STATUS OF AGRICULTURAL TRACTOR OWNERSHIP AND MANAGEMENT IN NIGERIA.

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ABSTRACT

The status of agricultural tractors in Nigeria was investigated. For effective coverage, the study was limited to three management systems namely Government Ownership and Management system (GOMS), Private Ownership and Management System (POMS) and Co-operative Ownership and Management System (COMS). The data was collected from different agricultural establishments state by state in Nigeria taking note of functional and non-functional tractors as at 2013. This data was obtained through questionnaires, existing records and on the spot assessment and finally analyzed statistically. Results obtained indicate a total number of 15449, 9628 and 5184 tractors for GOMS, POMS and COMS respectively. Also, that there were 42.64%, 34.43% and 34.95% non-functional tractors for GOMS, POMS and COMS respectively. The result of this finding will be useful for planning of mechanized agriculture in Nigeria.

Keywords: Agricultural tractor, Ownership, Management, Nigeria.

1.0 INTRODUCTION

Agricultural Tractor is an important component in current agricultural production, whereby large areas are cultivated yearly. In Nigeria, agricultural tractors thereby have been used in irrigated schemes as well as in mechanized rain fed areas. But half of these tractors are owned by government and two third of it is not functioning again, due to poor management and ownership of these Agricultural tractors thereby hindering its usefulness in Nigeria (Oluka, 2000). Nigeria is a country blessed with arable lands and its citizens engage in food production and agricultural related businesses but the country is still not independent in food production and supply, this follow in the nation's continuous importation of food to meet the food requirement of her large and increasing population (Alabadan and Yusuf, 2013). To capture the countries enormous potentials, therefore, most of its agricultural activities have to shift from hand tool technology to mechanized agriculture. Mechanizing her agriculture will attract youths into the profession, boost output and increase timeliness in operations and by extension reduces poverty (Ahaneku *et al*, 2014). Agricultural tractor can be defined as a general purpose machine or vehicle used for providing power for different operations including tillage, planting, harvesting, processing and transportation. (Onwualu *et al*, 2006). (Olaoye, 2007) investigated on the evaluation of farm power and equipment ownership and management in Niger state, Nigeria. The investigation showed that tractors, animal traction and electricity are major sources of farm power in Niger state. (Dauda *et al*, 2010) studied on agricultural tractor ownership and off- season utilization in Ogun state, south western Nigeria, his study revealed that the use of tractor by farmers in Ogun state has grown. (Maysara *et al*, 2013) worked on evaluation and improvement of machinery management system of the rahad project using a decision aid model, the optimization is capable to estimate the planned objectives of building machinery management program. (Oluka, 2000) stated that between 1975 – 1985 the federal government of Nigeria imported and distributed 15,906 tractors and only 59.80% were functional at the time of the survey while 26.66% were not in operational conditions. Unfortunately there is inadequate data to show other agricultural tractor owners and their management in Nigeria. The objective of this research is to carry out an inventory of agricultural tractors in different agricultural establishments in

Nigeria and specifically evaluate its ownership and management systems in Nigeria and its level of functionality.

2. METHODOLOGY

The study area for the research covers the agricultural and associated institutions in Nigeria divided into six zones namely; North-East zone, North-West zone, North-Central zone, South-West zone, South-South zone and South-East zone. Nigeria is located between latitude 4^0 and 14^0 North of the equator and longitudes 3^0 and 15^0 East. It is bounded on the west by the republic of Benin, to the North by the republic of Niger, to the east by the republic Cameroun and to the south is bathed by the Atlantic Ocean.

