Benefits for the Local Vegetable Farmer from the Ghana School Feeding Programme:
The case of Vegetable Production in the Ga East Municipality in the Greater Accra Region of Ghana

A Research Project submitted to Van Hall Larenstein University of Applied Sciences in partial fulfilment of the requirements for the award of Professional Master Degree in Management of Development with specialization:
International Agriculture

By

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September 2010

Wageningen, the Netherlands

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I DEDICATE THIS WORK TO

My husband , Joseph Jectey Asare

My children: Daniel Jectey - Asare and Emmanuela Jectey Asare

and my father Mr E .A.Osae for their love, encouragement support and prayers.

ACKNOWLEDGEMENT

I wish to express my sincere gratitude to the Almighty God for His protection and guidance since I came for this course.

I also appreciate Nuffic and the host institution, Van Hall Larenstein University of Applied Sciences for financing and facilitating my study program respectively.

I am grateful to my supervisor and course coordinator, Eddy Hesselink, who has been of great help throughout the stages of this research. I also give my gratitude to Gertjan Becx who directed me in choosing my topic on the Ghana School Feeding Programme(GSFP). I also appreciate the Desk Officer, GSFP, of the Ga Municipal Assembly, the Ga Municipal Directorate of Agriculture and all the stakeholders of the GSFP who helped me in my data collection.

Finally to all, whose efforts could not be mentioned individually here, kindly accept my hearty appreciation for your support and cooperation. God Bless you all.

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LIST OF ABBREVIATIONS

Acronym	Full Name
ADRA	Adventist Development and Relief Agency
AGRF	Alliance for a Green Revolution for Africa
AOP	Annual Operating Plan
CAADP	Comprehensive African Agriculture Development Programme
CRS	Catholic Relief Services
DA	District Assembly
DCE	District Chief Executive
DFID	Department. for International Development
DIC	District Implementing Committee
DOM	District Operations Manual
ECASARD	Ecumenical Association for sustainable agriculture and Rural Dev.
FAO	Food and Agriculture Organization
FFS	Food for Schooling
FFE	Food for Education
GES	Ghana Education Service
GoG	Government of Ghana
HGSF	Home Grown School Feeding
IWMI	International Water Management Institute
MMDA	Metropolitan/Municipal/District Assembly
MDG	Millennium Development Goal
NEPAD	New Partnership for African's Development
NGO	Non Governmental Organization
SF	School Feeding
SFP	School Feeding Programme
SEND	Social Enterprise Development
SIC	School Implementing Committee
SNV	Netherlands Development Organization
UN	United Nations
UNICEF	United Nations Childrens' Fund
USAID	United States Agency for International Development
WFP	World Food Programme

ABSTRACT

Most feeding programmes in Ghana are implemented by donor agencies and imported foodstuffs are used in feeding the children. The GSFP which commenced in 2005 is a Home Grown School Feeding Programme (HGSFP). The school feeding programme has been identified as very potent to reduce hunger and malnutrition of children as well as boosting domestic food production through local production.

The local farmers are to produce the foodstuffs to the GSFP and by doing so increase their production and their income increases and subsequently escape hunger and poverty. The objective of the study is to find out how and the extent to which the local vegetable farmers in the Ga East Municipality of the Greater Accra Region are benefiting from the GSFP. The study was examined under the following headings: Farmers' willingness to sell their farm produce to the GSFP, the willingness of the Caterers to procure from the local farmers, commonly cultivated crops in the study area, the quantities that local farmers supply to the GSFP and benefit from the GSFP for the farmers.

A qualitative case study was used for the study and sampling was done purposively. Data collection instrument included interviewing, observation, focus group discussions and secondary sources like project documents and reports were used. In all 24 informants were interviewed. 2 caterers, 2 traders, 6 farmers involved and 6 not involved in the GSFP and 2 focus groups, 4 in each group.

The data for the studies was gathered between 12th of July to16th of August 2010 by the researcher in the Ga East Municipal area of the Greater Accra Region. The results of the study indicated that all 6 local farmers involved in the GSFP are willing to continue to sell to the GSFP because of the significant increase in their income. Their average income per year ranged between GH¢1,000. to GH¢5,000.00(One Thousand to Five Thousand Ghana Cedis or five hundred and fifty five Euro to Two Thousand Seven Hundred and Seventy Five Euro). This was higher than the minimum wage of the government worker. The 2 Caterers are willing to procure from the local farmers. The farmers had this increase in income due to some benefits they enjoyed when they involved themselves in the Ghana School Feeding Programme.

The benefits are: 1. Market for their produce Is guaranteed.

2. They have access to extension services,

3. They have access to input supplies

4. They are able to diversify to produce other crops that are needed by the programme.

5. Less transportation cost as most of the crops are sold at the farm gate.

6. Regular sales preventing glut on the market.

7.Compared to those who are not involved, these farmers have been able to acquire some assets including of land purchase, farm inputs and equipment

8 Ability to send their children and wards to private schools where high school fees are paid

To make the program more sustainable, the Purchase for Progress (P4P) strategy which was introduced by the WFP can be adopted. This strategy involves the buying of foodstuffs in bulk at places where food is in abundance and then sent to places where food is in short supply. This will help farmers to continuously cultivate their crops because they are sure it would be bought. P4P could be introduced in the Ga East to encourage farmers to produce more to be purchased and sent to other areas where quality vegetables would be needed in the District or in the Region.

CHAPTER ONE

1. INTRODUCTION

In many parts of sub - Saharan Africa, majority of children of school going age (kindergarten and primary) come to school in the morning without breakfast. Many suffer from health and developmental problems including stunted growth. The Ghana School Feeding Programme (GSFP) is a combined initiative from the New Partnership for African Development (NEPAD), Government of Ghana (GoG) and The Netherlands Government as part of Ghana's measures to reach the Millennium Development Goal (MDG). In this GSFP Pupils in selected primary schools from the poorest areas out of the Ten Regions of Ghana get a hot and nutritious meal at school, as a means to increase enrolment, retention and attendance and to increase health of the children GoG, (2006). Besides, the programme also aims at boosting domestic food production and the reduction of poverty by the home grown component of the GSFP. The home grown school feeding (HGSF) hopes to create a bigger market for rural farmers through demand created by purchasing only locally grown food in that particular community. This in turn has the potential to boost domestic food production and increase the food sovereignty of the country Quaye (2007). The major problem concerning the above is where the GSFP which is to supply a ready market for local farm produce is generally weak and little business is taking place between them. SEND, (2008); WFP, (2007). Practically the guide lines of the GSFP, said, schools should target to buy at least 80% of the foodstuffs for the meals from local farmers. It is calculated that with this target, the total of investment in the national economy about US$147million could be realized by the end of the implementation period in 2010 GoG (2006). However studies have shown that the target of 80% is not reached and that the incentive of the local market is not enough to get farmers to produce food for the schools SEND (2008), In the light of the above other sources of motivation for the local farmers to produce for the GSFP need to be researched into.

In this study therefore the topic will focus on "Benefit for Local Vegetable Farmers for The Ghana School Feeding Programme: The Case Of Vegetable Production In The Ga East Municipality In The Greater Accra region Of Ghana".

As stated in the above introduction, the local farmers are to be the main source of the foodstuffs for their community schools. In the GSFP AOP (2008) report, the programme was started in 2005 on a pilot scheme with ten schools in different regions of the country and the implementation period runs until the end of 2010. The overall objective of the GSFP is to contribute to poverty reduction and food security. The specific objectives are in three folds: Firstly the programme aims at the traditional objective of School Feeding Programme (SFP): Increasing school enrolment, attendance and retention rates. Secondly, the programme aims at reducing hunger and malnutrition among children going to public KG and Primary schools. The third is to strengthen food production net works AOP (2008). This has to be achieved by the home grown component of the programme, Which means that the school provides a market for the agricultural products of the community thus encouraging the local farmer to also benefit from the project.

From the above statement, the five year period will be ending soon but it is not well known the extent to which the GSFP is benefiting or has benefited the local farmers, in order to keep them in their farming activities, especially the vegetable growers of the Ga East municipality of the

Greater Accra Region who produce the bulk of vegetables (90%) for all the schools under the GSFP in the Ga East Municipality, the research area.

The Main Objective of this study is: To find out the extent to which the local vegetable farmers in the Ga East Municipality are benefiting from the GSFP

This report consists of Eight chapters. In chapter one the study begins with an introduction to the main topic. It covers the main Objectives, the Problem Statements, the Research questions and sub-questions as well as the Justification of the study. Chapter two presents the Research Set Up and the study area. Chapter three looks at the Conceptual framework of benefits of local farmers. Chapter four presents the GSFP and its procurement mechanism. Chapter five looks at Agriculture and vegetable production in the Greater Accra Region. Chapter six discusses the benefits of the farmers of the GSFP. Chapter seven focuses on the results and discussion of the findings based on the research topic and the objectives and finally Chapter seven outlines the conclusions and recommendation.

1.1 THE MAIN RESEARCH QUESTION

Considering the objective of the research the main question is:
What benefits have the Local vegetable farmers of the Ga East municipality derived from the GSFP?

RESEARCH SUB-QUESTIONS
In the course of finding the answer to the main question, the following sub-questions would be addressed .
The sub-questions are:
SUB-QUESTIONS
To be able to analyze the main research question, the following sub-questions will be discussed under the activities of the under listed Actors, Namely: Caterers, Middlemen/ Traders, and Farmers.

