African Journal of Biotechnology Vol. 7 (12), pp. 1911-1923, 17 June, 2008
Available online at http://www.academicjournals.org/AJB
ISSN 1684–5315 © 2008 Academic Journals

Full Length Research Paper

Farmers' perception of the performance of the National Special Programme for Food Security (NSPFS) in Enugu State, NIgeria

A. E. Agwu* and P. U. Ugwu

Department of Agricultural Extension, University of Nigeria, Nsukka, Enugu State, Nigeria.

Accepted 9 May, 2008

The study determined participating farmers' perception of the performance of the National Special Programme for Food Security (NSPFS) in Enugu State, Nigeria. A structured interview schedule was used to collect data from a sample of 147 farmers in the three SPFS sites in the state. Statistical analysis was accomplished by the use of frequency distributions, percentages and mean scores. Findings indicated that the majority of the farmers were males that fell mostly within the ages of 41-60 years. A greater percentage of the farmers were also married and did not go beyond secondary school. All the participating farmers were found to have farming as their primary occupation while a greater proportion of the respondents were artisans and traders besides being farmers. The majority of the farmers had an annual income of between 51,000 and 100,000 naira. Findings also showed that the majority of the farmers received between 11,000 and 40, 000 naira as interest free loans from the NSPFS programme for 2003/2004 and 2004/2005 farming seasons. However, the major problems militating against the timely repayment of loans were high costs of production and disease attack on crops, poor yields and devastation of crops by animals, lack of markets for products and late release of loans, among others. The farmers indicated that only fertilizers and maize seeds were inputs readily available in the programme. Most of the technologies disseminated by the extension staff to the farmers were adopted and already in use. In general, the SPFS programme was perceived to be effective in terms of crop intensification, number of animals acquired by the farmers, as well as increase in estimated annual income of the participating farmers. However, the major problems militating against the effective implementation of the programme in the state were late release and insufficiency of loans and inputs, high cost of production due to lack of machines, unavailability of markets for products, and inadequacy of improved facilities. It was recommended among other things that the loans and other inputs from the SPFS programme be released early enough to the farmers to effectively improve their productivity and enhance food security in the State.

Key words: Food security, perception, crop intensification, participating farmers, constraints.

INTRODUCTION

Nigeria, in spite of her great potentials, has been experiencing food shortages for her teaming population since the sixties. This has caused a continuous rise in the country's import bill on food items over the years as a result of decreasing domestic production. Nigeria currently faces serious food and agricultural problems, manifesting in the declining per capita food production, growing food importation and accelerating ecological degradation (Iheanacho and Ogumbameru, 1997); this is in spite of the fact that the country has the human and natural resources to produce in sufficient quantity the kind of crops needed.

In a bid to solve the problem of food production in the country, the Federal Government of Nigeria has initiated different programmes over the years. One of the programmes, the National Accelerated Food Production Programme (NAFPP) was launched by the Gowon administration in 1973. This was followed three years later by the Operation Feed the Nation (OFN) which was launched in 1976, by the then Obasanjo administration. With

*Corresponding author. E-mail: agwuekwe1@yahoo.com.

the advent of civilian administration in 1979, the civilian administrators felt that the old programmes would not meet their target of self-sufficiency in food production by 1985, and as a result, the country witnessed in 1980 the launching of yet another food production programme, the Green Revolution (GR).

All the above mentioned programmes and a number of other ones because of one reason or the other failed to meet the target of self-sufficiency in food production. As a result, the Federal Government of Nigeria, jointly with the Federal Ministry of Agriculture and Rural Development (FMARD), and the Food and Agriculture Organization of the United Nations (FAO/UN) recently implemented the National Special Programme for Food Security (NSPFS) in Nigeria (FMARD and FAO, 2001).

The Special Programme on Food Security is a programme initiated by Food and Agriculture Organization (FAO) to reduce food insecurity worldwide. As a special dimension of FAO's work, this programme was strengthened and its implementation accelerated after the 1996 World Summit (FAO, 1996). The Special Programme for Food Security (SPFS) assists countries, particularly but not exclusively Low-Income Food-Deficit Countries (LIFDC), to improve food security within poor households through National Food Security Programmes (NFSPs) and Regional Programmes for Food Security (RPFS). All programmes are developed by the governments that participate.

As of today, the programme is being executed in 102 FAO member-countries with a budget of over USD 700 million. Forty-two (42) of the participating countries are in Africa. However, the Nigeria's National Special Programme for Food Security (NSPFS) is the largest food security programme that has been executed by any country in collaboration with the FAO (Obasanjo, 2005). The programme started as a pilot phase in 1998 in Kano in the northern part of the country. The success of the pilot phase made the Nigerian Government in 2002 to establish a USD 45 million Unilateral Trust Fund jointly managed by the FAO and the Nigerian Government, to start simultaneous activities in 109 sites across all the 36 states of the Federation and the Federal Capital Territory. The NSPFS is also being complemented by a USD22 million South-South Cooperation Agreement with the Government of the Peoples Republic of China, under which some 520 Chinese experts and technicians are giving technical backstopping in water control, micro-projects in the areas of aquaculture, integrated rice-fish culture, poultry-fish culture, small ruminants production, improved low cost production technology and biogas technology. The agreement on the implementation of the NSPFS programme under UTF/NIR/047/NIR was on 11th May 2000. The broad objective of NSPFS is the attainment of food security in the broadest sense and the elimination of rural poverty in Nigeria (Ilevbaoje, 2002).

