Status of Organic Agriculture in Ghana: A Survey of Consumers, Producers, and Marketers

By

Yaw Bonsu Osei-Asare (PhD)[1]

An FAO/GOAN/MOFA PROJECT ON ORGANIC AND FAIR-TRADE EXPORTS FROM AFRICA

[1] The consultant is an Agricultural Economists and a lecturer at the Department of Agricultural Economics and Agribusiness, University of Ghana, Legon, Accra, Ghana

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1. INTRODUCTION

What is organic agriculture? For many, especially policy-makers in developing countries, organic agriculture are a set of strict rules and complicated practices that allow marketing of certified food products (Nadia, 2000). The FAO/WHO Codex Alimentarius Commission (1999) defines organic agriculture as a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. It emphasizes the use of management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adapted systems.

Although traditional farming which applies soil-building practices and no synthetic inputs qualifies as "organic", it is not usually considered as such when discussing the present status, potential for development, and related policy support of organic agriculture. Meanwhile, it is well documented that African agriculture is largely characterized by very low level of input use and low take ups of Green Revolution technologies. Hence, it is sometimes claimed that most farming in Africa is already de facto organic. This situation is no different in Ghana. Traditional farming in Ghana can be deemed organic by default simply because it does not use synthetic agriculture inputs or soil-building practices. In addition, such systems fail to meet food security needs or to protect the fragile environments of the continent largely due to the unsustainable ways of managing the environment and the predominantly subsistence nature of farming. However, where conversion to organic farming has been fully achieved, economic and viable yields are attained.

In Africa and for that matter Ghana, organic farming can be classified into two different levels based on certification: certified organic production and non-certified or agro-ecological farming. Products destined for export beyond Africa's shores mostly require certification. However, local markets for certified organic products are also growing especially in Egypt, South Africa, Uganda, Kenya and Tanzania. Meanwhile, the relatively underdeveloped organic sector in Ghana rarely certifies organic products due to numerous obstacles and hindrances. Nevertheless, a vast majority of farms in Ghana practice organic farming by default. An important motivating factor for organic production in the country is the high

demand for organic product in the industrialized countries. It is estimated that about 19,132 hectares of land are under organic cultivation, which accounts for 0.13 % of the total agricultural area in Ghana (IFOAM & FiBL 2006). This farming practice is mainly private sector led, with the existence of large scale organic farms with or without out growers and mostly funded and or managed by expatriates. Local entrepreneurs are also into small to medium scale organic production/exports mostly with funding from expatriate source. Other smaller farmers also serve as out growers for exporters. The activities of these farmers are mostly funded or supported by the exporters. Very few of the organic produce grown in the country are sent onto the domestic market.

Studies suggest the growing interest in organic agriculture in developing countries because it requires less financial input and places more reliance on the natural and human resources available. It therefore seem to indicate that organic agriculture offers a comparative advantage in areas with less rainfall and relatively low natural soil fertility levels, realising a good return on labour and this is very important where paid labour is almost non- existent. Organic agriculture does not need costly investments in irrigation, energy and external inputs but rather substantial investments in capacity-building through research and training. The foregoing suggests that organic agriculture has prospects when given due attention. Information regarding organic agriculture in Ghana is difficult to come by except for various development partners involved in organic agriculture that have pieces of information on the aspects of their emphasis. At this stage in Ghana's quest to modernise agriculture for increased productivity growth and poverty reduction, it is therefore expedient to investigate the situation that pertains with regards to organic agriculture. What is therefore the status of organic agriculture in Ghana? Are consumers and sellers of agricultural produce/products aware of organically produced crops or products in Ghana? If yes, do they consume or prefer organic products to the conventional ones? What informs consumer preferences for organic products over conventional ones and what product attributes do they look out for? Is there high demand for organic products in Ghana?

This study attempts to address these relevant questions raised to give more insights into the little that is known of organic agriculture as it does not constitute part of the mainstream agricultural practice. All along, the private sector has been the one promoting organic

agriculture and other related issues and these efforts are being supported by the FAO to get organic agriculture embedded in the traditional production lines in Ghana.

2. RESEARCH AIM & OBJECTIVE

Based on the foregoing, the aim of this study or survey is to establish database centres in Accra and Kumasi that will serve as a platform for the Ministry of Food and Agriculture (MOFA) especially and other interested parties and stakeholders to access information on organic agriculture in Ghana mainly for purposes of planning and policy intervention in the areas of (fair) trade, agricultural planning and development policy. Ghana, like many other developing countries, has the agricultural sector playing a dominant role in the provision of food, employment and supply of raw materials to industries.

The main objective of the FAO/MOFA and the Ghana Organic Agriculture Network (GOAN) project is to conduct producer, consumer, and market survey in Ghana to:

1. Establish a baseline database that will comprise production, marketing, and consumption profiles of organic products in Ghana,
2. Establish the demand for organic products in Ghana, and
3. Identify areas of intervention and focus for stakeholder participation in the overall promotion of organic agriculture in Ghana.

3. RESEARCH METHODOLOGY

3.1. Data Collection Methods and Sampling Approach

In order to ensure that results from the survey were reliable and statistical inferences drawn to make a case for the state of organic agriculture in Ghana, the need for a statistically representative sample was very paramount. Thus, a sound approach to sampling and data collection becomes a key factor in the process of coming out with good information for a sound database.

For the purposes of taking a representative sample nationwide, the country was therefore stratified into three zones based on similarities in the agro-ecology: Northern zone (comprising Northern, Upper East, and Upper West regions), Middle Zone (Brong Ahafo, Ashanti, and Eastern regions), and Southern Zone (Western, Central, Volta, and Greater Accra regions). All the ten administrative regions of Ghana were purposively selected, except

the Upper East and Upper West Regions in the Northern zone mainly because of time and financial constraints. The survey respondents were stratified or grouped into three categories: producers, consumers, and traders/marketers of organic products and their sampling also took into consideration similar factors, in addition to the interest of the major stakeholders, such as FAO, MOFA, and GOAN. Since GOAN has a list of about 15 commercially oriented farmers who are known to produce organically, it served as a starting point for sampling purposes and were all purposively included in the survey. The snowballing sampling approach was employed to reach out to the possibly few identified small-scale producers of organic products.

In certain instances such as this, FAO's interest in knowing the state of organic agriculture in certain regions and areas it deems appropriate suggest that such regions/areas should be purposively sampled. Coincidently, these regions represent some of the major potential consumption, marketing, and producing centres of organic products in the country. These towns, which include Accra, Cape Coast, and Sekondi/Takoradi (Southern zone), Kumasi (Middle zone), and Tamale (Northern zone), are included as part of the towns/regions selected for surveying. Other regions/towns purposively selected based on the above criteria and also on the concentration of potential producers, marketers, and consumers include Sunyani, Techiman, Koforidua, Tafo, Offinso, and Nkawkaw (Middle zone), and Tema and Agbozome (Southern zone). Simple random sampling was employed to select the individual categories of respondents in the identified towns and regions.

Sample size

Due to time and financial reasons, the survey envisaged interviewing at least 200 respondents across the 8 regions in Ghana. Large- and small-scale producers (potential and actual) of organic products were targeted. Supermarkets, open (way side) shops and grocery shops constitute the traders or marketers group whilst the consumer group was subdivided into institutions, hotels/restaurants/fast-food joints (hospitality industry), and households. The breakdown of sample size by region was undertaken using the proportional to size approach. Thus, locations or towns with larger populations had more respondents sampled from that location. In the absence of a complete list of consumers, producers, and traders of organic products in each region or town, the estimated population of each town (and not region) is used as a rough measure to determine the sample size per region.