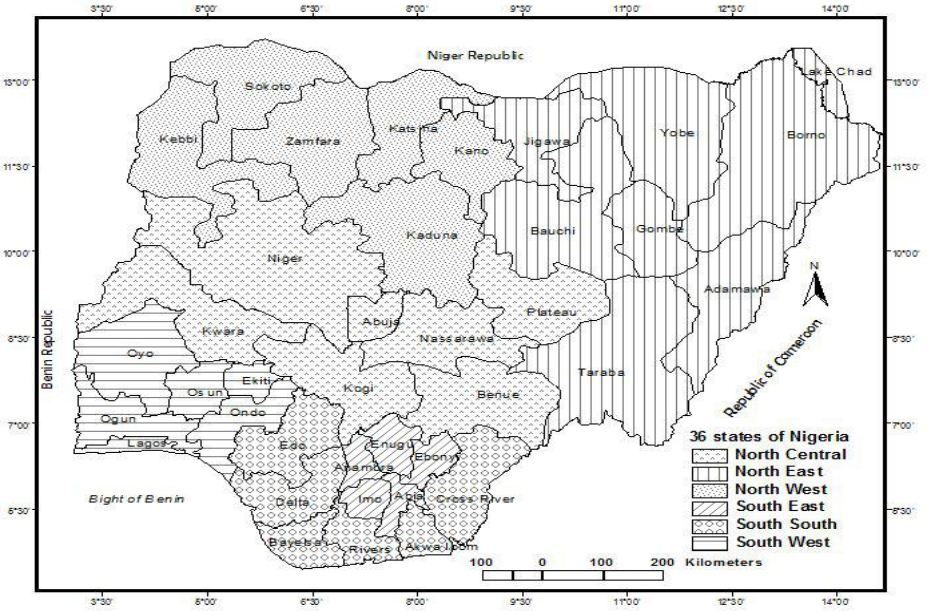

Figure 1: Map of Nigeria showing the six geological zones.

Sets of questionnaires were developed and distributed to agricultural organizations example Enugu state agricultural development program, federal ministry of agriculture, Anambra state ministry of agriculture etc., and post-secondary institutions across the agricultural zones to collect necessary data. In the course of administering the questionnaires, personal observations, on the spot assessment and explanations were provided to the respondents in their local languages. Those who could read and write were allowed to complete the questionnaire, which was later retrieved from them. Questions in form of oral interview were asked at federal ministry of agriculture, Enugu state agricultural development program, Anambra state ministry of agriculture. For effective coverage, the study was limited to three management systems namely Government Ownership and Management System (GOMS), Co-operative Ownership and Management System (COMS) and Private Ownership and Management System (POMS).Data collected were analyzed statistically. Qualitative and quantitative data were obtained based on existing records, observations and relevant publications as at 2013.

3. RESULTS AND DISCUSSIONS

Table 3.1 shows tractors in Nigeria as at 2013 under the three different ownership and management with government ownership and management having the highest number of tractors in the 36states of Nigeria and as well the highest number of non- functional tractors.

Table 1: Tractors in Nigeria as at 2013.

S/N	States	Government Ownership and Management (GOMS)		Private Ownership and Management (POMS)		Cooperative Ownership and Management (COMS)		Total
		Functional	Non - Functional	Functional	Non - Functional	Functional	Non - Functional	
1	Abia	8	6	1	0	1	0	16
2	Anambra	80	25	21	5	12	7	150
3	Adamawa	47	15	584	445	315	232	1638
4	Akwa Ibom	17	2	NA	NA	NA	NA	19
5	Bauchi	75	203	1003	987	578	543	3389
6	Bayelsa	63	45	24	8	19	10	169
7	Benue	312	525	245	69	114	34	1299
8	Borno	2089	902	532	271	228	127	4149
9	Cross River	372	85	NA	NA	NA	NA	457
10	Delta	35	189	62	15	43	12	356
11	Ebonyi	182	20	34	12	17	6	271
12	Edo	30	27	52	10	20	5	144
13	Ekiti	101	103	31	6	8	2	251
14	Enugu	180	143	21	7	9	3	363
15	FCT	4	4	42	15	22	7	94
16	Gombe	113	70	NA	NA	NA	NA	183
17	Imo	9	8	7	3	5	1	33
18	Jigawa	248	135	819	302	402	126	2032
19	Kaduna	250	148	556	24	255	18	1251
20	Kano	46	92	NA	NA	NA	NA	138
21	Katsina	2564	135	NA	NA	NA	NA	2699
22	Kebbi	807	147	231	58	94	33	1370
23	Kogi	12	6	NA	NA	NA	NA	18
24	Kwara	17	134	6	1	5	2	165
25	Lagos	25	113	NA	NA	NA	NA	138
26	Nasarawa	78	79	17	7	9	5	195
27	Niger	45	18	21	9	9	5	107
28	Ogun	88	36	376	76	264	101	941
29	Ondo	156	63	287	68	145	43	762
30	Osun	72	71	47	20	26	10	246
31	Oyo	544	59	172	35	100	19	929

32	Plateau	90	89	453	76	184	41	933
33	Rivers	74	37	16	13	7	5	152
34	Sokoto	983	291	708	4	539	6	2531
35	Taraba	200	744	NA	NA	NA	NA	944
36	Yobe	71	240	NA	NA	NA	NA	311
37	Zamfara	135	214	405	309	208	143	1414
	Total number of tractors	10222	5223	6773	2855	3638	1546	30257

