

Title Variations of leaf and storage roots morphology in *Ipomoea batatas* (sweet potato) varieties
Author Hue S M and Chandran S
Citation Book of abstracts, APS2010 & SEAsia2010 & GMS2010, August 2-4, 2010, Radisson Hotel, Bangkok, Thailand
Keyword Sweet potato; morphology; storage

Abstract

Ipomoea batatas or Sweet potato is the sixth most important food crop in the world and is planted mainly for its storage roots. There are currently 6000 varieties of sweet potato in the world and they are distinguished by their skin and storage root colour. However, in larger farms where several varieties of sweet potato are planted, this method is often labour consuming and might influence the growth and development of the storage roots due to repeated pulling and planting action on the plant. Therefore, *Ipomoea batatas* leaves morphology could be used as an indicator to distinguish between the varieties to ease the process of harvesting the storage roots. Up to date, no studies have been conducted to establish the morphological differences between the leaves of different varieties in Malaysia. This paper studies the leaf morphologies using parameters which include leaf length, width, thickness, $L*a*/b$, shape arrangement, margin, venation bases and surface area. The results obtained indicate that the width of these leaves did not differ significantly from one another but the differences in length and thickness are significant. Furthermore, features such as leaf shape, apices and bases when combined could give a representation of each leaf among the varieties. Thus, the variation in leaf morphology can be used to determine the variety of the storage roots of *Ipomoea batatas*.