Research

(a) Completed

(i) Development of land evaluation criteria for rubber in the sedimentary rock-derived soils in Southern Nigeria.

(ii) Indigenous land evaluation methods among rubber farmers southern Nigeria.

(iii) Soil and environmental suitability indeces for rubber and gum arabic in Northern Nigeria.

(iv) Evaluating carbon sequestration in land use/land cover types in southern Nigeria using remote sensing techniques

(b) In Progress

i. Variability in soil properties among different agricultural land uses in the derived savannah agro-ecological zone of South Western Nigeria

This research work commenced in 2013. Spatial variability in soil properties is a major challenge in precision agriculture and one of the major factors inducing soil variability is the soil management techniques applied in various agricultural land uses. Arable cropping, plantation crops and cattle ranching are being compared with natural forest to estimate the degree to which the landuse types have altered the chemical, physical and biological properties of the soil. Seasonal collection and analysis of soil samples from the identified land use types for at least three growing seasons has been concluded. Laboratory analysis of soil samples is at an advanced stage. Analysis of field and weather data is on-going. The research is expected to help identify the major land management techniques that best ensure improved land quality and soil health among the varoius land use types.

ii. Evaluation of the flood plain soils of Northern Nigeria for commercial sugarcane production

The Research commenced in 2012. Nigeria has one of the best climates for sugarcane cultivation but remains a heavy importer of sugar. This research which commenced in 2012, is designed to evaluate the floodplains of Rivers Niger, Benue, Kaduna, Rima, Gongola and Sokoto for commercial sugarcane cultivation so that interested investors in the sugar sector can make informed decisions. Field soil sampling and evaluation on the Lower River Niger, River Gongola and part of River Benue has been concluded while data collection on sugarcane yield and 5-year ratoon at Sunti (Niger State), Numan (Adamawa State) and Lokoja (Kogi State) is still on-going.

Project report, dissertation and thesis:

(i) Effects of tillage and alley cropping on baseline soil properties. B.Sc. Project, University of Ibadan, Ibadan. 1995. 97 pages.

(ii) Evaluation of the agricultural potentials of the soils of Ajibode, University of Ibadan, Ibadan. M.Sc. Project, University of Ibadan, Ibadan. 1998. 93 pages

(iii) Characterisation and evaluation of selected soils of Southern Nigeria for Rubber (*Hevea brasiliensis*, Muell. Arg) cultivation. Ph.D. Thesis, University of Ibadan, Ibadan, 2011. 238 pages.