ANIMAL TRACTION TECHNOLOGY IN OGUN STATE, NIGERIA POTENTIALS AND CONSTRAINTS

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ABSTRACT

This paper presents the finding of a survey on the potential of Animal traction technology in Ogun State of Nigeria. A total of fifteen settlements (Camps) and sixty households were purposively selected and surveyed using a combination of structured interview schedule and participatory Rural Appraisal technique. Data were analysed using descriptive statistics.

Fulani of Kwara State of Nigeria origin settled in Ogun State with their cattle for over 25 years and are pursuing sedentary lifestyle as agro-pastoralists. They operate under a relatively secure tenurial arrangement that allow them to settle and practise arable crop farming. They prepare the land for planting using the ridge system, which favours the use of animal traction. The very cost of hired labour represents a major incentive for adoption of animal traction technology. The average cattle herd size is 30. All the respondent were aware of the use of animal traction. Although none of the respondent had used the technology in Ogun State, they nevertheless believed that the technology can be used in the State. They all indicated readiness to release their cattle for training if the technology is to be introduced. The paper discussed animal traction in rural economy, its potential and constraints.

Keywords: Animal traction, technology, Ogun state, Nigeria.

INTRODUCTION

Agriculture, which is the dominant occupation of the people of Ogun State

provides employment and income for about 80% of adult working population of the State. The 1.5 million hectares of land area of the state covers mainly the rain forest and the derived savanna. The farmers, who are mostly small holders and are resource-poor, cultivate on the average 1.2 hectares with traditional farm implements. Farm production is achieved almost entirely with the aid of family labour as cost of hired labour is prohibitive and there are labour shortage particularly for land preparation, weeding and harvesting. Government effort at introducing tractor hiring services was a failure as the policy could not be sustained due to high hiring charges, delays in providing the service and unavailability of tractors. This situation gives a compelling need for a locally sustainable cheaper labour-saving technology.

Omotayo and Idisi (1990) reported that the use of animal traction contributed immensely to farm output and family income in Northern Nigeria. The technology was not extended to Southern Nigeria because of the perceived fear of tsetse fly. Reports (Adu, 1993; Ogungbe and Adu, 1998) on the settlement of Fulan agro-pastoralists with their cattle in the humid zone of Nigeria removed such fear. Also, experiences from other parts of West Africa with similar ecological and socio-cultural setting or environment, confirmed the use of animal traction in the humid zone (Musa and Bello, 1990). The study was therefore carried out to determine the potential of animal traction technology among Fulani agropastoralists in Ogun state.

MATERIALS AND METHODS

The study was carried out in four local Government Areas (LGAs) of Ogun State namely Abeokuta North, Odeda, Ifo and Yewa North. These LGAs are in two

headed by men whose ages ranged from 30 to 60 years. Sixty-seven percent of household heads were aged between 50 and 60 years. All the household heads were Fulanis of Kwara State origin, who had

TABLE 1: SOCIO -ECONOMIC CHARACTERISTICS OF THE HOUSEHOLD SAMPLED LOCAL GOVERNMENT AREAS.

CHARACTERISTICS	ABEOKUTA NORTH	ODEDA	IFO	YEWA NORTH	FREQUENCY% RESPONDENTS
Age of household Head					
30-39 years	4	2	5	1	20
40-49	3	2	1	2	13
50-59	2	6	4	7	30
60 and above	1	4	4	13	37
Level of Education					
No formal education	4	8	17	21	83.3
Primary education	3	2	1	0	10.0
Secondary education	2	1	1	0	6.5
Post- Secondary Edu.	1	0	0	0	1.2
Length of stay in the Settlement					
Less than 5 years	4	4	2	5	25.0
6 -10 years	3	0	1	2	10.0
11-15 years	2	6	11	17	60.0
Above 15 years	0	0	1	2	5.0

distinct ecological zone namely transitional rain forest and derived savanna.

In each of the LGAs, Fulani settlements were purposively sampled and surveyed. For the study, fifteen settlements and sixty households were used. Primary data were generated through the use of structured interview schedule and participatory Rural Appraisal technique. Secondary data were generated from discussion with Village Heads/ Chiefs and from records of Ogun State Ministry of Agriculture and Natural Resources. The data were analysed using descriptive Statistics of means and percentages.

RESULTS AND DISCUSSION

Socio economic characteristics of the households

All the households sampled were

settled in various parts of the state for periods of about 3 to over 15 years (Table1) The reasons adduced for settling in the state included availability of forage, relatively disease -free environment, availability of market for their products and opportunity to practise arable farming in addition to their primary occupation of cattle rearing. The respondents claimed that their cattle decide whether to settle or not in particular areas as the animals display signs of ailment and discomfort within a few days of arrival in non-conducive areas.

