Farmers' assessment of Donor support for Rain-fed Lowland Rice Production in Ashanti and Northern Regions in Ghana

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Abstract: This paper examined farmers' assessment of donor support for rain-fed Lowland Rice Production in Ashanti and Northern Regions in Ghana. A simple random sampling due to proportion was used to select 210 participating farmers from the two regions. Data for the study were collected through a structured questionnaire designed based on the objectives of the study and from literature. The sections of the questionnaire include the challenges facing the project, cooperation and adoption levels, its impact on the outputs and the funding requirement for the project. The data collected was subjected to descriptive analysis with the use of bar charts and frequency distribution tables. The results show that prominent challenges indicated by the respondents about the projects are funding, weather dependent, land tenure system, credit implementation challenge, farmer group, work system cohesion and project staff strength. Adoption rate for project interventions was high for rice cultivation activities including land development activities though farmers complained of itsue to its drudgery. Farmers yield increased to an average of 4.9ton/ha and 2.9ton/ha level for Ashanti and Northern respectively despite the challenges. The study recommends increase in project fund and also, farmer group strengthening, improving on the activities of farming support systems to bring processors and marketers and further collaboration with other relevant stakeholders to complete the rice value chain.

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Introduction

According to the European Union, investments in the smallholder sector yield the best returns in terms of poverty reduction and growth (OECD, 2010). Agriculture is still the mainstay of Ghana's economy. About 35.4 % of the GDP is accounted for by agriculture and livestock, forestry, and fishing in 2010 with 65% of the population dependent on it (AfDB, 2006). This indicates the strategic importance of the sector and its overall contribution to the economy. The World Bank (2011) reported that, poverty reduction impact of growth in agriculture is three times greater than comparable growth in any other sector of economies, and Ghana as an agricultural dominated country has the propensity to reducing its poverty. About 80% of agricultural production is from smallholder family-operated farms, mainly below one hectare (Banson, 2008). Larger holdings produce mainly cash crops, such as oil palm, rubber, and pineapples. Only about one third of land suitable for agriculture is currently cultivated (AfDB, 2006). Thus, the agriculture sector (and especially the sub-sectors that produce food is critical in provision of livelihoods and incomes, and developments within this sector are most important in terms of attaining the Millennium Development Goals such as elimination of poverty (Banson 2008).

Donor funding has been an integral part of funding sources for not only the projects in the agricultural sector but for all other sectors of the country's economy. The country's GDP has largely been supported by donors and other development partners to implement its developmental projects. This support has gradually been on the decline not only to the national budget but also to agricultural projects. This low funding poses some challenges and difficulties to the overall productivity of agriculture in the country and food security drive of governments (OECD, 2008). Donor agencies due to their own budgetary constraints and deficits now disburses low amounts of funding to the country's agricultural projects expecting the local governments to take part through their counterpart budget system as a contribution towards the implementation of the projects. But this is often difficult to fulfill by government due to their expenditure levels and low revenue levels creating serious challenges for the full implementation of the intervention projects.

The IFAD Strategic Framework (2007) defines sustainability as the "institution supported through

projects and the benefits realized are maintained and continue after the end of the project." Ensuring that the institutions supported through projects and the benefits realized are maintained and continue after the end of the project. Projects should be sustainable from the view point of field works and knowledge adoption (technical), institutional, political, economic cash flow sustainability and above all environmentally and communally sustainable. Alternatively, government counterparts defined sustainability as sustained funding and government takeover of the services provided by donor supported projects, as well as a continued flow of capital and credit into rural areas. There are several dimensions to project sustainability, depending on the nature of a sector or a project each of these dimensions has the capacity to influence project sustainability in one or way or another. These dimensions include: continued operation and maintenance of project facilities, continued flow of net benefits, continued community participation, equitable sharing and distribution of project benefits, institutional stability and dimension, maintenance of environmental stability. According to IFAD (2009), considerations of all these dimensions are a key to sustainability of projects. Experience suggests that weakening of any one of these has the potential to jeopardize the sustainability of the entire project, in the long run especially for that of agriculture. The multi-dimensional attributes of sustainability - as stated above, imply that to enhance project sustainability, a rigorous sustainability analysis is needed at the time of formulation of a project or a programme. It is expected that such an analysis which is to be followed up by development of a sustainability strategy will assist in incorporating the elements of sustainability, right at the design stage of a project.