Caterers

These are professional/trained women and men whose main activities include: procurement of foodstuffs from the farmers and from the open markets, preparation of the menu for the meals, record keeping and supervising the cooks to prepare the meals and also to serve the children.
In the organizational chart of the Ga East GSFP, Caterers are the last to receive cash that are directly meant for the feeding of each child. The questions include:

- What types of foodstuffs are mostly used in preparing the meals and where are they purchased?
- W hat influences the choice of vegetables you use?
- What specific vegetables do you purchase from the farmers of the Ga East
- What benefit do the farmers obtain from you as a Caterer of the GSFP?
- What are the main crops the farmers in the Ga East produce for the GSFP
- How willing are the vegetable farmers to sell to the GSFP

Middlemen/women (traders)

The traders include market women or men who buy direct from the farmers the excess products after selling to the Caterers. These are traders found in the main commercial markets – the Madina market.

The questions for the traders will include:

- What foodstuff do you normally buy from the local farmers
- Who constitute your regular suppliers of vegetables.
- How sustainable is the supply of the foodstuffs from the local farmer?
- What benefits does the local vegetable producer enjoy from your end?
- Are the local vegetable producers willing to sell to you?

Farmers involved in the GSFP

About 70% of the population of the Ga East area, a suburb of the Capital city, Accra, are farmers whose livelihood depend on what they cultivate. These farmers are so specialized that they cultivate vegetable throughout the year both in the rainy and dry seasons. The questions are as follows:

- How knowledgeable is the local farmer about the GSFP?
- What produce do they supply to the GSFP?
- How has their supply to the GSFP influenced their production?
- Which vegetables do they supply to the GSFP?
- What benefits have they gained by getting involved in the GSFP?
- How has their involvement in the GSFP improved their livelihood?
- How willing are they with the supply to the GSFP?

Farmers not involved in the GSFP

- What foodstuffs do the farmers produce?
- How knowledgeable are they about the GSFP?
- Why they are not involved in the GSFP?
- What is their wish towards involvement in the GSFP?
- Which vegetables will they wish to supply to the GSFP?

1.3 Justification

Taking the general objectives of the GSFP, as a whole, many of the aims and objectives have been fully realized through various research findings while others are yet to be researched. One of such areas is how to use the existing programme as a platform to stimulate local agricultural production and the local development of farmers and their communities. By so doing the local farmers will realize the benefit and then support the sustainability of the entire feeding programme. The Ga East Municipality which produces a greater quantity of the vegetables used in the GSFP in the Greater Accra Region of Ghana is the area where both exotic and traditional vegetables are produced by the local farmers under hygienic conditions since the inception of the programme. Hence the selection for this study.

A number of authors such as Kuperus (2010), Sullivan (2002) and FAO (2004) assert that school children may benefit from foods that is indigenous to their culture and produced locally through the school feeding programme. There is therefore an argent need to find out the actual benefit that the local vegetable farmer will derive from the GSFP when they continuously produce vegetables locally.

CHAPTER TWO

1.RESEARCH SET UP

This section describes the methodology used to collect and analyze data. It describes the study area, research design and discusses how data was collected, analyzed and interpreted.

1.1 The Study Area

The study area is the Ga East Municipality in the Greater Accra Region of Ghana. (as shown in the map below) It has a population of 231,003 with its capital being Abokobi Municipal Assembly (2006). The municipality has an annual growth rate of 2.3%. The growth of the population is mainly due to migrant inflow. The population has about 51% males and 49% females with an average house hold size of 4.6. It is one of the ten Metropolitan/Municipal/Districts in the Greater Accra Region and covers a Land Area of about 166sq. km. Madina is the largest settlement within the Municipal area. Others are Dome, Taifa, Haatso, Ashongman, Agbogba, Danfa, Otinibi and Sesemi.. The Municipality falls in the savannah agro-economic zone. The Ga East Municipality has an annual rainfall averaging 810 mm. The rainfall pattern is bi-modal with the average annual temperature ranging between 25.1oC in August and 28.4oC in February and March. Irrigation facilities for farming are located in the area, mainly for vegetable production. There are also a number of ponds which support aquaculture.

Farming is the major economic activity for about 55% of the economically active population. About 70% of the rural population depends on agriculture as their main source of livelihood with about 95% of them being small holders. The major agricultural activities are crop and livestock production. Among the wide range of vegetables produced are pepper, tomatoes, cabbage, okra and garden eggs. Livestock production includes poultry keeping, rabbits, and cattle. The production of cash crops like maize, cow pea and cassava are also encouraging, especially amongst the rural community. The women in the rural communities are mostly farmers who process cassava into gari and cassava dough.

The Municipal Area has two public Senior Secondary Schools, 13 privately owned Senior High Schools, 56 public Junior High Schools, and a number of private schools which are cited in the peri-urban areas of the district. Also there are 63 public primary schools with about 32 kindergarten Schools. The schools being catered for by the two caterers are 1. Ashongman District Assembly Primary 1,2and 3. and 2. Madina Estate Primary 1,2 and 3. Each of the schools having 1 200 school children.

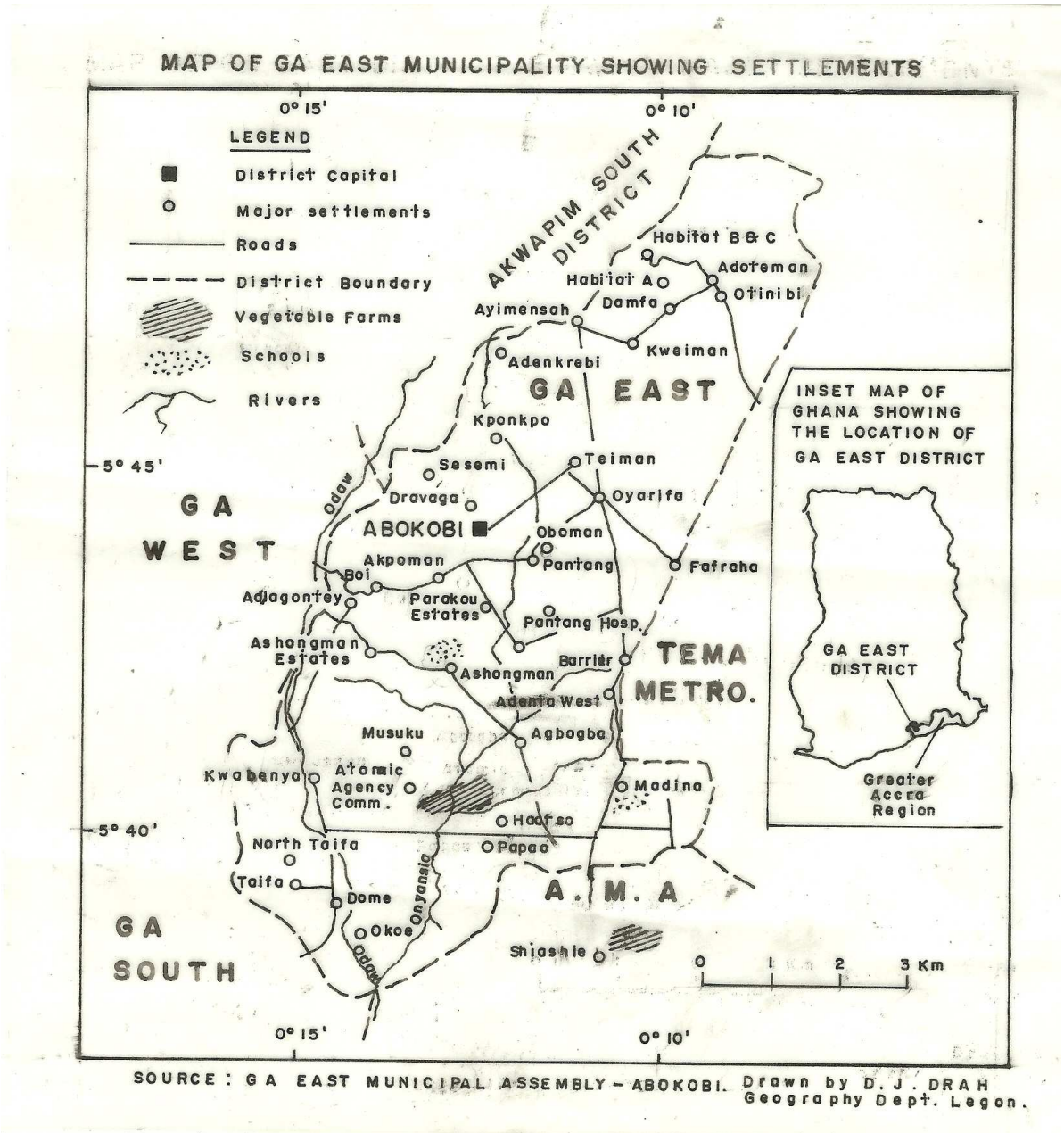

Fig I Map of Ga East Municipality in the Greater Accra Region of Ghana showing settlements

1.2 Research Design

A qualitative case study strategy was employed in the research to obtain detailed information on the GSFP from the Ga East to provide insight into its operations. This is in line with Vershuren and Doorwaard (1999) who defined it as a type of research during which the researcher tries to gain a profound insight into one or several objects or processes that are restricted in time and space. Mitchell (1983) also defines the same strategy as a detailed examination of an event (or series of related events) which the analyst believes exhibit (s) the operation of some identified general theoretical principle. Leeuwis, 2004 added that all sorts of methods and techniques, both qualitative and quantitative can be used and/or combined in a case study. In this study the researcher made use of semi-structured interview, focus group discussion and observation.
Two Caterers were purposively selected for the interview because they were pioneers in the GSFP operations in the Ga East and they were conversant with the principles underlying the GSFP. In all twenty local farmers out of the thirty five (source: Agriculture Extension Officer) were involved in the interview and group discussion. Twelve were interviewed individually: six GSFP members and six non- GSFP vegetable farmers. Eight farmers were used in the group discussions, in two groups of four each. Two regular traders were also interviewed – one at the farm gate and the other at the open market.