The NSPFS aims at improving the economic status and standard of living of the rural poor farmers, through the provision of loans and operational inputs to the farmers to boost their food crop and animal productivity. In the programme sites all over the country, the farmers engage in such activities as yam production, cassava production, fisheries, animal husbandry (animal disease and trans-boundary pest control), soil fertility management, crop processing and marketing among others, depending on the geographical location of the sites and the natural conditions that abound (Otti, 2005). The loans given to the NSPFS farmers are given to them without interest, and such inputs as fertilizers, herbicides, insecticides and improved seedlings are given to them at a very sub-sidized rate. The long-term objective of the programme is to contribute to the improvement of national food security by increasing food production on an economically and environmentally sustainable basis, strengthen the effectiveness of research and extension services in bringing technologies and new farming practices developed by research institutions and ensuring the relevance of research to the practical problems faced by small-scale farmers (Arokoyo, 2006) and to reduce year-to-year variability in agricultural production, and improve people's access to food. The programme is operational in the whole country and is executed by the Federal Ministry of Agriculture and Rural Development (FMARD) in collaboration with FAO and uses a bottom up participatory community development approach (SPFS, 2003). One programme site within each senatorial district is selected in accordance with pre-determined criteria (Guy, 2003).

According to FMARD and FAO (2001) in Ilevbaoje (2002), the major institutional strategies for implementing SPFS are as follows:

a) Each state is guided by the Federal Ministry of Agriculture and Rural Development through the office of a national coordinator who will operate through existing relevant institutions.
b) At the state level, the projects are implemented by the state Ministry of Agriculture and Natural Resources through existing implementing arms and agencies; and
c) At the state level, the local government councils and communities are closely involved in the implementation.

However, preliminary visits to the different SPFS sites in Enugu State in 2004 showed that some of the objectives of the programme were not adequately addressed. This study therefore sought to determine the perception of participating farmers' of the performance of the NSPFS programme in Enugu State. The specific objectives include to:

1) ascertain the volume of loans granted by SPFS to participating farmers, intervals of granting such loans and default cases;

2) assess the performance of the programme in terms of inputs availability to the participating farmers;
3) find out the level of intensification of production as a result of the SPFS programme;
4) determine the different SPFS programme technologies disseminated to farmers and the extent of adoption; and
5) identify problems militating against the effective implementation of the SPFS programme in the state.

METHODOLOGY

Study area

The study was carried out in Enugu State, Nigeria. The state, which is one of the south-eastern states in Nigeria, is located between latitude and longitude of 5^{o} 50^{1}N – 7^{0} 06^{1} N and 6^{0} 53^{1}E – 7 55 E, respectively (Ezike, 1998). It is bounded in the east by Ebonyi state, north by Benue and Kogi states, south and west by Abia and Anambra states, respectively (Amadi, 2005). The state occupies an area of 7,534 km^2 and has a population of 3,154,308 persons (National Bureau of Statistics, 2006). About 59% of its population lives in the rural areas with an average household size of five persons per household (National Bureau of Statistics, 2006).

Enugu State has seventeen (17) Local Government Areas and is divided into three agricultural zones in accordance with the three senatorial zones in the state (Adumike, 2005), namely: Enugu north zone comprising Nsukka, Igbo Etiti, Igbo Eze South, Igbo Eze North, Uzo Uwani and Udenu local government areas with the zonal office at Nsukka; Enugu West comprising Oji River, Udi, Ezeagu with zonal office at Oji River and Enugu east zone comprising Enugu North, Enugu South, Enugu East, Isi-uzo, Nkanu West and Nkanu East LGAs with zonal office at Enugu.

The three programme sites in Enugu State were selected from the three senatorial zones in the state, in accordance with predetermined criteria. They include Amagunze community in Nkanu east Local Government Area of Enugu east senatorial zone; Nenwe community in Aninri Local Government Area of Enugu west senatorial zone and Adani community in Uzo-Uwani Local Government Area of Enugu north senatorial zone.

Population and sample

Multistage random sampling procedure was employed in the selection of respondents for the study. In the programme sites, the farmers were divided into groups, according to the activities engaged in. There were such groups as the yam group, the cassava group, the maize group, the livestock group, the processing group and the rice group, among others. Each group was made up of between fifteen and thirty farmers. The first stage of selection involved the selection of groups from among these groups in the programme sites. For the purpose of this study, seven groups were selected through simple random sampling from the list of groups in each of the sites.

The second stage involved the selection of individual respondents. Seven respondents were selected from each of the seven groups, giving a total of 49 participating farmers from each programme site. Thus, the total sample size for the study was one hundred and forty seven (147) respondents.

Data collection and analysis

Data for the study were primarily collected from the respondents using interview schedules. To determine the availability of the inputs to the farmers, a four point Likert-type scale of readily available, available, rarely available, and not available with nominal values of 4, 3, 2 and 1 were assigned to the response categories, respectively. The values were added to get 10 which was divided by 4 to obtain 2.50, which was used as cut off mean point. The respondents' mean scores were obtained for the various inputs and any mean response higher or equal to 2.50 was regarded as available whereas, any mean response lower than 2.50 was regarded as unavailable. To ascertain the effects of SPFS on the farmers in terms of agricultural production, the respondents were asked to provide records of earlier production activities. These records were thereafter compared with current outputs generated by individual farmers under the SPFS project. Adoption of the technologies disseminated to the farmers was determined on the basis of whether the farmers were using or not using these technologies. The respondents were also asked to indicate those problems militating against the effective implementation of the SPFS programme in the State. The data collected were analyzed using frequency, percentage and mean scores. Specifically, objectives two and three were analyzed using mean scores while objectives one, three, four and five were analyzed using both frequencies and percentages.