The Project for Sustainable Development of Rain-fed Lowland Rice Production is a joint donor and counterpart funded agricultural project by the Japanese government through Japan International Development Agency (JICA) and the Ghana Government through the Ministry of Food and Agriculture (MOFA) with total estimated funding amount of $1.6 million for a five year period to increase the production of rice and farmers income in selected communities of the two regions of the country. With this funding and the wider scope of the project area seeking to cover over 2100 beneficiaries including farmers, rice processors and marketers in the Ashanti and Northern regions. The overall goal of the project is improvement in productivity and profitability of rice farming in rain-fed lowlands in project areas are increased. The project purpose is the dissemination of the model for sustainable rain-fed lowland rice development is accelerated within the project areas. The expected project outputs are technical package of improved rain-fed lowland rice production is developed, methodology to improve farming support system for sustainable rain-fed lowland rice production is verified and dissemination procedure of a model for sustainable rain-fed low land rice development, consisting of the technical package and farming support system is established. In achieving these outputs, the following thematic areas on land development, rice cultivation, extension; postharvest and marketing will be addressed. The objectives of this paper was to examine how funding has affected the operations of the project, identify and describe the challenges faced by the project, analyze the positive impact of the project on farmers/beneficiaries in the project area, examine the project funding and its contribution to the cooperation and adoption levels of the beneficiaries of the project and examine the funding requirements of the project.

Materials and Method

The study was conducted in Ashanti and Northern Regions of Ghana. As depicted in Figure 1, the site in Ashanti region falls within the semi-deciduous agro-ecological zone of Ghana and is located by latitude 6°52'N and longitude 1°51'W. The area is on an altitude of approximately 280 m a.s.l. Mean seasonal annual rainfall in this area is about 1300 mm, with a bimodal distribution pattern.

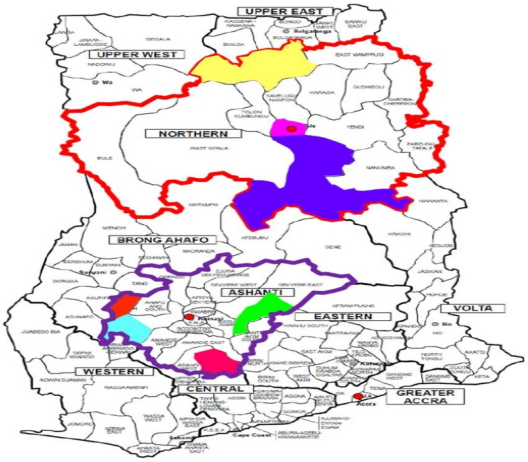

Figure 1. Project Areas marked with Colors

The population of the study is the 420 rice farmers participating in the project for the first phase. Simple random sampling technique was used to select 210 farmers for the study. The sample size was

proportional to size in Ashanti and Northern Regions as shown in Table 1. Sarantakos, (1997) argues that a bigger sample size gives better accuracy than smaller sample sizes.

Table 1: Study Population and Sample Size

PCU Region		Project Farmers Population (first phase)	Sample Size Selected
Ashanti		240	120
Northern		180	90
Total		420	210

Data for the study were collected through a structured questionnaire designed based on the objectives of the study and from literature. The sections of the questionnaire include the challenges facing the projects, cooperation and adoption levels, its impact on the outputs and the funding requirement for the project. The data collected was subjected to descriptive analysis with the use of bar charts and frequency distribution tables.

