POTENTIAL FOR THE CONSUMPTION OF ORGANIC/GREEN FRUITS AND VEGETABLES AMONG MIDDLE CLASS CONSUMERS IN BOLGATANGA

AMANDA STURGEOUN

(VOLUNTERY SERVICES OVERSEAS)

AND

GERARD AGANA

(COALITION FOR THE ADVANCEMENT OF ORGANIC FARMING)

Abstract

Following the quest of the Coalition for the Advancement of Organic farming (CAOF) and its partners to promote healthy consumption of fruits and vegetables in the country, several surveys have been conducted to ensure the feasibility of their organic/green market project.

This report is part of such surveys and targets the middle income consumers of fruits and vegetables in the Bolgatanga municipality and its environs. It takes a look at the types of fruits and vegetables that such consumers require of the market, their knowledge of organic/green products, willingness to pay a premium for such products and how they want to access those products.

Questionnaires where used to illicit responses from respondents and the data analysed using the statistical package for social scientists. It was found out that there was demand for organic/green products and consumers of the products were willing to pay a premium for it.

Key Words: Organic/green, Fruits and Vegetables, Middle Income Consumers, Market

Potential for the Consumption of Organic/Green Fruits and Vegetables among Middle Class Consumers in Bolgatanga

1.0 INTRODUCTION

Fruit and vegetables are important components of a healthy diet, and their sufficient daily consumption could help prevent major diseases, such as cardiovascular diseases and certain cancers. Approximately 16.0 million (1.0%) disability adjusted life years (DALYs, a measure of the potential life lost due to premature mortality and the years of productive life lost due to disability) and 1.7 million (2.8%) of deaths worldwide are attributable to low fruit and vegetable consumption.

Moreover, insufficient intake of fruit and vegetables is estimated to cause around 14% of gastrointestinal cancer deaths, about 11% of ischaemic heart disease deaths and about 9% of stroke deaths globally. (http://www.who.int/dietphysicalactivity/fruit/en/)

A recently published WHO/FAO report recommends a minimum of 400g of fruit and vegetables per day (excluding potatoes and other starchy tubers) for the prevention of chronic diseases such as heart disease, cancer, diabetes and obesity, as well as for the prevention and alleviation of several micronutrient deficiencies, especially in less developed countries.

Organic foods are foods produced by methods that comply with the standards of organic farming. Standards vary worldwide; however, organic farming in general, features practices that strive to foster cycling of resources, promote ecological balance, and conserve biodiversity. Organizations regulating organic products may choose to restrict the use of certain pesticides and fertilizers in farming. In general, organic foods are also usually not processed using irradiation, industrial solvents or synthetic food additives. (Wikipedea)

The Coalition for the Advancement of Organic Farming (CAOF) is a network of NGOs, Institutions and Private Organizations operating in the northern parts of Ghana. It was formed in 2009/2010 and it's registered with the registrar Generals Department according to Ghanaian law. The coalition has been working with the Ghana Grows Organic Consortium made up of Christian Aid Ghana, Concern Universal Ghana and Voluntary Service Overseas Ghana to help promote organic farming in Ghana.

2.0 BACKGROUND OF THE STUDY

Many surveys have been conducted by CAOF and its partners on the feasibility or otherwise of a domestic market for organic/green fruits and vegetables in the country. Results from a survey conducted late in 2010 indicated that customers in the two main supermarkets of Accra would be interested in organic produce being on the shelves. Many shoppers were aware of the growth of organic in the international market and they would like to have the same choice on the domestic market.

A Business Survey was also carried out in June 2011 for Ghana Grows Organic (GGO). The same questions were used. It focused on the top end hotels and restaurants in Accra. So although the survey was positive for buying local and supporting GGO objectives, this would have meant transporting goods from the north to the south of Ghana to supply the Accra market. Given the lack of budget to support this transportation, it was decided that the market in Bolgatanga be looked at initially and see whether a local initiative there would work.

In October, 2013 another survey was conducted by CAOF with nine hotels and restaurants at the top end of the hospitality market in Bolga. This survey came out with the findings that hotels and restaurants in Bolgatanga would be interested in purchasing organic/green produce from a designated stall in the local market. Price increases could be tolerated by some of the hotels and restaurants but most were very price sensitive. Confidence in what they are buying and knowing the source of the produce was important and given that consumers and catering outlets were becoming more aware of health issues related to their diet. It was also found that Government support for the initiative was very important.

To further explore the possibility of a market for organic/green fruits and vegetables in the Bolgatanga municipal, this survey was conducted in September, 2014 on the potential customers who might use the Green Market. This was to justify market demand and inform the pilot project in Bolgatanga to ensure that it will be possible to replicate the model in other areas and scale it up.

3.0 OBJECTIVES OF THE SURVEY

The main objective of this survey was to find out the market demand for organic/green fruits and vegetables among middle income consumers in the municipality.