RESULTS AND DISCUSSION

Socio -economic characteristics of the respondents

Table 1 shows that majority (73.5, 73.5 and 69.4%) of the respondents were males in Adani, Nenwe and Amagunze sites, respectively. This means that there were more male farmers in the SPFS programme in Enugu State. The table further reveals that the majority (53.1 and 42.9%) of the participating farmers in Adani and Amagunze sites were between 41 and 50 years, while a greater proportion of these farmers in Nenwe site were between 51 and 60 years. The result shows that most of the participating farmers of the SPFS programme in Enugu State were above 40 years of age. Level of formal education was moderately high among farmers in Adani site as only 2.0 percent of them had no formal education, however up to 16 and 14% in Amagunze and Nenwe sites, respectively were illiterate, with greater proportion (34.7 and 38.8%) of them having secondary school education. Education is generally considered an important variable that could enhance farmers' acceptance of new technologies. Analysis of occupational status of the respondents showed that they were all primarily engaged in farming. However, in Adani site, 31.1 and 53.3% of the respondents were artisans and traders, respectively on secondary basis, while in Amagunze and Nenwe 28.6% and 40.8%, of the respondents, respectively, were engaged in trading. Estimated annual income from farming activities of the respondents shows that greater proportion (38.8, 42.9 and 36.7%) of the respondents in Adani, Amagunze and Nenwe sites indicated that they realized between ₦ 50, 000.00 and ₦ 100,000.00 yearly. However, a significant proportion of those in Adani (22.5%)

Table 1. Percentage distribution of respondents by personal characteristics.

Personal characteristics	Adani		Amagunze		Nenwe	
	%	$\overline{X}$	%	$\overline{X}$	%	$\overline{X}$
Sex Male	73.5		69.4		73.5	
Female	26.5		30.6		26.5	
Age 21 - 30	2.0		nil		nil	
31 - 40	14.3		18.4		16.3	
41 - 50	53.1	27.9	42.9	48.2	28.6	52.2
51 - 60	22.4		32.7		42.9	
61 and above	8.2		6.1		12.2	
Marital status						
Single	4.1		4.1		12.2	
Married	95.9		83.7		75.5	
Divorced	nil		4.1		2.0	
Windowed	nil		8.2		10.2	
Level of education	2.0		16.3		14.3	
No education	24.5		32.7		30.6	
Primary education	44.9		34.7		38.8	
Secondary school	14.3		12.2		8.2	
OND	4.1		2.0		4.1	
HND	8.2		nil		4.1	
B.Sc	100		100		100	
Other sources of income	31.1		36.7		30.6	
Artisan	nil		6.1		4.1	
Trading	8.9		4.1		8.2	
Civil servant	4.4		nil		2.0	
Commercial motorcyclists	2.0		4.1		2.0	
Pensioners	nil		6.1		2.0	
Drivers	nil		nil		2.0	
Palm wine tappers	nil		nil		2.0	
Security service	18.4		38.8		32.7	
Hoteliers	38.8		42.9		36.7	
Annual income from farming						
1-50,000	10.2	111735.2	8.2	75000.5	16.3	103571.9
50,001-100,000	10.2		4.1		2.0	
100,001-150,000	22.5		6.1		12.2	
150,001-200,000						
200,001 and above						
Income from all investments						
1-50,000	2.1		14.6		20.4	
50,001-100,000	16.7		29.2		12.2	
100,001-150,000	18.8	296939.3	20.8	136225.0	24.5	266633.2
150,001-200,000	12.5		8.3		14.3	
200,001 and above	50.3		25.0		28.4	

and Nenwe (12.2%) sites, respectively claimed they generated above ₦ 200, 000.00 yearly from their farming operations. It can also be gleaned from Table 1 that apart from Adani site where about 50% of the farmers generated more than ₦200, 000.00 yearly from all their investments, majority (75.0 and 71.6%) of the respondents in Amagunze and Nenwe sites generate less than this from all their investment on yearly basis. The implication of this is that the farmers were largely subsistence farmers who need to be supported, especially through a programme such as the SPFS for sustainable growth in productivity.

Table 2. Percentage distribution of respondents by loan allocation.

Loan disbursement and allocation	Adani (%)	Amagunze (%)	Nenwe (%)
Loan frequency			
Once	100	100	100
Mode of loan disbursement			
Individually	nil	100	nil
In groups	100	nil	100
2003/2004 loan disbursement			
10,000 and below	16.3	45.8	nil
10,001 - 20,000	63.3	10.4	51.0
20,001 - 30,000	6.1	14.6	34.7
40,001 - 50,000	nil	14.6	nil
More than 100,000	14.3	14.3	14.3
2004/2005 loan disbursement			
10,000 and below	2.0	34.0	4.1
10,001 - 20,000	95.9	17.0	51.0
20,001 - 30,000	2.0	21.3	34.7
30,001 - 40,000	nil	17.0	nil
40,001 - 50,000	nil	10.6	nil
More than 100,000	nil	nil	10.2
Timely repayment of loans			
Yes	73.5	83.3	67.3
No	26.5	16.7	32.7
Problems militating against timely repayment of Loans			
High cost of production and disease attack on crops	22.4	12.2	24.5
Poor yield of crops	10.2	4.1	4.1
Poor sales of produce	16.3	14.3	28.6
Devastation of crops by animals	8.2	4.1	18.4
Slow rate of return from enterprise	2.0	2.0	2.0
High mortality rate of animals	4.1	2.0	4.1
Insufficiency of loans and inputs	6.1	4.1	6.1
Late release of loans and inputs	nil	6.1	20.4
Lack of irrigation facilities	2.0	nil	2.0
Land tenure system/availability of land	nil	nil	nil
Short time required for repaying loans	nil	2.0	nil

Loan allocation and disbursement

Loan frequency and mode of loan disbursement

Data in Table 2 show that all respondents interviewed indicated that they were given loans once in every cropping season. The entries also reveal that apart from Amagunze site where farmers were given loans on individual basis, respondents in Adani and Nenwe sites indicated that loans were given to them in groups. This is in line with the operational framework of the SPFS which emphasizes collective responsibility. Hence, the deviation in the method of disbursement of loans to farmers as seen in Amagunze site needs careful re-examination.

