

CIMMYT Latin America Stage 4 and Stage 5 Trials

Results of the 2020 and 2021 Trials and Product Announcement

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Introduction

CIMMYT is happy to announce four new, improved tropical maize hybrids, [CIM20LAPP1C-9](#), [CIM20LAPP1C-10](#), [CIM20LAPP1A-11](#) and [CIM20LAPP1A-12](#), that are now available for uptake by public and private sector partners, especially those interested in marketing or disseminating hybrid maize seed across Latin America and similar agro-ecological zones. Public- and private-sector organizations are hereby invited to apply for licenses to pursue national release and/or scale-up seed production, and deliver these maize hybrids to farming communities. Product performance and other relevant information for these promising new hybrids are linked below. A more comprehensive listing of CIMMYT maize products available for licensing can be found at the [CIMMYT Maize Product Catalog](#)¹.

Each year, CIMMYT's Global Maize Program conducts Stage 4 and Stage 5 trials through a network of partners in Latin America, including National Agricultural Research and Extension Systems (NARES) and private seed companies, under various management and environmental conditions (trial site information is below as **Appendix 3** and **Appendix 4**). Elite hybrids developed by the CIMMYT-Latin America team through a rigorous stage-gate advancement process, are evaluated in these trials, along with relevant benchmark commercial checks as well as CIMMYT internal genetic gain checks.

The objectives of these trials are:

1. To identify improved maize hybrids with higher yield, stress resilience, and agronomic performance, based on “must-have” and “nice-to-have” traits included in specific product profiles;

¹ <https://maizecatalog.cimmyt.org/>

2. To provide data to support varietal nomination under National Performance Trials (NPTs), and variety registration/release of new improved CIMMYT hybrids by the regulatory authorities in target countries;
3. To help partners replace outdated, less productive, less resilient and/or less profitable commercial varieties in the target market segment with improved genetics;
4. To monitor the breeding progress and enhance regional genetic gains in maize breeding and product development.

In order to be considered during the first round of product allocations and licensing, interested institutions are requested to submit an application by **25 November 2022** through the [CIMMYT Maize Licensing Portal](#)². Specific questions or issues faced with regard to the application process may be addressed to GMP-CIMMYT@cgiar.org with attention to **Nicholas Davis**, Program Manager, Global Maize Program, CIMMYT. Any applications received after the deadline will be considered during subsequent rounds.

2022 Available CIMMYT Hybrids for Licensing to Partners

CIMMYT's maize breeding program is designed around a portfolio strategy, such that each product is evaluated, selected and advanced based on well-defined decision metrics that are strategically aligned to a particular market segment defined by key factors, such as the crop maturity, agro-ecological zones, and key traits of importance.

Following rigorous trialing and a stage-gate advancement process that culminated in the 2021 Stage 5 trials, CIMMYT has advanced four new elite maize hybrids, [CIM20LAPP1C-9](#), [CIM20LAPP1C-10](#), [CIM20LAPP1A-11](#) and [CIM20LAPP1A-12](#) (previously coded as CLTHY19509, CLTHY19510, CLTHW19547 and CLTHW19548, respectively) which met the stringent performance criteria for CIMMYT's Latin-America pipelines. While there is variation between different products coming from the same pipeline, the LatAm pipelines are designed around the product concepts described below:

Product Profile	Basic traits	Nice-to-have / Emerging traits	Target agroecologies
LatAM-PP1A (Tropical Lowland White)	Intermediate maturing, white, high yielding, drought tolerant, and resistant to TSC, MLB, and Ear rots	GLS, Fusarium Stalk Rot	Latin-American lowland tropics and similar agroecologies.

² <https://cimmyt.inteum.com/cimmyt/agreementportal/login.aspx>

Product Profile	<i>Basic traits</i>	<i>Nice-to-have / Emerging traits</i>	<i>Target agroecologies</i>
LatAM-PP1C (Tropical Lowland Yellow)	Intermediate maturing, yellow, high yielding, drought tolerant, and resistant to MLB and Ear rots	GLS, Fusarium Stalk Rot	Latin-American lowland tropics and similar agroecologies.

