Agroforestry: a tool for accelerated socioeconomic improvement of rural livelihood in Nigeria

Mende Ifeoluwanugbo
Department of Forest Resources Management, Faculty of Agriculture and Forestry, University of Ibadan, Ibadan, Nigeria.

Introduction
In Nigeria, more than 75% of the population resides in the rural area and more than 70% of the rural inhabitants are farmers (Ijewolo, 2002). According to FAO (1999), Forest area is 17,800 hectares of Nigeria’s total land area of 91,077 hectares in 1996. The prevalent land use practices in southwestern Nigeria are crop rotation and shifting cultivation (J-Aibaji, 2002). However, population is growing in the country at the rate of 2.5% annually and 2.8% of these forest areas are disappearing yearly (Nest, 1993). With just 2.3% of Nigeria’s land area remaining as undisturbed forest land area in 1995 (Akinsanmi, 1999), the need to combat deforestation is imperative.

Methods
Recomendation survey was carried out in all the ecological zones of Nigeria to evaluate the various land use practices in Nigeria with a view to determining Agroforestry models most suitable to each agro ecological zone.

Agroforestry models suitable to each agro-ecological zone

In Nigeria, the ecological zones used for the analysis of agroforestry models are:

1. Freshwater Swamp
2. Derived Savanna
3. Montane Region
4. Guinea Savanna
5. Sahel Savanna
6. Sudan Savanna
7. Guise Plateau
8. Jos Plateau
9. Plateau Region
10. Derived Savannah
11. Lowland Rain Forest
12. Freshwater Swamp
13. Mangrove Forest and Coastal Vegetation
14. Tropical Grassland
15. Tree Fallow
16. Taungya
17. Aquaforestry
18. Entomoforestry
19. Sylvopastoral
20. Reclamation Forestry

The photographs below are practical examples of Agroforestry models practiced in the Lowland Rain Forest and Derived Savanna zones of Nigeria.

Fig. 2: Schematic representation of current Agroforestry practices in Nigeria.

Agroforestry, a dynamic, ecologically-based natural resources management system, has a large extent improved the socioeconomic livelihood of rural population in Nigeria by increasing income, improving human welfare, food and nutritional security as well as provision of fuel wood, fodder for animal consumption and employment.

Discussion
In addition to this, the ecological benefits include watershed protection, soil stabilization and improvement and carbon sequestration. However, agroforestry is not an all-embracing panacea to solve problems of land mismanagement, rural poverty and environmental degradation in Nigeria. The choice of an appropriate model for Nigeria is often localisation specific as a number of pertinent factors limit the prevailing of a particular model.

The major aim is the adaptability of a selected system to the peculiarities of a given problem. In Nigeria, the following factors affect the selection of an agroforestry system:

• Conflicting objectives of management
• The prevailing cultural practices among the rural people
• Existing land tenure system particularly in Southwestern and Southeastern regions
• Socioeconomic conditions of the rural population in terms of capital and labour

The research findings also identified some crucial limitations of agroforestry in Nigeria and they are highlighted as follows:

• Some trees do harbour or serve as alternative host of pest and disease agents of food crops
• There is competition between the tree crops and food crops for such site factors as light, water, space, nutrients, etc.
• The mechanisation of food crops production is made difficult with the presence of trees
• Some agroforestry technologies are generally complex in design for the local farmers and are therefore inappropriate

In Nigeria, agroforestry practices has been an age long system. The research finding however reveals that if the factors and limitations identified are properly addressed, the potential of agroforestry to stem the problem of rural poverty, ecological catastrophes and economic stagnation would be achievable. But a holistic institutional support in terms of provision of improved incentives, cooperation between researchers and extension agents in developing appropriate models for the rural population and the end user would encourage them in planting trees on their farmlands.

References

Plate 1: Lecseyca Jucurophef, Main, plantings and Grevillea indica are all grown together in this intensively managed plot.
Plate 2: Fuelwood obtained from multipurpose trees grown on farms. Wood from the green biomass is applied between the rows of Cassava.