



ANALYSIS OF SHARP PRACTICES INVOLVED IN MECHANISATION PROCESSES AMONGST ARABLE CROP FARMERS IN OGBOMOSO AGRICULTURAL ZONE OF OYO STATE, NIGERIA

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ABSTRACT

Agricultural Mechanization (AM) is the application of tractorisation technology into the field of agriculture to improve agricultural output. The study investigated sharp practices involved in mechanisation processes amongst arable crop farmers in Ogbomoso Agricultural Zone of Oyo State, Nigeria. Specifically, the personal characteristics of respondents were described, various forms of sharp practices identified, the extent of sharp practices on farmers' production level examined and measures used to curb the sharp practices were identified. A total number of 150 arable crop farmers were selected using multistage sampling technique, and requisite information was collected using interview schedule. Frequency counts, percentages, Mechanisation process Sharp Practices Used Index (MPSP UI) was used to access the extent of sharp practices on the arable crop farmers. Majority (80%) of the arable crop farmers were male, only 52% had formal educational experiences at varying levels and about 60% farmed between 5 to 8 hectares of land. Results further showed most common sharp practices of mechanisation processes as improper farm ploughing, collection of money and refusal to go to farmers' farm, ploughing land only to get to a stage and disguise as if the tractor is faulty. Inability of the arable crop farmers to ascertain the accurate farm size measurement (64%) was a major reason for being a victim. The extent of MPSP revealed that Ploughing of land only to get to a stage and disguise as if the tractor is faulty ranked first in the MPSPs (30.0%) among the five MPSP considered in the study. It was concluded that arable crop farmers should be educated on the correct farm size measurement to forestall future cheats, which if not curbed can hinder optimum farm earnings.

Key words: Farm size measurement, arable crop farmers, sharp practices, farm mechanisation

INTRODUCTION

Agricultural modernisation is an inevitable process of social development, with agricultural mechanisation as one of its important phases. According to Manta and Aduba (2013), Agricultural Mechanisation (AM) was defined as the application of tractorisation technology into the field of agriculture to improve agricultural output. It is a deliberate or conscious departure from peasant and subsistence agriculture into commercial agriculture. This process also involves the development and management of machines for field production, water control, material handling as well as post-harvest operations (Rahman and Lawal, 2003).

In Nigeria, farmers' demand for agricultural machinery and their use to a great extent determine their agricultural productivity and level of awareness. Anthony (1995) was of the opinion that if AM is implemented in the right way, it will have a considerable effect on agricultural productivity thus increasing peasant farmers' output while optimising input cost. This in a way was supported by the work of Manta and Aduba (2013). (2003) that human being are limited to less than 0.1 KW continuous power output.

Some researchers have conducted field studies on agricultural bush clearing in the tropics. For instance Anazodo (1986) developed appropriate methods and equipment for agricultural land clearing and development in Nigeria. Oni and Adeoti (1994) conducted field experiment to determine the effects of mechanised land clearing

and tractor traffic on agricultural soils and crop growth. Okore, *et al.* (2006) carried out field studies on impact of land clearing methods and cropping systems on labile Soil C and pools in the Humid zone Forest of Nigeria.

Also, Fagbemi and Gana (1994) attempted to produce guidelines for agricultural bush clearing in Nigeria. They include processes, operational techniques, specifications and factors to consider in mechanized agricultural bush clearing. Couper, 1996 working under the International Institute for Tropical Agriculture, produced a guide for agricultural land clearing in the tropics. Although these works are useful and relevant but they failed to give a comprehensive approach to mechanised agricultural bush clearing, and why many of the farmers are not breaking even, one of the major reasons is the insincerity on the part of the tractor operators which this present work conceived as sharp practices. Sharp practices could be defined as a clever way of cheating on an individual using the ignorance of the other party. Most farmers in Ogbomoso Agricultural Zone of Oyo State are aware of mechanisation technologies and farming that are most suitable for their agricultural environments

The general objective of this study was to analyse sharp practices that are involved in mechanisation processes among arable crop farmers in Ogbomoso Agricultural Development Zone of Oyo State, Nigeria. The specific objectives included to:



- (1) describe the personal characteristics of the arable crop farmers,
- (2) identify various sharp practices in mechanisation processes
- (3) determine extent of involvement in sharp practices of mechanisation processes on arable crop farmers production level

METHODOLOGY

The study was conducted in Ogbomoso Agricultural Zone, Oyo State, Nigeria between April and May 2015. A multi-stage sampling procedure was used for sample selection. At the first stage, Ogbomoso Agricultural Zone was purposively selected for the study due to the predominance of arable crop farmers in the zone. The population of the study were all arable crop farmers in the selected local governments. The second stage involved a random selection of three Local Government Areas of the Zone, Orire, Ogo oluwa and Surulere that have a high concentration of arable crop farmers.