Although most (83.3%) of the household heads had no western education, they were all interested in formal education for their children. All the respondents managed their herds as family business. The Fulanis will not engage in activities that may put their

livestock at risk. They will resist any assistance that may presuppose the loss of their livestock for failure to repay loans. The household heads expressed their dissatisfaction with migratory life as this has often affected their childrens education. About 50% of the respondents belong to one type of farmers organisation or the other. The commonest type of farmers organisation is the Cooperative and Thrift Society. This may be an indication that the Fulanis have imbibed the culture and practices of the people of Ogun State.

Land Ownership and Utilisation

Majority (80%) of the respondents borrowed land for arable farming as their residency in their respective camps was based on mutual agreement and understanding between them and their village chiefs (Baale) or land owners. Only about 20 of the respondents pay token amounts varying from N50 to N400 per annum for use of allocated land. Farms sizes vary from 3 to 10 hectares.

The Fulanis cultivate about 70% of the land while the rest is left under fallow. The Fulanis use the ridge system for planting as against heaps or mounds used by the indigenous farmers of Ogun State. The use of ridge system will facilitate tractorization or animal -drawn land -preparation equipment and ridgers.

Cropping System and Practise

The Fulanis practise a semi- rotational cropping system in which sorghum is followed by yam. Land preparation and other tillage activities are carried out manually with traditional hand tools. The different types of arable plants grown by the respondents relative to the total crops are sorghum (90%) ; yam (89%) , cassava (78%) , maize (67%) and kenaf (2%). Kenaf

is not a popular crop with the Yorubas of Ogun State , but the Fulanis grow it for rope making. After sorghum harvest , its long stem are bent over the ridges to serve as stakes for the yams. Most of the farm labour is supplied by household members. Hired labour is very expensive probably because of the proximity of Fulani (Rugas) to Urban Centres. The high cost and unavailability of hired labour suggest additional incentive for the promotion of animal traction technology among the Fulanis. The main reason for farming by the Fulanis is to provide food for themselves and their families as well as to generate some income to take care of their basic needs. The men handle the sale of farm produce.

Livestock Herding

Labour for livestock herd is supplied by the household members. The Fulanis operate an elaborate system of Social Contracts and Kinship networks in this regard. Animals belonging to all the household members and even those of extended family members are pooled. Children of the household aged between 9 and 20 years take charge of the herding on rotational basis. At the beginning of each week, the entire household /family plan herd movement within an established grazing orbit. Grazing periods vary from 0600h in the morning to between 1700h and 1900h in the evening depending on the season. The grazing orbit during the rainy season is usually within 5km radius of ruga. This may extend to between ten and fifteen kilometers during the dry season.

The average herd/flock size is shown in Table 2. The cattle is mostly of the Bunaji type with a few ketekus. The sheep and goats that are herded with the cattle are of the indigenous West African Dwarf breed. the respondents claim that the

TABLE 2: HOUSEHOLD HERD SIZE AND STRUCTURE

	ABEOKUTA NORTH	ODEDA	IFO	YEWA NORTH	MEAN
BULLS	2	2	3	4	2.80
COWS	11	9	21	27	17.00
HEIFERS	3	2	5	8	4.50
BULL CALVES	1	2	3	5	2.80
FEMALE CALVES	3	1	4	2	2.50
SHEEP	11	9	8	13	10.30
GOATS	4	3	7	8	5.5

northern breeds of sheep and goats do not thrive in the area. Each household on the average owns about 30 head of cattle, 70% of which are female. The ownership of cattle by the Fulanis should facilitate the adoption of animal traction technology.

Knowledge of Animal Traction Technology

All the respondents are aware of the use of animal traction but about 62% of them have never used animal traction technology. The respondents however believe that the technology can be used in their respective areas which have been opened up and cultivated for years. All the respondents indicated their willingness to release their cattle for training for traction purpose whenever such opportunity is provided.

The experience of Nigerians on the use of tractors is disappointing. Although, many of our researchers and politicians regard animal traction as a backward technology, experience from various areas increasingly see Animal Traction as an economically and ecologically appropriate technology which is highly relevant to the rural small-holder farmers and farming systems. The potential use of animal traction in transitional and derived savanna zones of Ogun State appears very great, but there are major challenges such as the culture of cattle handling by the indigenes and the training of animals. The successful introduction and promotion of Animal traction technology in the state will require more

sociocultural and economic studies to determine profitability as well as the design of efficient implements.

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