Utilizing DNA Markers to Further Identify the Blast Resistance in Indica Rice and Other Oryza spp. Germplasm (C07-eizenga081842-Poster)

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Abstract:

Blast, Pyricularia grisea Cav., is a major fungal disease of cultivated rice (Oryza sativa L.) in the US, and of irrigated rice worldwide. Indica rice, rice grown in tropical areas, and Oryza spp. are possible sources of additional blast resistance genes (Pi-genes) which could be incorporated into US rice cultivars. Pi-ta, is a major blast resistance gene being incorporated into many recently-released US rice cultivars. In earlier field studies, 36 indica rice accessions were identified as resistant to US blast races. The objective of this research is to determine the presence of Pi-ta with a dominant marker in 36 indica rice accessions and closely related, A-genome, Oryza spp. In addition, 160 microsatellite markers are being used to further characterize the aforementioned accessions. These markers are located throughout the twelve rice chromosomes, including regions where known Pi-genes and/or RFLP fragments associated with blast resistance are known to reside. All microsatellite markers are being visualized on an ABI 3700.

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