A pre-test using the interview checklist was conducted from each of the research groups to assess its suitability. One informant from each of the 3 groups, that is the caterers, the traders and local vegetable farmers were interviewed and the necessary corrections were made for the subsequent interviews.

Find below a summary of the groups interviewed

Table 1. List of Interviewees

S/N	Categories of Interviewees	NO
1	Caterers	2
2	Traders	2
3	Farmers	20
Total		24

1.3 Analyzing of Data

The data collected was qualitatively analyzed and the data summarized into categories. The analysis was interpreted and conclusions drawn from them were to be used to answer the research questions.

The discussion was grouped under the following:

- The willingness of the Farmer to sell the vegetables to the caterer
- The willingness of the Caterer to buy from the local Farmer
- The benefits of the farmer from the GSFP

CHAPTER THREE

3. CONCEPTUAL FRAMEWORK

To be able to measure the indicators of the benefits of the local farmers, the researcher would like to conceptualize 'the benefits of the local farmer involved in the GSFP and the benefit of those cultivating for the open market or not in the GSFP. To be able to do this the term "local" would be defined.

3.1 Local farmers

The YourDictionary defines local as "confined to a particular place or restricted to a place" In his report on the importance of using local farmers to produce vegetables in the GSFP, Theobald (2008) said that the programme coordinator of the Ghana School Feeding programme, Krister Neeser has stated that the definition of 'local' varies from country to country. He said "some schools keep their food purchasing within the community and some keep their purchasing within the country. But what is important is creating that relationship between the farmer and the government programme in other to benefit from it." The researcher's definition of local farmers therefore will be limited to farmers operating in the Ga East Municipality and its surroundings within five kilometers off the boundaries of the Municipality because the vegetables sourced for the GSFP are within this scope.

One of the outcomes of the Ghana school feeding programme as stated in the GSFP AOP (2008) is to increase income of farmers as they use the schools as a market. According to Theobald (2008) 'Ghana—HGSF hopes to create a bigger market for rural farmers, through demand created by purchasing only locally grown and processed food for school meals'. Also the project will promote local agriculture and benefit rural farmers by using locally-sourced food, providing regular orders and a reliable income for local farmers, the majority of whom are women Espejo, Burbano and Galliano (WFP 2007) Also, Adjei (2006) argued that often farmers are entreated to increase production without the reciprocate procurement of their produce. He again said it has been argued and proven that when one creates a demand it will be met, so, the HGSFP is based on the procurement of all its food requirement from the local farmers, providing ready and reliable market to the local farmers who in turn increase income to live a better life to their benefit.

With these statements, the following questions arise (i). Are all the local farmers willing to sell their vegetables to the GSFP in the research area or do they want to try other marketing avenues? (ii)Are the caterers willing to buy from the local farmers?

The succeeding paragraphs in this section provide some discussion and analysis on the above questions.

3.2 The willingness of farmers to sell their vegetables Under the GSFP

The willingness of farmers to sell to particular customers depends on various factors. Nashiru (2009) states that small-holder farmers in northern Ghana particularly the Kpalun are embedded in local cultural repertoires. Trust for the local and distrust for the foreign govern relationship with the outside world including markets. Therefore farmers are involved in trust relations with local traders through which produce are distributed. He further noted that when businessmen and women operating in poor countries are asked how they prevent opportunistic breaches of

contract, they typically respond that they conduct businesslike transactions only with individuals they can trust. With strangers, Fafchamps (2004) acknowledged that they revert to a cash and carry form of exchange: goods are inspected on the spot, and delivery takes place against instant payment in cash. Fafchamps further said normally, trust results primarily from history of successful exchanges. Eenhoorn and Becx (2009) state that in their discussions with farmers and traders, it became clear that on many occasions, a lack of trust played a role. If farmers do not trust their buyers in their prompt payment, they would not sell to them.
A survey by ECASARD/SNV (2009) found out that the farmers did not trust the GSFP of absorbing all their produce especially when there is a glut. Thus, the farmer said this would make them worse off, therefore most farmers would like to keep to their old customers who are willing to buy from them always.

Another factor which determines farmers' willingness to sell to a customer is crop prices. Baulch (2005) notes that for producers, crop prices are a major factor governing income and cropping decisions. Thus when crop prices are favourable, they produce more. He further states that, 'over a long term, the incentives provided by crop prices are thus a critical determinant of the adequacy of supplies'.

Furthermore, Eenhoorn and Becx (2009) explain that, by definition, poor farmers have hardly any capital of their own and have little access to capital for input or farm implements. Hence they are a big risk for every provider of capital, including micro-finance, because they have no collateral to present as a mortgage. According to Fafchamp (2004) farmers fall on their customers for credit, which is known as 'supplier credit'. This obliges them to produce foodstuffs on contract for the traders. He further states that 'supplier credits' are particularly important for small firms with limited access to bank finances. With the financing by the traders, the farmers are bonded to supply their produce to them.

The Ga East vegetable farmers are mostly involved in market gardening. These local farmers are supposed to supply the caterers with their vegetables. Mostly the farmers receive reasonable prices for their produce in market gardening as these are readily determined by the demand-supply forces of the market Amankwaa (2000) stated. He explained that the demand comes about because of the increased migration in the urban areas and as population increase in the area, there is an increase in population of school children who would need more vegetables in their food. Thus the local vegetable farmers are encouraged to produce more.

3.3 The willingness of Procuring Foodstuffs from local farmers

Food is usually procured from productive farming areas that can immediately supply the school feeding programme (SFP), but which are often located far from the schools of food-insecure areas Espejo, Burbano and Galliano (WFP 2007). While procuring from productive areas is necessary to meet the school feeding needs, it may also be more expensive due to the costs of transporting the food to the schools Espejo et al (2007) explained. So the caterer may decide to buy from a nearby market.

Secondly, the caterer may decide not to buy from a local farmer because of the poor quality of the produce which may be due to the nature of the food item or polluted water used on the crops Amankwaa (2000). It is for this reason that SEND-Ghana (2009) has recommended after its

survey that 'policies should secure small-producers' access to water for production purposes including water for irrigation. In addition the survey recommended that, potable water is necessary for small producers to produce a clean and good quality product for the market as well as for processing and added value.

Another reason why the caterer may choose to buy from a local farmer will depend on how the farmer is able to sustain efficient supply and good quality of food items produced under the best farm practices which respects social responsibility Boomsma (2008).

The forgoing analysis outlines the concepts which will determine whether local farmers will benefit from the GSFP or not.

The researcher has used these preceding indicators to find out whether the farmers involved in the GSFP have had any benefit on their livelihood.

3.4 Benefits of Farmers' involved in HGSFP

This study wants to assess the benefits for local vegetable farmers of the GSFP in the Ga East Municipality in the Greater Accra Region. To be able to know the meaning of benefits and the types of benefits that the farmer gains when he gets involved in the GSFP, the researcher would like to conceptualize benefit of the local farmer and find the indicators to access the benefit of the farmers involved in the Ghana school feeding programme. According to BrainyQuote, benefit is defined as whatever promotes prosperity and personal happiness, or adds value to property; advantage and profit. The American Heritage Dictionary defines benefit as something that promotes or enhances well-being. The researcher would zero down to the definition of advantage. According to YourDictionay.com, advantage is defined as a more favourable position; superiority and gain. With this definition, the researcher will use "a more favourable condition as my indicator.
Considering the two definitions, the researcher is trying to find out what the GSFP local farmers have gained considering their well being and has given them more favourable conditon over those who are not involved. Concerning the benefits of farmers in the HGSFP, Espejo et al (WFP 2009) explain that HGSF is a relatively new concept that has been implemented in a few countries on a national scale and the impact on the local economy has not been sufficiently studied so far. One possible explanation for this gap in research, Espejo et al (WFP 2009) say that, the objectives of school feeding programmes are normally based on educational and sometimes nutritional objectives. The authors again observed that there are very few programmes that explicitly include stimulating the local economy or local production as an objective and these programmes are fairly recent, as is the case with the national school feeding programme in Ghana. In general, the authors assert, the evaluations of school feeding do not include indicators to address this issue. Hence, the need to find out the importance of the benefits of the local farmers under the GSFP.

According to the GoG GSFP (2006) the collaborators are to provide useful efficient and expanded extension services for farmers who are involved in the GSFP because many rural farmers are unable to access extension programmes that provide them with the knowledge to use new technology. Programme such as those that encourage farmer exchange, to view and learn about new technologies and those that help with training and capacity building is to be promoted. In addition, these programmes should aim to collect and disseminate information on best

practices, using research that utilizes both modern and indigenous knowledge and is designed specifically for smallholder farmers use. In support of favourable condition, Espejo et al (2009) observed that in Chile, where the government initiated a local purchase scheme for school feeding following a natural disaster in the southern part of the country in 2001 as part of a package of measures to reactivate the local economy, local farmers that received support from the National Agricultural Promotion Agency now supply nearly all of the programme's vegetable requirements in that region.

By joining the school feeding programme, new market for farmers would be opened to farmers. This would be an advantage to the farmers who are not able to get market for their produce. In recent years, small and medium holder farmers have been forced out of business because of limited market. This was found out by the United Nation World food Programme in collaboration with the Ghana Statistical Service and other partners Boohene (2009). In this response the GSFP has been implemented by the government to create economic opportunities for small holder farmers in the community.

