

**DESIGNING & DEVELOPING AN
IMPLEMENTATION PROGRAMME ON ON-FARM
GERMPLASM CONSERVATION OF LOCAL ROOT
AND TUBER CROPS IN UVA REGION**

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ABSTRACT

Local root and tuber crops are important and popular food crops. The major and the popular local root and tuber crops are yams (*Dioscorea species*), cassava (*Manihot esculenta*), sweet potato (*Ipomoea batatas*), and edible aroids (*Colocasia esculenta* and *Xanthosoma spp*). They are high in carbohydrates, medicinal value and adaptability for the different climates. Therefore local root and tuber crops are certainly an alternative for food security of country. Today, these crops are facing a threat of extinction in Sri Lanka due to the ignorance of consumption and cultivation. On-farm germplasm conservation process can provide a very good solution to the food security problem and economic benefits for the farmers while conserving the bio diversity. The study was aimed to design & develop an implementation & monitoring program on On-farm germplasm conservation local root and tuber crops in Uva region. A questionnaire based survey was carried out. Awareness programs, distribution of planting materials and development of web site were designed for develop the concept among the community and implement the program. Geographic Information System was applied to analyze the data. Different samples of local root and tuber crops were collected for the *ex-situ* Germplasm Conservation in the university. Many types of local root and tuber crops are grown in Uva region. Majority of the farmers who are engaging organic agricultural home gardening are cultivating local root and tuber crops in Uva region. Cultivation local root and tuber crops have been ignored mainly due to pest and the climatic problems. Lack of planting materials, lack of market place, long time duration for the harvesting, low land availability are the major constraints in cultivation of local root and tuber crops. Ignorance of cultivation and unfavorable climatic conditions cause to reduce the species diversity of local root and tuber crops in Uva region. Thirty types of local root and tuber crops were conserved in *Ex-situ* in Uva Wellassa University. Twenty eight species are conserved on-farm among the farmers and contributed on-farm germplasm conservation without their knowledge on theory on the germplasm conservation.

Key words – Yams, Local root and tuber crops, On- farm germplasm conservation

Designing, Developing, Monitoring