2003/2004 loan disbursement to respondents

Table 2 further shows that a greater proportion of respondents in Amagunze site were given ₦10, 000.00 or less in 2003/2004, while majority (63.3 and 51.0%) of farmers in Adani and Nenwe were given between ₦10, 001.00 and ₦20, 000.00, respectively. Also, 6.1%, 14.6% and 34.7% of the respondents were given between N20, 001.00 and N30, 000.00 in Adani, Amagunze and Nenwe sites, respectively. Also, 14.3% of the respondents in each site indicated that they received more than ₦100, 000.00 during the 2003/2004 farming season (these were mainly livestock farmers), while 14.6% of those in Amagunze site received between ₦40, 000.00 and

₦50, 000.00 during the 2003/2004 farming season. The implication is that the livestock farmers received higher amounts of loans from SPFS programme in the three sites in 2003/2004 farming season.

2004/2005 loan disbursement to respondents

In 2004/2005, only 2.0% of the respondents in Adani received below ₦10, 000.00, while majority (95.9%) received between ₦10, 001.00 and ₦20, 000.00. In Amagunze site, 34.0% of the respondents received below ₦30, 001.00. While slightly (51.0%) more than half of the respondents received between ₦10, 001.00 and ₦20, 000.00 in Adani site. The data showed that in 2004/2005, no farmer in Adani and Nenwe sites received more than ₦30, 000.00. This implies that the SPFS grants small loans to her participating farmers and this is likely to take time before lifting them above poverty line. The likely implication of this finding is that the SPFS programme may only provide subsistence living for the beneficiaries with no possibility of providing job for others in the communities.

Timely repayment of loans

All the respondents asserted that they were not charged any interest on loans. However, 75.5, 83.35 and 67.3% of the respondents in Adani, Amangunze and Nenwe sites, respectively reported that they paid back their loans as at when due, while 26.5, 15.7 and 32.7% of the respondents, respectively indicated that they defaulted in paying back the loans received. This finding implies that there were low default rates with SPFS loans as majority of the respondents in the three sites paid back their loans as at when due. However, the inability of some farmers to pay back their loans as at when due could be as a result of constraints faced by them.

Problems militating against timely repayment of loans

The farmers who defaulted in loan repayment attributed their defaults to a number of problems. These problems include poor yield, disease and pest attack on crops, devastation of crops by wild animals and birds (for rice crop), slow rate of returns on investment (especially on livestock enterprises) decay of crops (especially cassava and yam tubers) and poor sales of produce. Others include high cost of production (mainly due to high cost of hiring tractors), high mortality rate of animals, high cost of building materials for pens, unavailability of such inputs as herbicides and insecticides, lack of irrigation facilities and unavailability of land. The implication is that these problems will greatly affect the farmers' income and as a result, these farmers will not be able to make full repayment of the loans received as stipulated by the SPFS guidelines. This invariably would affect the success of the SPFS programme in the state.

Inputs allocation to farmers

Fertilizer allocation for the 2003/2004 and 2004/2005 farming seasons

In Adani site, 14.3% of the respondents received between 1 - 3 bags of 50 kg fertilizers in the 2003/2004 farming season, 38.8% received between 4 - 6 bags and 26.5% got between 7 - 10 bags of fertilizers (Table 3). In Amagunze site, 83.7% of the respondents received 1 - 3 bags of 50 kg fertilizers in 2003/2004. In Nenwe, 30.6% received 1 - 3 bags of fertilizers, 28.6% received 4 - 6 bags, while 26.5% received 7 - 10 bags. This implies that fertilizers were more available to Adani and Nenwe farmers than farmers in Amagunze site. The data also show that in the 2004/2005 farming season, 24.5% of the respondents received 1-3 bags of 50 kg fertilizers, 28.6% received 4-6 bags while 26.5% received 7-10 bags in Adani site. In Amagunze site, majority (59.2%) got 3-6 bags, 24.5% got 7-10 bags and 2.0% got 11-13 bags of fertilizers, while, in Nenwe site in the same 2004/2005 farming season, 40.8% of the respondents got 1-3 bags of fertilizers, 16.3% received 4-6 bags and 28.6% received 7-10 bags of fertilizers. This shows that there were substantial increases in the quantities of fertilizer received by the farmers across the sites.

Insecticide allocation for the 2003/2004 and 2004/2005 farming seasons

In the 2003/2004, 28.8, 12.2 and 14.3% of the respondents in Adani, Amagunze and Nenwe sites, respectively received 1 litre of insecticides, while 16.3% of the respondents in Nenwe received 2 litres of insecticides in the same year. Again, in the 2004/2005 farming season 2.0% of the respondents in Adani received 1 litre of insecticide, 12.2% received 2 litres and 12.2% received 4 litres. In Amagunze, only 12.2% of the respondents received 1 litre of insecticides in 2004/2005, others received none. In Nenwe, 14.3% of the respondents got 1 litre and 2 litres, respectively while 16.3% got 3 litres of insecticides. In other words, insecticides were more available to participating farmers in Nenwe site than in Adani and Amagunze sites.