Another favourable condition is that, farmers can diversify their markets by supplying to local schools according to what the schools need. According to Ohmart (2002) their observation of farmers who are involved in farm to school programmes have shown that the schools represents a steady reliable demand that helps farmers plan their crop planting, harvesting and marketing more effectively. Besides direct revenues, farmers are motivated to participate in these programmes as it provides an opportunity to contribute to the health and education of children. Their interaction with students, parents and the community often results in additional sales through farmers markets and other avenues Ohmart (2002).

Ohmart (2002) again observed that as farmers supplied vegetables to the schools, it linked the schools and the markets. The link created a reciprocal relationship between the GSFP and the market. Parents and students who are enthusiastic about vegetables and its nutritive value learnt that the fresh fruit and vegetables provided by local farmers are also sold at the markets**.** Ohmart (2002), states that this created a connection to the market and desired to visit it, thereby increasing patronage and sales. In addition, creation of this link helped build the community, which was especially important for smallholder farmers' overall success. The goal is to increase local market opportunities by selling to the GSFP directly, but indirectly the community getting, interested, and bringing more people into the market venue.

With the regular service given by extension services, and new technologies learnt, cost of production becomes low therefore the farmer is not affected so much when prices go down.

According to Bright (2009), feeding programmes favour the local farmer as it cut out the middleman allowing increase in financial return through direct sales, price control and a regular cash flow. They also provide the producer with direct customer feedback on produce and prices. Another favorable condition for the local farmer is that transportation and packaging requirement are less as the farmer and the community is very close. This reduces the producers cost Bright (2009).

From the ongoing discussion, the benefits of vegetables farmers of the Ga East Municipality working under the GSFP can standout.

CHAPTER FOUR

4. The Ghana School Feeding Programme

To contextualize the Ghana School Feeding Programme, I start with the history of School Feeding in Ghana.

4.1 School Feeding in Ghana

Fighting child malnutrition and promoting education are major concerns of governments and development organizations. WFP (2001). About 300 million children in developing countries are chronically undernourished and many of them are among the estimated 120 million who do not attend school (WFP 2001). To address these problems simultaneously, some governments have realized that the way to solve them is through Food for Education.

Ghana has a long history of School Feeding Programmes (SFPs) which started in 1950s. WFP (2007). The WFP noted that the Catholic Relief Services (CSR) an American based NGO started by giving pupils of several Catholic primary and middle school children take-home rations of food aid. The objective, the WFP observed was to improve the nutritional status of school children and increase their enrolment and retention. They were later joined by the WFP in the 1960s and since then both organizations have remained major players of in school feeding children in Ghana WFP (2007). Other actors involved are: World Vision, Advent Development Relief Agency (ADRA), Dutch Development Agency (SNV) and SEND.

4.2 The Ghana School Feeding Programme

The Government of Ghana started its own school feeding programme in late 2005 using the home grown school feeding concept. This was different from other SFPs that had traditionally used imported food aid. The GSFP also differed from other SFPs in terms of coverage; while CRS and WFP feeding programmes target the north, the GSFP has a national character.

The immediate objectives of the GSFP are to:

- reduce hunger and malnutrition
- increase school enrolment, attendance and retention
- boost domestic food production

In the longer term, the GSFP seeks to address the following problems:

- poverty that generally affects households and communities and has a bigger impact on children, particularly those under 5 years of age
- hunger, particularly short-term hunger in children, including those under 5 years of age;
- malnutrition in children and rural households that results in stunting, wasting, and poor health, including higher incidence of infections and reduced access to opportunities to escape poverty altogether
- food insecurity that reinforces poverty in rural households and reduces the capacity of children to take advantage of the opportunities provided through education to improve their chances of escaping poverty;
- low enrolment rate, attendance and retention due to short-term hunger and poverty, among other reasons.

4.3 Goals and objectives of the programme

One of the long-term objectives (Appendix I) of the GSFP is to contribute to poverty reduction and improving food security in Ghana. Others are:

i. The Programme will also create opportunities for greater availability, access, utilization of food crops at the community level.

ii. The increased demand for food production will lead to development of other economic activities such as processing and cottage or small and medium enterprises using the surplus agricultural produce as inputs.

iii. The first order of priority is to purchase from local community where the beneficiary school is located followed by purchases at the district level.

Using locally produced food for the GSFP is also meant to provide markets for local farmers to enhance their productivity and production and improve their incomes. In line with the government's policy of reducing poverty, food is to be bought from the local community and cooked in the schools. It is targeted that 80% of feeding cost for the programme will go into the local economy.

It is this government-led school feeding programme which is the main subject of this case study.

The history

The programme was born out of the New Partnership for African Development /Hunger Task Force Initiative (NEPAD/HTFI) under the Comprehensive Africa Agricultural Development Programme (CAADP) of the African Union (AU). Ghana was selected as one of the initial nine focus countries in sub-Saharan Africa to pilot the programme. The Government of Ghana and NEPAD were to equally finance the programme; however, delays from NEPAD required the government to fully fund it. It started with a pilot from September to December in 2005 in Ten Districts, one from each of the Ten Regions, and was intended to last for five years.

This initiative is strengthened by support from the new Alliance for a Green Revolution for Africa (AGRF 2010), headed by Kofi Annan, the former UN Secretary-General, which is also committed to the school feeding. The idea of this new initiative is to see school feeding in a new light beyond alleviating short term hunger and malnutrition of school children in schools, but also promoting and boosting local food production to ensure long term food security; thus solving two problems with one initiative. Locally procuring food for the programme is solving these two problems; alleviates short term hunger and boost local food production. One assumption for the objective of boosting local food production through local food purchases are based on the economics theory of demand and supply Ahmed and Shama (2004).

Thus if the school feeding programme creates an imbalance in demand and supply through local purchases, farmers will swing into action to produce more and thus force the relationship back into an equilibrium Ahmed and Sharma (2004).

Currently, according to a study done by SEND-GHANA (2008) the GSFP has chalked some successes in school enrolment and retention of children in beneficiary schools. And the GSFP

feeds about 595,000 children in public primary schools with the target of 1.04 million children by 2010.
The programme provides one hot adequate nutritionally balanced meal for the children on site for GH¢0 .40 pesewas, (30Euro cent) per child per day, using locally produced and procured food items. The collaborating partners are the ministry of Education, Ministry of Agriculture, Ministry of Health, District Assemblies and Development Agencies. Their activities include provision of extension services and facilitating the provision of inputs to farmers involved in the programme, providing de-worming tablets to school children, water and sanitation in schools, micronutrient supplementation, health and hygiene education, HIV/AIDS prevention, creation of school gardens and malaria prevention.

4.4 Planned Implementation of the Ghana School feeding programme

According to the programme document the implementation of the GSFP is planned to centre on the District Assemblies (GoG, 2006). The mainline actors are the Ministry of Local Government and Rural Development, The Ghana school Feeding Programme Secretariat, The District Assemblies, District Implementation Committee (DIC). School Implementation Committee (SICs) and Caterers/Matrons.
The Ministry of Local Government and Rural Development, has the oversight responsibility for the GSFP. In pursuit of the programme objective, there is a strong local/community participation and operations are decentralized, using existing structures of District Assemblies and Regional Coordinating Council offices in the Implementation.
The implementation will be done through a District Implementation Committee (DIC). The committee consists of the District Chief Executive (Chairman), the District Director of Education, The District Director of Health, District Director of Agriculture, One Traditional Ruler from the District, Two representatives of the Social Services Sub-committee, The Desk Officer (Secretary). The committee ensures that funds are disbursed on time and the procurement of the foodstuffs and all the activities that contribute to the successful running of the programme at the district level is done. Therefore the DIC becomes the coordinating unit at the district level for the GSFP oversees all the schools in the programme.

At the school level, the programmes document states that each school is to have a School Implementing Committee (SIC) that oversees school feeding activities. The SIC sets up the menu, which should contain all six food groups, i.e. Protein, Carbohydrates, Vitamins, Minerals, Fats and Oil and Water, employ cooks, procure food as well as oversee the cooking and feeding. The committee comprises the Head Teacher, a representative of the Parent-Teachers Association (PTA), (Chairman), one representatives of the School Management Committee, a representative of the traditional leader from the community, an assembly man, a Head Teacher (secretary), the boys and girls prefect of the school. The responsibilities of the SIC is to plan and execute the actual feeding programme. It receives funds from the DIC (GHc 0.40p per child per day), procures inputs, supervises the food preparation and feeding activities and report to the DIC. The SIC facilitates community involvement, mobilization and support for the implementation of the programme. It also provides the frontline for the programme's objective to improve upon food security in the community level through the linkage of the school feeding initiative and the local farmers. The SIC therefore is to manifest the direct ownership of the programme by local communities who are its beneficiaries.

Other GSFP partners and External Support Agencies (ESAs):

These includes the Dutch Government which is co-funding the GSFP with GoG, other GSFP strategic and technical partners implementing or supporting the implementation of school feeding programmes including CRS, WFP, SNV, WVI, ADRA, SEND, and donors like USAID supporting school feeding programmes and sectoral activities directly supporting school feeding (e.g. water, sanitation, school infrastructure, etc

4.5 Procurement Mechanisms of the GSFP

As stated above, the SIC was supposed to be procuring the foodstuffs but according to WFP (2007) because of lack of infrastructure and logistics to purchase the commodities at the beginning of the programme, new mechanisms have been put in place.

WFP (2007) identified three different procurement and implementation models which have emerged in regions and districts implementing the GSFP: the supplier model, the caterer model and the school-based model.

