

The Entrepreneurial Activities of Urban Vegetable Farmers in Accra

Ewurabena Aniniwa Darkwah¹

¹(School of Governance and Public Administration, Ghana Institute of Management and Public Administration, Ghana).

Corresponding Author: Ewurabena Aniniwa Darkwah

Abstract: *The study examined the entrepreneurial dynamics inherent in urban agriculture within Greater Accra. Other objectives of the study are to examine the challenges encountered by urban agricultural farmers and viability of urban agriculture. The study used questionnaire to determine the nature of the variables on urban farmers within the Greater Accra Region. The findings indicated that entrepreneurial dynamics are inherent in urban agriculture and found that the major challenges facing farmers in Greater Accra has to do with land tenure. Other findings indicate that urban farming is a viable in the medium to long-term. The researchers therefore recommend policy focus on the economic contribution of the urban farmer to the food needs of the society by extending extension services to urban farmers. The researcher therefore recommends that, industry's relevant policies should be passed to improve operations of the banking sector. The sector should roll out innovative products and education toward building of savings culture by the public.*

Date of Submission: 25-02-2019

Date of acceptance: 11-03-2019

I. Introduction

According to the European Communities (2004), common Agricultural Policy (CAP) reforms worldwide tend to benefit farmers by allowing them for the first time to take responsibility for their businesses and theoretically, have more freedom to farm as they wish. Rapid and uncontrolled increases in urbanization West African cities result in the serious decline of, agricultural resources, increased food insecurity and deteriorating quality of life in these urban areas. To address these urban issues, policy makers and other stakeholders involved in agriculture and urban development therefore requires reliable information on the extent and of current and future urban agricultural activities within and around cities. However, urban and peri-urban agriculture, which is recognized as a means of addressing urban food requirements and other environmental services, receives very little support and remains poorly appreciated. Policies and programs are required to transform urban and agriculture into a legitimate and viable economic activity so that it can effectively contribute to addressing the problems of urban food insecurity, unemployment and poverty while ensuring sustainable environmental management and minimal health risks. In addition to this the growing poverty, hunger and lack of formal employment opportunities are pervasive in most urban dwellings among the poor. While the focus of urban agriculture tends to be on its role in the environmental sustainability of our food system, the economic and social aspects are easily neglected. The economic sustainability of urban agriculture partially lies in its ability to generate income or effectively solicit for appropriate grant monies; further, operating urban farms and gardens effectively with appropriate technology and affordable, quality infrastructure contributes to the economic return to urban growers. Urban agriculture's social sustainability is governed greatly by its contribution to the community and its effect on those working as urban farmers – including how their work hours may adversely affect their family and social life¹. Also, within cities of developing nations such as Ghana, however, where the need for city farming is often driven by the unreliable transportation of food from rural areas, food production is a more common activity. Urban-produced food accounts for fifteen percent of the world's food production, according to the United Nations Development Program². In Cuba, one-half of the vegetables consumed by residents of Havana are produced in the city's 8,000 gardens and urban farms. Also, the government of Singapore has provided licenses for almost 10,000 urban farmers active over 17,300 acres (27 square miles), producing 80 percent of the poultry and one-quarter of the vegetables consumed locally³.

In the urban environment across most developing countries, entrepreneurial urban agriculture projects, whether non-profit or for-profit, have different operating characteristics. Some grow food in cultivated soil. Others use hydroponic (non-soil) techniques to produce food. In most urban centers within Ghana, farmers are seen as coming from the poorer strata of the population⁴.

Some urban farmers are immigrants from the rural areas but, contrary to popular belief, more often than not urban have already lived in the city for longer periods of time; time that is needed to gain access to urban land, water and other resources⁵.

