

Latin America Product Profile PP1C

Mean yield performance and agronomic attributes of elite Intermediate-maturing CIMMYT hybrids under **LatAM-PP1C** vis-à-vis commercial and internal genetic check hybrids evaluated in Latin America Lowland Tropical **2017 Stage 4 and 2018 Stage 5 Trials**.

Target agro-ecologies: Tropical Lowland, rainfed

Hybrid	Comment	Grain Yield						Relative grain yield	Grain Moisture	Days to 50% anthesis	Anthesis-silking Interval (ASI) of the Hybrid	Difference in flowering between Male & Female Parents	Plant height	Ear height
		Stage 5 Evaluation	Stage 4 Data			Grain yield of Single Cross or female parent								
			Opt.	Rainfed	MD	Grain yield of Pollen parent								
		t/ha	t/ha			t/ha	%	%	d	d	d	cm	cm	
CLTHY16003	Available	6.4	9.2	4.7	2.9	3.4	4.3	110	17.8	60	1.1	-3	254	127
CLTHY16119	Available	5.9	8.4	4.6	2.9	8.0	3.1	101	17.0	59	1.2	-3	258	129
Internal Genetic Gain check 1		5.9	7.8	4.1	2.4			101	16.6	58	0.5		248	110
Internal Genetic Gain check 2		5.6						96	17.1	58	1.2		240	105
Commercial Check 2 / Stage 5 Check		6.7	8.0	4.3	3.0			116	18.4	59	0.4		244	122
Commercial Check 1 / Stage 5 Check		5.8						100	17.0	59	1.1		245	116
Mean		6.1	8.4	4.5	2.5			17.3		58.8	1.0		247.6	119.4
LSD (0.05)		0.4	0.7	0.3	0.5			0.5		1.2	0.4		4.8	4.1
H		0.9	0.8	0.8	0.4			0.9		0.7	0.7		0.9	1.0
CV		3.1	7.2	10.0	15.5			1.4		1.0	20.2		1.0	1.7
nreps		2	2	2	2			2		2	2		2	2
nLoc		38	8	18	1			34		38	38		37	37

Notes: Opt = Optimum Management; MD = Managed drought

Relative grain yield: % grain yield of an entry against the best commercial check 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.

Stalk and root lodging expressed as percent of number of plants lodged to total number of plants in a plot

Bad husk cover expressed as percent of plants with bad husk cover lodged to total number of plants in a plot

Product profile # LatAM-PP1C

Basic traits for target product profile Intermediate maturing, yellow, high yielding, drought tolerant, and resistant to MLB, and Ear rots

Nice to have / emerging traits Fusarium Stalk Rot

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Hybrid	Ears per Plant	Ear Position	Bad Husk Cover	Ear Aspect	Grain Texture	Lodging		Tar Spot Complex (TSC)	Maydis Leaf Blight (MLB)	Ear Rots (ER)
						Root	Stalk			
	#	Ratio	%	1-5	1-5	%	%	1-9	1-9	%
CLTHY16003	1.0	0.50	1.4	2.3	3.3	2.9	3.8	4.6	3.5	5.5
CLTHY16119	1.0	0.50	3.2	2.3	3.2	4.1	4.0	5.0	3.8	5.7
Internal Genetic Gain check 1	1.0	0.44	2.6	2.4	3.2	3.6	2.6	5.5	4.6	7.3
Internal Genetic Gain check 2	0.9	0.44	6.0	2.8	3.4	2.4	1.7	6.2	5.0	16.0
Commercial Check 2 / Stage 5 Check	1.0	0.50	3.0	2.2	2.9	4.9	1.4	5.5	4.9	6.6
Commercial Check 1 / Stage 5 Check	0.9	0.47	4.6	2.4	3.3	3.9	4.5	5.7	4.8	11.2
Mean	1.0	0.48	3.9	2.4	3.1	3.6	4.0	4.9	4.6	8.1
LSD (0.05)	0.0	0.01	1.9	0.2	0.5	2.3	3.4	1.1	0.6	2.8
H	0.8	1.0	0.8	0.7	0.9	0.4	0.7	0.7	0.8	0.9
CV	1.9	1.5	24.5	4.8	8.0	32.1	41.6	10.6	5.2	17.4
nreps	2	2	2	2	2	2	2	2	2	2
nLoc	34	37	28	30	8	26	24	2	11	34

