	8.04	2	6.56	3	7.56	3
24	CZH99042	CML442/CML443//CML444	CIMMYT	121	15	12	7.20	17	6.41	21	5.77	19	6.59	8
23	CZH99041	CZL00038/CML443//CML395	CIMMYT	115	17	9	6.92	19	5.51	34	6.29	6	5.38	24
9	CZH99027	CML312/CML206//CML197	CIMMYT	109	18	12	7.48	14	6.24	25	6.00	12	7.66	2
22	CZH99040	CML395/CML197//CML443	CIMMYT	109	18	10	6.92	19	6.61	17	5.46	21	5.57	20
33	SC709	SC709	Seed Co	100	18	14	7.41	15	6.58	18	5.94	14	5.47	23
30	C8027	C8027	Monsanto	110	20	12	6.92	19	6.32	24	5.44	22	4.25	35
15	CZH99033	CML216/395//CML312/206	CIMMYT	103	22	12	7.08	18	6.88	13	5.27	30	5.48	22
6	CZH99024	CML202/395//CML390/206	CIMMYT	102	23	9	6.74	22	6.44	20	5.30	28	5.89	15
41	CCD131	CCD131	ACFD	80	34	11	5.76	32	6.48	19	4.27	42	2.54	47
45	NCK331	NCK331	ACFD	82	35	11	5.34	36	5.28	37	3.21	47	3.30	41
Mean				100	24	11	6.43	25	6.12	.	5.29	.	5.12	.
LSD (0.05)							0.64		1.07	.	1.29	.	1.97	.
Min				68	11	8	4.13	7	4.11	.	3.04	.	1.72	.
Max				128	42	15	8.09	45	8.25	.	7.03	.	8.46	.

ILHYB00: Results of intermediate & late maturing hybrids from CIMMYT, Seed-Co, Monsanto, Pannar, Pioneer, ACFD and Zambia across 36 sites in eastern and southern Africa 1999/00.

Entry Name	Across			Grain yield - Mid Altitudes eastern Africa											
	Rel GY	Rank		Kakamega Ken		Namulonge Uga		Bungoma Ken		Kitale Ken		Kakamega Ken		Embu Ken	
	%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
Hybrids with anthesis date between 74 and 78 days															
10 CZH99028	109	19	11	6.37	36	5.84	22	5.08	25	7.28	16	5.43	21	7.56	31
18 CZH99036	111	21	13	7.18	26	6.15	17	4.95	28	6.63	23	4.42	36	9.74	9
29 C8001	109	24	14	6.63	34	4.73	41	4.94	29	5.96	35	5.88	12	8.84	21
28 PAN67	97	26	12	7.01	28	6.24	12	4.67	35	5.72	37	5.65	17	8.03	27
17 CZH99035	100	27	10	5.14	41	6.17	15	7.32	2	6.30	31	4.82	31	7.33	36
21 CZH99039	101	27	10	6.90	30	5.24	31	4.91	31	6.47	25	4.38	37	8.00	28
36 PHB30H83	83	29	15	8.66	7	3.13	48	5.97	11	5.76	36	3.91	44	5.68	45
48 LOCAL CHECK3	86	29	14	5.09	42	6.18	14	4.86	33	6.30	30	5.04	28	5.87	43
27 GV722	92	30	12	7.59	20	5.01	37	4.29	41	5.07	41	4.01	42	5.72	44
31 SC621	91	31	12	8.37	11	5.16	33	4.25	42	3.23	48	3.92	43	6.35	42
16 CZH99034	87	32	10	3.90	47	5.37	30	4.65	36	4.47	45	2.92	48	7.40	34
42 CCP136	73	40	8	4.06	46	4.39	43	4.61	37	4.76	44	4.46	35	6.87	39
Hybrids with anthesis date between 78 and 80 days															
12 CZH99030	124	11	10	8.71	6	6.19	13	5.54	17	8.30	8	5.80	13	10.72	4
3 CZH99021	120	13	9	8.35	12	6.33	11	6.87	6	10.85	1	6.54	6	9.63	11
7 CZH99025	112	15	11	9.20	2	6.07	19	5.21	23	8.85	4	5.78	14	10.62	5
25 CZH99043	118	15	11	7.30	24	7.35	3	5.05	26	7.26	17	7.17	2	9.12	18
19 CZH99037	117	16	10	7.55	22	5.83	23	5.70	14	7.84	11	5.54	18	9.18	17
1 CZH99019	109	18	11	8.47	9	6.16	16	7.35	1	7.20	18	6.34	8	8.35	25
5 CZH99023	104	19	10	7.95	19	6.06	20	5.80	13	8.90	3	6.56	4	9.70	10
4 CZH99022	103	21	10	8.61	8	6.97	6	5.22	22	6.92	20	5.90	10	9.22	16
14 CZH99032	105	22	13	8.12	16	7.28	5	5.01	27	8.73	5	6.56	5	11.34	2
13 CZH99031	102	23	12	8.72	5	6.62	8	6.25	9	7.32	15	5.75	15	8.84	22
34 SC713	99	25	13	5.86	39	5.40	29	5.20	24	6.02	32	4.76	32	8.81	23
8 CZH99026	98	25	10	7.16	27	5.04	36	4.75	34	6.75	21	5.05	27	8.76	24
32 SC627	96	26	13	8.43	10	6.47	9	3.76	45	6.34	29	5.36	23	9.82	8
37 PHB30G97	92	26	11	7.54	23	5.44	28	4.46	39	5.98	34	4.34	38	7.54	33
11 CZH99029	108	27	12	6.35	37	5.16	34	5.36	19	5.00	42	5.11	26	7.36	35
47 LOCAL CHECK2	88	28	15	6.38	35	6.41	10	3.10	48	5.54	38	4.12	41	8.23	26
35 SC715	87	29	13	8.26	14	4.80	39	3.59	47	4.29	46	5.39	22	6.87	38
46 LOCAL CHECK1	80	32	13	7.58	21	5.19	32	4.33	40	4.99	43	5.28	25	7.93	29
40 AC71	84	35	10	6.96	29	4.01	47	5.68	15	5.19	40	4.83	30	4.43	47
39 AC33	82	36	9	4.66	44	4.19	45	5.66	16	6.43	26	4.25	39	6.42	40
38 AC31	80	37	12	4.77	43	5.57	27	4.12	43	6.01	33	4.61	34	6.97	37
44 DPC361	81	38	11	4.26	45	4.77	40	4.56	38	6.39	28	3.28	45	5.10	46
43 DMC211	68	42	8	2.96	48	4.48	42	3.92	44	4.03	47	3.03	47	4.05	48
Hybrids with anthesis date between 80 and 83 days															
20 CZH99038	122	11	10	8.08	17	7.39	2	7.17	4	7.41	13	4.74	33	10.42	7
26 CZH99044	128	12	9	8.89	3	5.89	21	6.16	10	6.52	24	7.47	1	9.29	15
2 CZH99020	110	15	13	8.75	4	6.74	7	5.27	20	8.38	7	6.43	7	12.94	1
24 CZH99042	121	15	12	6.78	32	7.35	4	3.65	46	7.40	14	6.27	9	10.58	6
23 CZH99041	115	17	9	6.84	31	5.76	24	4.93	30	7.59	12	5.74	16	9.62	12
9 CZH99027	109	18	12	8.29	13	5.68	26	6.58	8	8.38	6	3.15	46	10.75	3
22 CZH99040	109	18	10	8.26	15	5.04	35	5.26	21	8.28	9	5.45	20	9.33	14
33 SC709	100	18	14	9.23	1	4.88	38	5.81	12	9.89	2	7.15	3	9.01	20
30 C8027	110	20	12	7.29	25	7.44	1	7.10	5	6.74	22	5.52	19	7.73	30
15 CZH99033	103	22	12	8.00	18	6.12	18	5.42	18	8.19	10	5.33	24	9.48	13
6 CZH99024	102	23	9	6.65	33	5.68	25	4.88	32	6.98	19	5.89	11	9.04	19
41 CCD131	80	34	11	6.08	38	4.11	46	7.22	3	6.39	28	4.88	29	6.39	41
45 NCK331	82	35	11	5.21	40	4.22	44	6.62	7	5.35	39	4.23	40	7.54	32
Mean	100	24	11	7.07	.	5.66	.	5.27	.	6.68	.	5.18	.	8.30	.
LSD (0.05)				2.27	.	2.11	.	1.94	.	2.42	.	1.56	.	2.01	.
Min	68	11	8	2.96	.	3.13	.	3.10	.	3.23	.	2.92	.	4.05	.
Max	128	42	15	9.23	.	7.44	.	7.35	.	10.85	.	7.47	.	12.94	.

ILHYB00: Results of intermediate & late maturing hybrids from CIMMYT, Seed-Co, Monsanto, Pannar, Pioneer, ACFD and Zambia across 36 sites in eastern and southern Africa 1999/00.