MLB: Maydis leaf blight, TSC: Tar Spot Complex; GLS Grey leaf spot

The data on grain yield and other relevant traits of entries across contrasting environments in Latin-America, and the performance of selected CIMMYT pre-commercial maize hybrids available for licensing to the partners, is presented in **Appendix 1 and 2**, below.

Upon receipt of a duly completed [license application](#) for registration and/or commercialization, the CIMMYT Maize Product Allocation Committee will review the applications received on or before the first-round deadline (**25 November 2022**) and will take decisions on allocation of specific products based on clear criteria designed to promote equitable support to our valued partners³. Any applications received after the deadline will still be accepted for review but will only be considered during subsequent rounds of product allocation.

Once CIMMYT finalizes its allocation decisions, applicants considered during the first round of allocations can expect to be notified as to the success or otherwise of their applications latest by **16 December 2022**. CIMMYT will maintain absolute confidentiality of commercially sensitive information for all the allocation decisions and related data (e.g., pedigree of an allocated hybrid, data submitted as part of the annual license reporting requirements, etc.). Successful applicants will be expected to demonstrate to CIMMYT that they are making progress along the path towards successful commercialization within reasonable timeframes and are expected to sign an agreement to that effect.

Further information regarding the product allocation process is available in the document, [ACQUISITION AND USE OF CIMMYT MAIZE HYBRIDS AND OPVs FOR COMMERCIALIZATION](#). For any additional clarifications in this regard, please do not hesitate to reach out to any of the following contact persons in CIMMYT:

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³ “Acquisition And Use of CIMMYT Maize Hybrids and OPVs for Commercialization” available at:
<https://www.cimmyt.org/content/uploads/Acquisition-and-use-of-CIMMYT-maize-hybrids-and-OPVs-for-commercialization.pdf>

Latin America Product Profile 1A (Tropical Lowland White)

Mean yield performance and agronomic attributes of elite Intermediate-maturing CIMMYT hybrids under **LatAM-PP1A** (Tropical Lowland White) vis-à-vis commercial and internal genetic check hybrids evaluated in Latin America Lowland Tropical **2020 Stage 4** and **2021 Stage 5** Trials.

Target agro-ecologies: Tropical Lowland, rainfed

Hybrid	Comment	Stage 5 Evaluation	Grain Yield				Grain yield of Single Cross	Grain yield of Pollen parent	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	Ears per Plant	Ear Position	Bad Husk Cover	Ear Aspect
			Stage 4 Data																
			Opt.	Rainfed	MD														
		t/ha	t/ha			t/ha		%	%	d	d	d	cm	cm	#	Ratio	%	1-5	
CIM20LAPP1A-12	Previously coded as CLTHW19548 Available for commercial licensing	7.3	8.3	5.7	4.5	5.8	3.3	105	16.7	58	0.3	0	252	135	1.0	0.53	2.3	2.4	
CIM20LAPP1A-11	Previously coded as CLTHW19547 Available for commercial licensing	6.9	8.1	5.4	5.0	5.8	3.4	98	17.0	57	0.5	0	256	142	1.0	0.55	2.4	2.4	
CLTHW14003	Internal GG Check 1	6.7	7.3	4.9	4.0			96	17.4	58	0.8		254	142	1.0	0.56	2.2	2.5	
CLTHW15080	Internal GG Check 2	6.9	7.9	5.0	4.1			99	17.3	57	0.3		255	135	1.0	0.53	1.8	2.5	
Commercial Check 1		7.0	6.4	5.0	4.6			100	16.8	58	0.3		250	143	1.0	0.57	2.2	2.7	
Commercial Check 2	Stage 5 only	6.8						98	17.2	58	0.3		253	136	1.0	0.54	1.8	2.5	
Mean		6.6	7.5	5.2	4.2				17.0	57.7	0.5		250.3	137.4	1.0	0.55	2.6	2.5	
LSD (0.05)		0.4	0.8	0.4	1.7				0.7	0.9	0.6		9.7	6.6	0.0	0.02	2.5	0.3	
H		0.7	0.6	0.7	0.3				0.6	0.7	0.6		0.7	0.8	0.5	0.7	0.6	0.7	
CV		12.8	10.1	9.0	12.6				4.4	1.3	143.2		4.5	6.6	7.9	5.9	79.4	16.4	
nreps		2	2	2	2				2	2	2		2	2	2	2	2	2	
nLoc		16	3	13	1				14	12	12		11	11	14	11	10	8	

