



Deutscher Tropentag, October 9-11, 2002, Witzenhausen
“Challenges to Organic Farming and Sustainable Land Use
in the Tropics and Subtropics”

**Fodder Tree Research with *Moringa stenopetala* — a Daily Leafy
Vegetable of Konso People, Ethiopia**

NORBERT STEINMÜLLER¹, KAI SONDER¹, JÜRGEN KROSCHER²

¹*International Center of Insect Physiology and Ecology (ICIPE), Ethiopia*

²*University of Hohenheim, Institute of Plant Production and Agroecology in the Tropics and Subtropics,
Germany*

Abstract

Moringa stenopetala is native to southern Ethiopia, northern Kenya and eastern Somalia. It is the second most important domesticated *Moringa* species after *M. oleifera*. In the Konso area of southern Ethiopia, where stone terraces are a famous ‘UNESCO World Heritage Site’, *Moringa* leaves are eaten almost every day like spinach together with cereal balls. *Moringa* leaves are outstanding with respect to high contents of essential amino acids, Vitamin A and C. *Moringa stenopetala* is a fast growing tree on sites that are not severely acidic, not waterlogged and below 2000 m altitude. Due to its water storage capacity in the bottle shaped stem, *M. stenopetala* is adapted to semi-arid areas of 500 mm annual rainfall.

The objectives of a 3-yr collaborative field research program of the International Center of Insect Physiology and Ecology (ICIPE) and the Ethiopian Agricultural Research Organization (EARO) in Ethiopia are **(i)** to generate a germplasm pool for subsequent genetic improvement programmes by a collection mission in southern Ethiopia; **(ii)** to assess the natural variability in agronomic yield and quality characteristics and pest resistance of 36 local *M. stenopetala* provenances in comparison to three local collections and three introductions of *M. oleifera*; **(iii)** to examine the potential of tree fodder production systems as a biophysically and economically viable soil conservation practice for smallholder rural farmers; **(iv)** to quantify the yield potential and labour costs of leaf meal production from fodder trees in erosion control systems.

The methodology comprises a germplasm collection, multi-site germplasm screening and erosion control experiments with tree-grass contour hedgerows as well as palatability studies with humans and ruminants comparing farmer-selected with unselected provenances. Results are expected in 2003 to 2004.

Keywords: Erosion control, fodder trees, germplasm collection, *Moringa stenopetala*