II. Theoretical Review of Urban Entrepreneurship in Farming

Entrepreneurial behavior is seen as behavior that manages to combine innovation, risk-taking and reactivity. In other words, it combines the classic theories of the innovative entrepreneur, the risk-taking entrepreneur that occupies a position of uncertainty as proposed by⁶ (Knight 1921), and the entrepreneur with initiative and imagination who creates new opportunities. Reference to entrepreneurial initiative underlines the reasons for correctly anticipating market imperfections or the capacity to innovate in order to create a “new combination”. Entrepreneurial initiative covers the concepts of creation, risk-taking, renewal or innovation inside or outside an existing organization. Lastly, the entrepreneurial spirit emphasizes exploration, search and innovation, as opposed to the exploitation of business opportunities pertaining to managers.

For⁷ provides the definition of entrepreneurship in agriculture. In the past being a good entrepreneur was being a good craftsman, whilst striving for a high level of production and product quality and making efficient use of inputs (labor, nutrients, crop protection and energy). This needs to be combined with sustainable production through finding a balance between farm activity and profit. Accordingly^{2,3,8}, entrepreneurship has become probably the most important aspect of farming and will increasingly continue to be so. Also⁹ see farm entrepreneurship as the importance of adopting community, ethical and social responsibilities as a way of doing business to improve the success of the farm business.

Discussion¹⁰ of the role and importance of the farm entrepreneur. He suggests that the notion of entrepreneur is freely applied within the agricultural sector and the entrepreneurs themselves are seen in those context as being key to decision-makers in the political, social and economic environment. Urban entrepreneurial activity is considered challenging due to environmental constraints.

This should be supported however¹¹ also indicate that fostering entrepreneurship and the creation and support of urban farm business is a crucial goal for the survival and integrated development of most economies is it urban or rural. However, despite the recognition that entrepreneurship is one of the primary factors through which rural economic development can be achieved, empirical research on urban entrepreneurship in Africa and for that matter Ghana is relatively sparse¹². The business process of entrepreneurship includes the identification and assessment of opportunities, the decision to exploit them oneself or sell them, efforts to obtain resources and the development of the strategy and organization of the new business project¹³. Entrepreneurship is “a process by which individuals –either on their own or within organizations– pursue opportunities” Stevenson and Jarillo, 1990. The entrepreneur’s central activity is that of business creation, which can be studied at an individual and/or group level –analyzing psychological aspects and social variables of education, background or the family– either at an environmental level using variables that enable business development, or by analyzing aspects of the economic, social and cultural environments.

III. Entrepreneurship and The Study of Farm Business

In the agricultural economics, it has not been very popular to view farming from the perspective of entrepreneurship, even though the development of farm businesses in terms of economic rationality has been a major concern in these disciplines^{14,33}. The resource-based theory of competitive advantage emphasizes tangible and intangible resources as crucial strategic factors. Viewed from these perspectives, the role of the individual farmer as an entrepreneur who uses the strategies and resources, as well as the above-normal profits as an objective of the farm, appear as essential elements in farming¹⁵.

In social sciences it has been common to approach farming as family business which does not conform to the image of market driven, profit seeking enterprise. According to Gasson and Errington 1993 “the primary aim of many family businesses is not to maximize profits but to maintain control and pass a secure and sound business to the next generation”. Farmers are said to have been detached from the market logic, and for this reason they have been identified as peasants rather than entrepreneurs¹⁶. Further, it has been claimed that the self-identity of farmers is firmly and persistently based on the role of a producer, rather than on the role of an entrepreneur Burton & Wilson 2006.

IV. Empirical Review

Some studies have focused on the question of entrepreneurial skills in farming. Also¹⁷ conducted an in-depth study on of 49 small-scale paddy farmers in Sri Lanka. They observed clear differences in the economic success among the farmers, generated during a period of twelve years. According to their results, the successful farmers were better able to mobilize resources through their urban networks and as they were pursuing multiple opportunities. As a rule, they had started additional businesses to complement the paddy cultivation. Further, they had good management skills as well as entrepreneurial skills, and they were able to

combine these skills. On the other hand, most of the unsuccessful “commercial” farmers were found to be lacking essential managerial skills (particularly marketing skills). These farmers had all the entrepreneurial qualities of the successful farmers (strategic and focused pursuit of opportunities, the creative means to mobilize resources, particularly through social networks. However, they sooner or later failed, largely through mismanagement caused by the inability to deal with efficient resource allocation^{7,18}.