Maize seeds allocation for the 2003/2004 and 2004/2005 cropping seasons

The Table also shows that 14.3% of the respondents in

Table 3. Percentage distribution of respondents by input allocation.

Inputs	Adani (%)	Amagunze (%)	Nenwe (%)
2003/2004 fertilizer allocation (50 kg)			
1 - 3 bags	14.3	83.7	30.6
4 - 6 bags	38.8	nil	28.6
7 - 10 bags	26.5	nil	26.5
2004/2005 fertilizer allocation (50 kg)			
1 - 3 bags	24.5	nil	40.8
4 - 6 bags	28.6	59.2	16.3
7 - 10 bags	26.5	24.5	28.6
11 - 13 bags	nil	2.0	nil
2003/2004 insecticides allocation			
1 litre	14.3	32.7	71.4
2 litres	61.2	67.3	14.3
2004/2005 insecticides allocation			
1 litre	2.0	12.2	14.3
2 litres	12.2	nil	14.3
3 litres	nil	nil	16.3
4 litres	12.2	nil	nil
2003/2004 maize seeds allocation (10 kg)			
1 - 3 bags	14.3	10.2	14.3
2004/2005 maize seeds allocation (10 kg)			
1 - 3 bags	14.3	10.2	14.3
2003/2004 rice seed allocation (10 kg)			
1 - 3 bags	143	14.3	14.3
2004/2005 rice seed allocation (10 kg)			
1 - 3 bags	14.3	14.3	14.3
2003/2004 feeds allocation (50 kg)			
20 - 30 bags	4.1	nil	4.1
31 - 40 bags	nil	nil	2.0
61 - 70 bags	10.2	10.2	6.1
71 - 80 bags	nil	nil	2.0
2004/2005 feeds allocation (40 kg)			
20 - 30 bags	nil	nil	6.1
61 - 70 bags	2.1	10.2	6.1
71 - 80 bags	6.0	nil	2.0
2003/2004 chicks allocation			
200 - 300	10.2	4.1	8.2
2004/2005 chicks allocation			
200 - 300	10.2	4.1	8.2

Adani and Nenwe received 1-3 bags of 10 kg maize seeds in the 2003/2004 farming season. Also, 10.2% of those in Amagunze received 1-3 bags of 10 kg maize seeds. The same percentages of respondents in the different sites received the same number of bags of maize seeds in 2004/2005. This means that equal number of the maize farmers in Adani, Amagunze and Nenwe received 1-3 bags of 10 kg maize seeds both in 2003/2004 and 2004/2005.

Rice seeds allocation for the 2003/2004 and 2004/2005 cropping season

The table shows that 14.3% of the respondents in all the sites received 1-3 bags of 10 kg rice seeds in both 2003/2004 and 2004/2005, respectively. In other words, there was no difference in the amount of rice seed allocation received by the farmers in the two farming season.

Table 4. Mean scores of respondents' perception of the availability of inputs in their sites.

Inputs	Adani $\overline{X}$	Amagunze $\overline{X}$	Nenwe $\overline{X}$
Fertilizer	2.59*	2.81*	2.98*
Herbicides	2.12	1.45	2.17
Insecticides	1.55	1.14	1.57
Cassava stems	1.27	1.20	1.00
Yam sett	1.14	1.00	1.00
Maize seed	3.13*	2.00	3.00*
Rice seed	2.43	2.14	2.29
Groundnut seed	nil	nil	2.00

*Available inputs.

Chicken feed allocation for the 2003/2004 and 2004/2005 farming seasons

Date in Table 3 further shows that in 2003/2004, 4.1% of the respondents in Adani were given between 20 and 30 bags of 50 kg chicken feeds. Also, 10.2% of the respondents in Adani and Amagunze were given 61-70 bags of 50 kg feeds. In Nenwe, 4.1% of the respondents got 20-30 bags, 2.0% got 31-40 bags, and 6.1% received 61-70 bags while 2.0% indicated that they received 71-80 bags of feeds. In 2004/2005, 2.1% of the respondents in Adani got 61-70 bags of feeds while 6.0% received 71-80 bags of feeds. In Amagunze site, 10.2% got 61-70 bags of feeds. While in Nenwe site, 6.1% got 20-30 bags and 61-70 bags respectively while 2.0% got 71-80 bags of chicken feeds.

Chicks allocation for 2003/2004 and 2004/2005 farming seasons

The table also shows that 10.2% of the respondents in Adani got 200-300 chicks in 2003/2004, 4.1% in Amagunze and 8.25% in Nenwe got the same number of chicks in 2003/2004. In 2004/2005, the percentage of respondents that got chicks in 2003/2004 got the same number of chicks they got the previous year in 2004/2005 signifying that there was no difference in the number of chicks allocated to these respondents in the two years.

Farmers' perception of the availability of the inputs under the SPFS in Enugu State

Data in Table 4 show that in Adani, only fertilizers ($\overline{X}$ 2.59) and maize seeds ($\overline{X}$ 3.13) were perceived by farmers to be available. The table also shows that only fertilizer ($\overline{X}$ 2.81) was perceived to be available by farmers in Amagunze site. In Nenwe, the farmers also perceived fertilizer ($\overline{X}$ 2.98) and maize seeds ($\overline{X}$ 3.00) as available inputs. In other words, crucial inputs such as herbicides, insecticides, cassava stems, yam sett, maize seeds, rice seeds and groundnut seeds were not perceived by the farmers as available in the different sites. Agwu (2006) had earlier pointed out that in many circumstances; the development of sustainable productivity requires increased use of purchased inputs such as seeds, fertilizers, pesticides and equipment. Hence, the perceived unavailability of these inputs by farmers has great implication in the realization of the objectives of the SPFS programme in the state.