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Nice to have / emerging traits Fusarium Stalk Rot

Information on Latin America trial locations and management for the 2017 Stage 4 and 2018 Stage 5 Trials

Site No.	Name Of Experiment	Name Of Location	Country	Management	Testing Stage
1	04-18MASTCHLTY-1	Est Exp Ernest W. Sprague, Venustiano Carranza, Puebla	Mexico	Optimal	5
2	04-18MASTCHLTY-2	E.E. Tlaltizapán, Morelos	Mexico	Rainfed	5
3	04-18MASTCHLTY-3	San Francisco Cozaltepec, Tonameca, Oaxaca	Mexico	Rainfed	5
4	04-18MASTCHLTY-4	La Reforma, Putla, Oaxaca	Mexico	Rainfed	5
5	04-18MASTCHLTY-5	Río Grande, Villa de Tututepec, Oaxaca	Mexico	Rainfed	5
6	04-18MASTCHLTY-6	Bajos de Chila, Mixtepec, Oaxaca	Mexico	Rainfed	5
7	04-18MASTCHLTY-8	La Florida, Santiago Yaveo, Oaxaca	Mexico	Rainfed	5
8	04-18MASTCHLTY-9	Collantes, Santiago Pinotepa Nacional, Oaxaca.	Mexico	Rainfed	5
9	04-18MASTCHLTY-12	Benito Juárez, La Concordia, Chiapas	Mexico	Rainfed	5
10	04-18MASTCHLTY-14	Benito Juárez, Villaflores, Chiapas	Mexico	Rainfed	5
11	04-18MASTCHLTY-15	Guadalupe Victoria, Villaflores, Chiapas	Mexico	Rainfed	5
12	04-18MASTCHLTY-16	El Parral, El Parral, Chiapas	Mexico	Rainfed	5
13	04-18MASTCHLTY-19	La Bajada, Coquimatlán, Colima	Mexico	Rainfed	5
14	04-18MASTCHLTY-20	La Caja, Comala, Colima	Mexico	Optimal	5
15	04-18MASTCHLTY-21	El Zacatepec, Tepalcingo, Morelos	Mexico	Rainfed	5
16	04-18MASTCHLTY-22	Agrícola Michapan, Acayucan, Veracruz	Mexico	Rainfed	5
17	04-18MASTCHLTY-25	Texistepec, Veracruz	Mexico	Rainfed	5
18	04-18MASTCHLTY-27	Santo Niño, Arcelia, Guerrero	Mexico	Rainfed	5
19	04-18MASTCHLTY-28	Cajales, Chilpancingo, Guerrero	Mexico	Rainfed	5
20	04-18MASTCHLTY-29	INIFAP C.E. Iguala, Guerrero	Mexico	Rainfed	5
21	04-18MASTCHLTY-30	Huitzuco, Guerrero	Mexico	Rainfed	5
22	04-18MASTCHLTY-31	C.E. INIFAP Cotaxtla, Medellín de Bravo, Veracruz	Mexico	Rainfed	5
23	04-18MASTCHLTY-32	Jiquipilas, Chiapas	Mexico	Rainfed	5
24	04-18MASTCHLTY-33	Ocozocoautla, Chiapas	Mexico	Rainfed	5
25	04-18MASTCHLTY-34	El Zanjón, Villa de Tututepec de Melchor Ocampo, Oaxaca	Mexico	Rainfed	5
26	04-18MASTCHLTY-35	San José Mojarras, Santa María del Oro, Nayarit	Mexico	Rainfed	5
27	03-18MASTCHLTY-36	C.E. INIFAP, Zacatepec, Morelos	Mexico	Optimal	5
28	04-18MASTCHLTY-37	C.E. INIFAP Las Huastecas, Villa Cuauhtémoc, Tamaulipas	Mexico	Optimal	5
29	04-18MASTCHLTY-38	S.E. Uxmal, Muna, Yucatán	Mexico	Optimal	5
30	04-18MASTCHLTY-40	Zacapalco, Tepalcingo, Morelos	Mexico	Rainfed	5
31	04-18MASTCHLTY-41	Uni.Tec. Izucar de Matamoros, Puebla	Mexico	Rainfed	5
32	03-18MASTCHLTY-42	Temoac, Morelos	Mexico	Rainfed	5
33	04-18MASTCHLTY-43	Coatlán del Río, Morelos	Mexico	Rainfed	5

