

Eastern Africa Product Profile 2

Mean yield performance and agronomic attributes of elite Intermediate-late maturing CIMMYT hybrids under EA-PP2 vis-à-vis commercial and internal genetic check hybrids evaluated in **Eastern Africa 2019 Regional On-station and 2020 Regional On-farm Trials**.

Target agro-ecologies: Upper mid-altitude; wet

Hybrid	Comment	Grain Yield										Relative grain yield	Grain Moist.	Days to 50% Anthesis	Anthesis-silking Interval (ASI) of the hybrid	
		Regional On-farm evaluation	Regional On-station Data								Grain yield of Single Cross					Grain yield of Pollen parent
			Opt.	HD	MD	NUE	Randon stress	Striga	MLN artificial Inoculation	t/ha						
t/ha	-----t/ha-----								t/ha	%	%	d				
CIM19EAPP2-31	Available	7.2	9.1	10.6	3.1	2.5	4.2	1.6	0.2	10.3	2.9	103.4	13.6	89.6	0.6	
Commercial Check 1		6.4	7.3	5.3	1.8	1.2	2.1	1.7	0.5			83.0	13.5	89.2	0.6	
Commercial Check 2			7.5	6.4	2.6	1.4	2.5	0.7	1.0			85.2	14.4	89.8	0.0	
Commercial Check 3			7.0	7.9	2.0	2.3	1.7	1.7	0.4			79.5	14.3	86.1	1.0	
Commercial Check 4			6.4	5.7	2.0	1.5	2.6	0.7	0.4			72.7	13.4	88.6	0.4	
Internal Genetic Gain Check 1		7.5	8.8	8.5	2.5	2.6	3.4	1.1	0.5			100.0	14.2	88.8	0.8	
Internal Genetic Gain Check 2		6.8	7.9	9.3	2.5	2.5	3.5	2.3	0.9			89.8	14.2	88.1	0.7	
Commercial Check 5			8.2	9.5	2.5	1.7	2.2	0.7	1.3			93.2	15.3	89.9	0.8	
ROFT Commercial Check		6.7														
Mean		7.0	8.0	8.3	2.4	2.1	3.3	1.5	0.9				13.7	89.2	1.0	
LSD (0.05)		1.1	0.7	1.0	0.9	0.4	1.0	0.5	0.4				2.0	1.2	0.6	
H		0.7	0.8	0.1	0.5	0.1	0.7	0.5	0.2				0.5	0.7	0.7	
CV		18.1	17.3	24.0	35.7	27.8	23.2	29.4	65.9				9.3	1.6	90.0	
nLoc		25	2	2	2	2	2	2	2				2	2	2	
nLoc		25	8	1	1	3	3	1	1				2	5	4	

Notes: Opt = Optimum Management; MD = Managed drought; NUE = Nitrogen Use Efficient (managed low nitrogen); HD = High Density (80,000); FAW = Fall armyworm; MLN = Maize Lethal Necrosis

Relative grain yield: % grain yield of an entry against the overall trial mean grain yield

Diseases scored on 1-9 scale: 1 = Highly resistant; 5 = Tolerant; 9 = Highly susceptible

Kernel texture rated on 1-5 scale: 1 = flint, 5= dent

Ear posion values are ratios of ear height to plant height, small values indicate low ear position; large values indicate high ear position.

SL = Stem lodging expressed as percent of number of plants lodged (stem) to total number of plants in a plot

RL = Root lodging at root expressed as percent of plants lodged to total number of plants in a plot

Product profile # EA-PP2

Basic traits for target product profile Late-maturing, white, high-yielding, Drought tolerance, NUE, and resistant to GLS, TLB, MSV Ear Rots, and Common Rust

Nice to have / emerging traits FAW, MLN, Striga

Eastern Africa Product Profile 2

Mean yield performance and agronomic attributes of elite Intermediate-late maturing CIMMYT hybrids under **EA-PP2** vis-à-vis commercial and internal genetic check hybrids evaluated in **Eastern Africa 2019 Regional On-station and 2020 Regional On-farm Trials**.