3.2. Questionnaire Design and Pre-Testing

Three sets of questionnaires (one for each of the three categories of respondents) were designed and the questionnaires pre-tested on a very small sample of respondents by all the field assistants (or interviewers) who are university graduates recruited from the regional capitals. One day training session was organised for these field assistants to get them understand what the whole project was about, the importance of meeting the project objectives, and most importantly, to fully understand the import of the questions contained in the questionnaire. This training session was relevant as it has implications on the quality and reliability of the survey results. The pre-testing was done after the training sessions and based on the feedback from the pretesting, some questions were rephrased and others deleted accordingly to give better understanding to the respondent. All the field assistants had some level of experience with questionnaire administration.

4. RESULTS AND DISCUSSIONS

Survey results are presented in this section by first showing the distribution of respondents across administrative regions and district and by category (i.e., producers, marketers, and consumers). Socioeconomic background information of respondents are then presented, followed by topical issues relating to awareness of and preference for organic products/produce, demand for and market availability of organic products, organic product pricing, and then on aspects of production practices by farmers are further discussed.

4.1. Distribution of Respondents by Region and Category

The survey sampled three different categories of respondents and these consists of 202 producers (29.4%), 167 marketers (24.3%), and 319 consumers (46.3%) from eight of the ten regions in Ghana (excluding the Upper West and Upper East regions). In all, a total of 688 respondents were sampled from a total of 33 Metropolitan, Municipal, and District (MMD) Assemblies. These covered 6 metropolises, 7 municipalities, and 20 districts (see Table 4.1 for more details).

Table 4.1 Respondents by Region, District & Category

REGION AND DISTRICT	Producers		Marketers		Consumers		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
GREATER ACCRA REGION								
Accra Metropolitan	4	28.6	15	100.0	52	98.1	71	86.59
Dangme District	6	42.9	0	0.0	0	0.0	6	7.32
Ga East District	4	28.6	0	0.0	1	1.9	5	6.09
Total	**14**	**100.0**	**15**	**100.0**	**53**	**100.0**	**82**	**100.0**
VOLTA REGION								
North Tongu District	8	57.1	3	50.0	6	35.3	17	45.95
Ketu South District	6	42.9	3	50.0	11	64.7	20	54.05
Total	**14**	**100.0**	**6**	**100.0**	**17**	**100.0**	**37**	**100.0**
CENTRAL REGION								
Assin North Municipality	13	100.0	3	30.0	0	0.0	16	32.65
Cape Coast Metropolitan			7	70.0	26	100.0	33	67.35
Total	**13**	**100**	**10**	**100.0**	**26**	**100.0**	**49**	**100.0**
BRONG – AHAFO REGION								
Sunyani Metropolitan	14	35.0	12	27.8	23	42.6	49	35.77
Tano North District	12	30.0	11	25.6	11	20.4	34	24.82
Wenhi Municipal	9	22.5	11	25.6	10	18.5	30	21.89
Sunyani West District	0	0.0	3	7.0	2	3.7	5	3.65
Asutifi District	5	12.5	6	14.0	8	14.8	19	13.87
Total	**40**	**100.0**	**43**	**100**	**54**	**100.0**	**137**	**100.0**
ASHANTI REGION								
Kumasi Metropolitan	14	29.2	28	73.7	68	85.0	110	66.27
Offinso Municipal	34	70.8	10	26.3	10	12.5	54	32.53
Atwima Nwabiagya District	0	0.0		0.0	2	2.5	2	1.20
Total	**48**	**100.0**	**38**	**100.0**	**80**	**100.0**	**166**	**100.0**

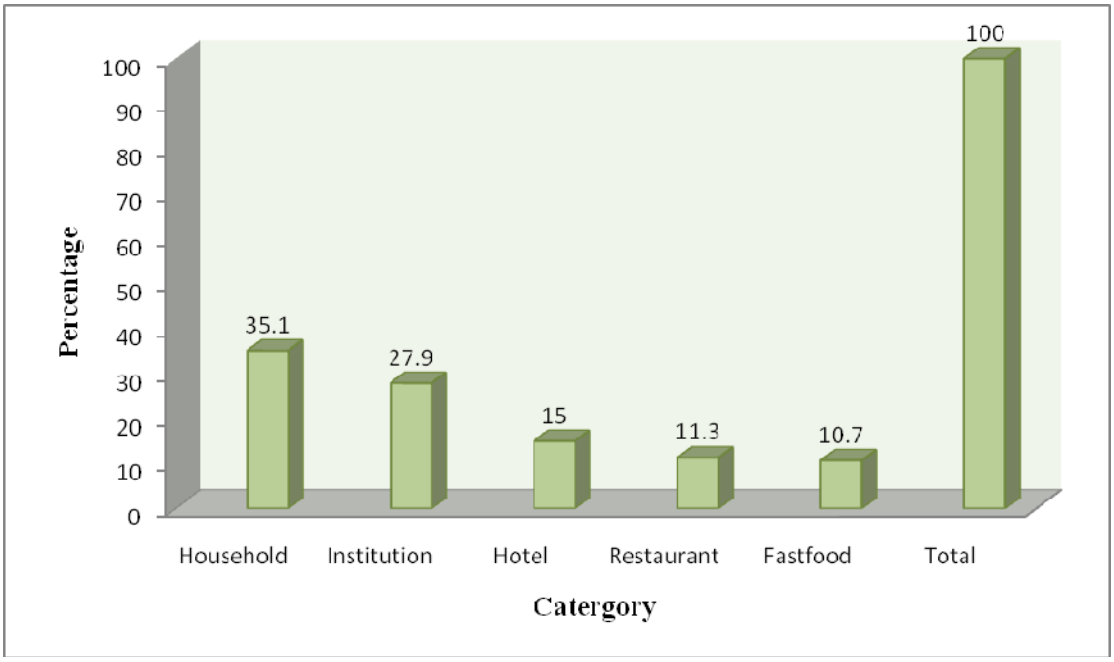
REGION AND DISTRICT	Producers		Marketer		Consumers		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
EASTERN REGION								
Kwahu West Municipal	3	20.0	4	26.7	3	18.8	10	21.74
Kwaebibirem District	3	20.0	3	20.0	3	18.8	9	19.57
New Juabeng Municipal	3	20.0	3	20.0	4	25.0	10	21.74
Asougyaman District	2	13.3	2	13.3	1	6.2	5	10.87
East Akim Municipality	4	26.7	3	20.0	3	18.8	10	21.74
Fanteakwa District	0	0.0	0	0.0	1	6.2	1	2.17
Yilo Krobo District	0	0.0	0	0.0	1	6.2	1	2.17
Total	**15**	**100.0**	**15**	**100.0**	**16**	**100.0**	**46**	**100.0**
WESTERN REGION								
Sekondi Takoradi Metropolitan	1	5.0	20	100.0	34	72.3	55	63.22
Ahanta West District	1	5.0	0	0.0	4	8.5	5	5.75
Mpohor Wassa East District	2	10.0	0	0.0	1	2.1	3	3.45
Ahanta East	3	15.0	0	0.0	2	4.3	5	5.75
Tarkwa Nsuaem Municipal	4	20.0	0	0.0	6	12.8	10	11.49
Shama District	4	20.0	0	0.0	0	0.0	4	4.59
Sekyere Central District	5	25.0	0	0.0	0	0.0	5	5.75
Total	**20**	**100.0**	**20**	**100**	**47**	**100.0**	**87**	**100.0**
NORTHERN REGION								
Tamale Metropolitan	11	28.9	17	85.0	23	88.5	51	60.71
Tolon Kumbugu District	0	0.0	2	10.0	1	3.8	3	3.57
Gushegu District	11	28.9	0	0.0	2	7.7	13	15.48
Savelugu Nanton District	16	42.1	1	5.0	0	0.0	17	20.24
Total	**38**	**100.0**	**20**	**100.0**	**26**	**100.0**	**84**	**100.0**
GRAND TOTAL	**202**	**29.4**	**167**	**24.3**	**319**	**46.3**	**688**	**100.0**

Source: Survey Results, 2009

4.2. Category of Consumers

As shown in Figure 4.1, the consumer group of respondents consists of five broad categories with the following representation: 112 households (35.5%), 89 institutions (27.9%), 48 hotels (15%), 36 fast foods (11.3%) and 34 restaurants (10.7%). Of the 319 consumers interviewed 35.1% were households, 27.9% were institutions, 15% hotels, 11.3% fast food operators and 10.7% were restaurants as shown in Figure 4.1.

