Using Nigeria Agricultural Cooperative and Rural Development Bank small holder direct loan scheme to increase agricultural production in rural Oyo State, Nigeria

[1]Oyeyinka, R. A. and K. K. [2]Bolarinwa

[1]Department of Agricultural Education,Federal College of Education (Special),

P. M. B. 1089, Oyo, Oyo State, Nigeria.

E-mail: drraoye@yahoo.com

[2]Department of Agricultural Administration,

College of Agricultural Management and Rural Development

University of Agriculture Abeokuta, Nigeria.

Correspondent author: E-mail: bolarinwakolade@yahoo.com

Abstract: Credit disbursement has been given priority by the Nigerian Agricultural Cooperative and Rural Development Bank. The study examined the use of NACRDB Small-holder Direct Loan Scheme to increase agricultural productivity in the rural areas of Oyo State, Nigeria. Systematic random sampling technique was used to select 130 beneficiaries and 130 non-beneficiaries for the study. The results of the study showed that beneficiaries have significantly higher mean yield index (1467), than non-beneficiaries (600). Also the income realized by the beneficiaries (N70,000 per annum) is higher than that of non-beneficiaries (N30,000 per annum). Generally, the beneficiary's access to credit has enabled them to make efficient used of improved farm inputs and labour than non-beneficiaries. It could be deduced that NACRDB small holder direct loan scheme is capable of transforming rural agriculture.

Keywords: Agricultural credit, loan scheme, agricultural production

INTRODUCTION

Agriculture has been and is still the bedrock on which every successful and stable economy the world over is built. In Nigeria today, agriculture accounts for one third of the Gross Domestic Product (GDP) and employs about two third of the labour force (Oyeyinka, 2002).

The Nigerian Agricultural policy places the small scale farmers in central focus. This is because, the nation's agriculture has always been dominated by the small-scale farmers who represent a substantial proportion of the total population and produce about 90 – 95 percent of the total agricultural output in the country. Prior to the advent of the oil boom era and that of money illusion in the economy, Nigeria was noted for her high production performance, in terms of food and cash crops as well as the supply of most industrial raw materials, which is the product of our small-scale farmers. For instance, the total agricultural output between 1986 and 1992 grew at the rate of 0.6 percent per year on the average. This is in contrast to the growth rate of 3.5 percent between 1981 and 1986 (World Bank, 1996). However, this important role agriculture has played in the Nigerian economy has declined tremendously. The decline has for a long time been blamed on the neglect of the rural sector, comprising mainly the small-scale farmers by successive administration in the country. As the role of agriculture in the economy decline, food importation increase, thus leading to the depression of the locally produced food, which has decreased farmers, expected income that could have been used to improve their farm productivity (Okunmadewa, 2003). This phenomenon led farmers to produce for their household use only, and as such they did not have marketable surpluses, when there are surpluses, it is usually too meagre to contribute enough income for household consumption and social obligations as well as re-investment in the farm. Since their income is small, most of these farmers resort to borrowing in order to fulfill their household economic demand and social obligations. Inadequate credit provision and poor marketing systems have reduced agricultural productivity drastically to the extent that food importation has been on the increase in recent years. Since agriculture in Nigeria and most other developing countries is where small-scale farmer's producers predominate, several constraints and barriers, which appear insurmountable, limit the overall farming activities. If this is anything to go by, the destiny of the developing economy heavily rest on the shoulders of the small-scale farmers (Bolarinwa and Oyeyinka 2005).

Granting credit to peasant farmers for the cost they incurred on land preparation, weeding and harvesting operations and labour to increase the use of agricultural inputs will enable them most importantly to be able to adopt modern farming techniques, so as to increase their agricultural productivity. Farmer's access to credit will enable them use tractors, which will lead to increased output of higher quality, thereby resulting in increased income and improved standard of living, which is imperative. Public policy in mobilizing financial resources for agricultural development has not been very effective for a number of reasons. First, there have been no consistent and effective policies to make private investment in agriculture more attractive due to persistently low productivity. While this has not induced the necessary industrial growth in the sector to create larger markets for farm output, it has also curtailed free flow of funds from the private sector.