Notes: Opt = Optimum Management; MD = Managed drought; GG = Genetic Gain

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-PP1A

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

Nice to have / emerging traits Gray Leaf Spot and Fusarium Stalk Rot

Latin America Product Profile 1A (Tropical Lowland White)

Mean yield performance and agronomic attributes of elite Intermediate-maturing CIMMYT hybrids under **LatAM-PP1A (Tropical Lowland White)** vis-à-vis commercial and internal genetic check hybrids evaluated in Latin America Lowland Tropical **2020 Stage 4** and **2021 Stage 5 Trials**.

Target agro-ecologies: Tropical Lowland, rainfed

Hybrid	Grain Texture	Lodging		Tar Spot Complex (TSC)	Maydis Leaf Blight (MLB)	Ear Rots (ER)
		Root	Stalk			
	1-5	%	%	1-9	1-9	%

CIM20LAPP1A-12	3.5	4.6	4.8	3.5	3.2	5.7
CIM20LAPP1A-11	3.0	3.5	3.1	4.0	3.8	6.3

CLTHW14003	2.3	3.7	5.6	3.9	4.5	6.5
CLTHW15080	2.6	2.7	4.6	4.5	3.7	6.3
Commercial Check 1	2.8	3.6	8.6	6.0	4.0	7.8
Commercial Check 2	3.5	6.6	3.5	5.6	4.5	6.0

Mean	2.9	3.7	4.0	5.5	4.6	6.3
LSD (0.05)	0.4	3.9	1.5	1.5	0.9	3.2
H	0.9	0.3	0.4	0.6	0.6	0.5
CV	17.9	105.9	81.1	11.6	27.3	65.1
nreps	2	2	2	2	2	2
nLoc	6	6	6	3	4	10

Notes: Opt = Optimum Management; MD = Managed drought; GG = Genetic Gain

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-PP1A

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

Nice to have / emerging traits Gray Leaf Spot and Fusarium Stalk Rot

Latin America Product Profile PP1C (Tropical Lowland Yellow)

Mean yield performance and agronomic attributes of elite Intermediate-maturing CIMMYT hybrids under **LatAM-PP1C (Tropical Lowland Yellow)** vis-à-vis commercial and internal genetic check hybrids evaluated in Latin America Lowland Tropical **2020 Stage 4 and 2021 Stage 5 Trials**.

Target agro-ecologies: Tropical Lowland, rainfed

Hybrid	Comment	Stage 5 Evaluation	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	Ears per Plant	Ear Position	Bad Husk Cover	Ear Aspect	
			Stage 4 Data			Grain yield of Single Cross												Grain yield of Pollen parent
			Opt.	Rainfed	MD													
		----- t/ha -----						%	%	d	d	d	cm	cm	#	Ratio	%	1-5
CIM20LAPP1C-10	Previously coded as CLTHY19510 Available for commercial licensing	6.7	7.6	6.0	4.1	6.0	3.3	107	15.8	56	0.5	0	247	118	1.0	0.48	2.7	2.4
CIM20LAPP1C-9	Previously coded as CLTHY19509 Available for commercial licensing	6.6	7.5	6.0	3.7	6.0	3.3	106	15.6	56	0.6	-5	250	119	1.0	0.47	1.7	2.3
CLTHY15031	Internal GG Check	6.0	6.8	5.6	3.5			97	16.3	57	0.6		247	128	1.0	0.52	4.0	2.4
Commercial Check 1		6.6	7.6	5.9	3.2			105	16.0	56	0.6		250	127	1.0	0.51	2.1	2.3
Commercial Check 2		6.2	7.0	5.1	3.3			100	16.1	57	0.6		254	124	1.0	0.48	4.2	2.5
Mean		6.2	7.4	5.6	3.6			16.1	56.5	0.6		249.3	122.7	1.0	0.49	3.4	2.4	
LSD (0.05)		0.5	0.8	0.4	1.2			0.4	0.8	0.2		6.6	6.5	0.1	0.02	2.9	0.2	
H		0.8	0.7	0.6	0.2			0.7	0.9	0.3		0.5	0.8	0.8	0.8	0.8	0.5	
CV		10.9	5.4	8.6	9.5			6.1	1.8	114.7		4.1	6.9	9.3	6.1	94.0	23.0	
nreps		2	2	2	2			2	2	2		2	2	2	2	2	2	
nLoc		16	1	11	1			16	12	12		13	13	13	13	9	13	