At the third stage, 50 farmers were randomly selected in each of the LGAs used for the study. A total of 150 respondents were used for the study.

Data for the study were collected through the use of validated structured interview schedule. Frequency distribution, percentages, means and standard deviation were used to describe the data. Mechanisation process Sharp Practices Used Index (MPSP UI) was used to assess the extent of sharp practices on the arable crop farmers.

RESULTS AND DISCUSSION

Personal characteristics of respondents

Results revealed that most arable crop farmers in the study area were male. This is especially true since 80.0% of the arable crop farmers were male. Majority (72.7%) were between ages of 40-59 years. Two-third (69.3%) of the arable crop farmers were Christians. Majority (86.7%) were married, 8.7% single and 4.7% were widowers. This high population of married respondents is in conformity with the local culture identified by Jibowo (2003) that majority of adult populations in southwestern Nigeria are married. This could suggest additional farm labour from children and spouses. The average household size was 6.54±2.87 persons. Educational level of respondents showed that 52% had educational experiences at varying levels. Though respondents in the study area appear not to be highly educated, they may not have problem appreciating new farm ideas and innovations when disseminated to them. (Table 1).

Table 1: Distribution of respondents by age, sex, religion, marital status, household size and educational level; n=150

Variable	Frequency	Percentage
Age		
20-29	8	5.3
30-39	27	18.0
40-59	109	72.7
Above 60	6	4.0
Sex		
Male	120	80
Female	30	20
Religion		
Christianity	104	69.3
Islam	35	23.3
Traditional adherence	8	5.3
No affliction	3	2
Marital status		
Single	13	8.7
Married	130	86.7
Widowed	7	4.7
Household size		
1-4	45	30.0
5-8	89	59.3
9-12	12	8.0
13-20	2	1.3
Above 21	1	0.7
Educational level		
Pry education only	18	12.0
Secondary education	60	40.0
No formal education	72	48.0

Source: Field survey, 2015

The result in Table 2 shows that 53.3% of the arable crop farmers had farm size between 5-6.99 hectares. The large farm size of the arable crop farmers shows the true characteristic feature of commercial farming as involving large farm size. It can be inferred from the study that farmers in the study area are experienced since more than half of them 61.3% indicated having up to 10years experience in arable crop production. Table 2 further shows that land acquisition is mostly by lease and that 68.6% had functional contact with extension agents. This finding is in line with the report of Bamigboye (2015) who reported that only 60% of farmers actually had functional contact with an extension agent and that other contacts are not functional in Ekiti State.

Table 2: Distribution of respondents by farm size, farming experience, method of acquiring land and functional contact with extension agents; n=150

Variables	Frequency	Percentage
Farm size (ha)		
< 1	10	6.7
1-2.99	15	10.0
3.0-4.99	35	23.3
5-6.99	80	53.3
7 and above	10	6.7



Variables	Frequency	Percentage
Farming experience		
1-5	8	5.3
6-10	50	33.3
10 and above	92	61.3
Method of acquiring land		
Family inheritance	42	28.0
Outright purchase	18	12.0
Lease	85	56.6
Gift	5	3.3
Functional contact with extension agents		
Yes	103	68.6
No	47	31.3

Source: Field survey, 2015

Farmers' awareness about MPSPs

Result in Table 3 shows that about 68.0% were aware about MPSPs whereas 40.0% claimed that they were not aware of any MPSPs. The implication is that many of the farmers may not be interacting with other farmers in the neighbourhood and consequently become the victims of sharp practices.

Table 3: Farmers' awareness about MPSPs

Variable	Frequency	Percentage
Yes	102	68.0
No	48	32.0

Source: Field survey, 2015

Types of MPSPs in which tractor operators duped arable crop farmers

Result in Table 4 shows that almost half (45.3%) of the arable crop farmers were being affected by MPSPs inform of incorrect farm size measurement as one of the areas where tractor

Table 5: Ranking of MPSP by extent of involvement

MPSP	Large extent	Some extent	Small extent	None extent	MPSPI	%	Rank
Improper farm ploughing	12	10	2	1	24	10.1	4 th
Collection of money and refusal to go to farmers farm	48	16	4	2	68	28.7	2 nd
Ploughing of land only to get to a stage and disguised as if the tractor is faulty	60	8	5		73	30.8	1 st
In correct farm size measurement	39	12	4	4	54	22.7	3 rd
Collect money and refusal to do the work at the scheduled time	-	16	2	-	18	7.6	5 th

Summation (Σ) = 237

Suggested ways to curb MPSPs sharp practices

Result in Table 6 shows ways suggested by arable crop farmers to curb mechanization processes sharp practices, 53.2% suggested that Government should embark on land preparation services for farmers as this will guide against incorrect farm size measurement that is one of the serious MPSP that farmers are victim. Also, 48.0%

operators practice their dubious act in form of sharp practices. Improper farm ploughing (17.3%), collected money and refused to do the work at the scheduled time(14.7%), collected money and refused to go to farmers farm (12.0%). All these were the various sharp practices in ascending orders.

