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| **Item name** | Journal Article |
| **Bibliography** | Rubiang-Yalambing, L.; Arcot, J.; Greenfield, H.; Holford, P. (2016) Aibika (Abelmoschus manihot L.): genetic variation, morphology and relationships to micronutrient composition, Vol.193, 62-68, URL: https://doi.org/10.1016/j.foodchem.2014.08.058 |
| **Associated conference** |  |
| **Abstract / Content summary** | Aibika (Abelmoschus manihot L.) is believed to be a good source of micronutrients. However, although many varieties of aibika are commonly consumed in Papua New Guinea, their micronutrient content is unknown. Therefore, the mineral (Ca, Fe, K, Mg, Mn, Na, Zn & Cu), folate composition and the genetic variation of 23 aibika accessions from the collection at the National Agricultural Research Institute were
studied over a 3 year period to provide data for nutritional studies and to inform breeding programs. The data showed that aibika is, potentially, a crop of high nutritional value with the potential to boost the micronutrient status of local PNG communities. However, there were substantial differences in the micronutrient concentrations of the accessions from year to year and accessions that had the highest concentration of a particular mineral in 1 year did not have the high concentrations in other years. Clusters determined using unweighted pair group method with arithmetic mean analysis (UPGMA) of the micronutrient contents differed in each of the 3 years. Genetic analysis made using random amplification
of polymorphic DNA and directed amplification of mini satellite region DNA placed the accessions into five groups. There was no correlation between these groups and leaf morphology, nor were there correlations with the clusters determined from the UPGMA analyses. There appears to be considerable interaction between genotype and environmental factors determining micronutrient composition and environmental factors may play a greater role than genotype in influencing micronutrient composition. |
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