Notes: Opt = Optimum Management; MD = Managed drought; GG = Genetic Gain

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 Gray Leaf Spot and Fusarium Stalk Rot

Latin America Product Profile PP1C (Tropical Lowland Yellow)

Mean yield performance and agronomic attributes of elite Intermediate-maturing CIMMYT hybrids under **LatAM-PP1C (Tropical Lowland Yellow)** vis-à-vis commercial and internal genetic check hybrids evaluated in Latin America Lowland Tropical **2020 Stage 4** and **2021 Stage 5** Trials.

Target agro-ecologies: Tropical Lowland, rainfed

Hybrid	Grain Texture	Lodging		Tar Spot Complex (TSC)	Maydis Leaf Blight (MLB)	Ear Rots (ER)
	1-5	Root %	Stalk %	1-9	1-9	%

CIM20LAPP1C-10	3.5	3.9	3.7	5.1	3.5	6.5
CIM20LAPP1C-9	3.1	4.1	2.9	5.4	3.4	6.6
CLTHY15031	2.6	0.9	1.8	7.7	4.0	6.2
Commercial Check 1	3.0	5.2	2.6	8.0	4.3	6.2
Commercial Check 2	3.1	2.9	1.5	7.8	3.9	6.2

Mean	2.6	3.2	2.3	6.8	3.9	6.7
LSD (0.05)	0.4	1.9	1.6	1.3	0.6	2.6
H	1.0	0.5	0.6	0.5	0.6	0.4
CV	13.1	155.2	113.1	11.3	16.8	121.9
nreps	2	2	2	2	2	2
nLoc	9	10	10	3	4	15

Notes: Opt = Optimum Management; MD = Managed drought; GG = Genetic Gain

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 Gray Leaf Spot and Fusarium Stalk Rot

Appendix 3: Information on Latin America trial locations and management for the 2020 Stage 4 and 2021 Stage 5 Trials
LA-PP1A (Tropical Lowland White)