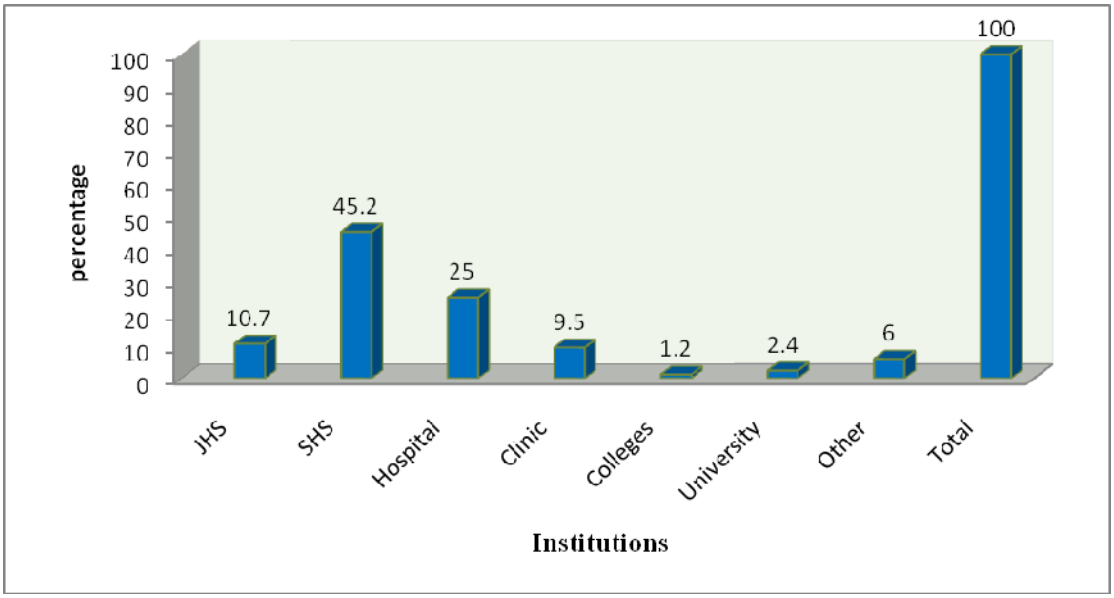
Figure 4.1 Category of Consumer



Source: Survey Results, 2009

The various institutions interviewed as consumers were broadly grouped into three and these are educational institutions, health institutions, and correctional institutions (such as the prisons). In all, the study surveyed 7 different groups or categories of institutions, with the following representations: 9 Junior High Schools (JHS), 38 Senior High Schools (SHS), 1 college, 2 Universities, 21 hospitals, 8 clinics, and 5 other institutions such as the prisons service, etc). Figure 4.2 shows the percentage distributions of these institutions. The survey interviewed a higher number of SHS (45%) compared to the others because majority of SHSs in Ghana have boarding facilities where meals are served to students daily and therefore consume more food produce than the other forms of institution.

Figure 4.2 Types of Institutions



Source: Survey Results, 2009

4.3. Category of Producers and Marketers

The producers and marketers sampled had different levels and scales of operations in their businesses. The producers undertook either solely organic, solely conventional, or a combination of both organic and conventional crop production, either as small or large scale producers. The supermarkets, local shops, and road side grocery shops constituted the marketers or sellers of food crops.

4.4. Socioeconomic Background Information of Respondents

Table 4.2 shows some socioeconomic background information of consumers and producers across the eight regions in Ghana. Majority of the consumers were females (75%) whilst majority of the producers (88%) were males, which is quite expected since farming is mostly undertaken by males. Generally, there were more male respondents (65%) than there were females. About 75% were married and majority belonged to the Christian faith (78%). Education plays a crucial role in decision making and hence had to be examined accordingly. Tertiary level of education (either the university, polytechnic or training college) represented the second largest level (18.2%) of education attained by respondents and also represented

the highest for the consumer category (28%). Quite a relatively large number (15.2%) had no formal education at all.

Table 4.2 Socioeconomic Profile of Respondents

Responses	Consumer		Producer		Total	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**
Gender						
Male	28	25.0	177	88.1	205	65.5
Female	84	75.0	24	11.9	108	34.5
Total	**112**	**100.0**	**201**	**100.0**	**313**	**100**
Marital Status						
Single	31	27.9	22	11.1	53	17.1
Married	61	55.0	167	83.9	228	73.5
Separated	2	1.8	6	3.0	8	2.6
Divorced	12	10.8	1	.5	13	4.2
Widowed	5	4.5	3	1.5	8	2.6
Total	**111**	**100.0**	**199**	**100.0**	**310**	**100**
Religion						
Christianity	101	90.2	140	71.1	241	78.0
Islamic	8	7.1	52	26.4	60	19.4
Traditional	3	2.7	5	2.5	8	2.6
Total	**112**	**100.0**	**197**	**100.0**	**309**	**100**
Educational Background						
No Education	11	9.8	37	18.4	48	15.3
Primary	8	7.1	16	8.0	24	7.7
JHS	12	10.7	40	19.9	52	16.6
SHS	18	16.1	23	11.4	41	13.1
MSLC	15	13.4	48	23.9	63	20.1
Tertiary	31	27.7	26	12.9	57	18.2
Vocational & Technical	12	10.7	7	3.5	19	6.1
Other	5	4.5	4	2.0	9	2.9
Total	**112**	**100.0**	**201**	**100.0**	**313**	**100**
Monthly Income level (GH¢)						
< 50	11	10.6	21	12.4	32	11.7
51 - 100	24	23.1	35	20.6	59	21.5
101 - 150	25	24.0	26	15.3	51	18.6
151 - 200	15	14.4	20	11.8	35	12.8
201 - 400	19	18.3	38	22.4	57	20.8
401 - 600	5	4.8	14	8.2	19	6.9
> 600	5	4.8	16	9.4	21	7.7
Total	**104**	**100.0**	**170**	**100.0**	**274**	**100**

Source: Survey Results, 2009

The survey revealed that majority of respondents (52.2%) earned average monthly incomes of between GH¢101 and GH¢400. More consumers (about 80%) fell within this income bracket than producers (70%). Whilst majority of consumers (24%) fell within the GH¢101-150 income bracket, it is interesting to note that majority of producers (22.4%) rather fell in the GH¢201-400 income range.

Average monthly income from the sales of organic and conventional produce by marketers is shown in Table 4.3. Going by the results suggest that the majority of sellers (37%) earned above GH¢600 a month and almost half of these sellers, constituting about 48%, earned above GH¢400 on a monthly basis. Although data was not available on monthly income sales of similar organic and conventional product of sellers, this outcome was quite encouraging.