Target agro-ecologies: Upper Mid-altitude; wet

Hybrid	Difference in flowering of Male and Female Parents (Nicking)	Plant height	Ear height	Ears per Plant	Ear Position	Bad Husk Cover	Ear Aspect	Grain Texture	Lodging		MLN Score (under Artificial Inoculation at Naivasha)	Gray Leaf Spot (GLS)	Common Rust (CR)	Turcicum Leaf Blight (TLB)	Ear Rots (ER)	Maize Streak Virus (MSV)
	d	cm	cm	#	Ratio	%	1-5	1-5	%	%	1-9	1-9	1-9	1-9	%	1-9
CIM19EAPP2-31	-2	261	139	1.2	0.5	3.3	2.3	2.3	5.3	5.6	7.0	1.3	3.4	4.0	11.9	3.1
Commercial Check 1		272	151	1.0	0.6	3.8	2.5	1.9	4.2	5.8	7.0	1.8	3.0	4.3	10.8	4.7
Commercial Check 2		266	139	1.1	0.5	2.5	2.4	2.1	5.4	5.4	6.5	1.5	3.2	4.7	10.1	3.3
Commercial Check 3		261	120	1.0	0.5	3.1	2.6	2.2	6.6	5.9	7.0	1.5	3.0	3.3	15.2	4.6
Commercial Check 4		261	126	1.0	0.5	4.8	2.6	2.6	4.8	6.8	7.0	2.0	3.4	4.8	21.2	4.5
Internal Genetic Gain Check 1		265	134	1.1	0.5	3.8	2.3	2.2	3.5	4.9	7.0	1.5	2.6	3.0	11.3	1.9
Internal Genetic Gain Check 2		257	130	1.0	0.5	3.8	2.5	2.6	4.7	5.2	6.5	1.7	3.0	4.0	10.7	4.0
Commercial Check 5		275	154	1.0	0.6	5.1	2.4	2.1	7.7	5.1	8.0	1.8	3.4	3.7	11.1	4.4
ROFT Commercial Check																
Mean		262	127	1.1	0.5	7.8	2.5	2.1	4.7	4.9	6.8	1.6	2.9	3.9	15.2	3.2
LSD (0.05)		7.3	9.2	0.1	0.0	5.0	0.2	0.2	3.0	3.4	0.4	0.5	0.2	0.8	6.3	3.3
H		0.5	0.9	0.6	0.9	0.8	0.5	0.8	0.3	0.3	0.2	0.4	2.0	0.6	0.5	0.3
CV		4.5	7.9	9.0	9.6	81.9	14.5	10.5	79.8	116.3	9.1	28.9	13.7	17.7	35.5	51.6
nLoc		2	2	2	2	2	2	2	2	2	2	6	2	6	2	2
nLoc		6	6	6	7	6	7	4	3	3	1	1	3	1	6	2

Notes: Opt = Optimum Management; MD = Managed drought; NUE = Nitrogen Use Efficient (managed low nitrogen); HD = High Density (80,000); FAW = Fall armyworm; MLN = Maize Lethal Necrosis

Relative grain yield: % grain yield of an entry against the overall trial mean grain yield

Diseases scored on 1-9 scale: 1 = Highly resistant; 5 = Tolerant; 9 = Highly susceptible

Kernel texture rated on 1-5 scale: 1 = flint, 5 = dent

Ear position values are ratios of ear height to plant height, small values indicate low ear position; large values indicate high ear position.

SL = Stem lodging expressed as percent of number of plants lodged (stem) to total number of plants in a plot

RL = Root lodging at root expressed as percent of plants lodged to total number of plants in a plot

Product profile # EA-PP2

Basic traits for target product profile Late-maturing, white, high-yielding, Drought tolerance, NUE, and resistant to GLS, TLB, MSV Ear Rots, and Common Rust

Nice to have / emerging traits FAW, MLN, Striga