Entry Name	Across			Mid altitudes eastern Africa				Grain yield - Midaltitudes southern Africa										
	Rel GY	Rank		Bako Eth		Adet-Gajjam Eth		Across		Arcturus Zim		Ratray Zim		Misamfu Zam		Kadoma Zim		
	%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	
Hybrids with anthesis date between 74 and 78 days																		
10 CZH99028	109	19	11	6.83	37	8.04	26	7.26	17	9.21	15	9.09	13	3.47	48	8.15	11	
18 CZH99036	111	21	13	6.21	41	6.72	40	6.69	23	8.89	23	6.83	40	4.16	44	7.92	15	
29 C8001	109	24	14	8.11	25	7.96	28	6.32	30	7.55	41	6.76	41	4.38	33	6.13	45	
28 PAN67	97	26	12	8.41	20	10.34	7	6.19	29	9.01	21	7.54	31	5.47	6	6.59	38	
17 CZH99035	100	27	10	6.96	34	6.56	41	6.27	28	8.20	35	6.55	43	4.35	35	7.53	25	
21 CZH99039	101	27	10	7.19	32	8.29	24	6.18	30	8.84	25	8.15	23	4.20	43	7.59	22	
36 PHB30H83	83	29	15	9.54	8	9.24	13	6.65	24	8.41	32	8.37	19	5.65	1	6.89	37	
48 LOCAL CHECK3	86	29	14	5.94	43	9.44	12	6.95	25	8.36	33	10.86	3	4.36	34	11.25	1	
27 GV722	92	30	12	8.31	22	7.58	33	6.26	27	7.04	45	7.40	32	4.70	18	7.55	23	
31 SC621	91	31	12	7.66	29	10.47	5	5.73	35	8.85	24	7.82	27	4.49	26	6.13	44	
16 CZH99034	87	32	10	8.41	19	7.01	38	6.08	30	8.73	29	7.19	35	4.58	20	7.17	31	
42 CCP136	73	40	8	3.88	48	6.08	45	5.20	39	6.83	46	5.62	46	4.38	32	5.19	47	
Hybrids with anthesis date between 78 and 80 days																		
12 CZH99030	124	11	10	9.54	9	6.54	42	7.41	12	9.34	14	9.67	8	5.48	5	8.74	7	
3 CZH99021	120	13	9	9.84	6	8.50	19	7.19	16	9.51	12	9.01	14	4.91	11	8.00	12	
7 CZH99025	112	15	11	10.80	2	8.40	21	7.28	18	10.61	4	9.26	10	4.22	42	7.54	24	
25 CZH99043	118	15	11	8.25	23	8.34	22	7.34	18	9.14	16	7.65	29	4.45	29	6.24	43	
19 CZH99037	117	16	10	9.16	11	11.04	3	7.08	19	10.22	6	8.72	17	5.62	2	7.31	29	
1 CZH99019	109	18	11	10.13	3	10.45	6	6.62	22	8.84	26	6.10	45	5.05	8	6.98	35	
5 CZH99023	104	19	10	7.76	27	8.02	27	6.90	19	10.00	7	8.14	24	5.49	4	8.29	9	
4 CZH99022	103	21	10	7.24	31	6.97	39	6.70	22	9.10	19	8.23	20	4.53	23	7.37	28	
14 CZH99032	105	22	13	9.97	4	7.72	31	6.51	24	10.44	5	8.19	22	4.26	40	8.25	10	
13 CZH99031	102	23	12	8.41	21	8.34	23	6.46	26	8.72	30	7.60	30	4.89	12	7.02	33	
34 SC713	99	25	13	6.97	33	9.02	15	6.90	22	8.71	31	7.09	37	4.27	39	9.30	4	
8 CZH99026	98	25	10	6.95	36	7.95	29	6.73	22	9.64	10	8.76	16	4.75	16	6.89	36	
32 SC627	96	26	13	8.22	24	8.59	18	6.42	27	9.14	17	6.87	39	3.85	47	8.81	6	
37 PHB30G97	92	26	11	7.54	30	11.38	2	6.74	23	8.82	27	7.82	26	4.94	10	8.00	13	
11 CZH99029	108	27	12	6.60	39	7.57	34	6.24	29	8.27	34	7.30	34	4.54	22	6.28	42	
47 LOCAL CHECK2	88	28	15	9.04	12	5.67	48	6.31	25	9.13	18	9.92	7	5.05	9	9.59	2	
35 SC715	87	29	13	8.75	16	6.41	43	6.62	25	9.01	20	7.78	28	3.98	46	7.77	19	
46 LOCAL CHECK1	80	32	13	7.67	28	6.03	46	6.12	30	7.32	44	9.31	9	4.64	19	9.11	5	
40 AC71	84	35	10	6.43	40	7.15	36	5.56	38	7.62	40	6.94	38	4.40	31	6.31	41	
39 AC33	82	36	9	4.56	47	7.63	32	5.66	36	7.90	38	6.64	42	4.79	15	7.01	34	
38 AC31	80	37	12	6.69	38	5.85	47	5.22	38	6.41	47	5.58	47	4.32	37	7.11	32	
44 DPC361	81	38	11	5.13	45	6.26	44	5.26	38	7.37	43	6.26	44	4.31	38	5.71	46	
43 DMC211	68	42	8	4.92	46	7.20	35	4.70	41	5.41	48	5.47	48	4.58	21	6.45	40	
Hybrids with anthesis date between 80 and 83 days																		
20 CZH99038	122	11	10	11.17	1	11.96	1	8.13	10	11.01	2	10.95	2	4.85	14	7.99	14	
26 CZH99044	128	12	9	6.95	35	7.80	30	7.69	11	9.64	11	9.25	11	4.47	27	8.44	8	
2 CZH99020	110	15	13	8.48	17	9.86	8	7.72	12	11.57	1	11.02	1	5.55	3	6.58	39	
24 CZH99042	121	15	12	8.99	13	9.47	11	7.65	14	10.78	3	10.38	4	4.24	41	7.78	18	
23 CZH99041	115	17	9	8.83	15	9.68	10	7.01	19	8.10	37	8.93	15	4.71	17	7.65	20	
9 CZH99027	109	18	12	8.85	14	10.66	4	7.15	17	9.70	9	9.98	6	4.45	28	7.20	30	
22 CZH99040	109	18	10	9.85	5	7.02	37	7.21	16	9.37	13	10.20	5	4.85	13	7.90	16	
33 SC709	100	18	14	8.42	18	9.10	14	7.64	13	9.87	8	9.21	12	5.32	7	9.31	3	
30 C8027	110	20	12	9.70	7	8.63	17	7.14	20	8.16	36	8.55	18	4.16	45	7.78	17	
15 CZH99033	103	22	12	8.05	26	9.68	9	6.61	24	7.77	39	8.04	25	4.50	24	7.63	21	
6 CZH99024	102	23	9	9.22	10	8.21	25	6.82	22	8.91	22	7.36	33	4.50	25	7.39	27	
41 CCD131	80	34	11	6.17	42	8.82	16	5.92	34	8.76	28	8.21	21	4.34	36	7.49	26	
45 NCK331	82	35	11	5.35	44	8.44	20	5.63	38	7.38	42	7.14	36	4.43	30	4.92	48	
Mean	100	24	11	7.88	.	8.29	.	6.58	25	8.78	.	8.12	.	4.62	.	7.50	.	
LSD (0.05)				2.77	.	3.19	.	0.49		1.50	.	1.25	.	1.25	.	1.57	.	
Min	68	11	8	3.88	.	5.67	.	4.70	10	5.41	.	5.47	.	3.47	.	4.92	.	
Max	128	42	15	11.17	.	11.96	.	8.13	41	11.57	.	11.02	.	5.65	.	11.25	.	

ILHYB00: Results of intermediate & late maturing hybrids from CIMMYT, Seed-Co, Monsanto, Pannar, Pioneer, ACFD and Zambia across 36 sites in eastern and southern Africa 1999/00.

