PDF - EFFECT OF SOIL EROSION ON AGRICULTURAL PRODUCTION ON ARABLE AGRICULTURAL PRODUCTION IN ASABA AND IT'S ENVIRONS - researchcub.infoABSTRACT

Soil erosion is recognized as one of the world's mostserious environmental problems (Pimentel et al 1995, Shiferaw and Holden,1999). Globally, about 80% of the current degradation of agricultural land iscaused by soil erosion.In most developing countries, including Nigeria, humanactivity triggers these losses this is associated with rapid population growth,inadequate attention to the basic natural resources S.W.V (soils, water andvegetation), and the need to maximize production to meet the needs of thegrowing population This situation is more serious in poor developing countrieslike Nigeria where subsistenceproduction predominates. Soil is one of the natural resources on Planet Earth.Though soil is a renewable natural resource, yet it can become finite, with thepassage of time, through its degradation. In Nigeria soil erosion is a problemand there are several causes for this. These causes are in fact various factorsas a result of which soil erosion takes place. Some of the contributing factorsare certain agricultural practices of conventional agriculture andenvironmental problems. There is a universal acceptance that such agriculturalpractices degrade the soil. This study deliberate to explore the prevention ofsoil erosion problems and damage of the environmental component such as theeffects of agricultural production and land degradation that soil erosioncaused in asaba, Delta state. The main objective of this study is to know thepossible cause and effect of soil erosion on agricultural production in asaba,delta state. And to be sought further in this study was be as follows:The aimof this thesis is to have clear understanding the cause and effect of soilerosion on agricultural production from the environment and the necessity toimplement conservation measures in the study area.

The study is carried out in asaba which is located in deltastate.The study was used a descriptive co-relational design; the study also wasused a cross sectional, comparative and ex-post facto designs. Descriptive inthat data collected was used to describe a phenomenon; co-relational in that itwas interested in relating cause and effect of soil erosion on agriculturalproduction in asaba, delta state.

Both soil causes and effect of soil are major drivers of landdegradation and pose key problems to livelihoods of the community members inthe study area. Sheet, rill and gully erosion are the main types of erosionwithin the study area and the latter form of erosion, namely gully erosion, isthe most alarming problem removing huge quantities of soil, dissecting land anddamaging infrastructure.

Deterioration in soil fertility as a result of severe soilerosion is a critical deterrent to crop production and a lack of fodder hasbeen a major factor in the decline in agricultural production. As charcoal isthe major source of energy for cooking in the study area, deforestation hasseriously depleted forest resources. This has compelled community members totravel long distances and spending significant amount of time for collection ofwood.

Chapter One:

1.0 Introduction

Introduction In total there are five chapters: The FirstChapter provides an overview of the background, the problem area identified,the problem formulation question, the research question and theobjectives. The Second Chapter discussesreview of related literature and third chapter methodology chapter fourpresentations Analysis and Interpretation of Data chapter five findingsconclusion, Recommendation

1.1 Background ofthe study

Soil erosion is recognized as one of the world's mostserious environmental problems (Pimentel et al 1995,

Shiferaw and Holden,1999). Globally, about 80% of the current degradation of agricultural land iscaused by soil erosion. Erosion by water, at a global scale, is the main soildegradation process in agricultural areas It generates strong environmentalimpacts and major economic losses from decreased agricultural production andfrom off-site effects on infrastructure and water quality by sedimentation processesSoil erosion creates severe limitations to sustainable agricultural land use,as it reduces on-farm soil productivity and causes food insecurity.

In most developing countries, including Nigeria, humanactivity triggers these losses this is associated with rapid population growth,inadequate attention to the basic natural resources S.W.V (soils, water andvegetation), and the need to maximize production to meet the needs of thegrowing population This situation is more serious in poor developing countrieslike Nigeria where subsistenceproduction predominates. The Asaba environment, is nowadays dependent onnatural conditions and cannot tolerate further deterioration of soilproductivity Increasing urbanization, intense land cultivation, uncontrolled grazing,and deforestation often lead to, or exacerbate, soil erosion These factorsundermine agricultural productivity and frustrate economic development efforts,especially in developing countries where there is heavy land dependence in lowexternal-input farming systems Nigeria has a total surface area of 137,600sq . However, whilst soil erosion is afeature of any natural Ecosystem, the rate at which it is taking place has beensignificantly accelerated by anthropogenic influences.

Soil erosion in the Areas has increased markedly in recentdecades the impacts of soil erosion have major implications for society from aneconomic, social and, environmental perspective. In terms of ecological service provision,soil performs many, ecological functions including nutrient cycling, regulatingwater and nutrient flows, filtering toxic compounds, providing a medium forplant roots and supporting the growth of a variety of animals and soilmicroorganisms by providing a diverse physical, chemical and biological habitat.As such, it is a vital natural resource and forms a key building block uponwhich life on earth depends. In economic terms, soil erosion inflictssignificant costs on society as the ecological services we derive from soilhave an economic value; as soil is eroded, the economic value we are able toderive from it is diminished. The financial implications of soil erosion do notstop here. For example, soil erosion can transmit pollutants into water whichhave to be removed through costly processes. Eroded soil often needs to beremoved from roads, reservoirs and estuaries which again can involveconsiderable costs to society.

Soil is a precious natural resource and in Nigeriaespecially this study Area asaba there is an ever increasing awareness of thedeclining soil quality. To inhibit this decline, soil conservation has beengiven due consideration in organic farming in the asaba village.

To conserve means ‘to protect from loss and harm’. Hencesoil conservation means to protect the soil from both loss and harm. ‘SoilLoss’ and ‘Soil Harm’ are two different unique terms/categories, with referenceto soil degradation, that have been introduced separately (in this thesis).Soil Loss implies soil degradation that occurs naturally e.g. erosion and otherfactors are responsible for the loss of soil. Soil Loss can occur in the threebasic dimensions of loss, i.e. physical, chemical and biological. Conversely,Soil Harm implies soil degradation that is anthropogenic in nature, i.e.induced by mankind e.g. chemicals and mechanics are responsible for the harm ofthe soil. Physical, chemical and biological dimensions of harm can take placein Soil Harm. With this background, organic farming practices propagate soilconservation by reducing both Soil Loss and Soil Harm.

As manifested from experience that soil harm has beenpre-dominantly higher as C S L Compared to soil

loss. The harm or damage to thesoil caused by human induced activities is ever increasing due to factors likeconventional agricultural practices, urbanization, Industrialization,increasing population, etc. Some of the problems of both soil loss and Soilharm are irreversible, e.g. soil erosion (whether it occurs naturally or ashuman Induced) Whereas, other problemsof both soil loss and soil harm can be dealt with and Improved with specializedtactics and measures, e.g. soil leaching can be improved with crop rotations oflegumes and catch crops; soil contamination can be alleviated with remediationprocedures; etc.
Here the soil management practices play a vital role in theSoil conservation.
The pressure on arable land is growing and this forcespeople to convert more marginal, available forest and grazing lands to arablelands. Hence, forest resources are very few and continuously decreasing both inquantity and quality. These results in firewood shortage and people are forcedto use animal dung as a fuel wood substitute. The major source of organicmatter is thus not brought back to the soil but used further purposes. Soilerosion is the most significant ecological restriction to sustainableagricultural production, mainly under subsistence agricultural productionsystem like west of Delta state including this Area asaba.

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