Table 4.3 Average Monthly Income of Marketers

Average Monthly Income (GH¢)	Freq	%
< 50	6	11.1
51 – 100	4	7.4
101 – 150	10	18.5
151 – 200	3	5.6
201 – 400	5	9.3
401 – 600	6	11.1
>600	20	37.0
Total	**54**	**100.0**

Source: Survey Results, 2009

Apart from farming which represented the major occupation for about 82% of the producers interviewed (Table 4.4), they also occupied themselves with other activities such as teaching (about 6%).

Table 4.4 Major Occupations of Producers

Major Occupation	Freq	%
Farming	164	82.0
Teaching	11	5.5
Medical Personnel	1	.5
Artisan	4	2.0
Other, Specify	20	10.0
Total	**200**	**100.0**

Source: Survey Results, 2009

Other relevant socioeconomic information of respondents is presented in Table 4.5. The average household size was 6; businesses in the hospitality industry on the average have operated for 8 years whilst they served an average of 63 customers daily; the identified institutions have existed for an average of about 32 years whilst marketers on the average have traded for almost 10 years.

Table 4.5 Other Information from Respondents

Characteristics	Average	Minimum	Maximum	Standard Deviation
Household size	6	1	23	4.13
Years in operation (*Hotel, Restaurants, Fast foods*)	8	0.5	36	7.53
Number of Customers (*Hotel, Restaurants, Fast foods*)	63	1	500	142.1
Years in operation (*Institution*)	31.9	1	100	31.94
Years in Operation (*Marketers*)	10.2	1	45	7.94

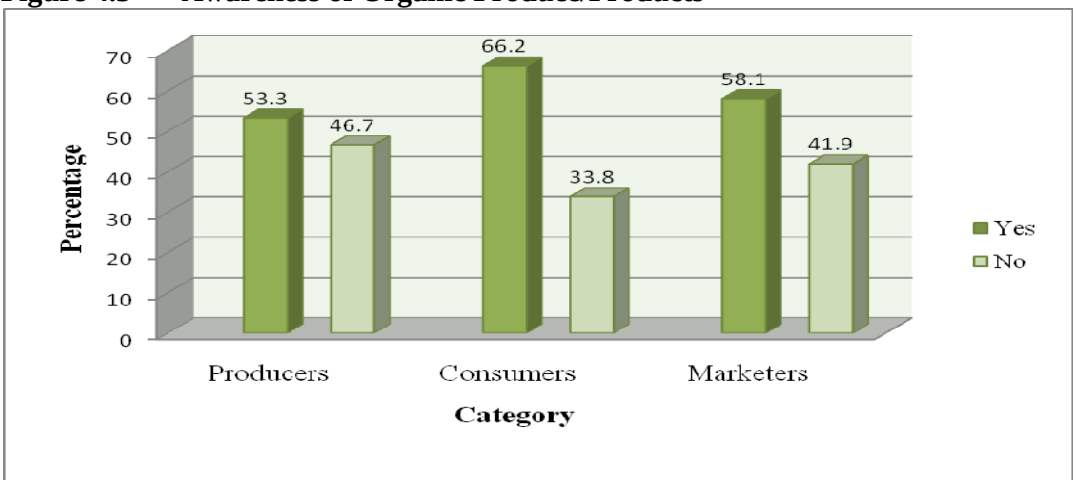
Source: Survey Results, 2009

4.5. Awareness of Organic Produce/Products

To determine the level of awareness of organic produce, the study questioned respondents if they had heard of availability of organic produce or had heard of the term "organic produce". With the high illiteracy rate in the country, the study envisaged a low knowledge of the word 'organic' as the responses from respondents indicated that they had not heard of the word 'organic'. However, when offered supplementary explanation on what organic produce were, the understanding of organic produce amongst respondents took a different trend.

Most of the respondents in the various categories (thus producers, marketers and consumers) seemed to have some knowledge about organic products. As shown in figure 4.3, more than half of these respondents: producers (53.3%), consumers (66.2%), and marketer (58.1%), respectively were aware of or had heard of organic products.

Figure 4.3 Awareness of Organic Produce/Products



Source: Survey Results, 2009

4.6. Preference for Products: Organic versus Conventional

This section investigates the preference(s) of consumers for similar products that are either produced organically or conventionally based on their ranking of certain attributes and quality of food items consumed by all the category of consumers identified in this study. Preferences of products lead to the choice for the product and subsequently culminate in the demand for that product, *ceteris paribus*.

4.6.1. Ranking of Organic Product Attributes

Consumers ranked certain attributes or qualities of organic food produce that they consume as these factors may likely influence consumers choice in purchasing and using organically produced products. Respondents ranked product attributes in order of importance of the attribute, with a ranking of 1 being most important and a 5 ranking representing the least important to the respondent. These qualities or attributes included the price of the produce, their qualities, tastes, nutritional value, proximity of product to consumer, product availability, shelve life of the product, product neatness, and the food safety or health.

The results, as shown in Table 4.6, applied the Kendall's coefficient of concordance (W) to test the agreements in the ranked product attributes by respondents.

Table 4.6 Ranking of Organic Product Attributes and Qualities

Organic Product Attribute	Mean Rank	Rankings
Price	4.88	5
Quality	3.01	1
Taste	4.66	4
Nutritional Value	3.73	3
Proximity Of Product	6.99	8
Product Availability	6.21	7
Shelve Life	5.71	6
Product Neatness	6.21	9
Food Safety/Health	3.60	2
Test Statistics		
N	182	
Kendall's W[a]	0.25	
Chi-Square	367.87	
DF	8	
Asymp. Sig.	0.000	

Source: Survey Results, 2009

The results indicated agreement in the order of the rankings by the respondents and these rankings were statistically significant. The quality of the food produce consumed ranked first, implying that this was the most relevant or important organic products characteristic that informed consumer purchasing decisions of organic products.

The second most important attribute considered very important in the purchase of organic products was the safety or healthiness of the organic produce. Concerns have been raised about the use of excessive chemicals in the production of conventional produce which has been quite detrimental to human health. Though in certain areas the use of these chemicals cannot be eliminated completely, however, there had been reported cases of over application by farmers that had resulted in excessive deposit of these agrochemicals on food produce even after harvest. Concerned and discerning consumers are compelled to opt for organic products that are devoid of chemicals and for that matter very low health risks. The nutritional value of organic produce ranked third as the most important product attribute to consumers of organic products.

Contrary to expectation, the price of the organic produce ranked fifth in terms of influencing consumer decisions to purchase organic products. Although consumers may be aware of the price premium that organic products command, other factors relating to the quality and healthiness of organic products were of paramount importance to consumers and therefore ranked highest than the price it commands. This finding suggests that the Ghanaian consumer is becoming very much health conscious with respect to the consumption of healthy foods.

Lastly, consumers looked out for product neatness. On the domestic market organic produce were generally perceived as not neat as revealed during interactions with consumers and was one of the ways and means by which some consumers differentiated organic products from the conventional ones. Certainly, such an observation suggest the need for intensive education of the general public regarding best practices on how to package products or presented for sale and how one can or cannot identify organic products when presented for sale.

4.6.2. Choice of Products

Holding certain factors such as price and product availability constant, majority of consumers (about 93%) opted for organic products when given the opportunity to choose between organic and conventional produce. The perception of the majority of these consumers that organic products were healthier (49.6%) whilst others believed that organic products were free from chemicals (40.5%) compared to the conventional ones clearly informed the choice of organic products over the conventional ones. The rankings of organic product attributes presented earlier also confirmed the importance of product quality and food safety and health concerns as very paramount to consumers.