Results

The results on challenges facing the project was narrative while figures 2 to 5 present the results on adoption level of land development techniques, adoption level for rice cultivation techniques, adoption level of extension concepts and impact of the project on farmers. Table 1 gives the results on yield.

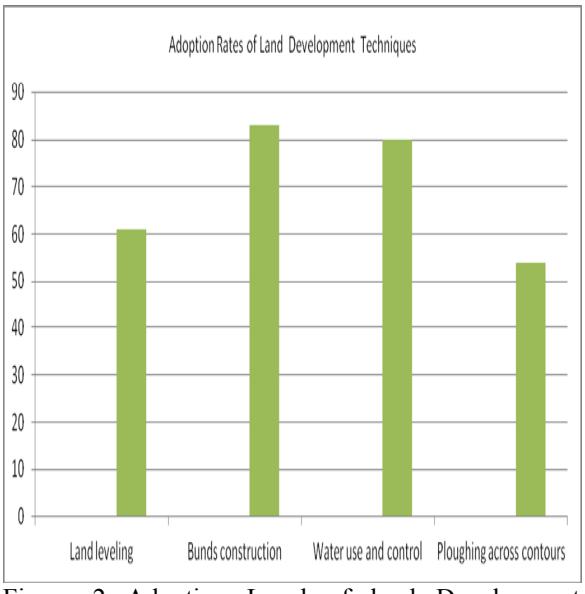

Figure 2 Adoption Level of land Development Techniques

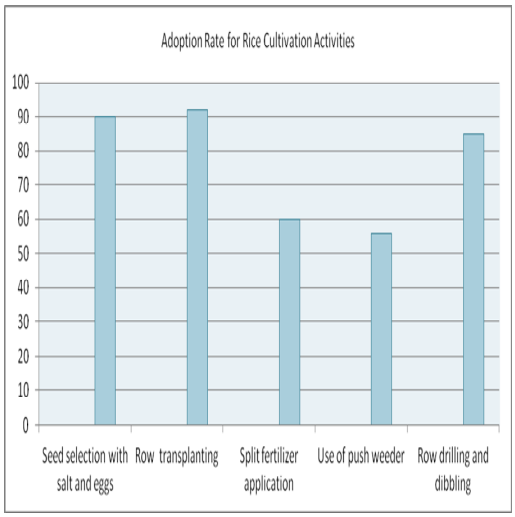

Figure 3. Adoption level for Rice Cultivation Techniques

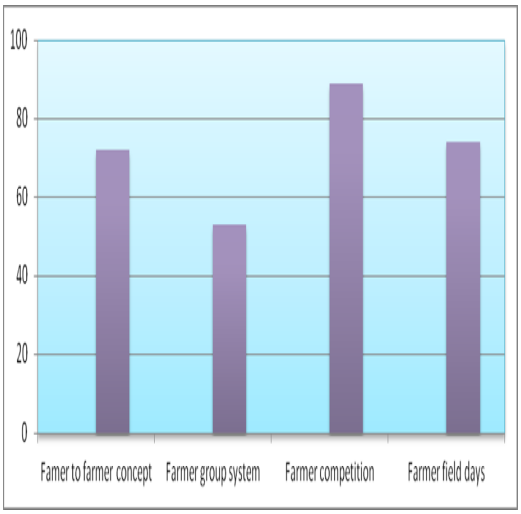

Figure 4. Adoption Level of Extension Concepts

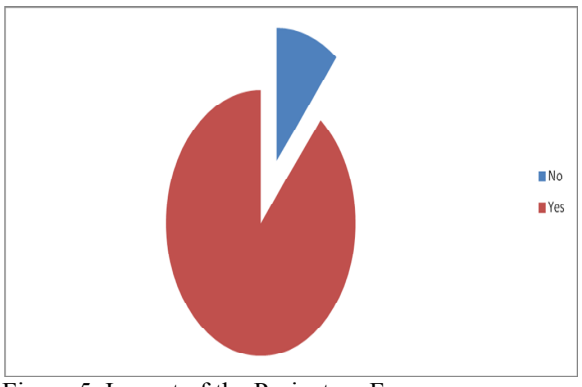

Figure 5. Impact of the Project on Farmers

Table 2. Yield Comparative Data

Region	2007	2008	2009	2010 -Project Figures
Ashanti	1.1	1.1	1.2	4.3
Northern	1.7	2.3	2.3	2.9