Specific objectives include the following;

1. To find out the types of fruits and vegetables that potetial consumers will like to purchase from the market
2. To find out the level of awareness of consumers on organic/green fruits and vegetables production and consumption
3. To find out the willingness of consumers to pay for organic/green fruits and vegetables
4. To idenfy consumer’s preference of organic/green fruits and vegetables sale points.

4.0 METHODOLOGY

The survey took data from both primary and secondary sources but the primary sources where key to the survey report. The primary sources of data were from consumers of middle income status of the society. These consumers were drawn from larger clients such as the

Departments of Health as per caterers for hospitals and Education in terms of the school feeding programme and the feeding of second cycle schools. Individual customers at larger employers in Bolgatanga such the Ministries, departments and agencies were also interviewed. The data was gathered with a structured questionnaire with closed ended questions, in some cases the questionaire was self administered and others were given out to individuals to answer and return.

The caterers in schools, hospitals and the school feeding program were purposefully sampled based on their job positions and ability to provide the needed information. However, the individuals were randomly chosen. A total of 115 people participated in the survey. The data was analysed using the Statistical Package for Social Scientists (SPSS) and presented in the form of tables and charts where appropriet.

5.0 POTENTIAL CONSUMPTION PARTERNS OF MIDDLE INCOME CONSUMERS

5.1 DEMORGRAPHIC CHARACTERISTICS OF RESPONDENTS

The survey respondents were made up of more males than females and the ages were between less than 25 years to 64 years. However the majority of respondents were aged between 25 and 44 representing 66.9%. Male participants represented 53.9% while that of female participants accounted for 46.1%. Table 5.1 below represents a cross tab count of age and gender.

Table 5.1 cross count of gender and age of respondents

Gender of respondent * Age of respondent Crosstabulation

Count

		Age of respondent					
		less than 25 years	25 to 34	35 to 44	45 to 54	55 to 64	Total
Gender of respondent	Male	1	19	24	12	6	62
	Female	11	26	8	6	2	53
Total		12	45	32	18	8	115

5.2 FRUITS AND VEGETABLES OF POTENTIAL CONSUMERS

Participants were given a list of fruits and vegetables that they will usually buy for consumption. These included tomatoes, watermelon, sweet pepper, carrots, cabbage, onions, cucumber, squash, okro, chillies, garden eggs, aubergines, mangoes, oranges, avocado, pineapple, banana and pawpaw. There was also an option for participants to add more to the list and only two vegetables of indegeneous consumption roselle (Bito) and bean leafs was added. Most participants (56.5%) were buying all the fruits and vegetables except cucumber, aubergines and squash. Another 39.1% will buy all except aubergines and squash. Participants were however of the view that they will buy organic/green fruits and vegetables in the same order as their normal purchases. Below is a table of preferences of consumers.

Table 5.2 Preferences of fruits and vegetables of potential consumers

Types of fruits and vegetables usually bought

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	All	2	1.7	1.7	1.7
	all except cucumber, squash &aubergines	65	56.5	56.5	58.3
	all except squash	1	.9	.9	59.1
	all except aubergines	2	1.7	1.7	60.9
	all except squash and aubergines	45	39.1	39.1	100.0
	Total	115	100.0	100.0	