Effects of SPFS on agricultural production crop production

Data in Table 5 show that the SPFS programme in Enugu State has a positive effect on the participating farmers in terms of intensification of crop production. The data show that the mean area of land devoted to the production of cassava crop increased from 1.35 to 1.95 ha, 1.38 to 2.28 ha and 1.05 to 1.26 ha in Adani, Amagunze and Nenwe sites respectively, under the SPFS programme. Also, the mean size of land under yam production increased from 0.97 to 1.36 ha, 1.28 to 1.66 ha and 1.26 to 1.86 ha in Adani, Amagunze and Nenwe sites, respectively. Again, the mean area of land under maize production increased from 1.13, 0.74 and 1.28 ha before the programme to 1.85, 1.53 and 1.63 ha in Adani, Amagunze and Nenwe sites, respectively. The area of land under rice production increased on the average from 1.12 to 1.86 ha, 0.99 to 2.07 ha and 1.02 to 1.55 ha in Adani, Amagunze and Nenwe sites, respectively. Furthermore, the mean area of land devoted to dry season vegetable production also increased from 0.45 to 1.88 ha and 1.27 to 1.63 ha in Adani and Nenwe sites, respectively, while the mean area of land devoted to groundnut production in Nenwe site increased from 0.88 to 1.74 ha under the SPFS programme. This finding implies that there was a sustainable increase on the average area of land cultivated by the farmers in the different SPFS sites in the State.

Table 5. Percentage distribution of respondents based on the land area devoted to the production of the various crops before and under the SPFS programme.

Crop	Hectares	Adani				Amagunze				Nenwe			
		Before (%)	$\overline{X}$	Current (%)	$\overline{X}$	Before (%)	$\overline{X}$	Current (%)	$\overline{X}$	Before (%)	$\overline{X}$	Current (%)	$\overline{X}$
Cassava	< 1	31.7		15.8		52.5		15.0		54.8		38.1	
	1-1.9	48.8		39.5		30.0		42.5		31.0		47.6	
	2-2.9	17.1	1.35	28.9	1.95	5.0	1.38	27.5	2.28	14.3	1.05	11.9	1.26
	3-3.9	2.4		13.2		5.0		2.5		nil		nil	
	4-4.9	nil		nil		5.0		nil		nil		2.4	
	5 ha & above	nil		2.6		2.5		12.5		nil		nil	
Yam	< 1	52.0		34.8		33.3		25.0		40.7		25.9	
	1-1.9	44.0		43.5		50.0		41.7		37.0		25.9	
	2-2.9	4.0	0.97	17.4	1.36	16.7	1.28	20.8	1.66	22.2	1.26	33.3	1.86
	3-3.9	nil		4.3		nil		12.5		nil		11.1	
	4-4.9	nil		nil		nil		nil		nil		3.7	
Rice	< 1	50.0		29.5		61.5		15.4		61.9		47.6	
	1-1.9	38.9		35.3		23.1		30.8		23.8		28.6	
	2-2.9	5.6	1.12	5.9	1.86	15.4	0.99	38.5	2.07	9.5	1.02	9.5	1.56
	3-3.9	5.6		23.5		nil		7.7		4.8		4.8	
	4-4.9	nil		5.9		nil		7.7		nil		nil	
	5 ha & above	nil		nil		nil		nil		nil		9.5	
Maize	< 1	31.6		25.0		70.8		37.5		51.7		42.9	
	1-1.9	68.4		30.0		29.2		29.2		24.1		32.1	
	2-2.9	nil	1.13	25.0	1.85	nil	0.74	25.0	1.53	17.2	1.28	3.6	1.63
	3-3.9	nil		20.0		nil		4.2		3.4		14.3	
	4-4.9	nil		nil		nil		4.2		3.4		3.6	
	5 ha & above	nil		nil		nil		nil		nil		3.6	
Dry season vegetable	< 1	100.0		nil		nil		nil		45.5		45.5	
	1-1.9	nil		57.1		nil		nil		27.3		9.1	
	2-2.9	nil	0.45	42.9	1.88	nil		nil		27.3	1.27	27.3	1.63
	3-3.9	nil		nil		nil		nil		nil		18.2	
Groundnut	<1	nil		nil		nil		nil		71.4		14.3	
	1-1.9	nil		nil		nil		nil		14.3	0.88	57.1	1.74
	2-2.9	nil		nil		nil		nil		14.3		14.3	
	3-3.9	nil		nil		nil		nil		nil		14.3	

Animal production

The entries in Table 6 shows that the mean number of poultry birds possessed by farmers increased from an average of approximately 91 birds to 145, 25 to 151 birds and 51 to 201 birds in Adani, Amagunze and Nenwe sites, respectively under the SPFS programme. The data also show that the mean number of sheep kept by farmers in Adani and Nenwe increased from an average of about 6 sheep to 10 sheep and 4 sheep to 8 sheep respectively, with that of Amagunze farmers remaining the same as it was before the programme (6 sheep per farmer). The table further reveals that the mean number of goats kept by the farmers in Adani, Amagunze and Nenwe sites increased from about 9 to 17 goats, 8 to 22 goats and 7 to 11 goats on the average respectively. This also shows that the SPFS programme has positive effect on the participating farmers in terms of the number of animals kept by the farmers.

Farmers estimated annual income from farming activities

Entries in Table 7 show that the mean income of the farmers from their farming activities increased from ₦66,413.43 to ₦137,739.48, ₦40,217.89 to ₦79,130.93 and ₦51,531.11 to ₦94,898.45 in Adani, Amagunze and Nenwe sites, respectively. This means that the SPFS programme had a positive effect on the participating

Table 6. Percentage distribution of respondents based on animals possessed before and under the SPFS programme.