The supplier model is operated in the Northern Region WFP findings stated. With this module, suppliers are generally contracted to supply the food items to the schools. Under the contract, the supplier buys the food, delivers it to the beneficiary schools each week and submits invoices to the Assembly (DIC) for payment.

Another model identified by the WFP is either all the food items or parts of the food basket can be procured at the school level and cooked on site. The key element of the school-based model is its grass-roots decision-making process WFP (2007). Procuring and storing food is carried out at the school and community level, so it is the community which decides what to buy, when to buy and at what cost to buy it.WFP further states that the community is also responsible for overseeing cooking and the feeding of the children and therefore, there is no middleman and the system is more transparent and efficient. This model achieves the goal of buying home-grown food for the programme and creating a market for local small-scale farmers and has a direct link with local farmers, the community and school authorities WFP (2007). This model is also in line with the original programme concept. Community involvement is the key in the sustainability of the programme, as has been seen in other school feeding programmes WFP (2007).

The caterer model is been implemented in the Greater Accra Region and in the Kumasi Metropolitan Assembly of the Ashanti Region. Under this model, assemblies have contracted caterers who buy and cook food at central kitchens for a number of schools and present invoices to the assemblies for payment on a weekly basis WFP (2007). The caterers in this model procure and store the food (both perishable and non-perishable), cook it at a central kitchen (away from the school premises), deliver cooked food to the schools, dish the food to the school children and then leave the school premises. The menu they serve is planned with the district assemblies, school authorities and the community people. The WFP (2007) states that some advantages of this model are that:

- School authorities are free to concentrate on their academic work.
- The caterers are experienced professionals who are in a position to provide nutritious, balanced meals for the school children.
- Some of the caterers are said to be pre-financing their operations, which helps to address some of the problems associated with the delay in the release of funds.

CHAPTER FIVE

5. AGRICULTURE AND VEGETABLE PRODUCTION IN THE GREATER ACCRA REGION OF GHANA

Agriculture plays an important role in the economic development of Ghana. It employs about 48% of the total working population. Amankwaa (2000). Commercial agriculture is the cultivation of cash crops and rearing of livestock for both foreign and local markets. The food crops grown often include rice, cassava, plantain and maize and these crops are grown for sale Amankwaa (2000).

Urban cultivation in Accra is categorized into three farming systems on the basis of location. Household or home gardening, open or vacant-space cultivation and peri-urban cultivation. Household or home gardening takes place within and around homes, while vacant-space cultivation is done in open spaces, undeveloped community and residential lands, stream banks, road sides, reservations along drainage channels, wetlands, abandoned waste dumps, rights-of-way and airport buffers. Peri-urban cultivation takes place on lands just outside the built-up area of the city Asamani-Boateng (2002).

5.1 THE NATURE OF FARMING IN GHANA

The table below contains the farming systems of Ghana in general**.**

Box 1

The types of systems of farming in Ghana

S/N	Systems	Description
1	Compound garden	The lands surrounding the households are cultivated intensively year after year by using farmyard manure to maintain the soil fertility.
2	Bush Fallow	A parcel of land cultivated for a number of years is allowed to lie fallow for about 5-10 years to regain its fertility.
3	Mixed farming	The cultivation of crops in combination of keeping livestock. The livestock of mixed farming are housed and the dropping used as manure for the crops.
4	Plantation System	Large scale farming is established with a limited number of cash crops cultivated mainly for export or for the local industry.
5	Irrigation Farm	Water is pumped to areas of unreliable rainfall to allow continuous cultivation all year round.
6	Keta-Angloga System	Farmers do not depend on the rains and it is very intensive. Farmers use irrigation, application of organic manure (bat dropping, cow-dung and fish) and rotate their crops. Crops cultivated are mainly shallots and they are cultivated on raised beds of about 2 meteres by 18meters.The system is market oriented and is cultivated almost parallel to the coast line of Ghana.
7	Urban Agriculture	It is defined as the practice of farming within the boundaries of towns or cities. There are two main types of urban cultivation, enclosed cultivation and open-space cultivation or market gardening. Cultivating in the enclosed areas around residences is called enclosed cultivation and it is mainly for consumption. Open-space cultivation is used for any cultivation away from the individual's residence and is usually for sale.

Source: Amankwa (2000).

5.2 Market Gardening/ Open-space gardening

In this system Amankwa (2000) states that crops are cultivated mainly for sale on small raised beds in and around the urban centers and the cultivators are usually of lower socio-economic status, i.e., unskilled workers and/or formally unemployed. Most open-space cultivators do not know the owners of the land they cultivate because they cultivate any land that is currently unused. The author further states that many of the farmers are migrants from rural areas who already possess agricultural skills. The crops cultivated by farmers are mainly vegetables: examples are lettuce, cabbage, carrots, cucumber, cauliflower, onions, green pepper etc. 'Poultry farming can also go hand in hand with it' he said. According to Amankwa (2000), market gardening is becoming important in urban centers like Accra, Tema and Sekondi-Takoradi because the farmers have ready market for their produce and it is a ready source of fresh vegetables. Today, nearly all perishable vegetables consumed in Ghana's cities are also produced in their urban and peri-urban areas. Therefore it indicates that urban agriculture could be an important means of attaining a balanced local food supply. Apart from increasing food security through a direct supplement of households' food, urban agriculture in developing countries can also increase employment and income, which in turn, will enable people to purchase food to improve their diet or increase their general food security Obuobie et al (2006). The system described is practiced in the Greater Accra Region where Ga East is part of it.

5.3 Irrigated urban agriculture in Greater Accra

Accra is the capital city of Ghana and covers an area of about 230 to 240 km². Currently it has an estimated population of 1.66 million within its administrative boundary (Ghana Statistical Service (2002). Accra's population growth rate is about 3.4 % annually and about 60 percent of Accra's population lives in informal settlements or slums in the centre of the city while the middle and upper class moves to its periphery. Twum-Baah (2002). Accra lies within the coastal-savanna zone with low annual rainfall averaging 810 mm distributed over less than 80 days. The rainfall pattern of the city is bimodal with the major season falling between March and June, and a minor rainy season around October. Mean temperatures vary from 24 ºC in August to 28 ºC in March. Natural drainage systems in Accra include streams, ponds and lagoons (e.g., Songo, Korle and Kpeshie). Floodwater drains into gutters and often drain into the natural system, polluting heavily the lagoons and Accra's beaches Obuobi et al (2006). In Accra, about 680 ha are under maize cultivation, 47 ha under vegetables and 251 ha under mixed cereal-vegetable systems. Irrigated urban vegetable production takes place on more than seven larger sites. Obuobi et al (2006) an average of about 100 ha is estimated to be under vegetable irrigation in the dry season.

5.4 Who are the cultivators?

Male farmers predominate in urban food cultivation in Accra. Asomani Boateng (2002). Informal discussions with some male farmers and female traders revealed an underlying reason for this phenomenon, which reflect the traditional role of men and women in Ghanaian society, where women dominate in petty trading activities. Besides, in most places in Ghana, women do not farm by themselves but assist their husbands; therefore, it is quite uncommon for a woman to

farm by herself. The men also explained that farming in the city is very tedious and labour intensive, and requires a lot of attention; hence few women prefer to farm Asomani Boateng (2002).

The farms are located near streams and drains and vegetables grown are mainly exotics such as cauliflower, lettuce, cabbage, carrots, sweet peppers, French beans, peppers, beetroots and herbs. Indigenous vegetables grown included okra, peppers, tomatoes, eggplant, and green leafy vegetables like ademe, ayoyo, gboma, busanga. These are not grown purposely for sale but rather are staples for the gardeners, and cultivated for personal consumption, although any surplus is sold Asomani Boateng (2002).

Open space vegetable farming is mainly for commercial purposes and only farmers specialized in traditional (indigenous) vegetables consumes a part of their produce Obuobi et al (2006).

5.5 Land Use

Flynn-Dapaah, (2002) observed that most urban farming sites are on lands belonging to government institutions and departments and private developers who have not yet started constructing. Preferably, farming is done in reserved areas along streams and other water sources. Farmers normally do not pay for such land and only have an informal agreement with the landowner. As such there is no security of tenure as they are allowed to farm only as long as the owners do not need the land. According to Asomani Boateng (2002) finding land was the most common problem mentioned by farmers from the three farming systems. The land issue has many dimensions. The first is the lack of tenure or security regarding the land on which urban cultivators' farm. The absence of legal right to use the land has created fear among farmers that they could lose the land on which they farm at any time. Discussions with some farmers revealed that since they do not possess tenure rights to the plots on which they farm wealthy individuals have subjected them to threats of eviction. The result is that they have been unable to protect themselves and their farms from harassment from these individuals. The general perception among farmers was that they were likely to lose their land at any moment, and this fear is heightened by the practice of selling land that has gripped the city lately.

The author further stated that in general, as you move to the peri-urban areas, land tenure becomes more secure because land is owned under customary rights and distributed according to traditional regulations.

5.6 Sowing of seeds

According to Obeng et al (2005), the commonest methods the farmers use in cultivating their vegetables are sowing seeds directly or at stake. That is at a place where the seed will grow into a matured plant to bear fruits. e.g. French beans and sowing the seeds on seedbeds and planting it out e.g. cabbage. According to Obeng et al. (2005),

When cultivating the traditional vegetables, the farmers use their own savings from their garden. The gardener buys healthy looking fruits like pepper, tomatoes garden eggs to remove the seeds and process them for planting.

The farmers also source vegetable seeds from extension services division of the ministry of Agriculture and recognized seed dealers like AGRIMART Ghana. Ltd.