Entry Name	Across			Grain yield - Mid altitudes southern Africa											
	Rel GY	Rank		Msekera Zam		Goodhope Bot		Chitedze Mal		Mbawa Mal		Chitedze Mal		Bembeke Mal	
	%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
Hybrids with anthesis date between 74 and 78 days															
10 CZH99028	109	19	11	8.98	4	3.88	7	9.70	10	7.60	12	7.60	19	2.88	34
18 CZH99036	111	21	13	7.76	16	4.03	5	7.62	32	5.89	30	5.75	39	4.33	4
29 C8001	109	24	14	8.52	8	3.62	12	7.10	41	8.16	8	6.24	37	2.64	43
28 PAN67	97	26	12	7.07	25	1.91	47	9.86	8	5.99	29	7.14	24	4.32	5
17 CZH99035	100	27	10	6.87	28	2.88	25	7.57	33	6.64	22	5.98	38	3.91	11
21 CZH99039	101	27	10	7.26	20	2.46	35	6.55	43	5.46	37	6.45	33	2.65	42
36 PHB30H83	83	29	15	7.23	21	3.50	14	11.10	2	6.52	23	9.40	4	2.80	36
48 LOCAL CHECK3	86	29	14	6.78	29	2.51	33	8.21	24	9.69	2	6.44	34	2.92	33
27 GV722	92	30	12	4.93	42	2.79	27	7.56	34	6.45	26	7.99	14	3.90	12
31 SC621	91	31	12	4.91	43	3.19	18	7.27	38	4.78	43	5.72	41	2.78	38
16 CZH99034	87	32	10	7.05	26	3.08	22	8.56	22	4.92	41	5.68	42	3.67	14
42 CCP136	73	40	8	5.69	38	2.96	24	5.79	47	5.07	40	6.47	32	3.28	30
Hybrids with anthesis date between 78 and 80 days															
12 CZH99030	124	11	10	7.19	22	4.05	4	10.53	6	5.76	33	8.12	11	4.20	8
3 CZH99021	120	13	9	7.94	13	3.80	10	9.66	11	5.82	31	6.92	29	2.56	46
7 CZH99025	112	15	11	6.75	32	3.43	15	8.77	20	8.69	5	7.99	13	3.06	31
25 CZH99043	118	15	11	9.21	3	3.41	16	9.10	15	10.43	1	8.84	7	2.59	44
19 CZH99037	117	16	10	7.14	24	2.18	41	7.92	29	8.31	7	7.47	21	3.50	23
1 CZH99019	109	18	11	7.03	27	3.92	6	8.69	21	6.68	21	8.17	10	2.83	35
5 CZH99023	104	19	10	8.32	11	2.23	40	7.32	37	5.63	34	7.08	26	4.02	10
4 CZH99022	103	21	10	6.71	33	3.14	19	7.24	39	6.69	20	6.96	27	3.65	15
14 CZH99032	105	22	13	8.40	10	3.09	20	7.32	37	4.54	45	7.81	17	3.34	27
13 CZH99031	102	23	12	6.45	34	2.67	30	9.24	13	5.30	39	7.23	23	3.54	21
34 SC713	99	25	13	6.13	36	3.84	8	11.07	4	6.78	18	7.98	15	4.09	9
8 CZH99026	98	25	10	6.76	30	1.78	48	9.00	18	7.17	15	8.08	12	4.22	6
32 SC627	96	26	13	4.50	45	2.16	43	8.20	25	8.15	9	7.94	16	3.58	19
37 PHB30G97	92	26	11	7.17	23	2.50	34	9.82	9	6.40	27	6.95	28	2.66	40
11 CZH99029	108	27	12	6.75	31	2.30	39	8.08	27	4.66	44	7.24	22	4.44	3
47 LOCAL CHECK2	88	28	15	7.70	18	2.76	28	6.18	44	6.50	24	5.30	44	3.46	24
35 SC715	87	29	13	4.29	46	3.62	13	10.74	5	7.70	11	8.87	6	3.54	22
46 LOCAL CHECK1	80	32	13	6.20	35	2.40	37	8.03	28	7.23	14	5.49	43	2.58	45
40 AC71	84	35	10	4.85	44	2.16	42	7.15	40	5.58	36	5.21	45	2.96	32
39 AC33	82	36	9	5.40	39	2.41	36	7.38	35	5.77	32	5.73	40	3.32	29
38 AC31	80	37	12	4.16	47	1.98	46	5.99	45	6.10	28	4.49	47	4.68	1
44 DPC361	81	38	11	5.22	40	3.76	11	5.42	48	4.10	47	4.91	46	4.57	2
43 DMC211	68	42	8	3.65	48	2.63	31	5.80	46	3.08	48	4.13	48	2.49	48
Hybrids with anthesis date between 80 and 83 days															
20 CZH99038	122	11	10	9.62	1	2.09	44	11.57	1	8.72	4	10.00	3	3.63	17
26 CZH99044	128	12	9	8.53	7	4.67	1	9.23	14	8.82	3	8.42	8	3.58	20
2 CZH99020	110	15	13	7.56	19	3.84	9	8.43	23	5.35	38	8.32	9	3.82	13
24 CZH99042	121	15	12	7.73	17	3.24	17	10.22	7	7.82	10	8.93	5	2.79	37
23 CZH99041	115	17	9	8.89	5	3.03	23	9.01	17	8.33	6	6.84	30	3.64	16
9 CZH99027	109	18	12	7.84	15	4.31	2	7.81	30	7.14	16	7.57	20	3.44	25
22 CZH99040	109	18	10	8.62	6	2.36	38	9.49	12	6.71	19	7.78	18	3.33	28
33 SC709	100	18	14	8.21	12	2.53	32	11.10	3	6.49	25	10.41	1	3.39	26
30 C8027	110	20	12	9.31	2	4.26	3	8.93	19	7.43	13	10.39	2	4.21	7
15 CZH99033	103	22	12	8.51	9	3.09	21	9.03	16	5.61	35	6.67	31	3.60	18
6 CZH99024	102	23	9	7.86	14	2.81	26	7.72	31	7.03	17	7.13	25	2.66	41
41 CCD131	80	34	11	5.98	37	2.01	45	8.16	26	4.53	46	6.42	35	2.75	39
45 NCK331	82	35	11	5.16	41	2.73	29	7.07	42	4.86	42	6.25	36	2.56	47
Mean	100	24	11	6.98	.	3.00	.	8.40	.	6.52	.	7.19	.	3.40	.
LSD (0.05)				1.85	.	1.14	.	2.26	.	2.40	.	2.43	.	1.56	.
Min	68	11	8	3.65	.	1.78	.	5.42	.	3.08	.	4.13	.	2.49	.
Max	128	42	15	9.62	.	4.67	.	11.57	.	10.43	.	10.41	.	4.68	.

ILHYB00: Results of intermediate & late maturing hybrids from CIMMYT, Seed-Co, Monsanto, Pannar, Pioneer, ACFD and Zambia across 36 sites in eastern and southern Africa 1999/00.

Entry	Name	Across			Grain yield - Mid altitudes southern Africa								Grain yield - N stress			
		Rel GY	Rank		ART Farm Zim		ART Farm Zim		Mazowe Zim		Nanga Zam		Across		Umbeluzi Moz	
		%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
Hybrids with anthesis date between 74 and 78 days																
10	CZH99028	109	19	11	6.27	34	8.44	6	5.00	11	11.33	11	3.33	20	3.73	6
18	CZH99036	111	21	13	6.39	29	7.64	20	5.12	10	11.32	13	3.61	16	3.73	7
29	C8001	109	24	14	5.87	40	6.49	35	4.54	14	10.53	16	3.31	19	2.88	19
28	PAN67	97	26	12	5.09	44	6.30	39	2.87	43	7.58	44	3.07	23	2.31	33
17	CZH99035	100	27	10	6.40	27	6.93	30	4.14	19	9.78	24	2.90	29	2.75	24
21	CZH99039	101	27	10	7.56	9	7.23	27	3.80	26	8.38	38	3.40	19	3.65	9
36	PHB30H83	83	29	15	6.28	33	7.01	29	2.30	48	7.66	43	2.47	31	0.93	43
48	LOCAL CHECK3	86	29	14	6.44	25	6.75	33	3.57	31	9.11	35	3.05	25		
27	GV722	92	30	12	4.50	47	5.33	44	5.64	5	11.80	6	2.86	31	2.67	26
31	SC621	91	31	12	5.35	42	6.17	40	3.06	38	9.76	25	3.20	23	2.21	34
16	CZH99034	87	32	10	5.92	39	6.36	38	3.74	28	8.51	36	2.14	37	0.59	45
42	CCP136	73	40	8	5.06	45	5.01	48	3.10	37	8.31	40	2.12	41	2.12	35
Hybrids with anthesis date between 78 and 80 days																
12	CZH99030	124	11	10	7.67	6	8.92	3	4.53	15	9.49	26	3.93	8	4.35	3
3	CZH99021	120	13	9	7.26	12	8.41	7	5.14	9	11.65	9	3.80	9	3.01	15
7	CZH99025	112	15	11	6.65	21	8.69	5	4.43	17	11.77	7	3.50	15	2.37	31
25	CZH99043	118	15	11	6.46	23	8.34	8	5.24	7	11.65	8	3.46	16	3.00	16
19	CZH99037	117	16	10	7.19	13	7.66	18	3.77	27	12.15	3	3.59	14	2.89	18
1	CZH99019	109	18	11	7.09	15	7.93	13	4.05	20	9.33	32	3.58	14	3.36	11
5	CZH99023	104	19	10	7.01	16	7.64	19	4.15	18	11.32	12	3.36	19	3.14	13
4	CZH99022	103	21	10	7.32	10	6.66	34	5.79	4	10.44	20	3.40	17	3.15	12
14	CZH99032	105	22	13	6.77	19	7.60	22	3.86	24	7.28	45	3.30	24	4.15	4
13	CZH99031	102	23	12	8.08	3	7.45	24	2.77	45	9.46	27	3.39	22	3.69	8
34	SC713	99	25	13	6.29	32	8.31	9	2.87	42	9.89	22	2.84	28	2.46	28
8	CZH99026	98	25	10	7.29	11	7.13	28	3.32	35	9.40	29	3.08	26	2.67	27
32	SC627	96	26	13	6.24	35	7.88	14	3.41	34	9.18	34	2.95	28	2.84	21
37	PHB30G97	92	26	11	7.00	17	7.39	26	4.00	21	10.84	14	2.76	28	0.93	42
11	CZH99029	108	27	12	6.39	28	7.44	25	3.15	36	10.52	17	3.16	22	2.86	20
47	LOCAL CHECK2	88	28	15	7.57	8	6.15	41	3.02	41	6.02	48	3.21	24		
35	SC715	87	29	13	6.19	36	7.70	17	3.45	33	8.11	41	2.90	29	3.07	14
46	LOCAL CHECK1	80	32	13	6.41	26	5.04	47	4.00	22	7.95	42	2.81	30		
40	AC71	84	35	10	5.97	38	6.82	31	3.47	32	8.44	37	2.39	36	0.95	41
39	AC33	82	36	9	4.96	46	5.84	43	2.66	47	9.44	28	2.25	38	1.61	39
38	AC31	80	37	12	5.40	41	6.03	42	3.60	29	7.26	46	1.78	45	0.83	44
44	DPC361	81	38	11	4.50	48	5.22	46	3.03	40	9.34	31	2.12	41	2.37	32
43	DMC211	68	42	8	5.27	43	5.24	45	4.45	16	7.12	47	1.86	44	1.35	40
Hybrids with anthesis date between 80 and 83 days																
20	CZH99038	122	11	10	7.66	7	9.35	2	6.36	1	10.02	21	3.60	15	2.46	29
26	CZH99044	128	12	9	6.62	22	7.98	12	5.21	8	12.83	2	3.56	15	2.99	17
2	CZH99020	110	15	13	8.88	1	9.77	1	5.91	3	11.46	10	3.32	21	3.62	10
24	CZH99042	121	15	12	6.98	18	8.15	11	4.75	12	13.25	1	3.34	20	2.77	22
23	CZH99041	115	17	9	6.71	20	7.60	23	5.26	6	9.36	30	3.75	13	4.86	2
9	CZH99027	109	18	12	8.09	2	8.29	10	3.89	23	10.45	19	3.15	21	2.75	23
22	CZH99040	109	18	10	7.09	14	8.90	4	3.84	25	10.48	18	3.27	21	2.43	30
33	SC709	100	18	14	7.94	4	7.79	16	3.58	30	11.82	5	3.10	21	1.85	37
30	C8027	110	20	12	6.31	30	7.63	21	3.05	39	9.83	23	3.70	19	5.15	1
15	CZH99033	103	22	12	6.29	31	7.85	15	4.63	13	9.27	33	3.56	18	4.01	5
6	CZH99024	102	23	9	7.67	5	6.39	37	5.99	2	12.11	4	3.14	24	2.73	25
41	CCD131	80	34	11	6.46	24	6.81	32	2.70	46	8.36	39	2.20	39	1.90	36
45	NCK331	82	35	11	6.19	37	6.49	36	2.80	44	10.79	15	2.48	34	1.62	38
Mean		100	24	11	6.56	.	7.25	.	4.02	.	9.84	.	3.06	24	2.71	.
LSD (0.05)					1.72	.	1.37	.	2.10	.	2.45	.	0.51		0.95	.
Min		68	11	8	4.50	.	5.01	.	2.30	.	6.02	.	1.78	8	0.59	.
Max		128	42	15	8.88	.	9.77	.	6.36	.	13.25	.	3.93	45	5.15	.