Economic Sustainability of Urban Farming among the Poor

Moreover¹⁹ estimate that backyard gardening is widely practiced by approximately 20 million urban dwellers in West Africa, mostly for subsistence. Market gardeners are mainly located in the open spaces within urban centers in Ghana, and change crops according to seasonal supply and demand, and market prices. A key issue, especially for the market gardeners, that is, the more entrepreneurial farmers is whether the intensification strategies are sustainable, especially concerning their impact on environment and health. Intensification is sought through cultivating high-value crops, increase in productivity on the same area of land, and by maximizing the use of available resources, including wastewater²⁰. Also analyzes^{21, 32} on the different farming systems in four West African capitals (Lomé, Cotonou, Bamako and Ouagadougou). The study revealed that differences in crops and inputs of the different farming systems are derived from different economic strategies adopted by the farmers. Mixed vegetable farming with watering cans and/or with pumps cultivates short- and long-cycle vegetables such as lettuce, cabbage, carrots and onions. The short-cycle crops are grown to ensure returns on inputs and salaries, while the long-cycle crops are used to maximize benefit and investment in infrastructure, or private or family life. The annual profit ranges from US\$20 to US\$700, depending on the management capacities and farm size.

V. Methodology

Research Design:

The research applied the survey design technique. The research design is a plan outlining how information relating to entrepreneurial opportunities, challenges and viability of urban agriculture which are to be gathered for an assessment or evaluation that includes identifying the data gathering method, the instruments to be used, administration of the instrument, and how information gathered from the research process would be organized and analyzed. The design employed the descriptive survey method, which is best for investigating an existing situation. This method is used to collect data by means of a questionnaire. The target population of the research included the entire population of urban farmers spread across various parts of Accra.

Sample Size and Sampling Techniques:

A sample of fifty (50) urban farmers was drawn from the population under study, specifically from the railway lines at Airport residential area, Dzorwulu, Pig farm, Achimota and predominantly from Weija. This was based on non-probability sampling, specifically, the purposive sampling. This is a type of non-probability sampling where a sample is selected in a deliberative and non-random fashion to achieve a certain goal. The purposive sample of these urban farmers was selected in order to explore in depth a wide range of issues pertaining to opportunities in urban agriculture, entrepreneurial challenges and the viability of urban farming. In choosing a sampling method for the research, the researchers’ interest lies in the method that best answers the research question. The question therefore decided the objectives on which the methodology was based on. Robbins et.al²² used a questionnaire as a systematic way to find informants in one of their sociological studies. The researchers asked the respondents what would denote the subject in question and ran their responses through a data reduction technique. Although random or probability sampling is recommended as a means of sample selection, randomization reduces biases and allows for the extension of results to the entire sampling population. The results obtained from such studies are to be applied beyond the community²³. However, random sampling is not always feasible, and not always efficient. A high dispersion of samples may induce higher costs for a researcher^{24,25}. Missing data, which is common in field situations, also renders random samples invalid for traditional probabilistic statistical inference. This is often the situation since not everybody is willing to take part in the process, and possibly not be around during sampling²⁶.

Sources of Data:

Data on opportunities in urban farming, challenges of the business and its viability were collected from a sample of fifty (50) urban farmers in the selected areas. This forms the primary data source by use of the questionnaire. This is the original data that has been collected especially for the purpose of the enquiry at hand or answering the research questions. The researcher collected the data for the first time with the help of the urban farmers under the study.

Data Collection Tool:

The questionnaire was applied to conduct the research. This is a record of the questions to be asked the respondent in its administration with appropriate instructions indicating which questions are to be asked, and in which order. This was chosen due to the fact that they are very cost effective and easy to analyze. The questionnaire describes the level of opportunities, entrepreneurial challenges and viability of urban farming variables.

Data Analysis Techniques:

The Statistical Package for Social Sciences (SPSS) was used to analyze data collected from the respondents in the survey. The research employed descriptive statistics such as frequencies, bar charts, and pie charts to analyze the data collected.