Animal		Adani				Amagunze				Nenwe			
		Before (%)	$\bar{X}$	Current (%)	$\bar{X}$	Before (%)	$\bar{X}$	Current (%)	$\bar{X}$	Before (%)	$\bar{X}$	Current (%)	$\bar{X}$
Poultry birds	1-100	40.0		nil		50.0		nil		50.0		nil	
	101-200	nil	91	nil	145	nil	25	100	151	nil	51	50.0	201
	201-300	20.0		60.0		nil		nil		nil		nil	
	301 & above	nil		40.0		nil		nil		nil		nil	
Sheep	1-10	40.0		40.0		50.0		50.0		50.0		40.0	
	11-20	nil	6	40.0	10	nil	6	nil	6	nil	4	20.0	8
Goat	1-10	40.0		20.0		nil		nil		33.5		28.6	
	11-20	20.0	9	nil	17	nil	8	nil	20	14.3	7	28.6	11
	21 & above	nil		30.0		nil		nil		nil		14.3	

Table 7. Percentage distribution of respondents by estimated annual income from farming operation before and under the SPFS programme.

Annual Income from farming	Adani				Amagunze				Nenwe			
	Before (%)	$\bar{X}$	Current (%)	$\bar{X}$	Before (%)	$\bar{X}$	Current (%)	$\bar{X}$	Before (%)	$\bar{X}$	Current (%)	$\bar{X}$
1-50000	54.3		17.4		76.1		32.6		73.5		31.3	
50001-100000	21.7		39.1		17.4		45.7		16.3		35.4	
100001-150000	13.0	62245.4	8.7	128571.9	6.5	37755.6	10.9	75510.7	2.0	51531.1	18.8	104082.1
150001-200000	8.7		8.7		nil		4.3		4.1		2.1	
200001-250000	nil		13.0		nil		2.2		nil		4.2	
250001-300000	2.2		8.7		nil		4.3		4.1		2.1	
300000 & above	nil		4.4		nil		nil		nil		6.3	

farmers in terms of their annual income from farming activities.

Technology dissemination to farmers and the extent of adoption

Table 8 shows all the technologies disseminated to the farmers in the SPFS programme sites and the extent of adoption. The data show that all the rice farmers in Adani and Nenwe were using line planting in rice cultivation, while 95% of the farmers at Amagunze site were doing so. The majority (87.0, 80.4 and 79.6%) of the respondents in the Adani, Amagunze and Nenwe sites were using improved disease and pest control measures in their crop farms. The table also reveals that the majority (87.0% each) of the respondents in the respective sites had adopted the technologies of spacing of crops. The high adoption levels for these technologies could be associated with farmers awareness that these technologies/practices increase yields and minimize loses. Again, the table shows that (65.2, 37.0 and 78.3%) and (54.3, 76.6 and 42.9% of) the respondents in Adani, Amagunze and Nenwe had adopted cassava maize single row planting and yam cassava maize single row planting, respectively.

With respect to the livestock technologies disseminated, the majority (90 and 68.2%) of the livestock farmers in Adani, and Nenwe sites had adopted improved disease and pest control measures in poultry production, while only 34.3% of the farmers in Amagunze site were using this technology. Also, 70.9, 68.7 and 56.1% of the respondents were using improved disease and pest control in sheep and goat production as well as tying of feed for sheep and goat and the use of raised platform for sheep and goat production in Adani, Amagunze and Nenwe sites, respectively. The table further reveals that 68.7, 68.7 and 56.1% of the livestock farmers in Adani, Amagunze and Nenwe sites, were using improved management practices in sheep and goat production.

Problems militating against the effective implementation of the SPFS programme in Enugu State

The farmers perceived a number of factors as problems militating against the effective implementation of the SPFS programme in Enugu State. Data in Table 9 show

Table 8. Percentage distribution of respondents by the extent of adoption of technologies disseminated in the SPFS sites.

Technology	Adani (%)		Amagunze (%)		Nenwe (%)	
	Yes	No	Yes	No	Yes	No
Line planting in rice	100.0	nil	95.0	5.0	100.0	nil
Improved disease and pest control measures in crops	87.0	13.0	80.4	29.6	79.6	20.4
Improved disease and pest control measures in poultry	90.0	10.0	34.3	75.7	68.2	31.8
Improved disease and pest in control measures in sheep and goat	70.9	29.1	68.7	31.3	56.1	43.9
Spacing of crops	87.0	13.0	87.0	13.0	87.0	13.0
Tying of feed for sheep and goats	70.9	29.1	68.7	31.3	56.1	43.9
Use of raised platform for sheep and goats production	70.9	29.1	68.7	31.3	56.1	43.9
Vaccination of poultry	90.0	10.0	34.3	75.7	68.2	31.8
Vaccination of sheep and goat	68.7	31.3	68.7	31.3	56.1	43.9
Improved management practices in sheep and goat production	68.7	31.3	68.7	31.3	56.1	43.9
Brooding of local chicks	90.0	10.0	34.3	75.7	68.2	31.8
Cassava maize single row planting	65.2	34.8	37.0	63.0	78.3	21.7
Yam cassava maize single row planting	54.3	45.7	76.6	23.4	42.9	57.1

Table 9. Farmers perceived problems militating against the effective implementation of the SPFS programme in Enugu State.

