
PROBLEMS AND PROSPECTS OF AGRICULTURAL MECHANIZATION IN EDO STATE

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Abstract: This research elaborates the problems and prospects of agricultural mechanization in Edo State. Personal research and interview using questionnaires were also put to use to obtain data from various establishment and farmers in the three senatorial district of the state. This paper also elaborate the constraints faced by farmers in the state and the necessary policy prescriptions that need to be put aside to spark up the growth and development of the Agricultural sector as far as mechanization is concerned. At this vein, it is categorically say that the Government should try as much as possible to invest heavily in Agricultural mechanization and put in place a proper monitoring check on the project execution done to the grass root level.

Keywords: Agricultural Mechanization, Constraints, Prospect, Edo State,

INTRODUCTION

It is burdensome that Nigeria is still dwelling on the primitive method of Agriculture. Being so obvious that Agricultural mechanization is the key to massive production of food and poverty alleviation of the suffering youths. Statistics have also shown that Nigeria is among the least recognized agricultural mechanized practices in the world at large. In the past few years we have seen a paradigm shift in the way agriculture is perceived as a non lucrative job. The development of the agricultural sector is a vital step to take in restructuring or reorganizing the public enterprise as far as agricultural mechanization is concerned (Asoegwu, S 1998). Taking for instance, the total hectares of farmland cultivated in the rural areas of the state, just about 34 percent of arable land is being utilized by farmers in cultivating crops for mans consumption. Olatide O.J. Edo State farmers are more into cassava ,yam, and maize cultivation .The major cash goldmine cassava which is used in the production of cassava chips, ethanol, glucose syrup ,and cassava bread to mention but a few. Farm mechanization has been seen as the pivot to Agricultural revolution such as the United states of America, Thailand, Asia have contributed greatly to the increase in output of food and agricultural crops to meet up with the incessant demand of the increasing world population(Akande, 2006).

It is quite alarming that despite the huge sum of money that is invested by the Federal Government on mechanized agriculture in the state, it is so surprising that the result is still the same in Edo State. In Nigeria today, despite the fertility of the soil, favorable weather condition, the importation of several crops such as rice, wheat is still on the increase just because of the unwillingness to harness the right agricultural strategies and monitor the implementation to the grass root level with the assistance of the agricultural extension officers in place. In order to generate substantial revenue for the state and the entire nation we need to diversify the economy by keying into the full practice of mechanized agriculture to balance the growth of the sector and reduce the reliance of oil products (Anazodo 1982).

Concept of Agricultural Mechanization

Agricultural mechanization simply means the application of the basic engineering principles and technology in Agricultural production, storage and processing. This can also be termed as the sector of the economy that embraces the manufacture, distribution and operation of all types of tools, implement machines and equipment for agricultural development, crop production, crop production, harvesting and primary processing (Alatise M.O. (1996). This simply implies that farm mechanization encompasses in its widest sense in relation to mechanical power technology (Mittal V K, Bhatia BS (1998).

Problems of Agricultural Mechanization in Edo State

The problems of agricultural mechanization in Edo State cannot be over emphasized. There arise a lot of challenges standing as stumbling block to the success of agricultural mechanization in Edo State. This is as follows:

- a) Land tenure system: In many parts of the senatorial districts of the state, land is communally owned and farmers have no claim to the land after they are done with their cultivation. In some locations of the state, it is observed that non indigenes of a communal land are deprived from gaining access to make use of the land.
- b) Infrastructural Inadequacies: This is construed to include physical infrastructures such as good roads, health centers, railway system, educational facilities, electricity, and communication system. Inadequate infrastructures constitutes a major constraints to agricultural investment, and productivity. (Olomola A.S. (2007). These deficiencies contribute to high production costs of agricultural outputs and further undermine the profitability of agriculture as well as discourage export initiatives.
- c) Inadequate agricultural research and extension services: This has been lingering for quite a long period of time in which much effort on agricultural research institutes have been concentrated on agricultural export crops. The need to carry out much intensive research to discover more agricultural strategies which could either is

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mechanized or manual in order to increase productivity. This has lingered too long due to shortage of trained agricultural extension staff to carry out the result of such research to the farmers.

d) **Poor credit facilities:** It is quite alarming that some farmers who are willing and have the passion for large scale farming cannot adopt mechanized farming. Majority of the farmers are poor of which they find it very difficult to embark in a huge project since they cannot provide the required collateral security which is needed to obtain loan from financial institutions such as the bank of agriculture, micro finance banks etc. They cannot adopt the modern mechanized agriculture which involves the use of tractors, disc plough, mouldboard plough, combine harvester.

e) **Inadequate storage and processing facilities:** This virtually discourages large scale production by farmers. Agricultural products get spoilt easily due to lack of storage and processing facilities; this in turn reduces the farmers' incentives to go on a large scale.

