Genetic Variation in Rice Germplasm Evaluated by Morphological Characters and Microsatellite Loci. (C01-zeng172054-Poster)

Authors:

- L.Zeng* - *USDA-ARS, Riverside, CA*
- T.Kwon - *USDA-ARS, Riverside, CA*
- X.Liu - *USDA-ARS, Riverside, CA*
- C.Wilson - *USDA-ARS, Riverside, CA*
- C.M.Grieve - *USDA-ARS, Riverside, CA*

Abstract:

Salinity is the most prevalent problem in irrigated agriculture. The success of genetic improvement for salt tolerance in rice cultivars through traditional breeding is limited in the previous years. This study was designed to evaluate genetic variation among rice genotypes with different performance under salt stress using microsatellite markers. The genetic variations identified will be useful for salt tolerance breeding. Rice germplasm introduced from different regions were grown in sand tanks in greenhouse. Plants were measured for agronomic and morphological characters under salt stressed and controlled conditions. Genomic DNA was extracted and amplified using published microsatellite primers. The data of both microsatellite markers and morphological characters among genotypes were analyzed using the NTSYS-pc statistical package. The genotypes were clustered based on the microsatellite markers using the method of UPGMA. The means of the morphological characters were compared among the clusters by microsatellite markers. The cluster means were significant for the most of the characters investigated. The related results and their implication for salt tolerance breeding were discussed.

Corresponding Author Information:

Linghe Zeng
USDA-ARS, Riverside, CA
450 W. Big Springs Rd
Riverside, CA 92507

phone: (909)369-4823
fax: (09)342-4963
e-mail: lzeng@ussl.ars.usda.gov

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