

Impact of Changes in Land Use System on Rodent Population and Species Diversity: A Case Study of University of Agriculture, Abeokuta, Nigeria

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Abstract

A study on changes in land use system in different areas of University of Agriculture, Abeokuta was carried out to ascertain its impact on rodent population and species diversity. The three locations used for this study were farmlands, construction sites and watercourses while data collected were analyzed using Schnabel method, A total of one hundred and twenty-nine (129) rodents were collected, comprising twelve (12) from the construction sites, sixty-one (61) from the farmlands and fifty-six (56) along water courses. The results indicated that the three major species commonly found along the water courses included *Arvicanthis niloticus* (Nile-rat); *Lophiromys sikapusi* (rusty-belled rat) and *Malacomys edwardsi* (Edward swampy rat) while those of farmlands included *Cricetomys gambianus* (Gambia giant rat), *Mus minutoides* (pigmy mouse) and *Arvicanthis niloticus* (Nile Rat). Also the rodent species caught on the construction sites in this study are *Lemniscomys striatus*. (Spotted grass mouse) *Myomys daltoni* (Dalton's mouse) and *Mus minutoides* (pigmy mouse). The rodent species diversity was almost constant for the three studied locations with few cases of overlapping. There was a sharp **decline** in population of rodent moving from farmland and water courses ecosystem area of plant diversity and abundant food supply to the construction site area of drastically altered ecosystem with highly reduced plant diversity and on soil water flow through the biopores.

Keywords:

Land use, Rodent population, Species diversity and University of Agriculture