F) **Poor Topography:** Describes the uneven land terrain that makes it difficult to operate machines due to undulating land.

G) **Soil type:** This is a limiting factor as heavy hard soils are difficult to cultivate.

Prospects of Farm Mechanization in Edo State

Agricultural mechanization which started in Sierra leone in the year 1946 has been kept aside by the government to move forward along its source (Oduori M F 2010).The problems of farm mechanization in Edo state are too numerous to mention. It is quite certain that man needs food to carry out his day to day activities. Base on this fact, agricultural mechanization is the key that will unlock food scarcity in the state. To promote national development, agriculture provides labour to other sectors of the economy which can easily be achieved through mechanization of agriculture in the state which will improve the food processing capacity of Edo state farmers, food processors, agribusiness investors and so on. With this lesser hands will be required to till the soil, harvest and carry out post harvest operations on the soil. This will also motivate the youths in the state to develop passion for agricultural business.

MATERIALS AND METHOD

The study was carried out in nine local government areas of the state which represents 30 percent of the population of total farmers taking consideration to the timing and the cost of the research work. Edo state is in south southern part of Nigeria West Africa. It lies in the rain forest zone of Nigeria on Latitude, with three political senatorial district with three local government areas as follows:

Edo North----- Ikabigbo, Ekperi , Owan

Edo central----- Uromi, Irrua , Ekpoma
Edo South----- Oredo, Ovia , Oriovwon

Though they are of different sizes. The locations were visited and relevant information of farmers was collected on the problems and prospects of agricultural mechanization in Edo state. The following method was used to obtain information of the research: Personal observation, and oral interview. Relevant information was gotten from past records of activities in the establishment. The farm inputs that was used by the farmers are seed for planting, cassava stems, fertilizers and the pesticides used that they utilized (insecticides and herbicides). It is quite certain that a farmer cannot produce reasonable output if necessary check in respect to the type of fertilizer, herbicides, Insecticides the type of soil does not suit the specific crop that need to be planted. Planting a high yielding variety at the right time or season is also a determinant factor for high yielding plant. This is because sometimes the seed to be planted may not be able to develop under favourable condition in this situation the farmer requires fertilizer and herbicides to apply to the crop due to the effect of the humid region on the plants which gives rise to insects and pest attack. The soil in Edo state is very rich in nutrient mostly in Ovia south west local government area which has massive tractorable land. Infrastructural facilities considered in this research are roads, social services such as electricity, pipe borne water, educational and health facilities.

The accessibility to farm location in the rural settlement of the state is not encouraging, taking the expanse of such land having very wide hectares of tractorable land. Base on this, such communities are not identified or pictured as investable land due to bad road network. This has deprived foreign investors. The supply of portable water has not been adequate for majority of rural dwellers. Electricity supply is often epileptic mostly in the rural areas. This is one of the major strength in running agricultural machines. If there is no access to electricity in the rural areas where the processing firms are located there will be excessive funding and inflation on the processed crops. If put in place the youths will be passionate to key into the agricultural practice, since this will go a long way to reduce the rate of personal effort that will be harnessed on the job. Improved seed and chemical inputs should be adopted. One reason why agricultural productivity has remained low in the state and Nation at large is because farmers are not properly educated on the positive and negative effect of using improved seedlings. If this is implemented the state will mark transformation in the Agricultural sector.

