

Distribution Management and Economic Enhancement of Agricultural Input Services: Oysadep X-Rayed

Idowu Abiola

Department of Management Science,
Ladoke Akintola University of Technology, Ogbomoso, Nigeria

Abstract: This study examined the distribution management pattern adopted by the OYSADEP that pay off and has helped in reducing the loopholes of diversion of agricultural inputs, as well as analyzing the effectiveness and impact of agricultural input distribution on farmers' productivity. Data analyses involved the use of both descriptive and F statistic to examine the significance of input distribution on the performance of agricultural sector and the effect of OYSADEP's extension service on agricultural development in Oyo State. Major findings revealed that the farmers' financial status improved as a result of the activities of the agency and this led to expansion in farm's output.

Key words: Fertilizer, agrochemical, training and visit, OYSADEP, OYSAISCO, pesticide, herbicide

INTRODUCTION

The need to give agricultural sector of the national economy a new lease of life after the oil boom era gave rise to the setting up of various agricultural development programmes. The problem of rural-urban drift and leaving of farming in the hands of aged farmers led to importation of food so as to make up for the short fall as a result of growth in demand for food supply (Clarke, 1957). While, the food import bills keep mounting and the foreign exchange, which hitherto was used to offset the bill keeps dwindling resulting in persistent balance of payment disequilibrium.

This unwholesome development led to cries from different quarters to the Nigerian government to redirect attention to the agricultural sector to enhance better performance so that the sector can once again play the expected role of food sufficiency in the economy of the country (Ogunfowora *et al.*, 1975; Ayanwale, 2000).

According to Oyatoye (1983), the growth of agricultural production depends to a large extent on the timely and cost effective supply of agricultural inputs, such as improved seeds, fertilizers, pesticides, agricultural machinery, tools, spare parts and fuel. He further stressed that, easy access to these inputs at the farm gates supported by adequate technical advisory services is crucial for agriculture and rural development.

For this to be actualized, poor conditions of feeder roads and other transport facilities, inadequate supply of agricultural production inputs; lack of well developed

agricultural extension and modern farming techniques, as well as inadequate supporting services for example, agricultural loan insurance are to be put in place. There is need for a definite agricultural policy guideline in order to enhance agricultural development of the nation. Olayide *et al.* (1973) corroborated this assertion by saying that for policy to be meaningful there has to be a consensus of beliefs, values, facts and weights attached to them at a particular point in time.

The most important ingredient of this policy guideline is to raise agricultural output, agricultural income, creating sufficient employment opportunity and therefore, alleviating rural poverty.

Agricultural development in Nigeria: In 1971 the Federal Government initiated the National Accelerated Food Production Programme (NAFPP). This approach has three components namely research, extension specialists and agro service components. Testing of research findings on farmer's fields was under-taken through mini-kit trials. The promising treatments are then passed to extension to convince farmers of the superiority of the new research findings over their traditional or existing methods. The final stage is the adoption which is supported by the provision of farm inputs through the agro-services centers.

The Nigeria Agricultural and Cooperative Bank (NACB) was established in 1973 as a step in recognizing the importance of credit facilities to farmers in the national development plan. In addition the government directed

that at least 6% of the total loan and advances by commercial banks should be for agriculture. This loan is to be guaranteed by the government under the Agricultural Credit Guarantee Scheme (ACGS), which was set up under Decree 20 of 1977.

At the end of 1978 a total of 341 agricultural projects located in 18 states had been guaranteed under the scheme and total agricultural loan amounted to N11.3 million was also made available to the ultimate farmers.

By 1975, Agricultural Development Project (ADP) was introduced. The ADP approach adopted Training and Visit (T and V) Extension system. According to Okunade *et al.* (2006), this is a management tool designed to ensure that technical messages relevant to farmer's needs are disseminated to farmers regularly and timely too. The salient features of T and V system include professionalism, single line of command, concentration of efforts, regular and continuous training. Others are time bound work, strong linkages with research and input supply agencies and use of contact farmers (Benor and Harrison, 1997).

The government in 1977 streamlined the agricultural research system by creating 18 agricultural institutions and each was given statutory responsibilities for specific commodity research. Hence, public sector agricultural research institutes are therefore an essential part of a strategy for rapid growth in agricultural outputs vis-à-vis industry based agricultural inputs.