Table 4.7 Consumer Preference

Consumers View	**Freq**	**%**
Preferred product		
Organic Produce	76	92.7
Conventional Produce	6	7.3
Total	**82**	**100.0**
Marketers View		
Customers Insist on Organic Produce		
Yes	20	36.4
No	35	63.6
Total	**55**	**100.0**

Source: Survey Results, 2009

From the marketers' point of view, majority of their customers, constituting about 64%, however did not insist on purchasing organic products whilst few (36%) insisted on purchasing organic products. These marketers/sellers however asserted that the preference or demand for organic products among consumers was undoubtedly high.

4.6.3. Choice of Production and Marketing of Organic Products

The study sorted out the perspectives of producers on their reasons for solely engaging in the production of organic products or in combination with conventional production. Most of the organic producers engaged in organic production for several reasons. The three most important reasons advanced by producers for producing organic products, as shown in Table 4.8, included the safety of organic produce from chemicals (26%), healthiness of these products (22.6%), and for environmental concerns (17%). A point worth noting is the number

of producers (14.4%) who mentioned that they produced organically because of the increasing customer demand for organic products, representing the fourth highest reason and the first economic reason that relates the supply of a commodity to the increasing demand (demand driven) for the product. In other words, producers responded to consumer demands to meet their needs. Consumers are now very much concerned about their health and the health implications of the foods they consumed and in response to such growing needs, some farmers responded to these signals by engaging in organic farming. Another economic variable that determined the supply of a product was the price of the product. Interestingly, only 6% of producers mentioned price as the main reason for opting to produce organically.

The reasons advanced by sellers or traders as to why they traded in organic products followed quite a similar pattern to that of the producers. Food safety and health concerns dominated, followed by the increased demand for organic products (17%), the third highest reason for selling organic products.

Table 4.8 Reasons for Engaging in Organic Farming or Trade

Reasons	Producers		Marketers	
	Freq	**%**	**Freq**	**%**
Health	47	22.6	34	34.0
Food Safe	54	26.0	26	26.0
Environmental Concerns	36	17.3	6	6.0
Ethics	8	3.8	7	7.0
Customer Demand	30	14.4	17	17.0
Price	13	6.2	3	3.0
Other, Specify	20	9.6	7	7.0
Total	**208**	**100.0**	**100**	**100.0**

Source: Survey Results, 2009

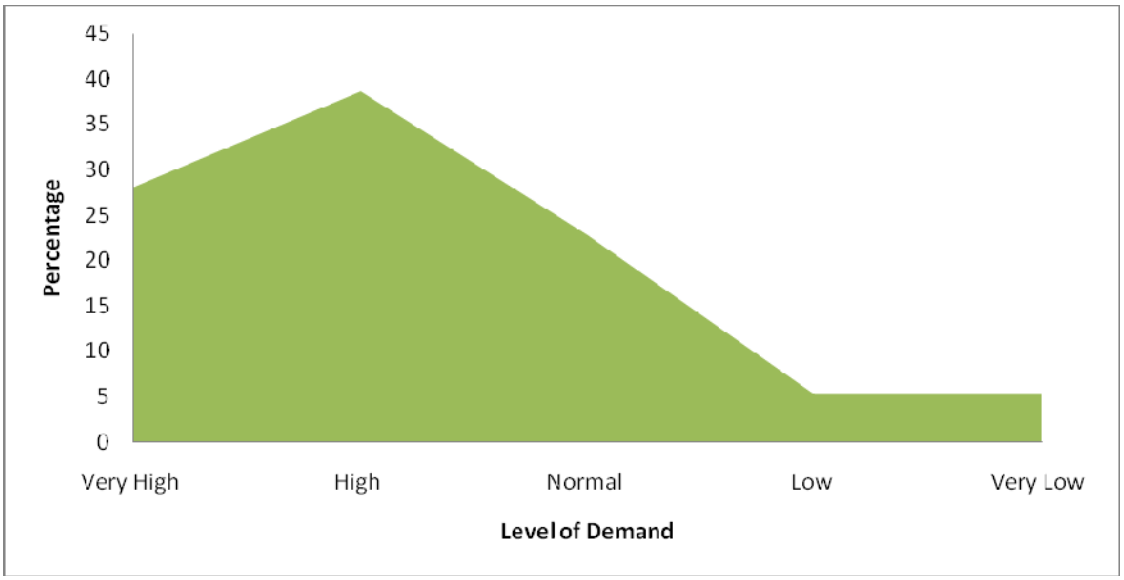
4.7. General Demand for Organic Produce/Products

4.7.1. Market Demand for Organic Products

Figure 4.4 illustrates the market demand for organic produce/products in the country from the perspective of the traders or marketers of organic and other products. Market demand for organic produce was skewed to the left, indicating a high demand for this product. About 28% of marketers indicated a very high demand for their organic products whilst an additional 39% also specified a high demand for their organic products. Overall, 67% of marketers of organic products indicated a high market demand for organic products in Ghana.

When these observations are taken as good signals coming from traders who are in direct contact with consumers, then this may call for proper measures to promote the production of organic produce in Ghana since there appears to be a potential and an expanding market for this category of products.

Figure 4.4 Description of Organic Market Demand



Source: Survey Results, 2009

4.7.2. Frequency of Market Demand for Organic Produce/Products

To buttress the high market demand for organic produce, about 67% of these traders also mentioned the high frequency of demand for organic products by consumers. The rate at which consumers demanded organic produce was extremely great and this call for the need to increase production to meet this high consumer demand.

Figure 4.9 Frequency of Demand

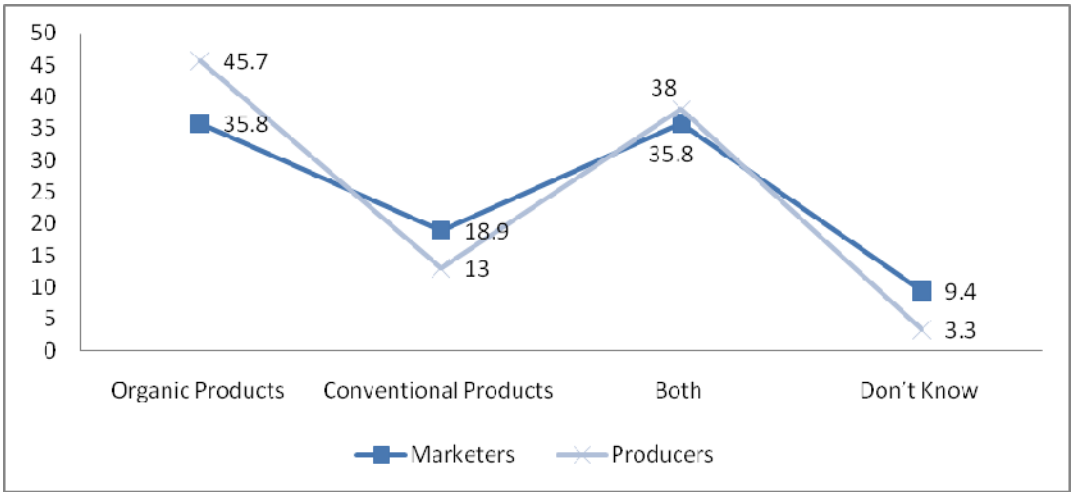
Demand Frequency	**Freq**	**%**
Very Frequent	14	24.6
Frequent	24	42.1
Occasional	14	24.6
Not Frequent	4	7.0
Not Very Frequent	1	1.8
Total	**57**	**100.0**

Source: Survey Results, 2009

4.7.3. Product Category Demanded Most

Organic products seem to have a higher demand than conventional produce of the same kind, according to marketers and producers. About 45.7% and 35.8% of producers and marketers respectively indicated higher demand for their organic produce than the conventional ones (Figure 4.5). Only 13% of producers and about 19% of marketers had their conventional produce demanded more than their organic produce. That notwithstanding, 38% of producers and about 36% of traders viewed both as equally demanded. Very few of these producers and traders could not determine which product category moved faster in terms of consumer demand.