S/N	Perceived Problems	Adani (%)	Amagunze (%)	Nenwe (%)
1.	Late release of loans and inputs	98.0	89.9	95.9
2.	Insufficiency of loans and inputs	93.9	87.8	89.8
3.	Land tenure system/unavailability of land	4.1	14.3	2.0
4.	Inadequacy of improved facilities	32.7	10.2	6.1
5.	High cost of production	69.4	77.6	100.0
6.	Poor sales of produce	18.4	16.3	16.3
7.	Lack of irrigation facilities	26.5	8.2	30.6
8.	Inaccessible roads	4.1	2.0	Nil
9.	Poor allowance to extension staff	6.1	Nil	Nil
10.	High mortality rate of birds	4.1	14.3	12.2
11.	Lack of electricity	2.0	Nil	Nil
12.	Poor yield of crops	Nil	4.1	8.2
13.	Devastation of crops by animals	Nil	2.0	Nil
14.	Short time required for repaying loans	Nil	2.0	Nil
15.	Disease and insect attack on the crops	Nil	Nil	2.0

that majority (98.0, 89.8 and 95.9%) of the respondents in Adani, Amagunze and Nenwe cited late release of loans and inputs as serious problem militating against the programme, while 93.9, 87.8 and 89.8% of the respondents in Adani, Amagunze and Nenwe respectively indicated insufficiency of loans and inputs as a problem. In agricultural projects, it is not only the availability of funds that matters, but also, the time when the releases are made. Central Bank of Nigeria (1999) reported that untimely release of funds were among the major constraints hampering agricultural production in Nigeria. According to Agbamu (2005) timely release of funds are necessary for the purchase of the required farming materials and payment for labour, among other things. In other words, for sustainable increase in farmers' production under the SPFS programme, timely and sufficient availability of loans are necessary.

The entries in the table further indicate that 32.7, 69.4 and 10.2% and 77.6, 6.1 and 100% of the respondents in Adani, Amagunze and Nenwe respectively cited inadequacy of improved facilities and high cost of production respectively as the problems militating against the programme. These facilities include hatchery facilities, brooders, etc, while high cost of production was attributed to high costs incurred in hiring tractors and building animal pens. Also a small proportion (4.1, 14.3 and 2.0%) of the respondents in Adani, Amagunze and Nenwe sites, respectively, asserted that the system of land ownership in the state was a major problem militating against the effective implementation of the programme, while only

18.4, 16.3 and 16.3% of the respondents in Adani, Amagunze and Nenwe respectively, asserted that poor sales was a problem. The data in the table also indicate that 26.5, 8.2 and 30.6% of the respondents in Adani, Amagunze and Nenwe cited lack of irrigation facilities as a problem. This lack of irrigation facilities according to the respondents made "off season" production of crops impossible. However, only 4.1 and 2.0% of the respondents in Adani and Amagunze cited inaccessible roads (for the extension staff) as a problem, while 4.1 and 8.2% of the respondents in the Amagunze and Nenwe, perceived poor yields of crops as a problem. With regard to livestock production, the data reveal that 4.1, 14.3 and 12.2% of the respondents in the three sites perceived high mortality rate (of poultry birds) as a problem, while 2.0% of the respondents in Adani and Amagunze respectively, indicated lack of electricity and devastation of crops by animals as problems. Finally, 2.0% of the respondents in Nenwe and Amagunze sites reported that disease and insect attack on crops and short time required for loan repayment were problems militating against the effective implementation of the SPFS programme in the state. The implication is that these problems will greatly affect farmers' income and as a result their general output/production levels as well as success of the SPFS in the State.

Conclusion and recommendation

The study showed that a greater percentage of the participating farmers were males who had basic formal education and fell mostly within the age range of 41and 60 years. The major occupation of all the respondents was farming, though the majority of them were artisans and traders on secondary basis, with an estimated annual income of between ₦50, 001.00 and ₦100, 000.00 from farming. The study also revealed that the majority of the farmers in all the sites received ₦ 20,000 or less in both the 2003/2004 and 2004/2005 farming seasons.

The study further revealed that only fertilizer and maize seeds were perceived by the farmers to be available. However, the SPFS programme in Enugu State had a positive effect on the participating farmers in terms of crop intensification and number of animals acquired. The programme also had a positive effect in terms of their estimated annual income. However, the major factors militating against the timely repayment of loans by the farmers include high cost of production due mainly to lack of machines, poor yields and insufficiency of the supplied inputs to enable farmers produce on a large scale, disease and pest attack on crops and slow rate of returns on investment (especially on livestock enterprises). On the other hand, the major problems militating against the effective implementation of the SPFS programme in Enugu State include late release of loans and inputs, insufficiency of loans and inputs, high cost of production due mainly to lack of machines, poor sales, lack of improved facilities, and lack of irrigation facilities to enhance "off season" production of crops.

Based in the findings of this study, the following recommendations were made.

1. The loans and other inputs from the SPFS programme to the farmers should be released early enough, so that the farmers will actually use them for production. It is in the opinion of the farmers that the Federal Government uses the farming "time- table" of the northern part of the country to release funds meant for the programme, when in the actual sense, farmers in the southern part of the country and, precisely the farmers in Enugu State cultivate their crops long before their northern counterparts.
2. Other facilities as irrigation and hatchery facilities should also be made available to the farmers. The irrigation facilities would help the rice farmers, vegetable farmers, and maize farmers produce their crops all the year round.
3. Finally, since the participating farmers of the SPFS programme in Enugu State have perceived the programme as useful and effective to an extent, the programme should be extended to other places other than the present sites in Enugu State and beyond. This will make other resource-poor rural farmers benefit from the programme, and this will make the nation achieve the ultimate aim of rural poverty alleviation and national food security.

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