Experiences on utilisation of indigenous fodder trees and shrubs in Kenya (Abstract)

Ralph Roothaert

International Livestock Research Institute/ Centro Internacional de Agricultura Tropical, P.O. Box 5689, Addis Abeba, Ethiopia.
Email: r.roothaert@cgiar.org

Abstract

There are opportunities for increasing milk production in central Kenya through the use of tree fodder, leading to a higher farm income. Most research on the intensive use of fodder trees has been carried out on exotic species, neglecting indigenous ones. The objectives of this study were to assess the potential of indigenous and naturalised fodder trees and shrubs (IFTS) in central Kenya, involving farmers in all phases of research in order to increase the adoption of so developed technologies. Formal surveys and feedback meetings were conducted. Farmers chose tree seedlings, planted them on-farm, and the performance was monitored. Farmers' assessments of qualities of IFTS were compared with laboratory nutritive analyses. Two feeding trials with dairy heifers were conducted, involving seven fodder tree species. Farmers used a total of 160 different IFTS. Their ratings on palatability for cattle and goats and milk production for goats differed significantly among tree and shrub species. On-farm assessment of planted IFTS provided useful information on the preference of species, in addition to the survey results. There were strong relationships between the laboratory nutritive analyses and the farmers' assessment of the quality of IFTS and useful characteristics of individual species were obtained by comparing the two methods. Dry matter intake by heifers was higher for some IFTS than for the popular exotic species *Calliandra calothyrsus*. Selective feeding behaviour of heifers caused an improvement of nutrient concentrations of the consumed feed of up to 29%. It was concluded that there is a large potential for an intensive use of IFTS in central Kenya. Promising species for the subhumid zone are: *Ficus thoningii*, *Lantana camara*, *Morus alba*, *Manihot glaziovii*, *Sapium ellipticum*, *Tithonia diversifolia*, *Trema orientalis*, *Triumfetta tomentosa* and *Vernonia lasiopus*; for the medium and semi-arid zone they are: *Acacia ataxacantha*, *Aspilia mossambicensis*, *Crotalaria goodiiformis*, *Grewia tembensis*, *Indigofera lupatana*, *Lantana camara* and *Melia volkensii*. Future research is needed on experiments with lactating cows, agronomic performance, protein quality and current mechanisms preventing the toxicity of *L. camara*.