

**Mugendi DN**, Mugwe J, Mucheru-Muna M, Karega R, Muriuki J, Vanlauwe B, Merckx R (2011). Dissemination of integrated soil fertility management technologies using participatory approaches in the central highlands of Kenya. In: Bationo et al. (eds.), *Fighting poverty in Sub-Saharan Africa: The multiple roles of legumes in integrated soil fertility management*, pp 1279-1296, Springer, Dordrecht, NL

## **Abstract**

Declining soil fertility and productivity is a critical problem facing smallholder farmers in the central highlands of Kenya. A study to improve soil fertility and farm productivity within the smallholder farming systems in the area was carried out from 2003 to 2006. The specific objectives were to identify farming system constraints, evaluate and disseminate potential integrated soil fertility management (ISFM) interventions using participatory approaches, assess achievements and impacts, and document learning experiences emanating from the methodologies used. The participatory approaches used were Participatory Rural [Appraisal](#) (PRA), mother–baby approach (with emphasis on demonstration), farmer groups, stakeholders planning meetings, village training workshops, cross-site visits and participatory monitoring and evaluation. The core problems identified were low crop and fodder yields that were caused by erratic rainfall, soil erosion, low soil fertility and small land sizes. There was high participation of farmers in all the partnership activities, and this possibly contributed to the high uptake of the technologies for testing by farmers whereby after only 2 years a total of 970 households were testing the new technologies. Maize yields at the farm level increased by more than 150% following use of the new ISFM interventions and about half of the farmers within the groups planted close to 500 trees propagated in the group nurseries. We recommend that pathways to reach more farmers should concentrate on demonstrations, farmer training grounds, field days and farmer groups and that a policy framework should be put in place to impart appropriate skills in ISFM to the extension workers.