Detailed analysis revealed that the five identified sharp practices, if not curtailed, can impede agricultural development initiatives.

Table 4: Distribution of respondents by the types of mechanisation process sharp practices

MPSP	Frequency	Percentage
Improper farm ploughing	26	17.3
Collection of money and refusal to go to farmers' farm	18	12.0
Ploughing of land only to get to a stage and disguised as if the tractor is faulty	16	10.6
In correct farm size measurement	68	45.3
Collect money and refusal to do the work at the scheduled time	22	14.7

Source: Field survey, 2015

Extent of Mechanisation processes sharp practices

Result in Table 5 shows the extent of MPSPs using sharp practices index (SPI). The result shows that Ploughing of land only to get to a stage and disguise as if the tractor is faulty ranked first in the MPSPs (30.0%) among the five MPSP considered in the study.

suggested that farmers should form themselves into group to purchase a tractor as this will enhance good job performance and curtail unreasonable behaviour of commercial tractor hiring services, 22.2% were of the opinion that farmers should own and educated on how to use GPS. Detailed analysis revealed that if the suggested ways to curb mechanisation processes sharp practices are



followed religiously the opportunity to curb it will be very high.

Table 6: Distribution of arable crop farmers by suggested ways to curb sharp practices

Variable	Frequency	Percentage
Farmers to strive to own personal tractor	23	15.3
Group of farmers to strive to own personal tractor	72	48.0
Farmers to be educated on how to use GPS	34	22.7
Government should embark in land preparation services for farmers	82	53.2

Source: Field survey, 2015

CONCLUSIONS AND RECOMMENDATION

Sharp practices in mechanisation processes in agricultural production have been identified. In conclusion, the findings of the study revealed that most arable crop farmers in the study area were aware of mechanisation processes sharp practices, and they have been a victim one way or the other. The MPSPs that farmers are mostly involved are incorrect farm size measurement and improper farm ploughing. The key suggestions on how to curb the MPSPs are, Government should embark in land preparation services for farmers and that farmers should form themselves into groups to purchase tractors. The study recommended proper utilisation of tractor and that extension agents should endeavour to educate the farmers on how to determine the farm size of their farm land.

REFERENCES

Anazodo, U. G. N. (1986): Appropriate methods and equipment for agricultural land clearing and development in Nigeria: basic considerations. An invited paper presented at the National Workshop on Soil Erosion and Land Clearing and Soil Testing. Centre for Rural Development and Co-operatives, University of Nigeria, Nsukka. 24 pages.
 Anthony penin, (1995): Empirical Evidence of mechanization effects on Smallholder Crop

Production Systems in Botswana, Agricultural System 41(1995) 199-210
 Bamigboye E.O (2015) Analysis of Indigenous Climate Change Adaptation Strategies among Arable Crop Farmers in Ekiti and Oyo States, Nigeria. Unpublished Ph.D. Thesis Department of Agricultural Economics and Extension, Ladoke Akintola University of Technology. Ogbomoso PP240
 Couper, D.C. (1996) Land Clearing for Agricultural Research Stations. IITA Research Guide 5. Ibadan Nigeria. 16 pages.
 Fagbemi, A. A. and Gana, G. I. 1994. The sequence of NALDA land development activities. National Agricultural Land Development Authority. Abuja, Nigeria.1- 10 pages.
 Jibowo, A.A(2003):Essential of Rural Sociology, Gbemi Sodipo Press Ltd. Abeokuta, Nigeria.pp 21
 Manta, I.H and Aduba, J.J (2013): Mechanisation Practice: A tool for Agricultural Development in Nigeria: A case study of Ifelodun Local Government Area of Kwara State. International Journal of Basic and Applied Sciences Vol.2. No.3 . 2013pp 98-106
 NCAER,(1973): Impact of Mechanisation in Agriculture on Employment Report of National Council of Applied Economic Research , New Delhi.
 Okore, I. K; Tijani-Eniola H; Agboola. A. A. and Aiyelari, E.A. (2006): Impact of land clearing methods and cropping systems on labile soil C and N pools in the humid zone forest of Nigeria. Agriculture, Ecosystems and Environment, ELSEVIER 120 (2007), 250-258.
 Oni, K .C and Adeoti, J. S. (1994): Mechanized land clearing and tractor traffic effects on agricultural soil and crop growth. Agricultural Mechanization in Asia, Africa and Latin America. 36 (4). 25-29.
 Rahman, S. A. and Lawal, A. B. (2003): Economic analysis of maize-based cropping systems in Giwa Local Government Area of Kaduna State, Nigeria, *An International Journal of Agricultural Sciences, Science, Environment and Technology*.3:139-148