

Analysis of Effects Various types of Wild Fodder and Forages Exploitation on the Livelihood of Rural Households and their Intensity of Utilization in Benue State, Nigeria

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Abstract: The study assessed the various types of wild fodder and forage exploited and their level of intensity of utilization by rural households for feeding livestock in Benue state, Nigeria. This was achieved with the help of a well structured interview schedule to purposively elicit information from 300 eligible respondents from the study area. The results of the study revealed that 60.0% of forest grasses were mostly exploited and intensively utilized (70.0%) while trees and shrubs leaves were identified to be exploited at 57.0% and intensively utilized (45%). The study concluded that the most exploited and utilize forest fodder and forage were grasses and trees and shrubs leaves. It was recommended that: government and community efforts should be intensified to protect the forest fodder and forages from indiscriminate bush burning for utilization by livestock; modern equipment for harvesting, treatment and preservation of fodder and forage for a long time for all year round utilization by livestock should be imported by government, individuals and organizations and sold to livestock farmer at cheap price for use; and research should be carried out by research institutes to establish the nutritional value of forest fodder and forage to enable the livestock farmers to avoid the ones that are poisonous for their livestock as well as introduce the exotic fodder and encourage its utilization by the livestock farmers for more nutritional value.

Key words – Forage, Fodder, Forest, Utilization, Resources.

I. INTRODUCTION

Livestock production in Nigeria partly depend largely on the use of fodder and forages which most of them are derived from the forest which in turn serve as organic manure for crops after been fed to livestock and passed out as dung. Animal based farming system in most parts of Nigeria has a strong link with forest resources for fodder and forages supply and nutrient recycling. The trees have nutritional, social, ecological and cultural values in Nigeria society.

Forest, fodder and forage resources tremendously help the livestock farmers in many ways to sustain their livestock farming in general through animal production in particular.

Fodder and forage are used to support livestock -cattle, sheep, goats, donkeys, camels and horses both in wet and in dry season. In the savannah zones, most trees and shrubs shed their leaves, the annual grasses die off and the perennial grasses dry up and the vegetation in burnt thereby leaving the animals with little or nothing to eat (waleed, 2008; Townson, 2012 and Thankur, 2013).

However, the plants parts such as new flush of leave, flowers and fruits often produced in the dry season are rich in proteins, vitamins and minerals. Fodder is harvested in the natural and is effectively utilized for feeding livestock (NAERLS, 1992; Osemeobo, 2006 and Mander, 2008).

The main objective of the study is to assess the various forest fodder and forages resources utilized by then livestock farmers in Benue State, Nigeria. Specific objectives for the study include: i. to identify the various fodder and forages utilized by the livestock farmers and; ii. examine the level of intensity of utilization of the various fodder and forages identified.

II. METHODOLOGY

The study was carried out in Benue State. The State was created in 1976 with Makurdi as the State capital. It is found in the middle belt region of Nigeria, approximately located between latitude 6.5° and 8.5°N and longitude 7.5° and 10.5°E of the equator. The State has a total land area of about 30,995 square kilometers and a projected population of about 2,780, 398 people (BNARDA), 1995) and (NPC, 1995) in (Atongo, 2013).The State shares boundary with five states: Nassarawa to the North, Taraba to the East, Enugu to the South west, Cross River to the South east and Kogi also to the south west. The south eastern part of the state shares boundary with the Republic of Cameroon. It is bordered to the North by 280km of River Benue, second largest river in Nigeria, which the state derived its name. The state is also traversed by

202km of River Katsina-Ala in the in-land area with its catchment area from Cameroon.

A three stage sampling procedure was used for this study. In the first stage, out of 23 LGAs in Benue State, 2 Local Government Areas (LGAs) from zone A, B and C were purposively selected because of the forest resources availability in such LGAs giving a total of 6 LGAs (Katsina-Ala, Kwande, Makurdi, Tarka, Otukpo, and Okpokwu) covered for the study. During the second stage, 4 communities from each of the 6 LGAs were selected using simple random sampling balloting technique giving a total of 24 communities. During the third stage, 50 households were randomly selected from the 4 communities in each of the 6 LGAs using simple random sampling balloting technique giving a total of 300 respondents for the study.