5.7 Marketing

The marketing of farm produce was reported as a major problem facing farmers, especially vegetable cultivators in the city. There are profound fluctuations in prices resulting from supply and demand inequalities. Usually, the market women who buy the majority of the produce offer ridiculously low farm gate prices, which are not commensurate with the effort of the farmers and, since they have no alternative, must reluctantly accept the low prices. Furthermore, by insisting on buying whole beds of vegetables, market women deny the farmers use of the beds until the crops are harvested. Most of the farmers have been putting pressure on the city authorities to grant them stalls at the various markets to sell directly to consumers.

5.8 Potential role of urban cultivation

In spite of problems facing urban cultivators in Accra, urban agriculture (vegetables) could play a critical role in the city's development. The issue of food security has been recognized as a major urban problem in Accra and a host of cities in Africa. With Accra's growing population, coupled with the inability of the rural areas to provide enough food to feed the Ghana's urban population, urban agriculture will become critical Asomani Boateng (2002

5.9 Irrigated vegetable farming sites in the Greater Accra Region

In Accra, there are about 800-1000 vegetable farmers of whom 60% produce exotic and 40% indigenous local or traditional vegetables. Some of the modern or exotic crops cultivated are lettuce, cabbage, spring onions, and cauliflower while the more traditional crops are tomatoes, okro, garden eggs and hot pepper. Plot sizes under cultivation in the city range between 0.01-0.02 ha per farmer, and max. 2.0 ha in peri-urban areas. The plot sizes of most of these sites have diminished over time because of land loss to estate development and widening of drains. This has led to reduced land reservations along the drains which used to be cultivated. An additional problem faced by farmers in relation to their farm size is tenure insecurity and low soil fertility Obuobi et al (2006). The following are some major vegetable growing areas in Accra:). Some vegetable farming sites in the Greater Accra Region are The ‘Marine drive’ near the independent square, The ‘Dwowolo plant pool’, ‘Haatso’ and ‘Shaishie’ sites and others.

CHAPTER SIX

6. Benefits for Local Farmers involved in GSFP

According to the Programme document GoG, GSFP AOP (2006)**,** one of the objectives of the GSFP is to help boost domestic food production which has an output as increasing income of the local farmers. To be able to achieve the objective, 2007 action targeted the purchasing of 80% of foodstuffs from local farmers.
The programme document states that the collaborating partners in charge of Agriculture in the Districts were to see to it that the local farmers benefit from the following in order to achieve the objective of boosting food production and subsequently, bringing about the increase in income of farmers.

6.1 Access to water

The GSFP AOP (2006) states that the farmers would get access to clean water for irrigation. In addition to that, potable water is necessary for smallholder producer to produce a clean and good quality vegetable product for the market as well as processing and value addition.

In Ahmed and Sharma (2004) analysis, that further, irrigation can substantially increase the vegetable cropping intensity in the dry season. The authors further stated that in their analysis the adoption of modern technology induced by the GSFP initiative and increased cropping intensity due to irrigation will result in a 30% increase.

6.2 Access to Market

The Local farmers expected to be linked to new markets. In recent years, small and medium holder farmers have been forced out of business because of limited market. This was found out by the United Nation World food Programme in collaboration with the Ghana Statistical Service and other partners Boohene (2009). In this response the GSFP has been urged by the government to create economic opportunities for small holder farmers in the community.

The collaborators were to promote small producers to reliable markets for their produce. The market being the GSFP should be linked to the local farmers in order for them to get ready market.
The government would support small producers by investing in marketing infrastructure. This includes supporting accessible telecommunication, maintain local and regional roads that are impassable the year round, supporting investment in domestic processing and storage, enhancing small producers ability to meet national and international product quality and safety standard .

6.3 Access to financial services and business development services

The policy makers would promote access to affordable financial services for small producers. It is noted that finance is a huge constraint, amongst others in terms of affordable credit in order to purchase inputs, micro insurance for harvests, savings schemes etc. All are equally crucial for

small holder farmer production and micro-and small enterprises. And to gain this financial promotion, farmers need to have capacity building scheme purposely addressing the capacity needs of small holder farmers, such as credit management, business and entrepreneurship skills and assist farmers to efficiently use the loan for the intended purposes and not for other family needs (which leads to defaulting)SEND GHANA (2009)

6.4 Access to extension services

Again, the collaborators provide useful efficient and expanded extension services for small producers. According to SEND GHANA, many rural farmers are unable to access extension programmes that provide them with the knowledge to use new technology. Programme such as those that encourage farmer exchange, to view and learn about new technologies and those that help with training and capacity building should be promoted. In addition, these programmes should aim to collect and disseminate information on best practices, using research that utilizes both modern and indigenous knowledge and is designed specifically for small holder farmer use SEND GHANA (2009) With the regular services gained from the Extension services it is assumed that cost of production becomes low therefore it is anticipated that the farmer would not be affected when prices are low

6.5 Promotion of research and innovation

Another beneficial policy would promote research that builds on the rich heritage of indigenous knowledge. SEND GHANA notes that when governments decide on new policies to address the concern of the small-holder agricultural producers and farmers, they often neglect to adequately take into account indigenous knowledge and skills. Therefore policies should be based on community needs that are assessed through careful and adequate consultations with small-holder farmers and producers. Policies would also promote the use of indigenous seed banking and education and encourages culturally based preservation. At the same time, policies should not in advance exclude modern agricultural research and technologies that could benefit African agriculture and small- producers SEND GHANA (2009)

6.6 Link between schools and the markets

The programme document also indicates that, there would be a link between the schools and the markets. The link creates a reciprocal relationship between the GSFP and the market. Parents and students who are enthusiastic about vegetables and its nutritive value would learn that the fresh fruit and vegetables are provided by local farmers who also sell at the markets. This creates a connection to the market and a desire to visit it, thereby increasing patronage and sales. In addition, creating this link helps build community, which is especially important for smallholder farmers' overall success. A goal is to increase local market opportunities by selling to the GSFP directly, but indirectly the community getting, interested, and bringing more people into the market venue.

Selling to the schools can be particularly important to socially disadvantage farmer.

The programme document and implementers think that farmers who are socially disadvantaged especially the uneducated would be able to interact with school authorities and implementers as they transact business. This encourages these farmers to expand their farms to get more income.

6.7 Regularity of its Demand preventing post-harvest losses

Another point is that demand is constant during the school year, therefore glut is not experienced and selling to schools by farmers will provide a consistent and secure customer base.
It is also believed that the regular purchase would bring a balance when prices are low at a particular time. So the loss would not be felt so much.

6.8 Diversification

The AOP (2006) stated that by involving farmers in the GSFP, they would be able to diversify. This is because the SFP would need different types of foodstuffs and farmers would be encouraged to go into the cultivation of the crops. The SFP needs farmers encouraged to diversify to produce crops that they were not producing but could be produced to support the SFP

The poor rural local households will be able to increase their incomes from the sales of their surplus foodstuff to the GSFP. Moreover, the increase in income will strengthen their capacity to purchase food for the lean season when food is in short supply and hunger is at its peak. Therefore the improvement in income brought about by creating a market by the GSFP for farm outputs are expected to favour poor rural households. The motivation of a ready market for the farmer will encourage the farmers to produce more from the increasing demand from the GSFP purchases.

6.9 The Actual Benefits of the Local Farmer on the Ground

From the fore going, it can be stated that the actual benefit of the local farmer involved in the GSFP are as follows:

- **Access to new markets**

Apart from the GSFP being their main sales outlet, the local farmers have been able to gain access to other markets that they have been introduced to by some implementers and school children who visit their farms.

- **Access to extension services and innovations**

The extension officers now visit them regularly to educate them on farm practices and on the introduction of new innovations.

- **Access to inputs**

The extension officers link the local farmers to where they are able to obtain the right inputs which are affordable for their farm work.

- **Regularity of demand and supply preventing glut on the market**

Due to the consistency in supply of the vegetables to the GSFP, almost all the produce harvested are bought, so the glut which sometimes affect them is much reduced. Some of the perishable vegetables which could be stored are bought and stored.

- **Farmers diversifying into other crops**

The local farmers have been able to diversify into crops that they were not cultivating previously but are being by used the GSFP. The farmers were previously cultivating mostly exotic vegetables like. Cabbage, Cucumber, Cauliflower, Lettuce and the like, now some have gone into the cultivation of the indigenous vegetables. These include ‘gboma’, ‘ayoyo’ (green leafy

vegetables for stews and soups) and spinach. This has brought extra income to the farmers due to the high demand of these indigenous vegetables by the GSFP.

CHAPTER SEVEN

7. RESULTS AND DISCUSSION OF BENEFITS OF LOCAL VEGETABLE FARMERS FROM THE GSFP

This study was conducted with the use of semi-structured interview to collect the data. The result are based on data from 24 respondents. The analysis of this research is descriptive. The results are used to find out some of the benefits the Ga East local vegetable farmers are gaining from the Ghana School feeding programme.

7.1 Caterers sourcing of foodstuffs

It was found out that the caterers sourced all their staple foodstuffs like maize, rice, beans, cassava dough, plantain and gari outside the locality. They had supplies from wholesale traders who served as middlemen because the staple foods are not produced in large quantities in the Ga East municipality. The two Caterers interviewed stated that even though they were conversant with the principles of the GSFP which states that the local farmers should be the source of their supply, what they could obtain from the Ga municipality and its periphery were only vegetables like okra, cabbage, carrot, garden eggs, leafy vegetables such as 'ayoyo' *Corchorus spp*. and 'gboma' from the local farmers at Haasto and Shiashie. They choose to buy the locally produced vegetables because of proximity, good price and quality of the vegetables. The vegetables were also cultivated with clean water. It was evident that so far as these conditions persisted they were willing to buy from the local farmers.