ILHYB00: Results of intermediate & late maturing hybrids from CIMMYT, Seed-Co, Monsanto, Pannar, Pioneer, ACFD and Zambia across 36 sites in eastern and southern Africa 1999/00.

Entry Name	Across			Grain yield - N stress										Grain yield - Drought				
	Rel GY		Rank	Sussundenga Moz		Sebele Bot		Chitedze Mal		CIMMYT Zim		Kitale Ken		Across		Chiredzi Zim		
	%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	
Hybrids with anthesis date between 74 and 78 days																		
10	CZH99028	109	19	11	2.95	35	1.98	27	5.50	11	2.45	27	3.36	16	3.30	15	3.29	15
18	CZH99036	111	21	13	4.67	3	3.06	2	4.92	23	2.25	33	3.03	28	3.51	13	3.78	3
29	C8001	109	24	14	3.50	21	2.68	5	5.79	7	2.77	17	2.24	42	3.60	9	3.43	10
28	PAN67	97	26	12	3.12	31	2.22	14	4.60	27	2.56	24	3.62	9	2.70	27	2.32	36
17	CZH99035	100	27	10	2.95	36	1.95	28	4.35	33	2.72	19	2.68	35	3.14	17	3.55	6
21	CZH99039	101	27	10	2.89	37	2.95	3	5.10	19	2.79	16	3.02	29	2.81	24	2.67	29
36	PHB30H83	83	29	15	2.35	43	1.84	32	5.80	6	0.40	48	3.51	12	1.78	40	1.62	45
48	LOCAL CHECK3	86	29	14	3.36	23	2.14	17	3.32	47	1.60	38	4.83	1	2.02	37	2.38	35
27	GV722	92	30	12	3.32	26	1.82	34	4.23	35	2.23	34	2.91	33	2.46	30	1.92	41
31	SC621	91	31	12	2.81	38	2.48	8	6.47	1	2.70	21	2.53	38	2.49	29	1.28	48
16	CZH99034	87	32	10	2.16	45	2.26	13	3.54	46	2.68	22	1.59	48	2.87	23	2.86	25
42	CCP136	73	40	8	2.71	39	1.72	37	3.97	41	0.55	44	1.66	47	2.13	36	3.50	8
Hybrids with anthesis date between 78 and 80 days																		
12	CZH99030	124	11	10	4.32	8	2.45	9	5.98	4	3.10	10	3.40	14	3.65	13	4.72	1
3	CZH99021	120	13	9	3.96	15	2.52	7	5.49	12	3.92	1	3.88	5	3.31	16	3.38	12
7	CZH99025	112	15	11	4.55	4	2.15	16	5.18	17	3.06	13	3.69	8	2.86	21	3.39	11
25	CZH99043	118	15	11	3.64	18	2.63	6	5.79	8	3.09	11	2.62	37	3.68	10	3.27	16
19	CZH99037	117	16	10	4.03	13	2.20	15	4.90	25	3.68	4	3.83	6	3.65	12	3.51	7
1	CZH99019	109	18	11	4.14	12	2.13	18	4.75	26	3.31	7	3.81	7	2.67	27	2.44	33
5	CZH99023	104	19	10	4.34	6	2.02	25	5.07	20	2.50	26	3.12	22	2.59	28	2.39	34
4	CZH99022	103	21	10	3.34	25	2.08	21	5.12	18	3.63	5	3.09	23	2.50	30	2.25	39
14	CZH99032	105	22	13	4.40	5	1.67	41	4.08	39	2.53	25	2.95	31	2.75	26	2.32	37
13	CZH99031	102	23	12	4.94	2	1.81	35	4.41	32	2.98	14	2.53	39	2.41	31	1.81	43
34	SC713	99	25	13	3.36	24	2.94	4	4.22	36	1.86	35	2.18	43	3.13	22	3.31	13
8	CZH99026	98	25	10	3.82	16	1.93	30	4.56	30	2.25	32	3.23	18	2.66	25	2.87	24
32	SC627	96	26	13	3.03	33	1.75	36	5.22	16	1.80	36	3.07	26	2.64	26	1.80	44
37	PHB30G97	92	26	11	3.50	20	1.71	38	5.51	10	1.75	37	3.16	20	2.42	33	2.29	38
11	CZH99029	108	27	12	3.21	29	2.38	10	4.44	31	3.13	9	2.92	32	3.48	17	2.62	30
47	LOCAL CHECK2	88	28	15	3.40	22	2.09	20	3.74	45	2.38	30	4.45	2	2.17	36	1.91	42
35	SC715	87	29	13	3.21	28	1.83	33	3.99	40	2.25	31	3.05	27	1.88	39	1.33	47
46	LOCAL CHECK1	80	32	13	2.53	42	1.33	45	5.43	13	0.54	45	4.19	3	2.25	34	2.59	31
40	AC71	84	35	10	2.33	44	1.36	44	4.35	34	3.07	12	2.29	41	2.67	26	3.50	9
39	AC33	82	36	9	2.58	41	1.70	39	4.98	22	0.58	43	2.01	44	2.70	28	2.84	26
38	AC31	80	37	12	2.07	47	1.01	48	3.75	44	1.20	40	1.81	45	2.96	21	3.29	14
44	DPC361	81	38	11	1.95	48	1.40	43	3.82	43	0.79	42	2.39	40	2.76	27	2.88	23
43	DMC211	68	42	8	2.15	46	1.55	42	2.95	48	1.52	39	1.66	46	2.17	35	2.15	40
Hybrids with anthesis date between 80 and 83 days																		
20	CZH99038	122	11	10	4.15	11	2.02	26	5.63	9	3.85	3	3.47	13	3.50	13	3.09	20
26	CZH99044	128	12	9	4.15	11	3.08	1	4.59	28	3.46	6	3.08	25	4.12	8	3.09	19
2	CZH99020	110	15	13	2.97	34	1.91	31	5.83	5	2.43	28	3.17	19	2.36	29	3.15	18
24	CZH99042	121	15	12	3.26	27	2.32	11	6.23	3	2.72	20	2.78	34	4.13	6	3.64	4
23	CZH99041	115	17	9	4.17	9	2.31	12	5.22	15	2.57	23	3.39	15	3.26	15	3.00	21
9	CZH99027	109	18	12	3.52	19	2.13	19	4.09	38	3.14	8	3.24	17	2.82	23	2.82	27
22	CZH99040	109	18	10	3.73	17	2.07	22	3.92	42	3.90	2	3.57	11	3.11	18	2.95	22
33	SC709	100	18	14	3.98	14	2.04	24	6.30	2	0.49	47	3.94	4	2.22	36	2.69	28
30	C8027	110	20	12	5.04	1	1.95	29	4.57	29	2.83	15	2.68	36	2.78	24	3.22	17
15	CZH99033	103	22	12	4.32	8	1.69	40	5.32	14	2.41	29	3.59	10	2.38	33	1.60	46
6	CZH99024	102	23	9	3.17	30	2.06	23	5.04	21	2.76	18	3.09	24	2.71	26	2.54	32
41	CCD131	80	34	11	2.59	40	1.16	47	4.12	37	0.50	46	2.96	30	2.26	32	3.61	5
45	NCK331	82	35	11	3.09	32	1.26	46	4.91	24	0.85	41	3.12	21	2.55	31	4.13	2
Mean		100	24	11	3.41	.	2.04	.	4.81	.	2.34	.	3.05	.	2.81	25	2.81	.
LSD (0.05)					1.91	.	0.67	.	1.55	.	1.29	.	0.60	.	0.62		1.44	.
Min		68	11	8	1.95	.	1.01	.	2.95	.	0.40	.	1.59	.	1.78	6	1.28	.
Max		128	42	15	5.04	.	3.08	.	6.47	.	3.92	.	4.83	.	4.13	40	4.72	.