Figure 4.5 Product Category Most Demanded



Source: Survey Results, 2009

4.7.4. Consumption/Use of Organic Products

Of the 66.2% of consumers aware of organic products, about 42% indicated they consumed organic produce/products whilst the remaining 58% did not or had not consumed these products (Table 4.10). Majority of these consumers (about 50%) cited the healthy nature of organic products as their reasons for consuming this product type whilst for those who did not consume, unavailability of organic products was the major factor or hindrance mentioned by roughly 70% of the consumers, followed by the high costs of the product (10%) and the distance to the source of organic products (another 10%). The unavailability of organic products, as indicated by consumers, should give insights as to the potential demand for these "specially produced" products.

For those who consumed organic products, majority (56%) did so not because there was a special occasion that demanded that but rather consumed such products on normal days. Although organic products were consumed, it constituted not more than 20% of the diets of the majority (47%) of consumers.

Table 4.10 Consumption of Organic Produce/Products

Consume Organic Products	**Freq**	**%**
Yes	85	42.3
No	116	57.7
Total	***201***	***100.0***
Reasons for Organic Product Consumption		
Products Are Healthy	60	49.6
Products Are Free From Chemicals	49	40.5
Other	12	9.9
Total	***121***	***100.0***
Factors limiting Organic Product Consumption		
High Cost	9	10.1
Unavailability	62	69.7
Undesirable Taste	2	2.2
Distance To Source	9	10.1
Other	7	7.9
Total	***89***	***100.0***
Periods Organic Produce are Consumed/Used		
During Occasions	1	1.3
Normal Days	44	55.7
When Available	29	36.7
Other	5	6.3
Total	**79**	**100.0**
Proportion of Organic Products Consumed as Food		
0 - 20%	39	46.9
21 - 41%	9	10.8
41 - 60%	11	13.3
61 - 80%	12	14.5
81 - 100%	11	13.3
Cannot specify	1	1.2
Total	**83**	**100.0**

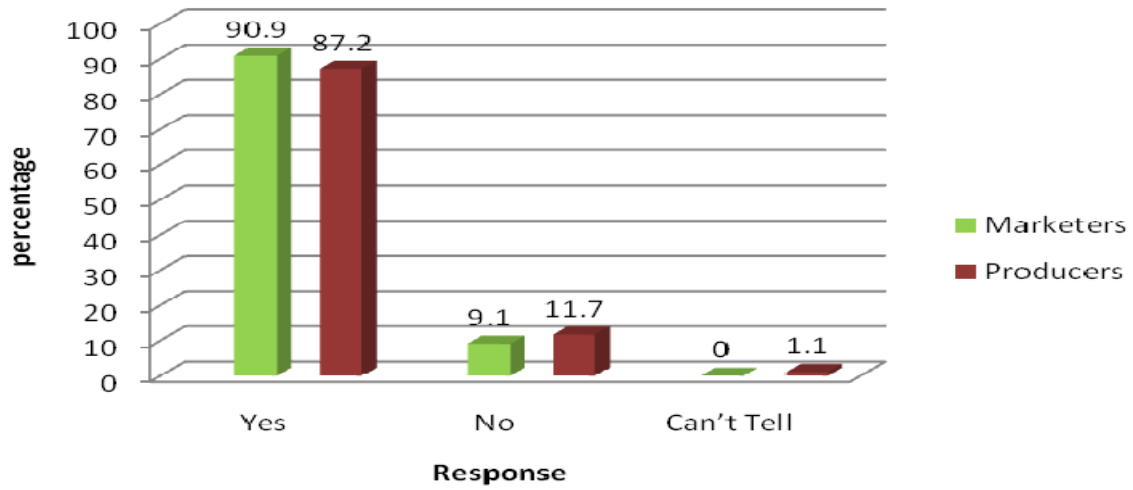
Source: Survey Results, 2009

4.8. Market Availability

As noted earlier, a huge percentage of consumers singled out unavailability of organic products as the reason for non-consumption, indicating demand for a product outstripping its supply, resulting in shortage on the market. As such, producers and entrepreneurs ought to take advantage of such opportunities to augment production and the effective marketing and

distribution of such commodities. Results from the survey revealed that majority of marketers (91%) and producers (87%) had ready markets for their organic produce (see Figure 4.6) Thus, once the product got to the market, it was purchased. This obviously is a good indication of the viability of organic production in the country.

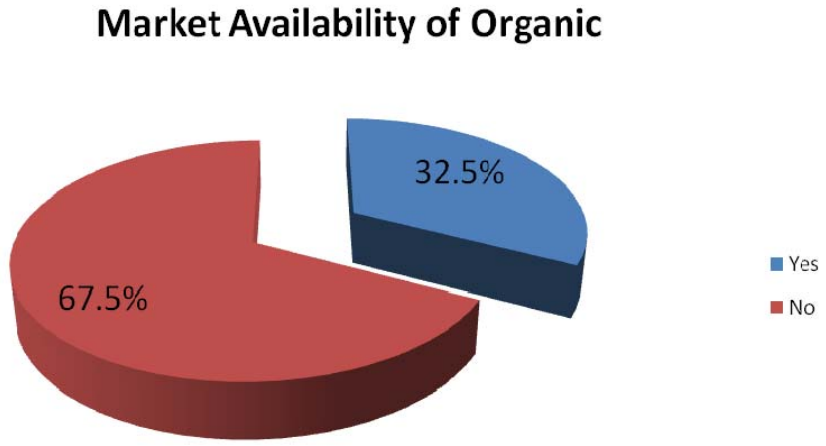
Figure 4.6 Existence of Ready Market for Organic Produce/Products



Source: Survey Results, 2009

This ready market was not backed by adequate supply of the organic produce, as majority of consumers (about 68%) opined that organic products were not readily available in the market (Figure 4.7).

Figure 4.7 Are Organic Common in the Market



Source: Survey Results, 2009

Once it was been established that organic products were difficult to come by, it may possibly imply that consumers of this product went through immense difficulties accessing it. Table 4.11 shows that over 70% of consumers experienced real difficulties in accessing organic produce in the market.

Table 4.11 Consumers Level of Difficulty in getting Organic Produce

Level	Freq	%
Not Very Difficult	6	7.1
Not Difficult	19	22.6
Difficult	46	54.8
Very Difficult	13	15.5
Total	**84**	**100.0**

Source: Survey Results, 2009

4.9. Organic Product Pricing

In ascertaining how organic products were priced by producers and traders, the determinants of organic product price and the perception of these actors on the price of organic products were examined, and finally views solicited on the product category that required higher price.