The Caterers also buy regularly from the farmers. Moneys are paid weekly in bulk to the farmers. They suggested that the schools should be zoned so that a few kitchens could cater for the whole municipality. This will make it more it more cost effective but the GSFP administration believes allocating the catering services to many caterers would make for efficient delivery and also avoid monopoly. They also suggested that farmers need to be organized so that they can produce in bulk to the kitchen There should be a centralized storage facility consisting of a large cold store room with a refrigeration facility that could store vegetables.

On the amount spent to feed one child per day, the caterers felt an increase on the Gh¢ 0.40(forty Ghana pesewas:30Eurocent) a day could be increased for a better service. Also delays in the payment for their services by GSFP often leads to late payment of vegetable bought from the farmers. Most of the time they pay cash to the local vegetable farmers but once a while when they are not able to pay due to lack of funds, the farmers' trust in them allow them to purchase on credit.

7.2 Planning and Monitoring

The menu is planned by the SIC by using the regional planned menu from the GSFP secretariat, which could be adjusted owing to the foodstuffs available in a particular area (see menu at the appendix 2). Foodstuff purchasing is done by the caterers who pre-finance, prepare and serve the school children. Refund of the amount spent is paid on weekly basis by the DIC as well as monitoring and constantly inspecting the food, kitchens, surroundings the cooks and the Caterers themselves

7.3 Traders in the GSFP

Another group of respondent, the traders, sourced their foodstuff directly from farmers. The trader was interviewed because the researcher would like to check whether the caterers were really procuring the vegetable from them or direct from the farmers at the farm gate. One commercial trader (market woman) who was interviewed on one of the farms mentioned that she had never sold her vegetables to any GSFP Caterer. After buying from the farmer, she sells her vegetables on the open market to individuals who buy in smaller quantities.

7.4 Local Vegetable farmers' awareness of the GSFP

The local vegetable farmers in the Ga Municipality and its immediate periphery (i.e. within 2 km off the boundary) know about the GSFP. They have particularly been oriented by the Ministry of Agricultural Municipal Directorate to the fact that the GSFP could be a ready market for them. Those already involved would wish that the existing relationship could continue, while those who are not yet involved wished they could sell to the GSFP now. Their main fear is how they will sell when schools go on recess. However those who sell to the GSFP still maintain the initial customers they were trading with. This has helped them to expand their areas of cultivation.

7.5 Land Use and Ownership

The farmers have an advantage on the land they occupy due to the fact that they have free use of the undeveloped Government land sites. They will be instructed to live when the land is needed in good time. Hence they need a land bank for long term cultivation and for longer security of land use. At Shaishie no agreement with the government institution who owns the land and could be ejected at any time, but with farmers who are on the Atomic Energy commission land, they have registered with them because the land would not be needed for a very long period.

7.6 Cost of Inputs and services

Only four out of the twenty farmer respondents had benefitted from some credit facilities from the banks. They would wish they could be assisted with obtaining credit facilities since their farmer base associations (FBOs) attempt to do so have failed in the past. Their FBO though not able to support them financially organizes workshops for them when there is the need. They also help each other on the farms when a farmer needs help in transplanting seedlings. There were plans by the Municipal Agriculture Directorate to dam the Onyansia stream to ensure continuous supply of clean water for irrigation. The extension service visits and helps them in any difficulties they face. When inputs like fertilizer was expensive, the farmers were given coupons to buy at a reduced rate. Manure is free but the transportation cost is high depending on where one could get it. Most of their inputs are bought from an Agricultural shop in Madina (about 2km) called AGRIMART which has inputs that are affordable. Labour is expensive- clearing a 3.65m by 3.65m costs about 5 Euro. Therefore most of the work is done with their family members to cut down cost of hire labour. The farmers also appreciated field trips which schools organize to their farms to learn about how to cultivate both the exotic and the indigenous vegetables.

7.7 Crops produced and crops supplied to GSFP

They produce mostly local and exotic vegetables such as Okra, garden eggs onion, cabbage, carrots, cauliflower and lettuce 'ayoyo' corchorus spp. and 'gboma'. A few of them produce some little quantity of maize. At times they supply according to the type of vegetables the GSFP demand. Below are some quantities of vegetables that are sold to the GSFP caterers.

Table 2:
Quantities of vegetables supplied to the GSFP per week

Vegetables	No of farmers	quantities	Cost GHc
cabbage	1	30pcs	45
carrots	1	½ bg	20
okra	4	2bgs	200
tomatoes	1	2boxes	200
gboma	4	2bgs	80
pepper	2	½ bg	40
lettuce	2	4bgs	10
Ayoyo	2	2bgs	60

7.8 The Extent of knowledge and Benefits of the Local farmers from the GSFP

Table 3 below shows the extent of knowledge the farmers have and their benefits. All the six local farmers who were involved and were interviewed said they had knowledge about the GSFP. The 6 local farmers who are involved in supplying vegetables to the GSFP have been able to expand their production to meet the demand of both the GSFP and the traders. The same group said transportation is not a problem since the caterers rather come to them for their purchases as compared to when they had to send them to the market to sell. 4 local farmers have been able to diversify into indigenous crops cultivation as requested by the GSFP. 5 farmers involved in the GSFP said they receive regular payments from the GSFP. 4 local farmers have been able to get access to new market avenues apart from the GSFP. This is because the Caterers, school children and other stakeholders have introduced them to other new points of sale. For example three of these farmers supply to nearby hotels. All the 6 local farmers have access to extension services from the Municipal Agriculture Directorate. They are visited regularly, educated and introduced to new innovations. The farmers are also linked to where they are able to get inputs that are affordable by the extension officers. Apart from one farmer who has had basic training in agriculture, the rest learnt farming through their daily practices. Most of them do not have basic education so do not keep records but they could see some improvement in their livelihood. Their estimated income per year from their vegetable production ranges from 500 Euros. to 2500 Euros per year. They are able to provide for their families, pay for rented accommodation and utilities and send their children to schools. 5 of the individual farmers have their children in private basic schools where they pay fees as compared to the fee free public schools. One of them had bought

a building plot and another has been able to build a two-room accommodation for his family. With the exception of one they have all bought equipment such as water-pumping machines for irrigating their farms at a minimum cost of about GHc450.00 (250 Euro) and other inputs like tools, pesticides and fertilizer.

Table 3
Knowledge and Benefit of GSFP to Involved Local Vegetable Farmers

Variable		Number
Knowledge of GSFP	Yes	6
	No	0
Source of knowledge	Electronic	
	Family friend	
	Extension Officer	6
	Seeing pupils being fed	4
Benefit from GSFP	Yes	6
	NO	0
How did you benefit	Food for children	2
	Increase in income	6
	Diversify	4
	Regular payment	5
	Access to market	6
	Extension services	6
	New market openings	4

7.9 Local Farmers who are not involved

The six local farmers who were not involved were interviewed. These farmers were interviewed because the researcher wanted to compare the livelihood of the local farmers who were involved with those who were not involved. The entire group of farmers wished they were part of it but had some reservations. Their fear is that, the GSFP being a government programme could be changed or stopped when there is a change of government. When the entire programme collapses they would lose all their investment.

Another fear is that, they do not trust the caterers' mode of payment when they purchase the vegetables on credit. Three farmers were not sure of the prices at which the caterers would buy their products.

Table 4 below shows the income and land sizes of the farmers who have not joined the GSFP as compared to Table 5 which shows the increase in income and expansion of the land sizes of farmers who are already in the GSFP.

Table 4
Land size and Income of farmers for non participant

NON GSFP FARMERS N1-N6	Land size Before	Land size After	Income before GHc/annum	Income after GHc /annum
N1	**1.0ha**	**1.0ha**	**2000.00**	**1800.00**
N2	**1.2ha**	**1.2ha**	**2000.00**	**1.600.00**
N3	**1.2ha**	**1.2ha**	**3000.00**	**2500.00**
N4	**1.0ha**	**1.0ha**	**1500.00**	**1200.00**
N5	**0.8ha**	**0.8ha**	**1500.00**	**1000.00**
N6	**0.4ha**	**0.4ha**	**1000.00**	**900.00**
Depending on Quantity Supplied to GSFP and Frequency of Production in a year.				

Source: Field survey

Table 5
Land size and vegetables produced before and during GSFP by participants

GSFP PARTICIPANT FARMERS. P1-P6	LAND SIZE BEFORE GSFP	LAND SIZE AFTER GSFP	INCOME BEFOFR GSFP GHC	INCOME AFTER GSFP GHC
P1	**0.6ha**	**1.0ha**	**1000.00**	**2000.00**
P2	**1.8ha**	**1.8ha**	**3000.00**	**5000.00**
P3	**0.8ha**	**1.2ha**	**2000.00**	**4000.00**
P4	**0.4ha**	**0.8ha**	**1500.00**	**3000.00**
P5	**1.2ha**	**1.6ha**	**3000.00**	**5000.00**
P6	**0.4ha**	**0.8ha**	**1000.00**	**1500.00**

Source: Field survey: participants and the land sizes before and during the GSFP. Almost all the farmers have their land sizes increased. Participant 2 is still maintaining the same land size but it could be noticed that his income has increased. This is because of good agricultural practices gained from extension services.

CHAPTER EIGHT

8. CONCLUSION AND RECOMMENDATIONS

In this chapter of the study some conclusions and recommendations have been out lined to show how the local farmers have benefited from the GSFP.

8 .1 Conclusions

It was found out that the caterers obtained the staple foodstuffs outside the Ga East Municipality but obtained almost all their vegetables from the local farmers. This was so because the staple foods are not produced in the Municipality or cannot be sourced in the quantities required by the GSFP.