ILHYB00: Results of intermediate & late maturing hybrids from CIMMYT, Seed-Co, Monsanto, Pannar, Pioneer, ACFD and Zambia across 36 sites in eastern and southern Africa 1999/00.

Entry Name	Across		Grain yield - Drought								Low N			Drought					
			Rel GY		Arusha Tan		Kamenyamigo Uga		Chitala Mal		Nanga Zam		ASI	Ears/ Plant	Leaf Senes	ASI	Ears/ Plant	Leaf Senes	
	%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	d	#	1-10	d	#	1-10
Hybrids with anthesis date between 74 and 78 days																			
10	CZH99028	109	19	11	1.87	19	3.64	4	4.89	12	2.80	25	4.0	0.91	2.7	5.1	0.78	3.2	
18	CZH99036	111	21	13	1.89	17	2.36	31	5.32	4	4.19	9	1.8	0.92	3.0	3.5	0.84	2.8	
29	C8001	109	24	14	2.72	4	3.08	13	5.28	5	3.48	13	2.9	1.03	2.9	2.4	0.85	2.5	
28	PAN67	97	26	12	1.51	25	1.95	38	5.15	8	2.54	29	4.5	1.08	2.4	5.6	0.61	3.2	
17	CZH99035	100	27	10	1.82	20	3.44	7	4.00	27	2.88	23	5.0	0.99	3.3	5.0	0.78	3.5	
21	CZH99039	101	27	10	2.13	10	1.61	44	4.53	17	3.12	18	2.0	1.12	2.2	5.1	0.84	3.5	
36	PHB30H83	83	29	15	0.90	38	2.10	33	2.19	47	2.12	35	4.7	0.82	2.9	4.2	0.61	4.0	
48	LOCAL CHECK3	86	29	14	0.56	43	3.12	12	3.08	46	0.97	48	4.6	0.98	2.9	6.6	0.63	3.8	
27	GV722	92	30	12	1.96	16	2.06	35	4.52	18	1.86	40	4.4	0.96	2.8	6.2	0.64	4.0	
31	SC621	91	31	12	1.14	33	2.69	21	4.71	15	2.63	28	3.8	1.06	3.0	4.1	0.60	3.7	
16	CZH99034	87	32	10	1.23	31	2.61	24	4.71	14	2.92	22	5.5	0.92	3.8	6.4	0.64	3.2	
42	CCP136	73	40	8	0.84	40	1.56	45	3.26	43	1.47	45	4.9	0.97	3.1	7.4	0.63	2.5	
Hybrids with anthesis date between 78 and 80 days																			
12	CZH99030	124	11	10	2.69	6	2.90	14	3.58	37	4.36	7	3.6	0.93	2.7	3.5	0.85	2.9	
3	CZH99021	120	13	9	2.01	15	2.79	20	3.99	28	4.40	5	2.2	0.98	2.7	2.6	0.68	3.4	
7	CZH99025	112	15	11	2.35	8	1.02	48	4.55	16	2.97	21	4.2	1.07	2.8	4.4	0.70	3.1	
25	CZH99043	118	15	11	2.42	7	3.20	10	5.17	7	4.32	8	1.9	0.99	3.1	1.3	0.76	3.1	
19	CZH99037	117	16	10	1.87	18	2.40	30	5.54	1	4.93	3	1.9	1.33	2.5	2.3	0.82	2.7	
1	CZH99019	109	18	11	1.70	22	3.19	11	3.74	34	2.28	33	4.1	1.00	2.8	4.6	0.71	3.7	
5	CZH99023	104	19	10	1.45	26	2.01	36	4.05	25	3.07	19	3.6	1.08	3.2	3.7	0.73	3.3	
4	CZH99022	103	21	10	1.17	32	2.83	18	4.35	21	1.93	39	4.4	1.05	3.4	6.8	0.60	3.7	
14	CZH99032	105	22	13	1.13	34	2.85	16	4.04	26	3.41	15	4.4	0.99	3.2	5.4	0.73	3.6	
13	CZH99031	102	23	12	2.02	14	1.84	40	3.84	30	2.53	30	4.9	1.03	3.0	4.3	0.73	3.8	
34	SC713	99	25	13	0.47	46	1.95	39	5.09	9	4.83	4	3.5	0.86	2.9	7.4	0.51	3.4	
8	CZH99026	98	25	10	1.25	30	3.51	5	4.15	24	1.52	42	3.0	0.97	3.2	6.2	0.81	3.6	
32	SC627	96	26	13	2.03	13	2.41	28	5.48	2	1.50	43	4.0	0.98	3.0	6.4	0.71	4.1	
37	PHB30G97	92	26	11	0.87	39	2.54	25	3.93	29	2.48	32	3.2	0.94	3.3	4.0	0.60	3.6	
11	CZH99029	108	27	12	3.25	2	4.39	1	3.32	42	3.81	12	2.0	0.89	3.0	3.6	0.80	3.6	
47	LOCAL CHECK2	88	28	15	0.70	42	2.67	22	3.61	36	1.95	38	4.5	1.03	3.2	2.6	0.77	3.8	
35	SC715	87	29	13	0.53	45	2.09	34	4.33	22	1.11	47	4.1	0.98	2.3	8.4	0.41	4.1	
46	LOCAL CHECK1	80	32	13	0.38	47	2.48	26	3.80	31	2.03	36	4.7	0.82	3.4	5.6	0.55	3.6	
40	AC71	84	35	10	1.01	36	1.69	41	5.18	6	1.99	37	5.6	1.10	2.6	7.5	0.57	3.3	
39	AC33	82	36	9	1.28	29	2.00	37	3.45	39	3.91	11	5.0	0.86	3.1	7.7	0.69	3.3	
38	AC31	80	37	12	2.03	12	1.64	43	5.02	10	2.82	24	4.8	0.77	2.8	8.1	0.73	3.0	
44	DPC361	81	38	11	1.68	23	1.47	47	3.76	32	4.02	10	4.7	0.84	2.9	8.6	0.64	2.9	
43	DMC211	68	42	8	0.95	37	2.11	32	4.36	20	1.28	46	5.2	0.86	2.6	9.5	0.56	2.9	
Hybrids with anthesis date between 80 and 83 days																			
20	CZH99038	122	11	10	1.64	24	3.50	6	4.93	11	4.36	6	2.7	1.18	2.6	3.5	0.82	3.0	
26	CZH99044	128	12	9	3.62	1	3.26	8	4.81	13	5.83	1	1.8	1.03	3.0	2.3	0.89	2.7	
2	CZH99020	110	15	13	1.81	21	2.40	29	1.93	48	2.50	31	4.2	1.08	2.7	6.5	0.73	3.0	
24	CZH99042	121	15	12	3.06	3	2.85	17	5.33	3	5.75	2	2.1	1.05	3.0	2.3	0.85	3.3	
23	CZH99041	115	17	9	2.71	5	3.23	9	4.19	23	3.16	16	2.9	1.17	2.5	3.2	0.78	3.4	
9	CZH99027	109	18	12	2.19	9	3.68	3	3.22	44	2.19	34	3.5	1.09	2.6	4.9	0.90	3.2	
22	CZH99040	109	18	10	2.05	11	2.64	23	4.47	19	3.44	14	3.9	1.36	2.8	3.6	0.83	3.2	
33	SC709	100	18	14	0.82	41	1.67	42	3.15	45	2.79	26	4.8	0.80	2.7	9.9	0.39	3.7	
30	C8027	110	20	12	1.40	27	2.87	15	3.41	40	2.99	20	3.7	1.05	2.6	5.2	0.80	3.7	
15	CZH99033	103	22	12	1.08	35	4.21	2	3.38	41	1.63	41	3.9	0.90	3.2	5.0	0.53	3.9	
6	CZH99024	102	23	9	1.30	28	2.83	19	3.75	33	3.15	17	3.5	0.98	2.6	7.5	0.67	2.9	
41	CCD131	80	34	11	0.23	48	2.46	27	3.51	38	1.50	44	7.9	0.85	3.0	8.2	0.48	2.8	
45	NCK331	82	35	11	0.55	44	1.56	46	3.73	35	2.76	27	2.3	1.08	3.7	7.2	0.64	3.5	
Mean		100	24	11	1.59	.	2.57	.	4.16	.	2.93	.	3.9	0.99	2.9	5.3	0.70	3.3	
LSD (0.05)					1.02	.	1.38	.	1.18	.	1.79	.	1.7	0.19	0.4	2.7	0.17	0.6	
Min		68	11	8	0.23	.	1.02	.	1.93	.	0.97	.	1.8	0.77	2.2	1.3	0.39	2.5	
Max		128	42	15	3.62	.	4.39	.	5.54	.	5.83	.	7.9	1.36	3.8	9.9	0.90	4.1	