As a result, the bulk of the investment in agriculture has been from state resources. The proportion of agricultural output in the GDP which was close to 60 percent during the 1960s stagnated below 30 percent for most of the 1970s, although, there has been a reversal of this negative trend since the National Economic Empowerment Development Strategy (NEEDS) was introduced in 2004. The achieved proportion is however, yet to meet its pre-1970 levels. This indicates sub optimal use of available finance in the sector. In reality real expenditure in agriculture always falls far short of budgetary allocation, which in itself at best often hovers around the recommended minimum of 25 percent of total budgetary allocation for a predominantly agriculture state such as Nigeria (Food and Agricultural Organization (FAO), 1975 cited in Oyeyinka, 2002)

For many years, the urge to foster agricultural growth and development, among other things, has often compelled government to intervene in the development of agriculture. Among the key areas of intervention include extension, input supply, marketing services and most importantly, credit disbursement. It is a general belief that the disbursement of credit is a precondition for technology change and agricultural productivity. As such, the government of most developing countries has often fostered the growth of institutional financial market mainly to provide credit to the farmers on concessionary terms. Also credit disbursement to farmers has been given priority by the Nigeria Agricultural Cooperative and Rural Development Bank (NACRDB), Cooperative Societies and Commercial Banks.

Both large and small-scale farmers in Nigeria have been enjoying the services of Nigeria Agricultural Cooperative and Rural Development Bank (NARDB), in terms of loan disbursement to help them increase their farm output, by enhancing productive efficiency. However, with the small-scale farmers, there does not seem to be any significant increase in their output. Many of them still produce at subsistence level with little or none left for the market. This situation defeats the ultimate goals of loan disbursement by agricultural credit institution, which is to ensure higher agricultural productivity.

The following research questions emanate from an analysis of the use of Nigeria Agricultural Cooperative and Rural Development Bank (NARDB) small holder direct loan scheme on farmers productivity in rural Oyo state, Nigeria.

i. Is the level of production of beneficiaries, different from that of non-beneficiaries?
ii. Do beneficiaries have higher income than non-beneficiaries?
iii. Is the level of inputs used by beneficiaries different from that of non-beneficiaries?
iv. Do beneficiaries have larger farm size than non-beneficiaries?

Objective of the Study

The general objective of this study is to determine the effect of the use of Nigeria Agricultural Cooperative and Rural Development Bank (NARDB) smallholder direct loan scheme on farmer's productivity in rural Oyo State, Nigeria.

The specific Objectives are to:

i. investigate the differences in the production level of beneficiaries and non-beneficiaries.
ii. determine the net income of beneficiaries and non-beneficiaries.
iii. compare the level of inputs used by beneficiaries and non-beneficiaries.
iv. ascertain the effect of the use of credit on beneficiaries and non-beneficiaries, in terms of the size of farm acquired.

Hypotheses of the Study

The following null hypotheses were tested;

Ho_1: There is no significant difference between the beneficiary's level of production and that of non-beneficiaries.

Ho_2: There is no significant difference between the farm income of beneficiaries and non-beneficiaries.

Ho_3: There is no significant difference between level of inputs used by the beneficiaries and non-beneficiaries.

Ho_4: There is no significant difference between the farm size of the beneficiaries and non-beneficiaries.

METHODOLOGY

Area of the Study- The study was carried out in Fasola Community in Oyo West Local Government area of Oyo State. It is bounded in the North by Atiba Local Government, to the South by

Iseyin Local Government, to the West by Afijio Local Government and to the East by Oyo East Local Government areas of Oyo State. Ecologically, Oyo West local government lies in the Guinea Savannah. The major occupation of the people is farming, but there are few of them who engage in petty trading and artisan works.

Stratified and systematic random sampling techniques were adopted for the selection of the respondents. The lists of beneficiaries of the loan scheme were collected from the NACRDB, Oyo Zonal Office while the lists of non-beneficiaries farmers were supplied by the ADP in the study area. A systematic random sampling technique was used to select 10% of beneficiaries from NACRDB register and 10% of non-beneficiaries from the ADP register this gives a total of130 beneficiaries and 130 non-beneficiaries that participated in study. Structured questionnaire and interview schedule were used for gathering the primary data. Data was analyzed using t-test.