It was evident from the study that the local vegetable farmers needed to be properly organized to be able to have a consistent supply of their vegetables to the GSFP.

The farmers know about the GSFP and willing to continue to supply the caterers so far as they are able to buy and pay regularly. This is because the vegetable are always fresh nutritious and of good quality.

It was also evident that the traders had a role to play in the GSFP because they served as middle men between farmers outside the locality and the GSFP caterers in the supply of foodstuffs

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The study showed that those who supplied vegetables to the GSFP were able to increase their production and earned higher income which consequently improved their livelihood.

The vegetable farmers always relied on free undeveloped government land which does not augur well for sustainable production as they lose the land to governmental developments. Therefore there is the need to secure a proper documented land for their farming activities. Access to credit by the local farmers was rather low; only 20 % of the respondents have succeeded in accessing credit facilities from financial institutions.

For the initial clearing of the land the hiring cost of private tractor and its equipment services, are so expensive that the use of it can increase cost of production.

The local farmers have benefited from the Agricultural Directorate who have been actively involved with the monitoring activities of the District Implementation Committee of the GSFP. This is an improvement on an earlier research conducted by SEND-Ghana (May 2009) where the Ministry of Agricultures' involvement was rated as very low by 91% of the beneficiary schools.

Activities of the Ministry were under taken without the GSFP in mind. The Directorate in the Ga East Municipality had actively oriented the vegetable farmers towards the GSFP through its regular extension services workshops.

Also, in collaboration with the Atomic Energy Commission and the Irrigation Development Authority the Agricultural Directorate has plans to dam a stream(the Onyanasia) to ensure the provision of regular clean water for irrigation purposes.

8.2 Recommendations

From the above conclusions, the following recommendations are suggested for improving and sustaining the benefit that local farmers will derive in their continuous production of vegetables for the survival of the GSFP.

It is recommended that:

- To make the programme more sustainable, the Purchase for Progress (P4P) strategy which was introduced by the WFP can be adopted for the vegetable growers in the Ga East Municipality. This strategy involves the buying of foodstuffs in bulk at places where food is in abundance and then sent to places where food is in short supply. This will help farmers to continuously cultivate their crops because they are sure it would be bought and on time. P4P could be introduced in District or in the Region.
- Another recommendation is that the Farmer Based Organization (FBO) of the local vegetable farmers could be reorganized and strengthened properly in order to qualify for credit facilities for their members to expand their farms. This could be done if their leaders would stand in as guarantors when accessing loans. Farmers could be asked to pay on daily or weekly basis.
- In addition the Agricultural Directorate could collaborate with the Municipality to allow the farmers to use the tools, equipment and inputs that are available at its recently acquired Pool at a much lower cost than the private commercial tractor services
- The collaborative efforts by the Atomic Energy Commission, The Municipal Agricultural Directorate and the Irrigation Authority to dam the Onyasia stream for the continuous supply of water all the year round to benefit the local vegetable farmers should be vigorously pursued by all the GSFP stakeholders for its realization. The project will ensure quality vegetable production all the year round.
- Due to the uncertainty surrounding the permanent ownership of land for vegetable production in this area, it is also proposed that the Ga East Municipal Assembly should acquire land banks for farmers who will lose their lands in future to ensure a continuous vegetable production in the Municipality. This could be linked with provision of land for the ongoing youth employment programme established by the Government of Ghana.. Currently, local vegetable farmers rely on free undeveloped government land which may not give them much security and benefit.
- Modalities of procurement of foodstuff from local farmers should be clearly laid out after various consultations with various stakeholder in the District.

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Though the current increases in food prices is due more to global processes, it is the idea of the Ghana School Feeding Programme to have higher food prices so farmers will be motivated to produce more. WFP (2009).

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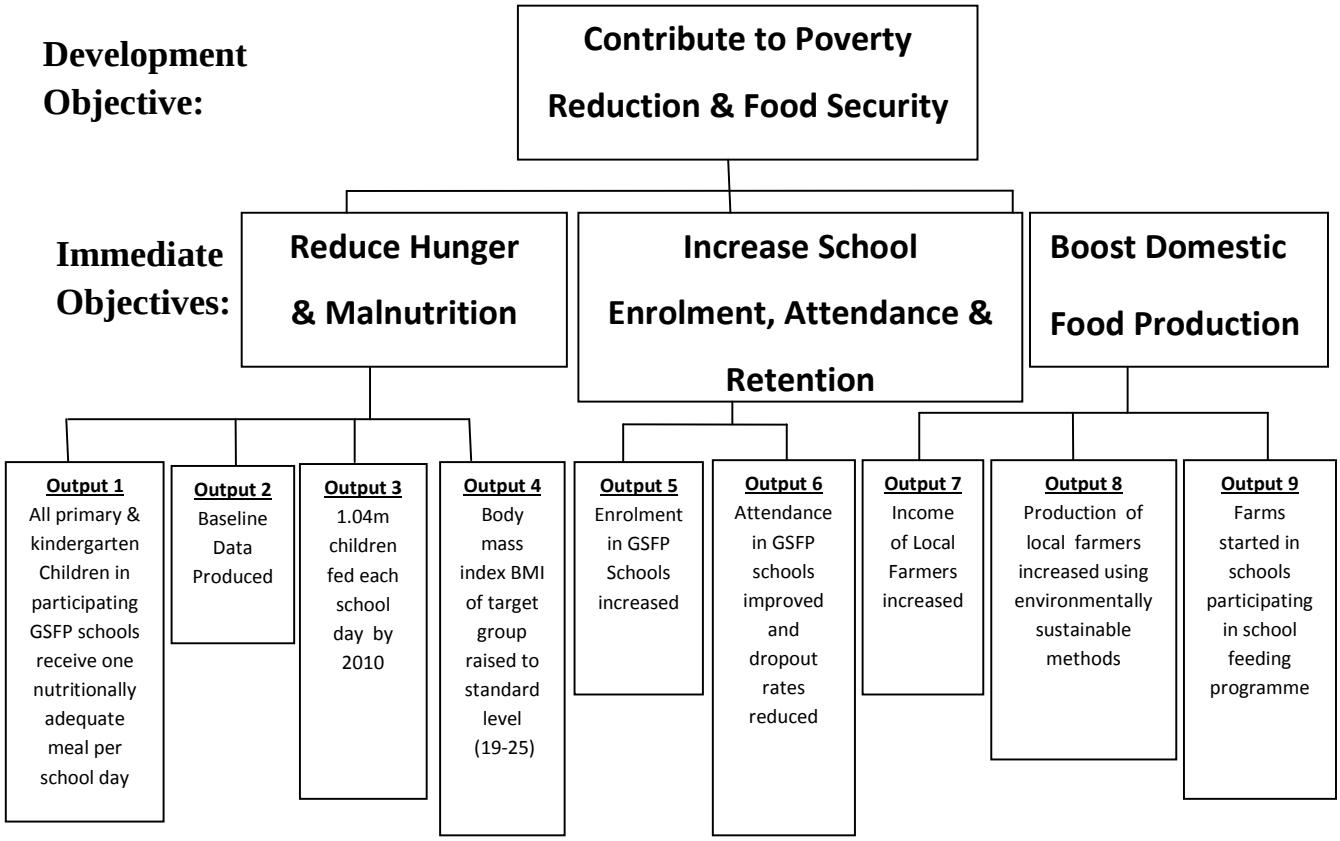
Appendix 1

Objectives and main outcome of the GSFP



Source: GoG (2006)

Appendix 2

SAMPLE OF

GHANA SCHOOL FEEDING PROGRAMME

MENU CHART

GREATER ACCRA REGION

MONDAY	TUESDY	WEDNESDAY	THURSDAY	FRIDAY
Groundnut/ Palmnut Soup with fish/Meat Banku/Omo Tuo or Tatale/ Rice+ Bambara Beans/ Black eye Beans	Palava Sauce with Soya Beans & Fish. Boiled Yam/ Plantain or Fried Fish & stew or Pepper with kenkey or rice.	Waakye with stew and boiled Egg or Beans stew with boiled egg. Gari & Fried plantain or Rice.	Garden Egg stew with fish/meat Boiled Yam/ Plantain/ Banku or Okra stew with fish/Meat. Banku or Kenkey	Nkontomire/Garde n-Egg stew with Boiled Egg. Boiled Yam/rice/ banku or Rice and Stew with Boiled Egg / Jollof rice

a. Menu is subject to changes depending on the availability of food items

b. All meals are to be accompanied with fresh fruits in season.

c. Available green leafy vegetables, 'Kwahu Nsosoa 'and Soya beans can be added to soups and stew because of their high nutritive value.

APPENDIX 3

Observation Checklist for Caterers

- Kitchen and storage facilities.
- Means of transport.
- Clues for attitudes towards the GSFP.
- Kind of food cooked for the schools.
- The nature of the relationship between the schools and the catering providers.
- Quantities and quality of vegetables they buy from the local farmers

Observation Checklist for local farmers

- What is the source and quality of the water used in irrigating the farms?
- What equipment and tools are used?
- Any clues to the attitude of the farmer to the GSFP?
- Proximity of access road to the farm?
- The qualities of the farm produce?
- The inter-personal relationship among farmers?

APPENDIX 4 PICTURES DURING DATA COLLECTION

1.Inauguration of SICs in the Ga East Municipality

2. Focus group being interviewed

3.A Participant Local farmer in his 'Ayoyo farm' weeds

4. Local Okra farmer controlling

5.Local farmer irrigating his okra farm

6. Local farmer transplanting Onions

7. School children being served their meals in the Ga East Municipality