Table 4.12 Setting Prices for Organic Produce/Products

	Producers		Marketers		Total	
	Freq	%	Freq	%	Freq	%
Organic Product Price Determinants						
Set Own Price	17	17.9	36	62.1	53	34.6
Use Prevailing Domestic Market Price	33	34.7	14	24.1	47	30.7
Negotiation With Buyer	30	31.6	4	6.9	34	22.2
Use Prevailing Foreign Market Price	14	14.7	4	6.9	18	11.8
Determine By ITFC	1	1.1	-	-	1	0.7
Total	**95**	**100.0**	**58**	**100.0**	**153**	**100**
Product Commanding Better Price						
Organic Products	45	46.9	30	54.5	75	49.7
Conventional Products	10	10.4	10	18.2	20	13.2
Both	39	40.6	0	0.0	39	25.8
Don't Know	2	2.1	15	27.3	17	11.3
Total	**96**	**100.0**	**55**	**100.0**	**151**	**100**

Source: Survey Results, 2009

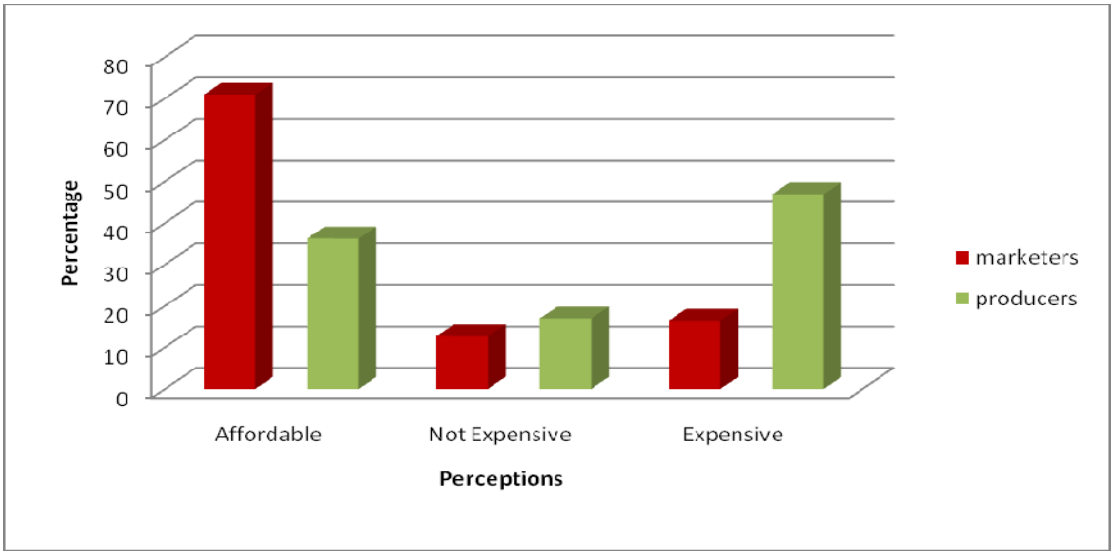
In general, as shown in Table 4.12, more than 34% of producers and marketers set their own prices based on their own calculations to determine the point at which they made profits. On

the other hand, more marketers (62%) than producers (18%) set their own price. Thus these actors decided on the price that their organic produce should command. Another 31% depended on prices set by others for a similar organic product on the domestic market to set theirs. Negotiations with buyers represented the third means by which product prices were determined.

While about half (50%) of suppliers (producers and marketers) viewed organic products as commanding better prices compared with conventional ones, an equally high number (47%) perceived this as true, not only for organic products but also for conventionally produced products they sold.

Figure 4.8 shows the perceptions of consumers and marketers regarding the affordability or otherwise of organic products. Consumers, rational as they are, prefer to pay less for any commodity. This was therefore evident that a high number of consumers (roughly 47%) perceived prices of organic products as expensive, about 17% believed prices were not expensive, and roughly 36% indicated prices set were affordable (Figure 4.8). More marketers (almost 68%) believed their organic products were very much affordable. This dichotomy between consumer and trader perceptions about product prices is to be expected.

Figure 4.8 Perceptions on the Price of Organic Produce/Products



Source: Survey Results, 2009

It is worth noting that more than 68% of marketers interviewed claimed they charged no premium on their organic products. Does that explain the high percentage of marketers claiming affordability of their products? Meanwhile, as shown in Table 4.13, most consumers, constituting 56% accepted a maximum premium payment of 20% for organic products. Very few (6%) consumers accepted a premium payment of between 80-100%. It was likely that those who constituted this group belonged to high income class.

Table 4.13 Acceptable Premium on Organic Produce

Premium (%)	Freq	%
0 - 20	40	56.3
21 - 40	14	19.7
41 - 60	8	11.3
61 - 80	5	7.0
81-100	4	5.7
Total	**71**	**100.0**

Source: Survey Results, 2009

4.10. Trading of Organic Produce/Products in Ghana

4.10.1. The Sale of Organic Products

For all the 97 marketers who had knowledge on organic produce, 56% actually sold organic products whilst about 40% did not (Table 4.14). Surprisingly, about 4% did not know which product category they traded in, either organic or conventional products. This small group of suppliers perhaps did not actually understand what organic products are and or did not enquire from their suppliers.

Table 4.14 further shows that trading of organic produce was mostly done at the retail level (81%), a practice that is very common with respect to agricultural trade in the country. The farm gate (37%) was the major source of organic produce for the marketers, implying that they sourced their organic produce directly from the farm. Others bought from wholesalers (30%) and very few (5%) relied on identified organic brokers. Agents or middlemen and middle women also play major participatory roles in the distribution and marketing of organic produce in the country. More than 21% of the organic marketers interviewed got their source of organic produce from these middlemen and women. Some other marketers, mainly the big supermarkets in Accra and Kumasi imported their organic products and this group represented about 8% of the organic marketers interviewed.

Table 4.14 Organic Product Sales

	Freq	%
Sell Organic Produce/Products		
Yes	54	56.2
No	38	39.6
I Don't Know	4	4.2
Total	**96**	**100.0**
How Organic Produce are Sold		
Wholesale	8	14.0
Retail trade	46	80.7
Other	3	5.3
Total	**57**	**100.0**
Sources of Organic Produce		
Imports	6	7.9
Wholesalers	22	28.9
Agents (Middlemen/Middle women)	16	21.1
Directly From Farm	28	36.8
Identified Organic Brokers	4	5.3
Total	**76**	**100**
Buyers of Organic Produce		
Low Income Earners	26	25.5
Middle Income Earners	40	39.2
High Income Earners	22	21.6
Expatriates	9	8.8
Other	5	4.9
Total	**102**	**100**
Reasons For Selling Organic Produce		
Health	34	34.0
Food Safety	26	26.0
Environmental Concern	6	6.0
Profits	3	3.0
Ethics	7	7.0
Customer Demands	17	17.0
Other	7	7.0
Total	**100**	**100**

Source: Survey Results, 2009

To re-enforce the affordability of organic produce as perceived by marketers and consumers, the survey revealed that 39% of sellers of organic products perceived most buyers of organic produce as belonging to the middle income bracket. Another 26% perceived buyers as low income earners whilst 27% viewed buyers as coming from high income groups. According to the sellers, a considerable number of expatriates, constituting 9%, bought organic products. The most important reason advanced by marketers for trading in organic products was the

healthiness of the product. It was difficult to believe that traders of organic products sold organic products not because of profits but rather for health and food safety reasons.

The state in which organic products were sold by traders and purchased by consumers was also examined. Most marketers (91%) and consumers (90%) respectively sold and purchased organic products in the raw form, as indicated in Table 4.15. Very few traders sold it processed. Processed organic products are found in big supermarkets located mainly in Accra and Kumasi.

Table 4.15 State Organic Produce are Sold/Purchased

State	Marketers		Consumers	
	Freq	**%**	**Freq**	**%**
Fresh	53	91.4	74	90.2
Processed	2	3.4	2	2.5
Both	3	5.1	6	7.3
Total	**58**	**100.0**	**82**	**100.0**

Source: Survey Results

In Ghana agricultural commodities are mostly traded in their raw or fresh state. Value addition to agricultural commodities is scarcely practiced. Trade of organic commodities, based on this result, is indifferent from the aforementioned since majority of consumers purchased them in the raw or fresh state.

