

## Abstract

A preliminary study to assess adoption potential of legumes and other organic soil replenishment resources was carried out in Chuka division, Meru south District, Kenya during 2002 long rains season. The study examined feasibility, acceptability, biophysical responses, farmers experiences - constraints and modifications of technologies as indicators of adoption. In a collaborative project between Kenyatta University and Kenya Agricultural Research Institute on integrated soil fertility management, a follow-up was done on how farmers selected technologies for soil fertility improvement after field days held every growing season, and a formal survey was carried out to find out how farmers implemented and modified the technologies. Selection of technologies by farmers was variable. Farmers initially selected soil fertility improvement resources that combined both organic and inorganic resources, but majority of the farmers implemented tithonia and cattle manure. Herbaceous legumes were least preferred due to competition with foodcrops while majority of the farmers used the new technologies on relatively small plots ranging from 0.02 to 0.05 acres citing reasons that they wanted to see the results first. Farmers practicing the technologies mainly benefited from increased crop yields and improved soil fertility. Among the main constraints farmers indicated were facing were lack of adequate biomass for incorporating into the soil and lack of cash to purchase inputs like hybrid maize and inorganic fertilizer. Farmers have responded by planting trees for biomass production on their farms and by 2002 long rains season some farmers had planted up-to 700 trees. The study has revealed the need to monitor how farmers adopt technologies as it facilitates in identification of issues and constraints that might hinder adoption and that could possibly feed into second generation research agenda. There is need to carry out more studies to validate the farmers innovations and to explore further the long-term sustainability of using tithonia.