

Methawee Chungthanawong 2011: Comparison of Cassava Varieties from Vietnam and Thailand. Master of Science (Agriculture), Major Field: Agronomy, Department of Agronomy. Thesis Advisor: Professor Chareinsak Rojanaridpiched, Ph.D. 105 pages.

Yield trials of three imported cassava (*Manihot esculenta* Crantz) varieties from Vietnam, KM 140, KM 98-5 and KM 99-1 in comparison with Thai commercial varieties, Kasetsart 50, Huay Bong 60, Huay Bong 80, Rayong 7, Rayong 5 and MKUC 34-114-235 were conducted in 2005-2006. The trials were conducted in the early and late rainy seasons in five locations, Chon Buri, Chachoengsao, Nakhon Ratchasima, Kalasin and Chaiyaphum. It was found that the effects of location and interaction of location with variety were more important than the variety in both fresh and dry root yield. On the contrary, for the root starch content, the variety was more significant than location or interaction between location and variety. Due to these set of varieties tested, the variation in root starch content exceeds root yield variation. Yield trials from ten locations in two seasons revealed that cassava varieties from Vietnam had lower yield potential than commercial Thai varieties. The response of varieties to environments was conducted by the use of stability parameter of Eberhart and Russell (1960) in which desirable variety was the one that had high yield and stability parameter, regression coefficient (b_i) equal to 1.0 with low deviation from regression line. Vietnamese cassava varieties proved to be less promising because of their lower root yield and stability parameter than commercial Thai varieties. Root starch content of Kasetsart 50 varied less to locations than the Vietnam varieties, even though at location with low average root starch content it still had very high root starch content. This high root starch content over a wide range of locations of Kasetsart 50 followed by Huay Bong 60 and Huay Bong 80 is a desirable trait which can be inherited to its offspring. Vietnamese cassava varieties from this study were not suitable for commercial production but suitable for the breeding program.

Student's signature

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