4.10.2. Marketing of Organic Products

Not many marketers (33%) gave special treatment to their organic products in differentiating them from the conventional ones. This may be due to the non existence of a niche market for organic produce domestically. More than 43% of the consumers of organic produce interviewed purchased their produce from the open market whilst others (26%) bought directly from the farm. This could be the institutions, hotels and sometimes restaurants. The supermarkets (11%) also served as another source to purchase organic produce especially by the expatriates and high income earners.

Table 4.16 Marketing of Organic Products

Special Treatment to Organic Produce	**Freq.**	**%**
Yes	19	32.8
No	39	67.2
Total	**58**	**100.0**
Where Organic Produce are Purchased		
Directly From Farm	34	26.4
Way Side Shops	9	7.0
Supermarket	14	10.9
Open Markets	56	43.4
Own Farm/Garden	9	7.0
Other	7	5.4
Total	**129**	**100.0**
Identification of Organic Produce		
From The Label	12	12.5
Informed By Farmer/Supplier	22	22.9
Ask Farmer/Supplier	25	26.0
Other	37	38.5
Total	**96**	**100.0**
Presentation of Organic Produce		
Displayed On Table Tops	53	50.5
Packaged In Attractive Containers	24	22.9
Arranged On Shelves	10	9.5
Refrigerated	2	1.9
Other	16	15.2
Total	**105**	**100.0**
Place Organic products are Sold		
Farm Gate	45	33.3
Town Market	47	34.8
Regional Market	3	2.2
Supermarkets	5	3.7
Foreign Market	25	18.5
Direct Sales To Customers	10	7.4
Total	**135**	**100**
Marketing Method		
Wholesale	82	73.2
Retail	19	17.0
Assurance/Contract	11	9.8
Total	**112**	**100**

Source: Survey Results

The organic sector in Ghana is still undeveloped and as such consumers resort to various informal ways of identifying organic products in the market. Majority of consumers interviewed either asked farmers/suppliers (26%) or are informed by farmers/suppliers without asking (23%) whether their commodities are organic or not. Locally produced

organic commodities traded on the domestic market are mostly without labels for easy identification. On the contrary, large number of organic commodities imported has labels to enable easy identification. Only 12.5% of consumers identified the organic produce they purchased by reading the labels.

Organic commodities were normally displayed on table tops for consumers to purchase. Conversely, supermarkets packaged and sold organic products in attractive containers and also refrigerated to prolong the life span of the produce. For about 51% of the consumers, they purchased organic products displayed on table tops.

4.11. Organic Production in Ghana

In Ghana, the agricultural sector employs a greater proportion of the working population. It is therefore not by chance that majority of producers interviewed engaged in farming (82%) as their major occupation. Teachers (5.5%), Medical personnel's (0.5%), artisans (2%), amongst others also doubled as producers. As shown in Table 4.17, most farmers (47%) practiced conventional type of agriculture and quite a sizeable proportion (27%) solely produced organically with an equal percentage undertaken both.

Table 4.17 Kind of Farming Practices

Farming Practices	Freq	%
Conventional	91	46.7
Organic	52	26.7
Both	52	26.7
Total	**195**	**100.0**

Source: Survey Results

4.11.1. Manure Application

The survey revealed that poultry dropping (57.1%) was the major source of organic manure used by producers (Table 4.18). This is followed by compost (15%), cow dung (14.3%), green manure (6%) and black soil (4.5%). According to 24% of the producers, the quantities of manure applied to crops were not sufficient for maximum crop yield. Nevertheless, 72.1% applied sufficient quantities of manure for maximum crop yield. This was however not an indication that organic manure was readily available to the farmer or producer.

For some producers (68%), unavailability of manure in desirable quantities prevented them from applying the required quantities of manure. Others have little or no knowledge about the application rate of organic manure (22.6%) and hence did not use organic manure at all.

Table 4.18 Manure Application

	Freq	%
Source of Manure		
Poultry Dropping	76	57.1
Cow Dung	19	14.3
Black Soil	6	4.5
Compost	20	15.0
Green Manure	8	6.0
Other	3	2.3
Pig Manure	1	0.8
Total		
Sufficiency of Quantity of Manure Applied		
Yes	75	72.1
No	25	24.0
Uncertain	4	3.8
Total	***104***	***100.0***
Prevention from Applying Required Qty of Manure		
Unavailability Of Manure	21	67.7
High Cost Of Manure	3	9.7
Little Or No Knowledge About Its Application Rate	7	22.6
Total		

Source: Survey Results, 2009

4.11.2. Exports of Organic Produce

Just over 28% of the organic producers exported their produce and the remaining 72% did not export their produce but possibly marketed them domestically, as portrayed in Table 4.19. With regards to exports, virtually all organic products (85%) were exported to Europe and according to 73% of these exporters certification was required before exportation whereas 27% did not certify their produce before export. Those who indicated the need for no certification before exports were likely to be out growers and did not have much knowledge about what went into the export of their produce though they professed to be well informed on the activities of the various companies' they worked with.

Contrary to expectation, more than 72% of producers viewed the cost of certification for exports of their organic produce as low. This was quite revealing since organic exporters

generally complained about the high certification cost which deters more producers and exporters from venturing into the export business.

Table 4.19 Organic Export and Certification

Do you Export Organic Produce	**Freq**	**%**
Yes	27	28.4
No	68	71.6
Total	***95***	***100.0***
Destinations of Organic Produce		
Europe	11	84.6
Netherlands	1	7.7
Uk	1	7.7
Total	***13***	***100.0***
Certification Require before Export		
Yes	19	73.1
No	7	26.9
Total	***26***	***100.0***
Perception on High Cost of Certification		
Yes	3	27.3
No	8	72.7
Total	***11***	***100.0***

Source: Survey Results, 2009

4.11.3. Ghana Standards Board Codes of Practice for Organic Farming

The codes of ethics required in the practice of organic agriculture by the Ghana Standards Board (GSB) were not well known among the organic producers surveyed, as indicated in Table 4.20. Only 14% of producers were aware of the existence of such codes of practice in the country and for this category of producers, only 40% adopted the recommendations. This revelation is quite significant and therefore required that appropriate organisations like the Ministry of Food and Agriculture (MOFA), the Ghana Organic Agriculture Network (GOAN), and other relevant stakeholders intensified education on the need to comply with internationally accepted standards of farming organically.

Table 4.20 Codes of Practices in Organic Farming

	Freq	%
Awareness of Ghana Standards Board Codes of Practice		
Yes	15	14.4
No	89	85.6
Total	***104***	***100.0***
Adopting any of these Recommendations		
Yes	6	40.0
No	9	60.0
Total	***15***	***100.0***

Source: Survey Results

5. Conclusions and Policy Recommendations

This survey examined the current status of organic agriculture in Ghana by sampling the views of producers, marketers, and consumers. Majority of respondents in the three broad categories were aware of what organic products were. However, the consumption of organic products was found to be low probably due to the largely unavailability of the product on the market. Demand for the product far outstripped supply, suggesting a huge potential for the organic sector in Ghana both for exports and for domestic consumption. The prospects for producers are high as most consumers were willing to pay a maximum of 20% premium on organic products. To increase the demand for organic products, there is the need for awareness creation on a continuous basis so that discerning consumers who are health conscious will have other product options to choose from. Organizations such as MOFA, GOAN, and other identifiable stakeholders should be well resourced to champion the campaign on the production and consumption of organic products in Ghana. Hence, information provided in this report based on the survey conducted should serve as a good database that gives insights to the nature of organic agriculture in Ghana, from which numerous interventions could spring out to influence the development of the organic agricultural sector in Ghana

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