During the 1989 meeting of National Council of Agriculture (NCA) held in Maiduguri, it was resolved that agricultural extension should be unified in the country. In 1990, the council urged each state to adopt the system urgently. This actually gave birth to Oyo State Agricultural Development Programme (OYSADEP) on 1st April 1989, with broad objective of supporting agricultural production and raising the standard of living of the rural communities. This laudable objective is to be achieved through the following functions:

- Provision of farm inputs such as seeds, fertilizers, agrochemical, machines and other services necessary for effective cultivation of crops.
- Provision and maintenance of necessary infrastructures such as roads, wells, boreholes, dams and irrigation facilities for agricultural development.
- Maintenance of a vigorous effective and result oriented agricultural extension services.
- Dissemination of improved farm practice and management methods to farmers for a rapid development of the state's agriculture.

In compliance with the guideline of the ADP which directed that commercial services department should be excised from its activities and be registered as Limited Liability Companies under the name Agricultural Inputs Supply Company. Oyo State Agricultural Input Supply Company (OYSAISCO) Limited was incorporated in 1993 but became functional in 1994.

OYSAISCO as a parastatal under direct supervision of the State Ministry of Agriculture, Natural Resources and Rural Development is divided into three distinct departments, that is, operations, administration and finance. The operation department carries out all marketing/input distribution activities of the companies. The department is made up of two units:

Tractor hiring unit: Handle hiring of tractors to farmers.

Commercial unit: Procurement, distribution and sales of agricultural inputs through the four zonal marketing officers who oversee the activities of commercial assistance of the 42 farm services centers in the state (Appendix 1).

Despite all the policy measures, it is strongly believed that not much has been achieved in Nigeria's agricultural sub-sector to match the level of country's population growth rate. It is this teeming problem that led to individual states forming their own agricultural development programme (Ladele, 2005).

- To determine the most effective distribution management that pays off and that can reduce the loophole of diversion of agricultural inputs.
- To analyze the effectiveness and impact of agricultural input distribution on farmers productivity.

Hypothesis of the study: In order to provide an empirical basis for the study it was hypothesized that:

Ho: There is no significance difference in income of farmers before and after the establishment of OYSADEP'S activities.

MATERIALS AND METHODS

The study was carried out in Oyo State of Nigeria between year 2000 and 2006 and the state was divided into five zones viz: Ibadan, Ibarapa, Oyo North, Ogbomoso and Oyo. Forty questionnaires each were

administered on randomly selected farmers within the zone. This brings the total to 200 structured questionnaire distributed. The questionnaire is divided into two sections containing questions on personal information of the respondents and on various issues such as, sources of agro-chemical, seeds, tractor, fertilizer and activities of extension agents. The population is made up of all the employees of OYSAISCO, OYSADEP and farmers in the state. However, out of the 200 questionnaire distributed 168 were retrieved back from the respondents, but only 151 representing 75.5% were found to contain sufficient information for analyses.

Data analysis: Data were collected on the following income and production parameters namely: improved seed/seedlings, fertilizer and agrochemical-pesticides herbicides, others are, tractor and extension services. Both descriptive and F-test statistic were used for data analyses.

RESULTS AND DISCUSSION

Agricultural practices in all the zones were characterized by a high number of illiterate farmers. Perhaps they think that farming does not require any specialized training on techniques, which may be a carry-over effect of what was passed down to them from their fore-fathers. Jibowo (1992) rerated that this greatly handicapped the adoption of modern technologies in farming in Nigeria as a whole. The dynamism of the sector might not be easily and effectively harnessed to profitable end due to lack of low level of education of farmers, as a result of low prestige accorded the farmers in our society.

In reference to the outcome of the field survey (Table 1-10), there was a clear departure from what obtained in the past when farmers used to depend majorly on previous years crops as major source of seed for sowing. It was observed that both private sector and public sector (ADP/OYSAISCO/FSC) accounting for 78.8% have been getting in touch with the farmers through normal distribution of scientifically proven seeds that are known for their high yield and disease resistance (Table 1).

The results in Table 2 revealed that the private sector took the lead in delivery of tractor hiring service to the farmers (57%), as against that of the public sector-Tractor Hiring Corporation/OYSAISCO (37%). The reasons for this is as a result of the locations of the tractors that are available for hiring to

Table 1: Sources of seed/seedlings

| Main source of seed/seedlings | Respondents | Percentage |
|-------------------------------|-------------|------------|
| Previous years crop | 32 | 21.2 |
| ADP/OYSAISCO/FSC | 39 | 25.8 |
| Private organizations | 80 | 53.0 |
| Total | 151 | 100.0 |