VI. Results and Discussions

Demographic Analysis:

Figure 1 below show that significant majority of respondents sampled within the selected areas are males accounting for 82% of responses as against a female sample of 18%. This therefore shows that most urban agricultural farmers are predominantly males.



Figure 1 Age of Respondents

Source: Field Data, 2018

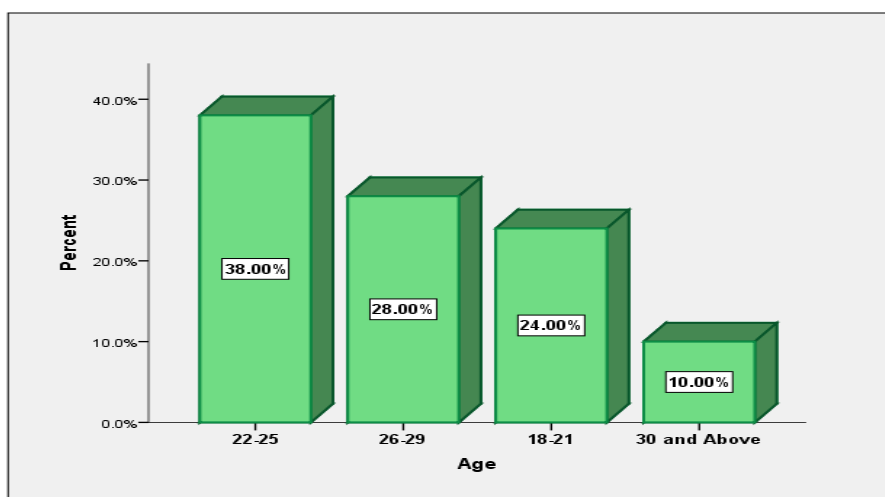


Figure 2: Age Distribution of Respondents

Source: Field Data, 2018

The figure 2 above indicates that 38% of the farmers sampled are aged between 22-25, 28% aged between 26-29 and 24% between 18-21 and 10% aged 30 and above. The findings show that most of the respondents who engage in this sort of farming constitute the economically active population of the country.

Table 1: Level of Education

		Frequency	Percent
Valid	Primary/JHS	15	30.0
	Secondary/SHS	10	20.0
	No formal education	16	32.0
	Other	9	18.0
	Total	50	100.0

Source: Field Data, 2018

Here, the table 1 above indicates that 30% of the respondents sampled had the level of education up to Primary/JHS, 32% no Formal Education, 20% Secondary/SHS and 18% for others. Ostensibly, this category of “others” includes respondents who have done post-secondary courses such as diploma and certificate course in various accredited institutions. All of the respondents are first and foremost, vegetable farmers who work in the various locations across Accra.

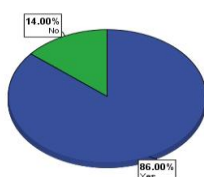


Figure 3: Sole Occupation of Respondents

Source: Field Data, 2018

The figure 3 above shows that 86% of respondents who were surveyed had vegetable farming as their sole occupation as against 14% of respondents who had other extra activities that they perform as occupations apart from vegetable farming.

Table 2: Additional Occupation

		Frequency	Percent
Valid	Petty Trading	26	52.0
	Cobbler	20	40.0
	Drinking Bar	1	2.0
	Masonry/Painting	3	6.0
	Total	50	100.0

Source: Field Data, 2018

As an additional occupation, 52% of respondents surveyed are also into petty trading apart from vegetable farming, 40% indicate that they are cobblers, 2% are drinking bar operators and 6% into masonry/Painting.

Table 2: Farm Size

		Frequency	Percent
Valid	1/2 Acre	19	38.0
	Between 1/2 and 1 acre	28	56.0
	More than 1 acre	3	6.0
	Total	50	100.0

Source: Field Data, 2018

Most respondents indicated that their farm size lies between ½ acres and 1 acre, 38% have a farm size ranging about ½ acres and 6% command farm sizes of more than 1 acre. This indicates due to land unavailability in the urban areas such as within the Accra Metropolis, such farming takes place on a rather small scale.