Impact Measurement- The impact of NACRDB smallholder direct loan scheme was studied with the use of t-test in order to empirically establish if there is any difference between the performance of farmers who have access to credit and those who do not have access to the loan facility. This is justified on the basis that the differences between two means could be established with the use of t-test. Yield of maize which is a common crop for all farmers was used as a proxy variable for productivity. Income generated from their total agricultural enterprises was used as their income level. The ratio of adopted fertiliser compared with recommended was used as a proxy for adoption of improved practices, while the farm sizes were actually measured.

RESULTS AND DISCUSSIONS

Smallholder Direct Loan Scheme (SHDLS) and Crop Production Level: For this particular study, yield of maize was considered as a proxy for productivity at the farm level. Farmers in Fasola village are familiar with maize production as both sole crop and as a component in intercropping systems. Table 1 shows that, there is significant difference between the farm output (yield) of beneficiaries and non-beneficiaries in the study area. T-test is 33.04 and P = .000 which is less than 0.05. The beneficiaries have a higher mean yield index of 1467, than non-beneficiaries (600). Generally, the productivity of the beneficiaries in terms of maize production is higher than non-beneficiaries. The implication of this is that credit disbursement had enhanced the productivity of the farmers in Fasola community. This finding supports the outcome of the study of Williams (1985), Balogun and Otu (1992) and Oyeyinka (2002) which showed that positive and significant relationship exists between agricultural credit and productivity.

Smallholder Direct Loan Scheme (SHDLS) and Farmers Income: Income made by farmers is also recorded in Table 1, increase in yield is desirable for farmers especially when it leads to increased income. Many intervention and development programmes increased yield without a corresponding increase in farmer’s income. Access to credit facilities helped the farmers to translate their increase in yield to a higher significant increase in income. Table 1, indicates that, there is a significant difference between the total income of beneficiaries and non-beneficiaries. The t-test is 31.3% and P = .000 which is less than 0.05. The beneficiaries has a mean total income of about N70,000 per annum, while that of non-beneficiaries is about N30,000 per annum. The higher income accruing to the beneficiaries may be a consequence of the loan obtained from NACRDB smallholder direct loan scheme, which has enabled them to invest more on agriculture. This finding is supported by the outcome of the study of Zeller *et al* (1997) and Oyeyinka (2002) which found that improved access to credit enables households to invest in farm assets and therefore increase income levels of beneficiaries.

Smallholder Direct Loan Scheme (SHDLS) and Use of Farm Inputs: The use of inputs measured by taking a ratio of inputs used against inputs recommended. The input of reference in this case was fertiliser. Farmers in Fasola village had poor access to agro inputs, where they are available, the prices were unaffordable. These problems coupled with poor knowledge of how to use them were major disincentives to adoption of farm inputs. However, the influx of credit had influenced the farmers in the adoption of farm inputs. The analysis of the results indicates that the t-test is 2.7 and P = 0.04 which is less than 0.05. Hence, the null hypothesis was rejected and the alternative hypothesis was accepted, that there is significant difference between the beneficiaries and non-beneficiaries, in their adoption of farm inputs. The implication of this findings is that farmers access to credit, has enabled them to purchase improved inputs such as seeds, herbicides, insecticides and fertilisers which has enabled them to expand and improve on their farm productivity. This finding is in line with the position of Ewuola (1985) and Oyeyinka (2002) which stated that credit availability is capable of enabling the small scale farmers to adopt improved farming technologies.

Smallholder Direct Loan Scheme (SHDLS) and Farm Size: Data on farm size of beneficiaries and non-beneficiaries is also contained in Table 1, access to credit facilities significantly increased the farm holdings of beneficiaries, which is 17.16 hectare compared with that of non-beneficiaries which is 9.77 hectare. P = 0.000 which is less than 0.05. This was probably due to the fact that beneficiaries' farmers increase their incomes and started to have some surplus which was ploughed into expanding their farm holdings. Like the use of external inputs, expansion of farm holdings is also an indicator of increased commercial outlook for subsistence-oriented farmers.

