

PHENOTYPING BIOTIC-ABIOTIC INTERACTIONS AFFECTING RICE GRAIN YIELD TO DISCOVER TOLERANT GENOTYPES

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***B. glumae* tolerance, one of the priorities for Rice producers in Latin America and The Caribbean (LAC)**

- **Limitation: Pathogen interacts with high temperature, and inhibit rice filling process**
- **Our objective: Find sources of tolerance and develop better rice varieties**
- **Methods:**



High high temperature phenotyping



Disease phenotyping

Results



Genotype	Heat Stress	% unfilled grains		Diff.	Tt
		Bacteria	Control		
CT16322-CA-7-M	Tolerant	88.4	83.3	5.1	<.0001
CT16329-CA-5-M	Tolerant	68.7	17.9	50.7	<.0001
CT16330(1)	Tolerant	63.3	27.2	36.1	<.0001
CT21375-F4-4	Susceptible	48.7	33.2	15.5	<.0001
FED2000	Not tested	40.9	23.1	17.9	<.0001
FED60	Susceptible	75.2	53.9	21.2	<.0001
IR6	Mod. Tolerant	36.0	27.3	8.7	<.0001
LAGEADO	Tolerant	33.2	15.9	17.3	<.0001
MOROBEREKAN	Tolerant	40.6	17.3	23.3	<.0001
N22	Tolerant	67.8	30.1	37.6	<.0001
PCT25	Mod. Tolerant	40.5	8.9	31.6	<.0001

Conclusions & Future Applications

- Previously identified heat stress tolerant and susceptible genotypes were affected by stress conditions due to bagging panicles after water spraying
- Bacterial infection affected heat tolerant and moderately tolerant and susceptible genotypes
- Results under greenhouse conditions showed no direct correlation between heat and bacterial tolerance.
- Tolerant heat + Disease genotypes are being crossed to develop improved varieties





Go to poster F5.7-1 to know more about this work.

Thanks!

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