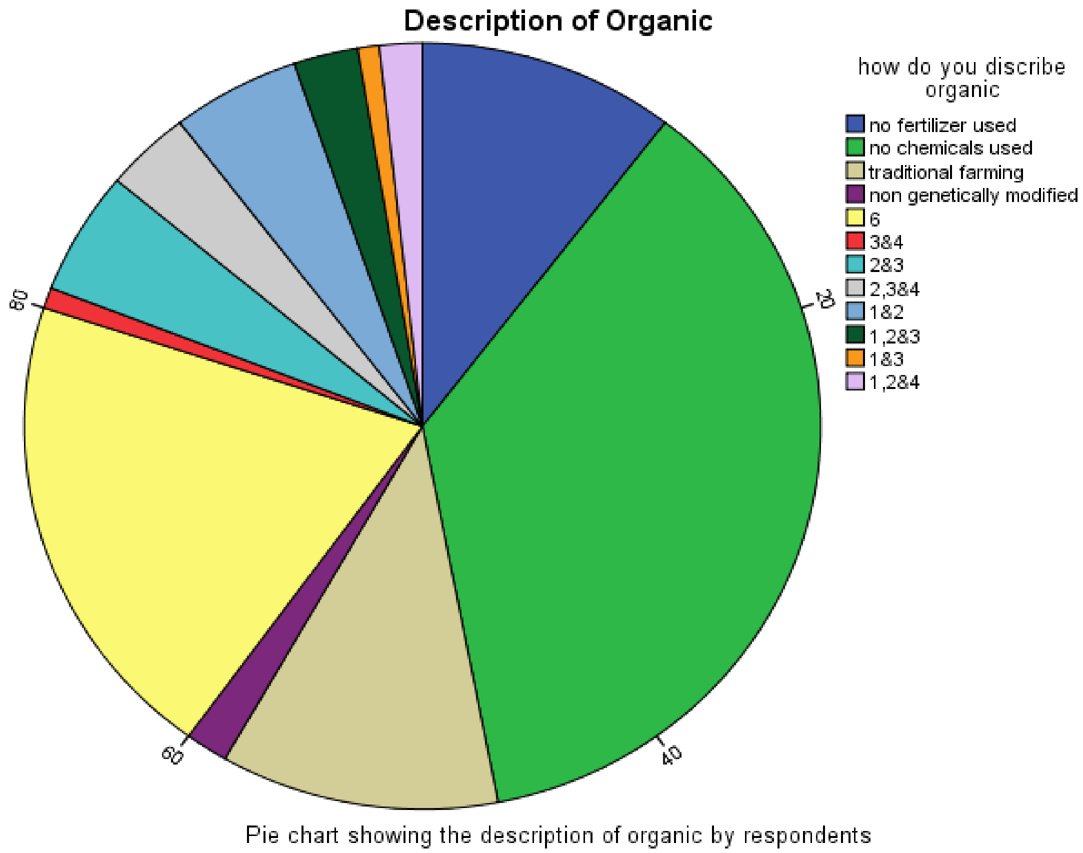
Note: All as seen on the table means all the listed fruits and vegetables in the questinaire

On the reasons for deciding to purchase the said fruits and vegetables, 35.7% cited healthy consumption, 26.1% said it was an important part of their daily diet and 15.7% chose both reasons for their consumption. However 7.8% just liked to consume fruits and vegetables. The rest of the 14.7% shared between all the three reasons, combinations of liking it and the other two reasons and other reasons which stangely were not given.

5.3 ORGANIC/GREEN AWARENESS

Opon first value case of understanding of organic, over 90% of participants (90.4%) answered yes to knowing what organic was and 9.6% said no to the question. However upon further exploration of what organic was there was mixed reactions to the discription of organic. The chart below shows how respondents described organic.

Figure 5.1: Description of organic by respondents



Note 1 represents no fertilizer used, 2,3 and 4 follow in decending order

The majority of the respondents (36.5%) saw organic as the non-use of chemicals while 20% of respondents (Represented by 6 in the Key) saw it as a combination of all four definitions.

5.4 PATRONAGE OF ORGANIC/GREEN FRUITS AND VEGETABLES

The consumers generally bought their fruits and vegetables from the market square. Out of the total number interviewed (115), 74.8% bought from the open market, 8.7% from a combination of open market and hawkers. Fruits and vegetables stores accounted for 6.1% but hawkers and supermarkets got 0.9% each of the customers interviewed.

Consumers of fruits and vegetables were ready to buy organic/green fruits and vegetables at a higher price but cited expensive, limited availability and other factors as the reasons why they won't buy organic/green. However respondents had a clear understanding of the benefits of consuming organic/green fruits and vegetables as responses spread across the various reasons and all possible combinations. The Tables that follow will give you the frequencies of consumers' willingness to patronize organic/green fruits and vegetables.

Table 5.3 Consumers interest in buying organic/green fruits and vegetables

are you interested in buying organic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	105	91.3	91.3	91.3
	no	7	6.1	6.1	97.4
	don't know	3	2.6	2.6	100.0
	Total	115	100.0	100.0	

Table 5.4 Reasons why consumers will not buy organic/green fruits and vegetables

Reason not to buy organic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	too expensive	13	11.3	11.3	11.3
	don't see any advantage	2	1.7	1.7	13.0
	quality does not meet my requirements	3	2.6	2.6	15.7
	limitted availability	22	19.1	19.1	34.8
	other	68	59.1	59.1	93.9
	1&4	5	4.3	4.3	98.3
	2&3	1	.9	.9	99.1
	14.00	1	.9	.9	100.0
	Total	115	100.0	100.0	

Note: Other (59.1%) is as a result of the question being cancelled at some point in the work

Table 5.5 Reasons why consumers will buy organic/green fruits and vegetables

what would be your reason to buy organic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	healthier to consume	34	29.6	29.6	29.6
	keeps longer	2	1.7	1.7	31.3
	better taste	7	6.1	6.1	37.4
	producers health and safety	5	4.3	4.3	41.7
	better for environment	2	1.7	1.7	43.5
	all above	11	9.6	9.6	53.0
	1 and 2	13	11.3	11.3	64.3
	1 and 3	13	11.3	11.3	75.7
	1 and 4	1	.9	.9	76.5
	1 and 5	1	.9	.9	77.4
	1,2 &3	13	11.3	11.3	88.7
	2&3	4	3.5	3.5	92.2
	1,2,3&4	3	2.6	2.6	94.8
	1,3&4	4	3.5	3.5	98.3
	1,3&5	2	1.7	1.7	100.0
	Total	115	100.0	100.0	