Table 2: Source of tractor hiring service to the farmers

| Main source | Respondents | Percentage |
|--------------------------------|-------------|------------|
| Self ownership | 9 | 6.0 |
| ADP/PHC/OYSAISCO | 56 | 37.0 |
| Private tractor hiring service | 86 | 57.0 |
| Total | 151 | 100.0 |

Table 3: Source of agro chemical source

| Source | Respondents | Percentage |
|-------------------------------|-------------|------------|
| OYSAISCO and OYSADEP | 56 | 37.0 |
| Private organization salesmen | 95 | 63.0 |
| Total | 151 | 100.0 |

Table 4: Distance of source of agro chemicals to farmers' farm

| Distance | Respondents | Percentage |
|-------------|-------------|------------|
| <5 Km | 25 | 16.56 |
| 5-10 Km | 35 | 23.18 |
| 11-15 Km | 51 | 33.77 |
| Above 15 Km | 40 | 26.49 |
| Total | 151 | 100.00 |

Table 5: Source of fertilizer to the farmers

| Distance | Respondents | Percentage |
|---------------------------|-------------|------------|
| Local Government/OYSAISCO | 111 | 73.5 |
| Others (Open market) | 40 | 26.5 |
| Total | 151 | 100.0 |

Table 6: Extension service delivery to the farmers

| Period | No of respondents | Percentage |
|-------------|-------------------|------------|
| Weekly | 18 | 11.9 |
| Fortnightly | 47 | 31.1 |
| Monthly | 60 | 39.7 |
| Not at all | 26 | 17.3 |
| Total | 151 | 100.0 |

the farmers, that is, Saki, Ogbomoso, Ibadan and Oyo towns from where farmers were expected to book for tractor services.

The private organizations' salesmen capitalized on low performance of OYSAISCO/OYSADEP distribution of agrochemicals to increase their distribution network among the farmers in the state (63%). Out of the 42 farm centers (Table 3) established as distribution outlets in state only four centers were allowed to distribute agrochemical. With this, majority of the farmers have to travel an average of 7.5 km in order to purchase agrochemicals (Table 4). Sequel to this, it is expected that very few farmer will be willing to take advantages of improved yield, reduced losses and labour saving attributed to the use of agrochemicals.

Also in Table 5, it was observed that the farmers in the state got their fertilizer supply through the Local Government and OYSAISCO (73.5%). However, there still

Table 7: Impact of extension service on agriculture

| Impact | Respondents | Percentage |
|--|-------------|------------|
| Increased production/improved farming techniques | 116 | 76.8 |
| No contribution | 35 | 23.2 |
| Total | 151 | 100.0 |

Table 8: Poverty alleviation as a result of OYSADEP activities

| Variables | Respondents | Percentage |
|--|-------------|------------|
| Full time farming | 122 | 80.79 |
| Combining farming with other professions | 21 | 14.00 |
| All of the above | 08 | 5.29 |
| Total | 151 | 100.00 |

Table 9: Fertilizer usage by farmers

| Variables | Respondents | Percentage |
|---------------------------------|-------------|------------|
| More awareness about fertilizer | 101 | 66.89 |
| High yield of farm produces | 50 | 33.11 |
| Total | 151 | 100.00 |

Table 10: Expansion in farm output

| Variables | Respondents | Percentage |
|--------------------------------------|-------------|------------|
| Usage of hoes and cutlass | 05 | 3.30 |
| OYSADEP extension workers activities | 40 | 26.50 |
| Using treated seedlings | 41 | 27.20 |
| Tractors for clearing | 65 | 43.00 |
| Total | 151 | 100.00 |

Table 11: ANOVA showing the effect of OYSADEP/OYSAISCO input services on income

| | Sum of Squares | d.f. | Mean Square | F | Sig. |
|----------------|----------------|------|--------------|---------|-------|
| Between groups | 6.62E+11 | 38 | 17424028296 | 459.713 | 0.000 |
| Within groups | 4.25E+09 | 112 | 37901941.610 | | |
| Total | 6.66E+11 | 150 | | | |

exist 26.5% that still flittered in through the open markets (black markets). This could not be unconnected with fertilizer diversions by the people concerned with haulage from fertilizer manufacturing plants to the state.

The Extension Development of OYSADEP handles agricultural extension activities in the state. The farmers received trainings on improved technology in agriculture mainly through the extension agents. These agents disseminate information to the farmers through field visits, conduct of farmer's field day, group meetings film shows, Radio/Television enlightenment programmes etc. From Table 6 it was observed that, 82.7% had enjoyed the state's extension services weekly, fortnightly or monthly. While only 17.3% of the respondents had not enjoyed directly their services. However, it was learnt from the officials of OYSADEP that the ideal contact with farmers for extension services should not be less than fortnight. So far from the finding only 43% of the respondents enjoyed ideal extension delivery services.

