

Double Tolerances of Cassava Germplasm to Drought Stress and Red Spider Mite Attacks

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Uncertain climate change encourages the assembly of cassava varieties with double tolerances to both abiotic and biotic stress. The research aimed to evaluate the double tolerances of cassava germplasm to drought stress and red spider mite attacks. The research was held at Installation for Research and Assessment of Agricultural Technology of Muneng from February to December 2019 using a randomized block design nested in two environments with two replicates. The treatments consisted of 50 cassava accessions from the Indonesian Legumes and Tuber Crops Research Institute collection and two irrigation environments, i.e. a normal environment and a drought environment. Parameters observed included plant height, red spider mites attack intensity, tuber yield, and drought stress tolerance index. Drought stress caused a decrease in plant height, tuber yield; on the other hand, increased red spider mite attack. Eight accessions have Stress Tolerance Index values reaching above 1.00, and two of them also have resistance to red spider mites. Accessions MLG 10361 and MLG 10362 had a high level of tolerance to drought stress as well as resistance to red spider mites so that both accessions may be used as a source of multiple resistance genes for biotic and abiotic stresses.

Keyword : *Manihot esculenta* Crantz, accessions, drought stress, *Tetranychus urticae* Koch