aiding policy making and research are to be more trusted. The goals of this study were to: 1) give a brief description of a rapid watershed erosion and reservoir sedimentation measurement technique using an acoustic profiling system to provide long-term reservoir sedimentation rate information and the sediment data needed for model calibration and validation; 2) present SWAT model case study results of the impact of converting cropland along streams to forested stream buffers on soil loss and water quality at Cobb Creek, one of the three main sub-watersheds within the Fort Cobb Reservoir Watershed (FCRW) (830 km2) located in Oklahoma, USA. Currently, there is an existing twinning pilot project between FCRW and Thika River Watershed located in Kenya, to which these technologies are intended to be transferred. The long-term goal is to get funding for a project that will create a regional or continental rapid watershed and reservoir sedimentation assessment laboratory in Africa. These techniques will complement the goals of bodies such as ICRAF, UNEP, and FAO, and governments whose overarching goal is to ensure food security under a sustainable environment, and institutions of higher learning that endeavour to build capacity.

Forest species growth and soil characterization in agroforestry systems of Rondônia northwest of the Brazilian Amazon: a case study

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Preferred session   *A1. Multistrata agroforestry systems with perennial crops*

Abstract   Agroforestry systems are natural resources systems that combine the cultivation of forest species with agricultural species and/or animals in the same area. In these soil use systems, during longer periods the soil quality study of is of fundamental importance. This objective of this study was to characterize the soil chemistry and plant growth of thirty-five agroforestry systems with ten or more years of age after planting in seven municipalities in the state of Rondônia, Brazilian Amazon. The soil characterization for each agroforestry system evaluated total height, diameter at breast height (DBH) of timber species components of the systems, and their growth was related with the soil chemical properties. The results showed that there are several forest species of commercial value in these systems such as *Cordia sp, Schizolobium parahyba var. amazonicum, Cedrella sp, Tabebuia sp., Tectona grandis, Hevea brasiliensis* and *Tabebuia sp.* The chemical analysis of the areas of study showed that differences in soil fertility and growth of these species differ with soil characteristics. The soils more frequently found were Red Yellow and Yellow Latosols (Oxisols), and also Red Yellow and Red Argisols (Ultisols).

Indigenous knowledge on non-timber forest product in northern Benin

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Preferred session   *D4. Incorporating local knowledge in agroforestry science*

Abstract   Natural ecosystems have historically been managed independently, or sometimes in collaboration with government agencies. Traditional forest knowledge and innovative forest management practices developed over centuries have contributed significantly to Africa's natural and cultural heritage, while helping to sustain production of multiple goods and services that enhance livelihood security and quality of life. This study assessed non-timber forest product (NTFP) utilization in surrounding villages of W National Park (northern Benin). The aim of the study was to document NTFP importance in local communities' livelihoods in order to highlight their potentials as key species to be improved and extended in traditional agroforestry systems. The data were obtained using semi-structured interviews and questionnaires. The random number tables were used to select 148 households among those who engage in NTFP extraction. Data were collected (for the year 2007) through personal interviews using individual questionnaires for the different stakeholders identified as those who gain utilitarian value from plants. Analyses have been made using EXCEL ordination statistical packages. This work showed that 172 species of