

## Eastern Africa Product Profile 1B

Mean yield performance and agronomic attributes of available elite CIMMYT hybrids under **EA-PP1B** vis-à-vis commercial and internal genetic check hybrids evaluated in **East Africa 2019 Regional On-station and 2020 Regional On-farm Trials**.

## Target agro-ecologies: Mid-altitude, dry

Hybrid	Comment	Grain Yield										Grain yield of Single Cross	Grain yield of Pollen parent	Relative grain yield %	Grain Moist. %	Days to 50% Anthesis d	Anthesis-silking Interval (ASI) of the hybrid	Difference in flowering of Male and Female Parents (Nicking) d
		Regional On-farm evaluation	Regional On-station Data															
			Opt.	HD	MD	STRIGA	NUE	Random Stress	FAW	MLN artificial Inoculation	t/ha							
t/ha	t/ha									t/ha	%	%	d	d				
CIM19EAPP1B-05	Available	6.5	8.1	10.4	2.9	4.5	3.6	3.9	8.2	5.1	8.4	2.0	119.1	11.8	67.8	0.8	-4	
CIM19EAPP1B-10	Available	5.9	7.3	5.3	3.8	4.1	2.6	3.2	6.8	6.0	8.4	2.3	107.4	12.0	64.7	0.3	1	
CIM19EAPP1B-17	Available	6.0	7.5	8.9	3.5	4.0	3.8	2.9	6.1	7.5	9.7	3.2	110.3	12.1	66.9	0.1	0	
Internal Genetic Gain check 1		5.6	6.8	7.5	3.2	3.7	4.2	4.1	6.5	0.0			100.0	11.7	64.5	0.5		
Internal Genetic Gain check 2		5.5	6.3	4.4	2.2	3.5	3.1	3.7	5.6	0.0			92.6	12.0	69.8	-0.2		
Commercial Check 1		5.1	5.7	5.4	2.7	2.8	3.3	3.2	7.0	0.0			83.8	11.2	62.8	1.1		
Commercial Check 2			6.6	5.3	2.5	2.3	3.0	2.7	6.1	0.0			97.1	11.4	63.9	1.1		
ROFT Commercial Check		4.6																
Mean		5.2	6.9	5.8	3.4	3.9	3.1	3.3	6.5	5.1				11.9	65.7	0.3		
LSD (0.05)		2.0	0.7	1.4	0.7	1.0	0.5	0.5	1.3	1.3				1.0	1.2	0.9		
H		0.9	0.7	0.4	0.7	0.7	0.3	0.4	0.5	0.7				0.5	0.9	0.6		
CV		19.1	14.2	25.1	15.0	19.2	23.0	20.2	18.2	17.6				3.9	2.5			
nReps		27	2	2	2	2	2	2	2	2				2	2	2		
nLoc		27	7	2	1	1	3	2	1	1				5	7	5		

**Notes:** Opt = Optimum Management; MD = Managed drought; NUE = Nitrogen Use Efficient (managed low nitrogen); HD = High Density (80,000 plants per ha); 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-PP1B

**Basic traits for target product profile** Early-maturing, white, high-yielding, drought tolerant, NUE, resistant to MLN, MSV, TLB

**Nice to have / emerging traits** FAW, Striga

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Hybrid	Plant height	Ear height	Ears per Plant	Ear Position	Bad Husk Cover	Grain Texture	Plant Aspect	Lodging		MLN Score (under Artificial Inoculation at Naivasha)	Gray Leaf Spot (GLS)	Turcicum Leaf Blight (TLB)	Ear Rots (ER)
	cm	cm	#	Ratio	%	1-5	1-5	Root %	Stalk %	1-9	1-9	1-9	%
CIM19EAPP1B-05	232	120	1.1	0.5	6.4	2.9	2.1	11.7	8.9	4.3	1.7	4.3	2.3
CIM19EAPP1B-10	222	109	1.0	0.5	8.1	3.0	2.4	7.2	4.9	3.1	2.2	4.8	1.8
CIM19EAPP1B-17	229	137	1.1	0.6	5.2	2.4	2.3	8.3	14.6	3.0	2.0	5.0	7.3
Internal Genetic Gain check 1	206	92	1.1	0.5	8.8	2.4	2.4	5.8	14.0	7.8	1.8	4.2	4.0
Internal Genetic Gain check 2	220	111	1.1	0.5	5.0	2.9	2.4	8.2	12.6	8.0	2.0	5.2	8.0
Commercial Check 1	221	99	1.1	0.4	8.3	2.1	2.6	6.8	5.6	8.6	1.7	3.5	5.6
Commercial Check 2	221	110	1.1	0.5	9.5	3.4	2.7	8.3	8.7	8.1	1.7	4.0	15.2
ROFT Commercial Check													
Mean	226	112	1.1	0.5	9.4	2.5	35.2	8.0	10.9	4.4	2.1	5.0	5.2
LSD (0.05)	7.4	6.5	0.1	0.0	3.9	0.2	1.5	4.3	11.9	0.9	0.9	0.8	9.2
H	0.8	0.9	0.8	0.8	0.7	0.9	0.3	0.3	0.2	0.9	0.7	0.5	0.9
CV	5.4	8.1	10.5	9.2	81.9	11.6	11.8	113.7	103.9	12.9	35.1	13.5	85.1
nReps	2	2	2	2	2	2	2	2	2	2	6	6	2
nLoc	7	6	5	6	7	5	7	4	6	1	1	1	4

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