OPM00: Results of quality protein maize hybrids from CIMMYT and Quality Seed across 37 sites in eastern and southern Africa, 1999/00.

Entry	Name	Pedigree	Origin	Across			Grain yield - Mid Altitudes southern Africa															
				Rel GY	Rank	Sldev	Across		Humpata Ang		Kasama Zam		Mt. Makulu Zam		Sussundenga Moz		Nampula Moz		Chitedze Mal		Bvumbwe Mal	
				%	Avg	Sldev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
Hybrids with anthesis date between 65 and 68 days																						
10	CZH99054	CML182/CML175//S91SIWQ	CIMMYT	109	11	7	5.94	10	6.53	5	4.88	2	6.55	12	5.92	18	4.86	21	7.38	16	5.52	6
13	CZH99057	CML181/CML175//S91SIWQ	CIMMYT	105	11	5	5.69	12	5.97	8	4.25	10	6.56	11	6.45	14	5.31	18	7.85	10	4.13	17
11	CZH99055	CML182/CML175//Obatampa	CIMMYT	113	12	6	5.44	14	4.72	21	4.04	16	6.21	17	6.79	10	5.94	7	6.24	23	4.87	9
19	CZH99062	CML175/CML176//S91SIWQ	CIMMYT	97	12	6	5.64	13	5.28	16	4.06	15	6.32	15	6.97	7	5.12	19	8.76	4	4.38	13
15	CZH99059	CML181/CML175//PL15QPM	CIMMYT	105	12	6	5.53	14	5.28	15	4.24	11	5.83	21	6.13	16	5.51	11	7.38	15	4.43	12
12	CZH99056	CML182/CML175//PL15QPM	CIMMYT	100	13	6	5.02	18	5.70	10	3.79	19	6.09	18	6.01	17	4.94	20	6.45	21	4.30	15
18	CZH99013	CML144/CML159//PL15QPM	CIMMYT	88	16	5	5.04	17	4.87	20	3.29	22	5.87	20	7.13	4	5.34	17	6.31	22	4.65	11
21	CZH99064	CML175/CML176//PL15QPM	CIMMYT	84	17	5	5.08	17	5.42	14	4.39	6	5.75	22	6.23	15	4.78	22	6.52	20	4.11	19
Hybrids with anthesis date between 68 and 72 days																						
7	CZH99051	CML144/CML159//CML182	CIMMYT	116	7	5	6.62	5	7.92	2	4.17	13	6.80	8	7.06	5	6.36	2	8.16	6	6.85	1
6	CZH99050	CML144/CML159//CML181	CIMMYT	111	7	6	7.11	5	9.72	1	3.92	18	8.50	1	7.98	1	5.47	14	10.62	1	5.94	3
5	CZH99049	CML181/CML175//CML176	CIMMYT	109	9	6	6.15	9	6.11	7	4.80	4	7.42	4	5.91	19	6.78	1	8.50	5	4.09	20
17	CZH99061	CML144/CML159//Obatampa	CIMMYT	110	9	5	6.17	8	6.12	6	4.73	5	7.02	5	7.44	2	5.42	16	7.87	9	5.87	4
14	CZH99058	CML181/CML175//Obatampa	CIMMYT	101	10	6	6.16	8	6.67	3	4.33	8	6.32	16	6.46	13	6.10	5	8.02	7	5.27	8
16	CZH99060	CML144/CML159//S91SIWQ	CIMMYT	112	11	6	5.88	11	5.70	11	3.96	17	5.69	23	6.97	8	6.18	4	7.65	11	5.34	7
23	Various	Local check 1	Various	105	11	8	6.28	9	3.06	23	4.33	8	8.21	2	5.75	22	5.89	8	9.33	3	5.65	5
24	Various	Local check 2	Various	108	11	8	6.26	9	3.47	22	5.22	1	6.75	9	5.01	23	4.09	23	9.46	2	4.33	14
20	CZH99063	CML175/CML176//Obatampa	CIMMYT	107	12	6	5.66	13	6.60	4	4.17	14	6.67	10	6.61	12	5.97	6	7.21	17	4.86	10
3	CZH99047	CML175/CML176	CIMMYT	96	13	6	5.71	12	5.14	17	4.82	3	6.90	7	5.77	21	5.47	13	7.94	8	2.46	23
4	CZH99048	CML182/CML175//CML176	CIMMYT	69	22	4	3.64	23	2.78	24	3.13	23	4.56	24	4.96	24	3.78	24	4.35	24	2.51	22
Hybrids with anthesis date between 72 and 74 days																						
1	CZH99045	CML142/CML176	CIMMYT	96	11	8	5.74	11	5.56	12	3.74	20	7.55	3	7.37	3	6.22	3	7.47	12	6.02	2
8	CZH99052	CML144/CML159//CML176	CIMMYT	96	13	6	5.58	14	5.14	18	4.32	9	6.34	13	5.86	20	5.86	9	7.13	18	4.20	16
22	QS7705	QS7705	Quality Seed	101	14	7	5.15	15	5.84	9	4.19	12	7.01	6	6.79	9	5.44	15	7.39	14	3.19	21
2	CZH99046	CML149/CML176	CIMMYT	80	17	6	5.03	17	4.87	19	3.70	21	6.32	14	6.73	11	5.61	10	6.65	19	1.62	24
9	CZH99053	CML141/CML144//CML176	CIMMYT	75	17	6	4.96	18	5.56	13	2.97	24	6.00	19	7.01	6	5.49	12	7.40	13	4.11	18
Mean				100	12	6	5.65	13	5.58	.	4.14	.	6.55	.	6.47	.	5.50	.	7.59	.	4.53	.
LSD (0.05)							0.45		1.61	.	1.94	.	1.40	.	1.19	.	0.92	.	1.28	.	1.67	.
Min				69	7	4	3.64	5	2.78	.	2.97	.	4.56	.	4.96	.	3.78	.	4.35	.	1.62	.
Max				116	22	8	7.11	23	9.72	.	5.22	.	8.50	.	7.98	.	6.78	.	10.62	.	6.85	.

QPM00: Results of quality protein maize hybrids from CIMMYT and Quality Seed across 37 sites in eastern and southern Africa, 1999/00.