Site No.	Name Of Experiment	Name Of Location	Country	Management	Testing Stage	Latitude	Longitude	Altitude (masl)
1	03-21M4MTLTHW-1	Est Exp Ernest W. Sprague, Venustiano Carranza, Puebla	Mexico	Optimal	5	20.45	-97.64	104
2	03-21M4MTLTHW-2	Piedras Negras, Tlalixcoyan, Veracruz	Mexico	Rainfed	5	18.75	-96.21	33
3	03-21M4MTLTHW-3	La Caja, Colima	México	Rainfed	5	19.38	-103.80	680
4	03-21M4MTLTHW-4	Morelos, Soteapan, Veracruz	Mexico	Rainfed	5	19.06	-102.06	446
5	03-21M4MTLTHW-5	Paso Los Arrieros, Jamapa, Veracruz	Mexico	Rainfed	5	18.75	-96.24	48
6	03-21M4MTLTHW-6	El Huaco, Gabriel Zamora, Michoacán	Mexico	Optimal	5	19.06	-102.04	428
7	03-21M4MTLTHW-7	Campo El Pañuelo, Tepalcingo, Morelos	Mexico	Rainfed	5	18.60	-98.85	1100
8	03-21M4MTLTHW-8	Buenavista, Cuauhtémoc, Colima	México	Rainfed	5	19.38	-103.80	680
9	03-21M4MTLTHW-9	El Huaco, Gabriel Zamora, Michoacán	Mexico	Optimal	5	19.06	-102.04	428
10	03-21M4MTLTHW-12	San Felipe, Zihualtepec, Oaxaca	Mexico	Rainfed	5	17.48	-95.37	15
11	03-21M4MTLTHW-13	Collantes, Santiago Pinotepa Nacional, Oaxaca	Mexico	Optimal	5	16.34	-98.05	205
12	03-21M4MTLTHW-14	San Ramón, Villaflores, Chiapas	Mexico	Rainfed	5	16.26	-93.26	615
13	03-21M4MTLTHW-15	Revolución, Villa Corzo, Chiapas	Mexico	Rainfed	5	16.39	-93.00	662
14	03-21M4MTLTHW-16	Guadalupe Victoria, Villaflores, Chiapas	Mexico	Rainfed	5	16.02	-92.89	585
15	03-21M4MTLTHW-17	La Concordia, Chiapas	Mexico	Rainfed	5	16.12	-92.69	540
16	03-21M4MTLTHW-19	Piedras Negras, Tlalixcoyan, Veracruz	Mexico	Rainfed	5	18.75	-96.21	33
17	01AS-20TSCTWCWN-13	Estación Experimental Las Acacias, Danli	Honduras	Rainfed	4	14.05	-86.58	814
18	01AS-20TSCTWCWN-14	Nueva Concepción, Escuintla	Guatemala	Optimal	4	14.20	-91.30	59
19	01AS-20TSCTWCWN-15	Aldea El Ovejero, El Progreso, Jutiapa	Guatemala	Optimal	4	18.75	-96.24	48
20	01AS-20TSCTWCWN-16	Aldea Cuyuta, Masagua, Escuintla	Guatemala	Rainfed	4	14.11	-90.88	54
21	01AS-20TSCTWCWN-17	Línea A-5, San José La Máquina, Suchitepéquez	Guatemala	Rainfed	4	14.30	-91.56	57
22	01AS-20TSCTWCWN-18	Línea B-6, San José La Máquina, Suchitepéquez	Guatemala	Rainfed	4	14.30	-91.56	57
23	01AS-20TSCTWCWN-19	San Jerónimo, Baja Verapaz	Guatemala	Rainfed	4	15.06	-90.24	999
24	01AS-20TSCTWCWN-20	La Faja, Chiquimulilla, Santa Rosa	Guatemala	Rainfed	4	14.01	-90.33	85
25	01AS-20TSCTWCWN-21	Cuyuta, Masagua, Escuintla	Guatemala	Rainfed	4	14.11	-90.88	54
26	01AS-20TSCTWCWN-24	San Andrés, Ciudad Arce, La Libertad	El Salvador	Rainfed	4	13.80	-89.40	460
27	01AS-20TSCTWCWN-25	Santa Cruz Porrillo, Tecoluca, San Vicente	El Salvador	Rainfed	4	13.44	-88.81	34
28	01AS-20TSCTWCWN-28	Buga, Valle del Cauca	Colombia	Optimal	4	3.89	-76.33	944
29	01AS-20TSCTWCWN-34	Guadalupe Victoria, La Concordia, Chiapas	Mexico	Rainfed	4	16.02	-92.89	585
30	01AS-20TSCTWCWN-37	Cholul, Campeche, Campeche	Mexico	Rainfed	4	20.18	-90.13	9
31	01AS-20TSCTWCWN-38	El Remate, Colima	Mexico	Rainfed	4	19.53	-103.95	955
32	01AS-20TSCTWCWN-41	Tepalcingo, Morelos	Mexico	Rainfed	4	18.60	-98.85	1100

**Appendix 4: Information on Latin America trial locations and management for the 2020 Stage 4 and 2021 Stage 5 Trials
LA-PP1C (Tropical Lowland Yellow)**