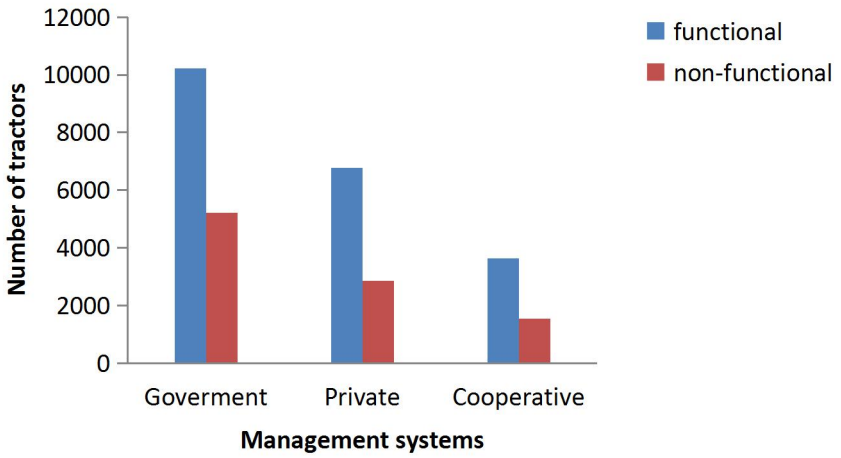

Figure 2: Charts of Functional & Non- Functional Tractors under Different Management Systems.

Figure 2 revealed that the three ownership and management systems have more number of functional tractors than non-functional tractors, with Government ownership management system taking the lead while cooperative ownership management system having the least number.

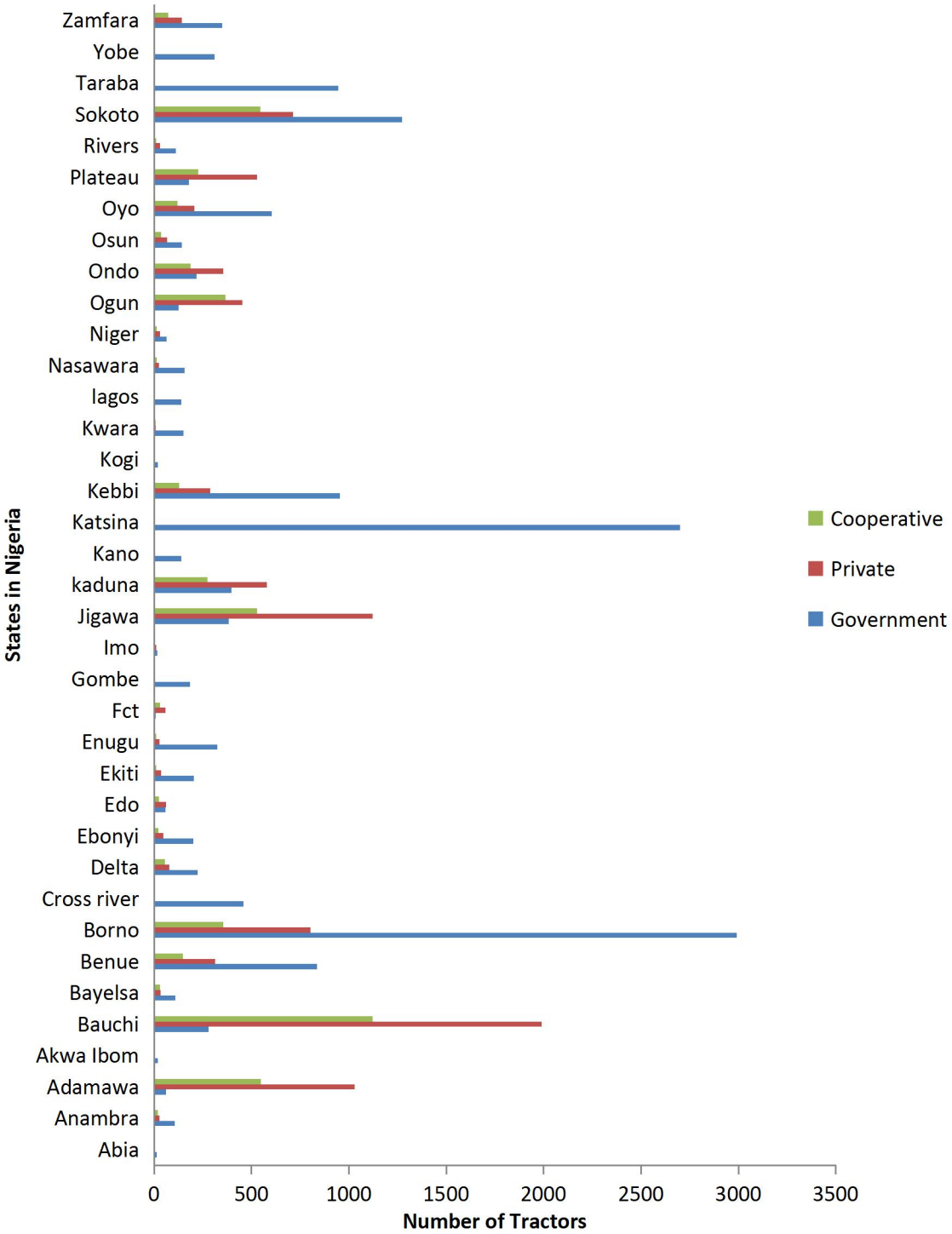

Figure 3: Chart on the number of Tractors in Nigeria.