Entry	Name	Across			Grain yield - Mid altitudes southern Africa														Grain yield - Mid Altitudes eastern Africa					
		Rel GY			Mbawa Mal		Baynesfield RSA		Pioneer Zim		Maseru Les		UZTU Zim		ART Farm Zim		Ratray Zim		Across		Lambo Tan		Arusha Tan	
		%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
Hybrids with anthesis date between 65 and 68 days																								
10	CZH99054	109	11	7	4.77	9	7.33	13	8.25	10	3.54	6	5.00	7	6.52	4	6.13	15	5.67	11	5.44	2	6.26	1
13	CZH99057	105	11	5	3.37	20	7.40	11	7.07	16	3.19	11	5.30	5	6.02	10	6.80	9	5.83	9	5.04	7	5.09	9
11	CZH99055	113	12	6	2.33	22	7.65	10	7.08	15	3.27	10	5.06	6	5.36	18	6.70	11	5.81	11	4.29	16	5.20	8
19	CZH99062	97	12	6	4.47	11	7.15	16	7.98	12	2.61	17	3.11	24	6.38	5	6.33	14	5.65	11	5.33	4	5.04	12
15	CZH99059	105	12	6	6.18	2	6.80	18	6.68	19	2.92	13	4.57	12	5.70	14	5.85	17	5.36	13	4.77	9	5.65	2
12	CZH99056	100	13	6	2.78	21	6.86	17	6.40	20	3.53	7	3.51	19	5.27	20	4.65	22	5.30	13	4.93	8	5.21	7
18	CZH99013	88	16	5	4.10	13	5.83	23	6.74	18	2.44	18	3.56	18	5.67	15	4.73	21	4.90	17	4.57	14	4.70	17
21	CZH99064	84	17	5	3.37	19	6.37	22	5.90	22	3.73	5	3.23	21	5.33	19	6.02	16	4.74	18	4.76	10	4.86	14
Hybrids with anthesis date between 68 and 72 days																								
7	CZH99051	116	7	5	5.46	6	7.90	6	8.01	11	3.87	3	6.05	1	6.12	7	7.99	3	6.66	6	5.14	6	5.43	5
6	CZH99050	111	7	6	4.72	10	7.93	5	8.79	5	4.36	2	5.82	2	7.43	1	8.42	2	6.92	5	5.23	5	5.07	11
5	CZH99049	109	9	6	5.25	7	7.82	7	8.79	4	3.01	12	4.99	8	5.93	11	6.72	10	6.02	9	5.45	1	4.86	16
17	CZH99061	110	9	5	3.93	14	7.68	9	8.74	6	3.41	9	4.59	10	6.11	8	7.49	5	6.38	8	4.27	17	5.36	6
14	CZH99058	101	10	6	4.31	12	7.79	8	8.30	8	3.45	8	5.33	4	6.97	3	6.90	8	5.15	12	4.63	12	5.56	3
16	CZH99060	112	11	6	5.51	4	7.18	14	8.25	9	2.67	15	4.48	13	6.20	6	6.54	13	5.52	13	3.80	21	5.07	10
23	Various	105	11	8	6.71	1	8.00	3	10.06	2	4.36	1	5.65	3	5.26	21	5.72	18	6.07	10	4.03	18	4.86	15
24	Various	108	11	8	5.49	5	8.36	1	11.11	1	3.82	4	4.58	11	7.37	2	8.57	1	5.67	13	3.15	24	4.67	18
20	CZH99063	107	12	6	3.92	15	6.65	21	6.78	17	2.70	14	4.39	14	5.56	17	7.15	7	5.69	11	5.40	3	4.97	13
3	CZH99047	96	13	6	4.96	8	7.18	15	9.60	3	2.42	19	4.33	15	5.77	13	7.22	6	5.59	12	4.63	13	4.20	20
4	CZH99048	69	22	4	2.18	23	5.20	24	3.56	24	2.00	20	3.66	17	4.09	24	4.27	24	3.55	23	3.59	23	2.96	24
Hybrids with anthesis date between 72 and 74 days																								
1	CZH99045	96	11	8	3.76	16	8.36	2	6.05	21	1.22	23	3.22	22	6.07	9	7.80	4	6.04	9	4.67	11	5.54	4
8	CZH99052	96	13	6	5.66	3	7.36	12	7.91	13	2.66	16	3.21	23	5.85	12	6.68	12	5.41	14	4.50	15	3.95	21
22	QS7705	101	14	7	3.67	18	7.97	4	5.56	23	1.52	21	4.89	9	4.23	23	4.48	23	4.94	16	3.82	20	4.58	19
2	CZH99046	80	17	6	3.70	17	6.76	19	8.56	7	1.27	22	3.47	20	5.65	16	5.60	19	4.43	18	3.59	22	3.49	22
9	CZH99053	75	17	6	2.15	24	6.72	20	7.42	14	1.03	24	3.76	16	4.49	22	5.32	20	4.44	19	3.92	19	3.18	23
Mean		100	12	6	4.28	.	7.26	.	7.65	.	2.87	.	4.40	.	5.80	.	6.42	.	5.49	13	4.54	.	4.82	.
LSD (0.05)					3.48	.	1.02	.	1.71	.	1.39	.	1.85	.	1.34	.	1.23	.	0.61		1.60	.	1.27	.
Min		69	7	4	2.15	.	5.20	.	3.56	.	1.03	.	3.11	.	4.09	.	4.27	.	3.55	5	3.15	.	2.96	.
Max		116	22	8	6.71	.	8.36	.	11.11	.	4.36	.	6.05	.	7.43	.	8.57	.	6.92	23	5.45	.	6.26	.

OPM00: Results of quality protein maize hybrids from CIMMYT and Quality Seed across 37 sites in eastern and southern Africa, 1999/00.

Entry	Name	Across			Grain yield - Mid altitudes eastern Africa																Grain yield - N stress			
		Rel GY	Rank	Stdev	Kakamega Ken		Serere Uga		Kitale Ken		Bungoma Kenya		Embu Ken		Kenya		Mvuazi DRC		Bako Eth		Across		Mazozo Ang	
		%	Avg		t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
Hybrids with anthesis date between 65 and 68 days																								
10	CZH99054	109	11	7	7.94	4	4.04	21	5.61	8	4.69	10	7.07	13	3.48	20	5.63	11	6.56	19	1.98	12	2.58	18
13	CZH99057	105	11	5	7.68	8	5.29	11	4.77	14	5.42	3	7.09	12	4.57	11	6.40	3	6.93	15	1.90	12	3.94	4
11	CZH99055	113	12	6	7.26	12	4.73	15	5.68	7	5.09	8	7.44	10	3.49	18	5.73	7	9.20	5	2.07	12	2.46	20
19	CZH99062	97	12	6	6.53	16	3.81	22	5.41	12	5.54	2	7.84	8	4.70	9	4.68	17	7.59	11	1.85	11	3.42	10
15	CZH99059	105	12	6	7.80	5	4.40	20	4.25	16	4.66	11	6.47	15	3.17	22	5.70	10	6.73	18	2.14	10	4.08	2
12	CZH99056	100	13	6	6.72	15	4.40	19	3.94	18	4.32	15	6.43	16	4.08	13	5.89	6	7.06	14	2.08	9	3.41	11
18	CZH99013	88	16	5	5.40	20	4.90	14	4.10	17	4.08	17	5.74	22	3.49	19	4.51	20	7.53	12	1.74	15	2.62	17
21	CZH99064	84	17	5	5.67	19	3.51	23	2.98	21	3.95	18	5.92	21	4.00	15	5.22	14	6.48	20	1.82	15	3.40	12
Hybrids with anthesis date between 68 and 72 days																								
7	CZH99051	116	7	5	10.26	1	5.54	9	7.64	2	5.39	4	6.12	20	4.72	8	6.09	5	10.31	3	2.31	9	3.48	7
6	CZH99050	111	7	6	10.01	2	5.09	13	6.77	4	5.81	1	7.11	11	5.58	3	7.21	1	11.33	1	2.01	12	3.54	6
5	CZH99049	109	9	6	8.05	3	6.19	3	5.44	11	4.65	12	9.07	1	4.61	10	5.72	8	6.12	21	2.20	8	5.02	1
17	CZH99061	110	9	5	7.50	9	7.80	1	7.85	1	5.30	5	6.89	14	4.74	7	5.00	16	9.12	6	1.91	12	3.02	14
14	CZH99058	101	10	6	7.71	6	5.81	5	3.01	20	5.25	6	7.75	9	3.29	21	4.51	19	3.99	23	2.15	10	3.82	5
16	CZH99060	112	11	6	6.78	14	4.48	18	6.33	5	4.27	16	6.14	19	4.87	5	5.71	9	7.78	10	2.17	10	3.45	9
23	Various	105	11	8	7.39	10	6.33	2	6.99	3	5.24	7	8.57	4	5.73	2	4.12	21	7.48	13	1.44	17	2.32	21
24	Various	108	11	8	7.69	7	5.54	8	4.68	15	4.56	13	8.88	2	3.57	17	3.22	24	10.74	2	1.40	13	0.41	24
20	CZH99063	107	12	6	6.12	17	5.26	12	5.49	10	3.78	20	6.25	18	6.27	1	6.62	2	6.75	17	1.82	14	2.85	15
3	CZH99047	96	13	6	5.07	22	5.47	10	6.24	6	4.36	14	8.43	5	4.86	6	4.62	18	7.99	9	1.65	13	3.09	13
4	CZH99048	69	22	4	4.77	24	4.56	16	1.90	23	3.32	21	4.56	24	2.99	24	3.31	23	3.50	24	1.43	19	2.26	22
Hybrids with anthesis date between 72 and 74 days																								
1	CZH99045	96	11	8	7.14	13	5.80	6	5.53	9	4.92	9	8.57	3	4.13	12	5.09	15	9.02	7	1.75	13	4.03	3
8	CZH99052	96	13	6	7.36	11	4.49	17	5.16	13	2.84	22	6.28	17	3.69	16	6.15	4	9.68	4	1.96	10	2.75	16
22	QS7705	101	14	7	5.28	21	3.07	24	1.92	22	3.88	19	7.93	6	5.23	4	5.56	12	8.17	8	1.95	12	2.53	19
2	CZH99046	80	17	6	4.89	23	5.70	7	1.57	24	2.43	24	7.86	7	4.08	14	3.77	22	6.92	16	1.57	17	3.47	8
9	CZH99053	75	17	6	6.07	18	6.18	4	3.40	19	2.48	23	5.62	23	3.14	23	5.24	13	5.16	22	1.52	15	1.70	23
Mean		100	12	6	6.96	.	5.10	.	4.86	.	4.43	.	7.08	.	4.27	.	5.24	.	7.59	.	1.87	13	3.07	.
LSD (0.05)					1.39	.	2.05	.	1.48	.	1.35	.	1.66	.	1.20	.	2.18	.	4.22	.	0.37		2.12	.
Min		69	7	4	4.77	.	3.07	.	1.57	.	2.43	.	4.56	.	2.99	.	3.22	.	3.50	.	1.40	8	0.41	.
Max		116	22	8	10.26	.	7.80	.	7.85	.	5.81	.	9.07	.	6.27	.	7.21	.	11.33	.	2.31	19	5.02	.