Nevertheless, given the 82.7% direct contact with extension service workers it was observed that 76.8% (Table 7) indicated that extension activities had brought

improvement to their agricultural production and improved farming techniques. This goes to say that extension service activities had contributed immensely to the development of agriculture in the state.

With the activities of the OYSADEP among the sampled farmers 80.79% had taken to full time farming while 14% combine farming with other profession. This can be seen as an improvement in their financial status (Table 8). The result of one way Anova of farmers' income after the activities ($F = 459.7; p < 0.01$) of the extension workers was highly significant (Table 11), implying that farmers received higher benefits from the input services of the OYSADEP/OYSAISCO. Giving this result, the null hypothesis which stated that there is no significance difference in income of farmers before and after the establishment of OYSADEP'S activities is rejected.

The farmers claimed that there is more awareness about the usefulness of fertilizer on their farms (66.89%) and this actually led to high yield of farm output as stated in Table 9. Also, in Table 10, using of treated seedlings, using of tractors for clearing of farm land and OYSADEP extension workers activities has been reported to be responsible for the expansion in farm output (96.7%).

CONCLUSION AND RECOMMENDATIONS

- Local government should collaborate with the state government by employing extension officers to complement the OYSADEP's efforts.
- Local government should give priority to construction and maintenance of feeder roads to promote accessibility of farmers to farm inputs as well as aid evacuation of farm produce to the market.
- Due to the non-performance of the Tractor Hiring Outfit of the state government as revealed by the research findings, it is recommended that tractor hiring operations should be handled by approved recognized farmer cooperative unions/societies or farmers associations in order to make it more profitable easily accessible to the farmers.
- OYSAISCO should encourage the farmers in the remote farm settlements to use improved seeds on their farms.
- Farmers should complement the efforts of the extension workers by forming cooperative societies so as to create more awareness among themselves as to the benefits derivable from the agency's activities.

Appendix 1: Haulage rates of fertilizer from different source of various locations

| Drop point/farm service centre | Estimated haulage rate from bora to locations | Estimated haulage from source to bora | | | Total haulage rate metric tonne from source to locations (P + R) | | |
|--------------------------------|---|---------------------------------------|-------|-------|--|-------|-------|
| | P | L | O | M | | | |
| Ido | 12600 | 10000 | 18000 | 15000 | 22600 | 30600 | 27600 |
| Akanran | 12600 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Idi ayunre | 12600 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Edun/lalupon | 12600 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Egbeda | 12600 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Moniya | 12600 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Ijaye orita | 12600 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Fiditi | 12600 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Ilori town | 14700 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Ilori farm service | 14700 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Awe road | 14700 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Oyo town | 14700 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Oyo zonal office | 14700 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Onirabara | 14700 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Elega | 14700 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Eruwa | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Ajaawa | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Ooko | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Oolo | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Odo-Oba | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Iseyin | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Mopo town | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Ipapo | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Okaka | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Ado-Awaye | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Ogbomoso | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Iluju | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Ayeye | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Ikoyi agbonle | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Iresaadu | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Idawure | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Gambari | 17000 | 10000 | 18000 | 15000 | 27000 | 35000 | 32000 |
| Ilori | 20000 | 10000 | 18000 | 15000 | 30000 | 38000 | 35000 |
| Okcho | 20000 | 10000 | 18000 | 15000 | 30000 | 38000 | 35000 |
| Out | 20000 | 10000 | 18000 | 15000 | 30000 | 38000 | 35000 |
| Iganna | 23500 | 10000 | 18000 | 15000 | 33500 | 41500 | 38500 |
| Iwere-Ile | 23500 | 10000 | 18000 | 15000 | 33500 | 41500 | 38500 |
| Tede | 23500 | 10000 | 18000 | 15000 | 33500 | 41500 | 38500 |
| Saki | 23500 | 10000 | 18000 | 15000 | 33500 | 41500 | 38500 |
| Kisi | 28000 | 10000 | 18000 | 15000 | 38000 | 46000 | 43000 |
| Igbeti | 28000 | 10000 | 18000 | 15000 | 38000 | 46000 | 43000 |
| Igboho | 28000 | 10000 | 18000 | 15000 | 38000 | 46000 | 43000 |

Source: OYSAISCO Annual Reports (1994-1999)

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