Data for this study was collected from the households through the use of structured interview schedule to elicit information from rural households. It was subjected to both face and content validity to avoid ambiguity of items as well as to ensure its validity. The interview schedule contained relevant questions on the study. It was pretested in one of each villages sampled for the study, the reliability of the instrument was determined using the split half technique. Secondary information was collected through the review of relevant literatures, maps, pamphlets bulletins, biographies, previous projects, theses, dissertations and materials from internet sources.

Multiple regression model was used to estimate the contribution of each variable to the dependent variable to determine the best variable predictive of livelihood activities by rural households and their effects on the livelihood of rural households in the study area due to forest resources exploitation and utilization activities.

III. RESULT AND DISCUSSION

Identified Wild Fodder/Forages for Feeding Livestock

The result on identified fodders/forages for feeding livestock in Table 1 shows that 60.0% of forest grasses and 26.7% of trees flowers were utilized to feed livestock by the respondent in the rural households in the study area. The implication of this is that the respondents in the rural households used mostly grasses to feed their livestock. Osemeobo (2006) also viewed that fodders and forages are used to support livestock. He particularly noted that in forest regions of Nigeria, forest grasses are predominantly used to feed livestock such as cattle, sheep, goats, donkeys and horses both in wet and dry seasons. NAERLS (1992) and Mander (2008) similarly observed that in the savannah zones, most trees and shrubs shed their leaves, the annual grasses die-off and the perennial grasses dry up and the vegetation is burnt thereby, leaving the animals with little or nothing to eat. New plants parts such as new flush or leaves, flowers and fruits/seeds often sprout out rich in protein, minerals and vitamins which is consumed by livestock. Fodder and forage harvested in the natural forest provide good source of feed for feeding livestock.

Table 1: Distribution of respondents according to the identified forests wild fodder/forages exploited for feeding livestock

Fodder/forages	Frequency*	Percentage
Forests grasses	180	60.0
Trees/shrubs leaves	172	57.3
Trees flowers	80	26.7
Fruits/seeds	155	51.7
Total	587	195.7

*Multiple responses



Figure 1: Distribution of respondents according to the identified forests wild fodder/forages exploited for feeding livestock.

Level of Intensity of Utilization of Forest Wild Fodder and Forage

It is evident on Table 2 that majority (70.0%) of the respondents intensively utilized forest grasses while 45.0% utilized tree and shrubs leaves for feeding their livestock in the study area. This implies that grasses are the most readily available and easily accessed fodder material from the forest by the livestock producers do it on part-time basis with more emphasis on crops farming therefore go on fodder (grasses) that could be accessed easily rather than taking too much to climb trees to cut leaves for their livestock in order to be brief and have time to attend to their crops farms. Wunder (2013) stressed that even cattle producers which have large number of herds go on grasses which is more in quantity and readily available than cutting trees and shrubs leaves which cannot go round for their large number of cattle, except in rare cases.

IV. CONCLUSION AND RECOMMENDATION

The study concluded that forest wild fodder and forage particularly grasses, trees and shrubs leaves were the most exploit and utilize by the respondents in the study area. It was recommended that: community efforts should be geared toward the protection of forest fodder and forage from bush burning and indiscriminate exploitation of the forest fodder and forage; modern equipment for harvesting treatment and preservation of fodder and forage for long time for all years round utilization should be purchase by government, individuals and private organizations rate for use; and

research should be carried out by scientists in the research institutes to identify the nutritious fodder and forage for livestock producers as well as identify poisonous types such that livestock farmers could avoid them been fed to livestock except the nutritious types, and exotic grasses should be introduced by research institutes to livestock farmers and encourage their establishment and sustained utilization.

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