Table 5.6/7 Consumers' willingness to pay higher Prices

would you pay a higher price for organic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	95	82.6	82.6	82.6
	no	20	17.4	17.4	100.0
	Total	115	100.0	100.0	

If yes how much more

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5% more	40	34.8	34.8	34.8
	6-10% more	43	37.4	37.4	72.2
	11-15% more	8	7.0	7.0	79.1
	16% or more	24	20.9	20.9	100.0
	Total	115	100.0	100.0	

5.5 LOCATION OF FRUITS AND VEGETABLES STORE

Results from the survey shows that 74.8% of respondents wanted a special store for the sale of organic/green fruits and vegetables. They wanted this store to be located in the market

(50.4% of respondents) and were only willing to walk less than 15 minutes to the store. A summary of the findings are presented below on Table 5.8 to 5.10.

Table 5.8 Willingness of Consumers to buy from a special outlet/store

would you be willing to go to a special organic market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	86	74.8	74.8	74.8
	no	29	25.2	25.2	100.0
	Total	115	100.0	100.0	

Table 5.9 Where organic/green should be sold

where would you expect green to be sold

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	market	58	50.4	50.4	50.4
	fruit and vegetable stall	5	4.3	4.3	54.8
	street hawkers	1	.9	.9	55.7
	special organic shop	22	19.1	19.1	74.8
	other	4	3.5	3.5	78.3
	1&5	4	3.5	3.5	81.7
	1,2&5	6	5.2	5.2	87.0
	2&5	2	1.7	1.7	88.7
	1&2	1	.9	.9	89.6
	2&4	1	.9	.9	90.4
	1&3	2	1.7	1.7	92.2
	1,2,3&4	3	2.6	2.6	94.8
	all	4	3.5	3.5	98.3
	4&5	2	1.7	1.7	100.0
	Total	115	100.0	100.0	

Table 5.10 Length of time to walk to organic/green store

how long are you willing to walk

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 15 minutes	62	53.9	53.9	53.9
	15-29 minutes	33	28.7	28.7	82.6
	30-44 minutes	7	6.1	6.1	88.7
	45-59 minutes	8	7.0	7.0	95.7
	1 hour or more	5	4.3	4.3	100.0
	Total	115	100.0	100.0	

6.0 SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

In conclusion, the responses show that there is market for organic/green fruits and vegetables from the middle class in Bolgatanga and its environs. It therefore beholds on CAOF to put the necessary structures in place to facilitate the establishment of the market.

6.1 SUMMARY OF FINDINGS

The findings in this research can be summarized as follows;

- The key consumers of the fruits and vegetables within the middle income class are between the ages 25 and 44 years. Majority of which are male (normally bread winners of families)
- Consumers will buy all the fruits and vegetables that are known locally to them than those that are a bit foreign and unknown to them as a result some even added local fruits and vegetables that were not added to the research questionnaire
- They also contended that whether organic/green or conventionally produced, these fruits and vegetables should be sold in the market.
- That specialized stores in the market was the best for the sale of green organic fruits and vegetables
- The walking distance to the store should be less than 15 minutes and should at worse not be above a 30 minutes' walk.
- Respondents are aware of the benefits of consuming organic/green fruits and vegetables but had little knowledge of what organic/green production was all about.
- Consumers were willing to buy organic fruits and vegetables at a premium price but cited limited availability and other factors that might make it too expensive for them.
- They were ready to pay up to 10% more for organic fruits and vegetables.

6.2 RECOMMENDATIONS

The survey shows that there is demand for organic fruits and vegetables in the Bolgatanga area; it is therefore recommended that CAOF should explore further the cost-benefit analysis of facilitating the setting up of a special store/outlet. In addition CAOF and its partners should do the following;

1. Marketing strategies for such a store should target the population of ages between 20 to 45 years
2. More fruits and vegetables with familiarity and usefulness to the local consumer should be stocked in such a store
3. A central store should be located at the Bolgatanga Central Market, with satellite stores at vantage points to serve the needs of customers.
4. Education should be provided to the consuming public on what organic/green products are, the benefits involved and the dangers of consuming conventional fruits and vegetables.
5. Price premiums at the store should not exceed 10% of the ruling market price at any particular time.

6.3 CONCLUSION

CAOF and its partners should take a further look at the crops being produced in the area, the cost involved in production, the role of various actors involved in the value chain, the economic and social constraints in the value chain and undertake the cost benefit analysis before setting up the store. Some further research is therefore needed.