Demographic Characteristic of Farm Settlers and Non Settlers

AGE	25-34	35-44	45-54	55	TOTAL
FREQUENCY	26	42	67	51	186
PERCENTAGE	13.98	22.58	36.02	27.42	100
MARITAL STATUS	SINGLE	MARRIED	DIVORCED	WIDOW	TOTAL
FREQUENCY	55	112	12	7	186
PERCENTAGE	29.57	60.22	6.45	3.76	100
EDUCATIONAL STATUS	PRIMARY	SECONDARY	TERTIARY	NO FORMAL EDUCATION	TOTAL
FREQUENCY	92	26	9	59	186
PERCENTAGE	49.46	49.46	13.98	4.84	100
HOUSEHOLDS SIZE	1-2	3-4	6-8	9-12	TOTAL
FREQUENCY	7	16	115	48	186
PERCENTAGE	3.76	8.60	61.83	25.81	100

SOURCE: FIELD WORK 2016

Table 1
Demographic Characteristics of farm settlers and non Settlers

LAND SIZE (ACRES)	NUMBER OF SETTLERS	NUMBER OF NON SETTLERS
0-5	7	26
6-10	13	14
11-15	22	10
15-20	43	-
21-25	15	-
TOTAL	100	50

SOURCE: FIELD WORK 2016

TABLE 2

The explanation of Table 1 indicates the characteristics of farm settlers and non settlers. The analysis was calculated using percentage. During the course of carrying out this research 215 farmers were interviewed and 186 were properly analyzed.

Problems Encountered by Farmers in Different Areas

PROBLEMS	FREQUENCY	PERCENTAGE (%)
Inadequate Capital	120	20.58
Poor market price	47	8.06
Infrastructural problem	36	6.17
Bad road network	58	9.95
Poor storage facilities	107	18.35
Land tenure system	99	16.98
Lack of pipe borne water	49	8.40
Inadequate labour supply	67	11.49
	TOTAL = 583	

TABLE 3

RESULT AND DISCUSSION

From table 1 above, it is quite glaring that the literacy level is low among the respondents. 49.46% for primary school and 31.87% for No formal education which gives a total of 81.18%. With figure 81.18% it is observed that there is little constraint in terms of administering entrepreneurial programmes on how to improve agricultural activities in the State. Large proportion of the household is between 6-8 farmers which gives rise to 61.83%.

From Table 2, it is observed that more of the settlers were able to cultivate more hectares of farmland than the local farmers in Edo state. This was as a result of their inability to have access to farm machineries such as tractor and other farm implements like mouldboard plough, disc plough and little difficulty in securing farmlands for themselves, since only little acres of land was given to them for lease. From table 3, the result deduced shows that inadequate capital, poor storage facilities and land tenure system were the common problems encountered in the course of the study.

CONCLUSION

The drastic decrease in implementing the right mechanized technology by farmers; processors have always been the major cause of decrease in agricultural productivity in the state. In order to enhance and expand agricultural mechanization technology in the state, the agricultural engineers need to be self motivated to key into the new paradigm shift of value chain approach in finding solution to the problems towards a better Nigeria.

RECOMMENDATION

Government should see the need to invest heavily in rural infrastructural development that will go a long way to promote mechanized farming and facilitate a

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link with the agro allied industries and more of the agricultural implement for different operation such as soil preparation, seed planter, incubator for seedlings, harvesters and machines for processing of the harvested crops which will reduce self medications and the problem of the use of cutlasses and hoe. The educations of farmers will help to eradicate illiteracy and the conservation which are the major obstacles to agricultural development. Farmers should be given adult education so that they can read, write and easily identify the various chemicals and other agricultural implement which will be useful in carrying out their farm operations in absence of the agricultural extension officers.

Adequate road network should be created in the rural areas. This will assist in easy evaluation of Agricultural produce from the farm. During the course of this research it was observed that over 58 percent of seedling planted by farmers is unimproved. The national seed service should take all necessary steps to discharge its duties of distribution of improved seed to the farmers. More emphasis should be placed on the development of high yielding varieties of crops which will be suitable for different ecological zones and system of cultivation. Farmers should be encouraged to farm cooperatives in order to produce at a large scale which will yield more profit for them.

Adequate storage facilities should be provided to avoid spoilage of Agricultural products. Scientific research should be intensified in the problem of Agriculture in Edo State and the nation at large. More research should be carried out which will develop suitable modern method of farming (developing improved seedlings, breeding of livestock to mention a few. The Edo state ministry of Agriculture should seek the assistance of the appropriate quarters to provide tractors for Edo state farmers.

Finally, there should be a change in communal system of land holding which will make it easier to allocate farmlands, need for identification, selection and application of appropriate technologies for the downstream agricultural activities by encouraging mechanized farming in order to enhance productivity.

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