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Site No.	Name Of Experiment	Name Of Location	Country	Management	Testing Stage
34	04-18MASTCHLTY-44	Buenavista, Cuauhtémoc, Colima	Mexico	Rainfed	5
35	04-18MASTCHLTY-46	C.E. REGA, Huayapan, Veracruz	Mexico	Rainfed	5
36	03-18MASTCHLTY-47	Xalisco, Nayarit	Mexico	Rainfed	5
37	03-18MASTCHLTY-48	Rancho San Antonio, San Juan Epatlán, Puebla	Mexico	Optimal	5
38	04-18MASTCHLTY-49	Tierra Blanca, Ciudad Altamirano, Guerrero	Mexico	Rainfed	5
39	02AS-17TSCTWCYN-1	Est Exp Ernest W. Sprague, Venustiano Carranza, Puebla	Mexico	Optimal	4
40	02AS-17TSCTWCYN-2	E.E. Tlaltizapán, Morelos	Mexico	Optimal	4
41	02AS-17TSCTWCYN-3	C.E. INIFAP Cotaxtla, Medellín de Bravo, Veracruz	Mexico	Rainfed	4
42	02AS-17TSCTWCYN-5	Piedras Negras, Tlalixcoyan, Veracruz	Mexico	Rainfed	4
43	02AS-17TSCTWCYN-6	Est. Exp. San Gilberto, León	Nicaragua	Rainfed	4
44	02AS-17TSCTWCYN-7	CNIA-Managua	Nicaragua	Rainfed	4
45	02AS-17TSCTWCYN-8	San José, La Maquina	Guatemala	Rainfed	4
46	02AS-17TSCTWCYN-9	San José, La Maquina	Guatemala	Rainfed	4
47	02AS-17TSCTWCYN-10	Cuyuta	Guatemala	Rainfed	4
48	02AS-17TSCTWCYN-11	Quesada, Jutiapa	Guatemala	Rainfed	4
49	02AS-17TSCTWCYN-12	El Chitele, Jutiapa	Guatemala	Rainfed	4
50	02AS-17TSCTWCYN-13	San Jerónimo, B.V.	Guatemala	Rainfed	4
51	02AS-17TSCTWCYN-14	La Faja, Chiquimulilla	Guatemala	Rainfed	4
52	02AS-17TSCTWCYN-18	Línea C2, La Maquina	Guatemala	Rainfed	4
53	02AS-17TSCTWCYN-19	Estación Experimental, Playita, Comayagua	Honduras	Optimal	4
54	02AS-17TSCTWCYN-20	Roldanillo, Valle del Cauca	Colombia	Optimal	4
55	02AS-17TSCTWCYN-21	Palmira	Colombia	Optimal	4
56	02AS-17TSCTWCYN-27	El Ejido	Panama	Optimal	4
57	02AS-17TSCTWCYN-28	El Salaito	Panama	Rainfed	4
58	02AS-17TSCTWCYN-29	Llano Abajo	Panama	Rainfed	4
59	02AS-17TSCTWCYN-30	Nuevo Ocu	Panama	Optimal	4
60	02AS-17TSCTWCYN-31	La Colorada	Panama	Rainfed	4
61	02AS-17TSCTWCYN-35	Suchiapa, Chiapas	Mexico	Rainfed	4
62	02AS-17TSCTWCYN-37	La Caja, Colima	Mexico	Rainfed	4
63	02AS-17TSCTWCYN-38	Collantes, Santiago Pinotepa Nacional, Oaxaca	Mexico	Optimal	4
64	02AS-17TSCTWCYN-39	Cholul, Campeche	Mexico	Rainfed	4