



Tropentag, October 11-13, 2006, Bonn

“Prosperity and Poverty in a Globalised World—  
Challenges for Agricultural Research”

## Germplasm Movement of Selected Underutilised Multipurpose Tree Species in Sri Lanka

BORIS M. HILLMANN<sup>1</sup>, HANNAH JAENICKE<sup>2</sup>, BRIGITTE L. MAASS<sup>1</sup>

<sup>1</sup>*Georg-August-University Göttingen, Department of Crop Sciences, Agronomy in the Tropics, Germany*

<sup>2</sup>*International Centre for Underutilised Crops, Sri Lanka*

### Abstract

Multipurpose trees play an important role for the livelihoods of rural and urban people in the tropics. Several species are typical components of homegardens. These species are mainly unimproved landraces. Tree improvement is a slow process because of the long time to flowering and fruiting. The International Centre for Underutilised Crops (ICUC), Colombo, Sri Lanka is studying the value of selected underutilised fruit tree species for income generation of small-scale entrepreneurs. In this study, jackfruit (*Artocarpus heterophyllus* Lamk.), bael (*Aegle marmelos* (L.) Correa) and four different *Annona* species were surveyed. Although some improvement research has been done with jackfruit, improved planting material seems still confined to nurseries. No formal improvement activities appear to have been undertaken for either bael or the *Annona* species. Overall, little is known about the provenance and quality of planting material used in farms and whether or how improved lines find their way to the user. This work mainly aims to understand the diversity of sources of planting material found in homegardens and, consequently, describe germplasm flow. For the study, two locations of Sri Lanka were selected where ICUC is active: Kandy and Galle. Semi-structured interviews of 30 farmers and about 10 nursery operators per location were conducted. Differences between locations were established by applying several diversity indices (Sørensen's coefficient, Shannon's and Simpson's indices). The germplasm movement for the selected species seemed to be very weakly developed. Additionally, farmers were not aware of the importance of improved varieties. The results of this study indicate not only the need for research and development in these underutilised multipurpose trees but also for more effective dissemination activities.

**Keywords:** *Aegle marmelos*, agroforestry, *Annona*, *Artocarpus heterophyllus*, genetic resources, germplasm movement, homegarden, multipurpose trees, Sri Lanka, underutilised crops