Discussion

Prominent challenges indicated by the respondents about the projects are funding, weather dependent, land tenure system, credit implementation challenge, farmer group, work system cohesion and project staff strength. In terms of the adoption level of technology disseminated all the techniques were above 50% level of adoption by farmers a shown in Figure 2. From Figure 2, farmers actually complained about the difficulty in developing their lands with simple tools like hoe, cutlass and manual levellers and that things could be more better and easy for them if power tillers and tractors will be made accessible to them especially for the Ashanti Region as farmers in the Northern region was used to tractors for ploughing. The low adoption for ploughing across contours could be attributed to tractor operators preferring to plough along contours as it is easier and faster but facilitates erosion as said by the land development counterpart officer. With all these, it could be deduce that with a bit more investment in the land development section, a greater part of the project output could easily be achieved.

On rice cultivation techniques, all the respondents indicated that both the land development and rice cultivation activities were easy for them when working in groups than at individual levels (figure 3). Split fertilizer and push weeders recorded lower rates due to high time as in frequency and labour demand. For the push weeders, they complained that it was slow using it for weeding as compared to their traditional hoes since they were not exposed to its use. The adoption levels for the farming support systems were not as high as others because of lots of challenges as only the farming record calendar system were well adopted. Only 52% of the respondents from the 210 sample size responded to adopting the farming record calendar promotion where all farming activities will be executed according to the calendar which was designed based long study and research. Market information relay to farmers, standardization of measurements, stakeholder linkages and rice quality forum promotions have just been started by the project and the farming support officer was hopeful that by next year adoption rates for these interventions would have been higher.

In Figure 4, concepts promoted by extension unit of the project centered on farmer to farmer extension, promotion of farmer group system, use of farmer field days for teaching specific techniques, trainings and promotion of farmer competition amongst the farmers. An interview with the farmers produced varied adoption rates for these concepts. Figure 4 shows the variations of adoption for the extension concepts. The lower adoption rate for the farmer group system was attributed to wider differences among farmers. Petty quarrels, concentration on their own individual fields other than the trial learning plot were common as said by the officer in charge of the group formation and cohesion of the project. According to the officer, the farmer competition came with incentives to the farmers that whoever adopts well the technologies disseminated by the project will be given special prizes (simple tools and inputs). This increased their flair for this concept which is bringing goods results to almost all the interventions of the project for practice and adoption by the farmers.

In Figure 5, despite the huge challenges faced by the project, it has made several positive impacts on the lives of the farmers. The farmers said their yields have started increasing from the start of the project especially for the 2010 farming season. This increase according to them was as a result of the learning and teachings of the project. Their knowledge on all the cultural practices in the field for rice cultivation from land preparation to the post-harvest activities has greatly improved. They have received several formal and informal trainings, field and off field's trainings and field exchange visits. The response to the impact of the project on the farmers as captured in figure 5 shows 74% of them agreeing that they have been positively influenced by the project with 9% believing otherwise. They believe their income increased last year due to higher yields they had and also knew more about farm record keepings on all their farm activities in addition to opening bank accounts with banks. Apart from that, the promotion of the use of tarpaulin for threshing and improved use of harvesting sickles by the project contributed to their rice paddy quality. Table 2 shows that from 2007 to 2009 rice yields from these areas of the two regions according SRID (statistics, research and information department) of MOFA indicated lower average yields from the project areas as compared to the current yield trends in the areas with the help of the project. However, farmers intimated that with supplementary irrigation infrastructure, developed lands or valleys, provision of credit facilities and

farm machinery could have assited them more greatly.

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