

TANZANIA

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Ministry of Agriculture Training institute, Ukiriguru (others)

District Agricultural and Livestock Development Office (DALDO)

Tropical Pesticide Research Institute, Arusha

Soil Conservation and Agroforestry Project Arumeru (SCAPA)

Village administration

Description of Activity

The work in northern Tanzania mainly involved Participatory Rural Appraisal (PRA), assessment of resources within the context of agrobiodiversity, and promotion of conservation farming practices. Fieldwork was first carried out in two transects mainly the leeward and windward sides of Mount Meru that were running from sub-humid to semi-arid ecozones. From 1998 onwards, work concentrated in two sites of Olgilai/Ngiresi and Kiserian both on the windward side in sub-humid and semi-arid ecozones respectively. Coffee/banana/trees agroforestry is dominant in the highland Olgilai/Ng'iresi. The lowland in Kiserian practice both crop production and livestock keeping. Overall there was greater diversity of crops and cropping systems in the sub-humid densely populated area of Olgilai/Ng'iresi than in the semi-arid site of Kiserian.

A total of 8 institutions and 2 universities were involved in PLEC work from which 39 PLEC collaborating professionals were based. A total of 80 farmers started working with PLEC in 1998. Through intensification of demonstration site activities, about 3000 farmers nationwide by 2001 were involved in PLEC work in some way. The majority of farmers participated in farmer to farmer training programmes, small scale projects by farmer associations, farmer training programmes and on meetings and workshops.

A total of 10 expert farmers were selected from each village. Selection was gradual, through close and intimate interactions in the field. The willingness to share knowledge with others is one important consideration. Each expert farmer has a specific model to demonstrate its management to others. A field demonstration consists of one expert farmer's introduction, followed by friendly interactions and contributions with and from other farmers, scientists and extensionists. Based on observed practices through farmer training, farmers may pick the technology and adopt it on their own farms. Others may adapt it to meet their own farm conditions while others pick nothing. Evaluation of the impact of demonstration site farmer to farmer exchange of knowledge is then assessed by visiting individuals.

Through farmer to farmer training, soil fertility especially through the use of manure has increased for some farmers in Ng'iresi bunches of bananas have increased from an average of 30 kg per bunch to 50 kg. as a result of soil conservation in Kiserian, maize has increased from 100 kg /acre to 600 kg for some farmers. Agricultural intensification, especially through planting of more than two crops at the same time and throughout the year has increased. About 20% of the farmers in Olgilai/Ng'iresi are optimizing yield through application of proper crop spacing in addition to year round production.

Environmental conservation is another area where PLEC impact was greatest. Through farmer associations, individuals and school children, tree nurseries were established and raised. At the moment about 50% of PLEC farmers have more than 50 planted trees around their homestead and another 30% with more than 2000 seedlings for sale.

Farmers have also improved their skills in optimizing farm production through integration of benefits from crops and livestock. Maize and bean stems are first fed to animal and resultant farmyard manure applied on farm with improved nutritional quality. Urine from the pens is also mixed with other botanicals and used to kill pests in vegetables and teaks in cows.

Training visits and on-site exchange of knowledge has increased interaction amongst farmers. They know each others skills and where to go when they want knowledge or material. Besides, establishment of several farmer associations has resulted in fast spreading of PLEC technologies and practices

Different actions were taken to ensure sustainability of PLEC work in Arumeru without a project. In order to be effective in implementation and monitoring of activities, each site was split into two i.e. Olgilai and Ng'iresi in sub-humid site and upper and lower Kiserian in semi-arid site. Each smaller village appointed a PLEC committee composing mostly leaders of existing farmer associations and expert farmers. The expert farmers & association leaders are considered powerful engines to carry on PLEC work without a project.

The established strong interactions between farmers and extension staff and reduced dependency of farmers on extension staff in technology dissemination, expert farmers are expected to continue their role as experts but now with more developed models and confidence as a result of their empowerment through PLEC.