QPM00: Results of quality protein maize hybrids from CIMMYT and Quality Seed across 37 sites in eastern and southern Africa, 1999/00.

Entry	Name	Across			Grain yield - N stress																	
		Rel GY	Rank		Msekera Zam		Makoholi Zim		Harare Zim		Umbeluzzi Moz		Sebele Bot		Leribe Les		Harare Zim		Kadoma Zim		Namulonge Uga	
		%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank	t/ha	Rank
Hybrids with anthesis date between 65 and 68 days																						
10	CZH99054	109	11	7	1.82	6	0.48	17	1.80	14	2.49	22	1.51	1	0.82	24	1.88	9	1.53	4	4.85	2
13	CZH99057	105	11	5	1.32	20	0.73	8	2.15	1	2.87	15	1.22	7	1.08	20	1.46	16	1.35	10	2.87	18
11	CZH99055	113	12	6	1.26	21	0.25	23	2.13	3	3.46	10	0.92	15	1.32	14	2.91	2	1.32	11	4.66	3
19	CZH99062	97	12	6	1.97	3	0.43	19	1.93	9	2.60	18	1.24	6	1.66	4	1.08	21	1.53	3	2.66	20
15	CZH99059	105	12	6	1.55	13	0.91	2	1.86	12	3.52	8	1.28	5	1.16	17	1.48	15	1.23	18	4.30	5
12	CZH99056	100	13	6	1.67	10	0.58	14	2.05	4	3.61	6	1.32	4	1.70	2	1.82	11	1.41	8	3.27	15
18	CZH99013	88	16	5	1.53	14	0.29	21	2.02	5	2.52	21	0.79	18	1.31	15	1.55	14	1.27	17	3.51	10
21	CZH99064	84	17	5	1.36	18	0.60	12	1.96	8	3.45	11	0.87	16	1.03	22	1.36	18	1.29	16	2.85	19
Hybrids with anthesis date between 68 and 72 days																						
7	CZH99051	116	7	5	1.38	17	0.68	10	1.67	16	4.22	2	1.39	2	1.57	7	1.73	12	1.30	14	5.67	1
6	CZH99050	111	7	6	1.42	15	0.56	16	1.67	15	3.57	7	1.35	3	1.11	19	2.07	7	1.12	21	3.67	8
5	CZH99049	109	9	6	2.04	1	0.70	9	2.00	6	3.24	12	1.08	9	1.63	6	1.43	17	1.52	5	3.32	13
17	CZH99061	110	9	5	1.84	5	0.89	5	1.58	19	2.82	16	1.06	11	1.27	16	1.84	10	1.30	12	3.55	9
14	CZH99058	101	10	6	1.81	8	0.56	15	1.92	10	3.74	4	1.06	10	1.16	18	3.17	1	1.30	13	2.98	17
16	CZH99060	112	11	6	1.59	12	0.63	11	1.43	20	4.19	3	0.59	22	1.48	10	2.39	4	1.37	9	4.62	4
23	Various	105	11	8	1.40	16	0.89	4	0.83	23			1.00	13	1.02	23	1.25	19	0.98	24	3.29	14
24	Various	108	11	8	1.68	9	0.43	18	0.33	24			0.61	20	1.50	8	2.67	3	1.65	1	3.36	11
20	CZH99063	107	12	6	1.17	23	0.60	13	2.13	2	2.52	21	1.04	12	1.07	21	2.29	5	1.16	19	3.35	12
3	CZH99047	96	13	6	1.82	7	0.77	7	1.64	17	2.73	17	1.18	8	1.63	5	0.70	23	1.30	15	1.68	22
4	CZH99048	69	22	4	0.63	24	0.34	20	1.62	18	2.11	23	0.46	23	1.75	1	0.91	22	1.07	23	3.19	16
Hybrids with anthesis date between 72 and 74 days																						
1	CZH99045	96	11	8	1.33	19	0.95	1	1.18	22	3.51	9	0.31	24	1.46	12	1.72	13	1.55	2	1.42	24
8	CZH99052	96	13	6	1.63	11	0.90	3	1.89	11	2.52	19	0.60	21	1.69	3	1.97	8	1.43	6	4.23	6
22	QS7705	101	14	7	2.04	2	0.81	6	1.86	13	2.98	13	0.78	19	1.47	11	2.08	6	1.07	22	3.89	7
2	CZH99046	80	17	6	1.24	22	0.22	24	1.98	7	2.94	14	0.85	17	1.43	13	0.51	24	1.13	20	1.96	21
9	CZH99053	75	17	6	1.84	5	0.25	22	1.25	21	3.62	5	0.94	14	1.49	9	1.22	20	1.43	7	1.50	23
Mean		100	12	6	1.55	.	0.60	.	1.70	.	3.21	.	0.97	.	1.37	.	1.73	.	1.32	.	3.36	.
LSD (0.05)					0.63	.	0.66	.	0.95	.	1.47	.	0.57	.	0.77	.	0.75	.	0.36	.	2.01	.
Min		69	7	4	0.63	.	0.22	.	0.33	.	2.11	.	0.31	.	0.82	.	0.51	.	0.98	.	1.42	.
Max		116	22	8	2.04	.	0.95	.	2.15	.	4.52	.	1.51	.	1.75	.	3.17	.	1.65	.	5.67	.

QPM00: Results of quality protein maize hybrids from CIMMYT and Quality Seed across 37 sites in eastern and southern Africa, 1999/00.

Entry	Name											Low N	
		Across			Drought						ASI	Leaf Senes	
		Rel GY	Rank		Across		Chiredzi Zim		Mazozo Ang				
%	Avg	Stdev	t/ha	Rank	t/ha	Rank	t/ha	Rank	d	1-10			
Hybrids with anthesis date between 65 and 68 days													
10	CZH99054	109	11	7	3.49	6	4.07	1	2.92	10	1.6	6.2	
13	CZH99057	105	11	5	3.13	9	3.44	7	2.82	11	1.7	5.7	
11	CZH99055	113	12	6	4.18	6	3.10	9	5.27	2	1.7	5.0	
19	CZH99062	97	12	6	2.51	13	3.59	4	1.42	22	1.9	6.4	
15	CZH99059	105	12	6	3.19	8	3.97	2	2.41	14	1.7	6.0	
12	CZH99056	100	13	6	2.91	11	3.05	10	2.78	12	1.5	6.0	
18	CZH99013	88	16	5	2.44	14	3.70	3	1.17	24	1.7	5.7	
21	CZH99064	84	17	5	1.87	22	2.19	22	1.56	21	1.6	6.8	
Hybrids with anthesis date between 68 and 72 days													
7	CZH99051	116	7	5	3.04	11	3.03	12	3.05	9	2.1	5.6	
6	CZH99050	111	7	6	2.53	14	3.05	11	2.01	17	1.8	4.6	
5	CZH99049	109	9	6	2.87	13	2.64	17	3.10	8	1.8	4.9	
17	CZH99061	110	9	5	3.09	12	2.57	18	3.60	6	1.6	5.7	
14	CZH99058	101	10	6	2.53	13	3.49	6	1.57	20	1.9	5.0	
16	CZH99060	112	11	6	3.89	9	2.79	15	4.99	3	1.5	5.1	
23	Various	105	11	8	3.36	12	2.30	20	4.43	4	2.3	5.3	
24	Various	108	11	8	4.14	7	2.96	13	5.32	1	2.4	4.8	
20	CZH99063	107	12	6	3.53	7	3.19	8	3.87	5	1.7	5.3	
3	CZH99047	96	13	6	2.48	16	2.73	16	2.22	15	2.3	5.3	
4	CZH99048	69	22	4	2.04	20	2.30	21	1.79	19	1.7	5.9	
Hybrids with anthesis date between 72 and 74 days													
1	CZH99045	96	11	8	2.35	18	2.04	23	2.66	13	1.5	5.0	
8	CZH99052	96	13	6	2.38	16	2.89	14	1.88	18	1.5	5.8	
22	QS7705	101	14	7	3.41	6	3.58	5	3.23	7	1.4	5.4	
2	CZH99046	80	17	6	2.21	18	2.34	19	2.07	16	2.0	5.8	
9	CZH99053	75	17	6	1.55	24	1.85	24	1.25	23	1.6	5.9	
Mean		100	12	6	2.88	13	2.95	.	2.81	.	1.8	5.6	
LSD (0.05)					0.81		1.51	.	1.31	.	0.5	0.9	
Min		69	7	4	1.55	6	1.85	.	1.17	.	1.4	4.6	
Max		116	22	8	4.18	24	4.07	.	5.32	.	2.4	6.8	