Site No.	Name Of Experiment	Name Of Location	Country	Management	Testing Stage	Latitude	Longitude	Altitude (masl)
1	04-21M4MTLTHY-1	Est Exp Ernest W. Sprague, Venustiano Carranza, Puebla	Mexico	Optimal	5	20.45	-97.64	104
2	04-21M4MTLTHY-2	Piedras Negras, Tlalixcoyan, Veracruz	Mexico	Rainfed	5	18.75	-96.21	33
3	04-21M4MTLTHY-3	La Caja, Colima	México	Rainfed	5	19.38	-103.80	680
4	04-21M4MTLTHY-4	Morelos, Soteapan, Veracruz	Mexico	Rainfed	5	19.06	-102.06	446
5	04-21M4MTLTHY-5	Paso Los Arrieros, Jamapa, Veracruz	Mexico	Rainfed	5	18.75	-96.24	48
6	04-21M4MTLTHY-6	El Huaco, Gabriel Zamora, Michoacán	Mexico	Optimal	5	19.06	-102.04	428
7	04-21M4MTLTHY-7	Campo El Pañuelo, Tepalcingo, Morelos	Mexico	Rainfed	5	18.60	-98.85	1100
8	04-21M4MTLTHY-8	Buenavista, Cuauhtémoc, Colima	México	Rainfed	5	19.38	-103.80	680
9	04-21M4MTLTHY-9	El Huaco, Gabriel Zamora, Michoacán	Mexico	Optimal	5	19.06	-102.04	428
10	04-21M4MTLTHY-12	San Felipe, Zihualtepec, Oaxaca	Mexico	Rainfed	5	17.48	-95.37	15
11	04-21M4MTLTHY-13	Collantes, Santiago Pinotepa Nacional, Oaxaca	Mexico	Optimal	5	16.34	-98.05	205
12	04-21M4MTLTHY-14	San Ramón, Villaflores, Chiapas	Mexico	Rainfed	5	16.26	-93.26	615
13	04-21M4MTLTHY-15	Revolución, Villa Corzo, Chiapas	Mexico	Rainfed	5	16.39	-93.00	662
14	04-21M4MTLTHY-16	Guadalupe Victoria, Villaflores, Chiapas	Mexico	Rainfed	5	16.02	-92.89	585
15	04-21M4MTLTHY-17	La Concordia, Chiapas	Mexico	Rainfed	5	16.12	-92.69	540
16	04-21M4MTLTHY-19	Piedras Negras, Tlalixcoyan, Veracruz	Mexico	Rainfed	5	18.75	-96.21	33
17	02AS-20TSCTWCYN-1	Est Exp Ernest W. Sprague, Venustiano Carranza, Puebla	Mexico	Optimal	4	20.45	-97.64	104
18	02AS-20TSCTWCYN-13	Estación Experimental Las Acacias, Danli	Honduras	Rainfed	4	14.05	-86.58	814
19	02AS-20TSCTWCYN-14	Nueva Concepción, Escuintla	Guatemala	Rainfed	4	14.20	-91.30	59
20	02AS-20TSCTWCYN-16	Aldea Cuyuta, Masagua, Escuintla	Guatemala	Rainfed	4	14.11	-90.88	54
21	02AS-20TSCTWCYN-24	El Ejido, Los Santos, Los Santos	Panama	Rainfed	4	7.92	-80.38	95
22	02AS-20TSCTWCYN-25	El Nanzal, Guararé, Los Santos	Panama	Rainfed	4	7.82	-80.28	25
23	02AS-20TSCTWCYN-26	La Candelaria, Las Tablas, Los Santos	Panama	Rainfed	4	7.77	-80.28	42
24	02AS-20TSCTWCYN-27	Aranda, Pocrí, Los Santos	Panama	Rainfed	4	7.73	-80.15	144
25	02AS-20TSCTWCYN-28	La Laguna, Pocrí, Los Santos	Panama	Rainfed	4	7.73	-80.15	144
26	02AS-20TSCTWCYN-46	Guadalupe Victoria, La Concordia, Chiapas	Mexico	Rainfed	4	16.02	-92.89	585
27	01AS-20TSCTWCWN-38	Cholul, Campeche, Campeche	Mexico	Rainfed	4	20.18	-90.13	9
28	01AS-20TSCTWCWN-41	Nohalal, Hecelchakán, Campeche	Mexico	Rainfed	4	20.18	-90.13	9