From Figure 3, Borno and Katsina State has the highest number of tractors under government ownership management system, Bauchi and Jigawa state has the highest number of tractors for private ownership management system, under cooperative ownership management system Bauchi and Sokoto state takes the lead.Table 2, shows available tractors under different management systems. Private ownership and management system has the highest percentage of functional tractors while government ownership and management system has the least value.

Table 2: Tractors in Nigeria under Different Management Systems as at 2013.

Management Systems	Tractors available	%Functional	%Non-functional	% change
GOMS	15445	66.18	33.82	32.36
POMS	9628	70.35	29.65	40.7
COMS	5184	70.18	29.82	40.36

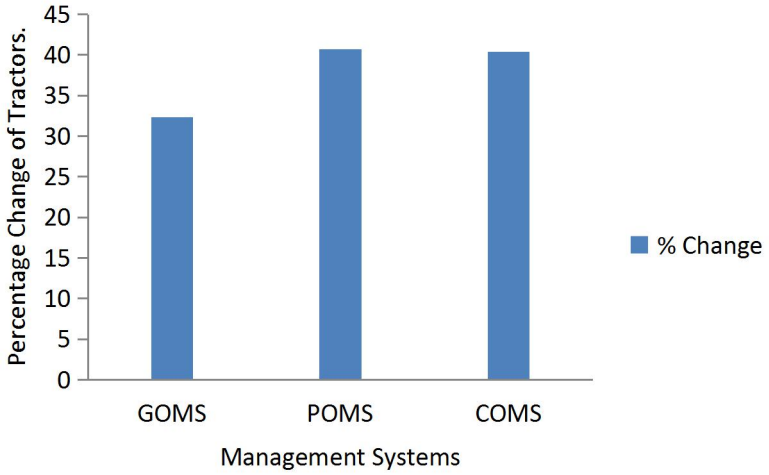

Figure 3: Bar Chart on the percentage change of Tractors under different Management Systems

The results from figure 3 showed that private ownership management system has the highest percentage change while government ownership and management system has the least percentage change.

4.0 CONCLUSION

From the results presented and discussed, the following conclusions could were drawn:

I) That the total numbers of 30257 tractors were recorded for the period under study.
II) That the total number of 15445, 9628 and 5184 were recorded for GOMS, POMS and COMS respectively for the period under study.
III) Generally, tractor ownership and management is mostly in the hands of GOMS having been associated with ownership and management of about 15445 tractors which is 51.05% of the entire tractor population in the country.

IV) There were 42.64%, 34.43% and 34.95% non-functional tractors for GOMS, POMS and COMS respectively showing that tractors in government ownership and management system experience more breakdowns and lacks prompt repair and maintenance.

REFERENCES

Ahaneku, I.E., Oyelade, O.A. and Faleye, T. (2011). Comparative field evaluation of three models of a tractor, proceedings of Nigeria branch of International Soil Tillage Research Organization. PP: 90 – 99.

Alabadan, B.A. and Yusuf, Y. (2013).Tractor hiring schemes in Nigeria: *A case study of federal capital territory (FCT),* African Journal of Agricultural Research. 8 (47): pp 5962-5966.

Dauda, S.M., Agidi, G and Shotunde, M.A. (2010).*Agricultural tractor ownership and off-season utilization in ogun state south western Nigeria*, African Journal of General Agriculture. 6 (3): pp 95-103.

Maysara, A.M., Hassan, I.M. and Omer, M.E.T. (2013).*Evaluation and improvement of machinery management system of the rahad project using Adecision-aid model*, Global Journal of Medicinal Plant Research. 1 (1): pp 148-156.

Olaoye, J.O. (2007). A*n evaluation of farm power and equipment ownership and management in Niger state, Nigeria*, Nigerian Journal of Technological Development. 5(2): pp 94-102.

Oluka, S.I. (2000). *Costs of tractor ownership under different management systems in Nigeria*, Nigerian Journal of Technology. 19 (1): pp 15-28.

Onwualu, A.P., Akubuo, C.O. and Ahaneku, I. E. (2006). Agricultural Mechanization Concept Fundamental of Engineering for Agriculture pp: 27 – 28.