Table 1. Means of Variables and T-test Values of yield of maize, incomes, external inputs used and farm sizes of the beneficiaries and non-beneficiaries.

Variables	**Mean Score of BF**	**Mean Score of NBF**	**Mean Differences**	**T-test Value**	**P**	**Decision**
Yield per unit area	1,467.69	600.0	867.69	33.04	.000	Significant
Income	62,536.16	28,776.36	33,759.8	31.37	.000	Significant
Use of external inputs	54,923	45,839	9,084	2.07	0.40	Significant
Farm size	17.16	9.77	7.39	12.77	.000	Significant

Source: Field Survey, 2006
S = Significant at 0.05
***NS** = Not significant at 0.05

Smallholder Direct Loan Scheme (SHDLS) and Source of Labour: The major factor input for crop production practices were land, capital and labour. Labour in any production practices enterprises is often limiting. This becomes vital as a result of diversification of products and reduced emphasis on tractor usage. This is due to limitation of capital for farm labour, like other inputs; this therefore aligns this resource with capital requirements. Table 2 indicates that farmer's access to credit enable 55.4 percent of the beneficiaries and 18.5 percent of non-beneficiaries to make use of tractors. Generally, the beneficiaries' accesses to credit enable them to make efficient use of hired labour more than the non-beneficiaries (60.0% > 41.5%). However, the non-beneficiaries are more efficient than the beneficiaries in the use of family labour (52.3% > 40.0%) and exchange labour (46.2% > 35.4%).

Table 2. Frequency Distribution of Respondents by Sources of Farm Labour

Sources of Farm Labour	**Beneficiary N = 130**		**Non-Beneficiary N = 130**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Hired labour	78	60.0	54	41.5
Family labour	52	40.0	68	52.3
Tractor	72	55.4	24	18.5
Animal traction	04	3.1	03	2.3
Self effort	82	63.1	72	55.4
Exchange labour	46	35.4	60	46.2

Source: Field Survey, 2006
* Multiple Responses

Smallholder Director Loan Scheme (SHDLS) and Reasons for Changes in Farm Output: Table 3 indicates that 60.0 percent of the beneficiaries opined that changes in their farm output was due to their access to credit facilities, while 13.8 percent of the non-beneficiaries shared similar view. The bane of the low productivity of the non-beneficiaries was due to their lack of access to credit facilities (53.8%), while (20.8%) of the beneficiaries shared the same opinion. Both the beneficiaries and non-beneficiaries who are of the opinion that other factors are the reason for changes in their farm output are (19.2%) and 32.3%) respectively.

Table 3. Frequency Distribution of Respondents by Reasons of changes in farm output n = 130

Response	**Beneficiary N = 130**		**Non-Beneficiary N = 130**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Access to credit	78	60.0	18	13.8
No access to credit	27	20.8	70	53.8
Other factors	25	19.2	42	32.2
Total	130	100.0	130	100.0

Source: Field Survey, 2006

CONCLUSION AND RECOMMENDATIONS

The study assesses the use of NACRDB small-holder direct loan scheme to increase agricultural productivity in Fasola village, a rural community in Oyo State. It was observed that farmers' access to credit facilities rapidly increase their output (productivity). The beneficiaries have a higher mean yield index of 1467kg, than non-beneficiaries of 600kg. Also, the beneficiaries' income, use of external inputs, and farm size are higher than that of non-beneficiaries. Generally beneficiaries' access to credit enable them to make efficient used of hired labour more than the non-beneficiaries (60.0% > 41.5%). Also (60.0%) of the beneficiaries opined that their changes in farm output was due to their access to credit facilities, while (13.8%) of the non-beneficiaries shared similar view. It could be deduced therefore that the NACRDB smallholder direct loan scheme (SHDLS) have the capacity to transform rural agriculture is delivered and sustainable. They therefore hold the key to the agricultural revolution that can solve the problem of African agriculture.

RECOMMENDATIONS

1. Loan should be disbursed to the beneficiaries with minimum delay, since respondents identified timely disbursement of loans as a way of effectively implementing the loan scheme.

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