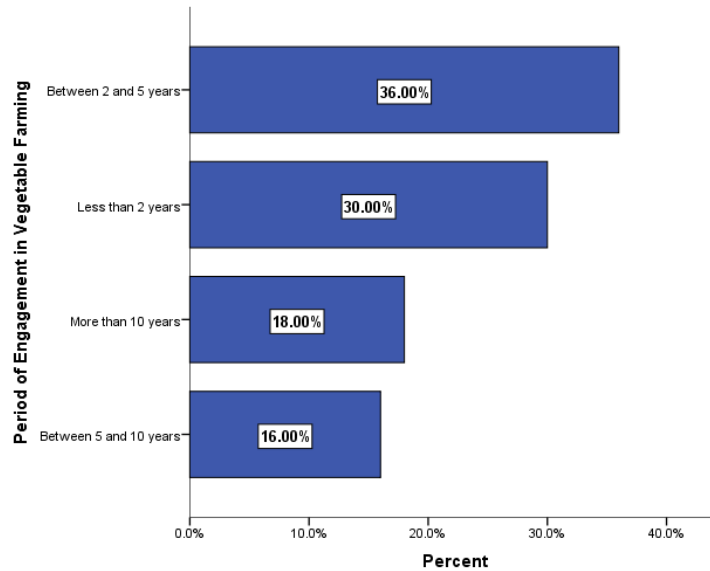


Figure 4: Period of Engagement in Vegetable Farming

Source: Field Data, 2018

As indicated on figure 4 above the respondents have quite significant level of experience in vegetable farming. 36% of them have between 2 and 5 years' experience in the business, 30% less than 2 years, 18% more than 10 years and 16% between 5 and 10 years. This gives indication that the respondents have adequate level of experience in urban agriculture and considered good enough to participate in the study.

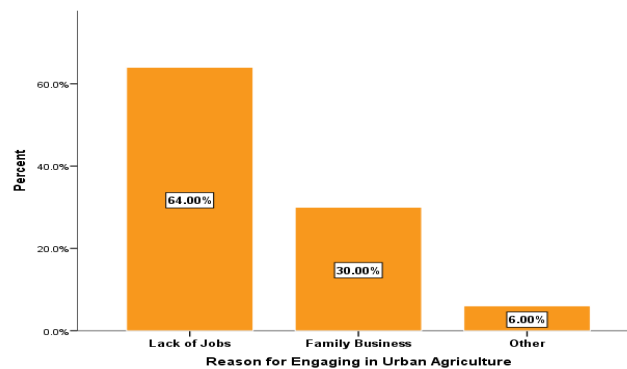


Figure 5: Reason for Engaging in Urban Agriculture

Source: Field Data, 2018

The survey showed that the respondents engage in urban agriculture for mainly economic reasons. Here, 64% of respondents sampled indicate that they engage in urban agriculture because of the perceived lack of employable opportunities, 30% indicated that their form of agriculture is being engaged in mainly because they are carrying it on from their parents who had earlier on been engaged in the occupation. 6% representing others also show that their engagement in the occupation is mainly due to their previous experiences elsewhere from engaging in the occupation.

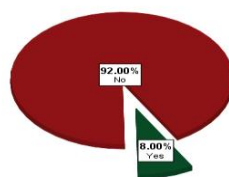


Figure 6: Formal Training in Vegetable Farming

Source: Field Data, 2018

The survey responses in figure 6 indicate that 92% of respondents do not have formal training in vegetable farming whilst 8% indicated they have undergone some form of training in this sort of farming.

Table 4: Ready Market for Produce

		Frequency	Percent
Valid	No	29	58.0
	Yes	21	42.0
	Total	50	100.0

Source: Field Data, 2018

Table 4 showed that of the respondents sampled, 42% indicated that they had ready market for their produce while 58% indicated that they do not have ready market for their produce. This is likely to affect sales since produce sometimes show seasonal patterns.

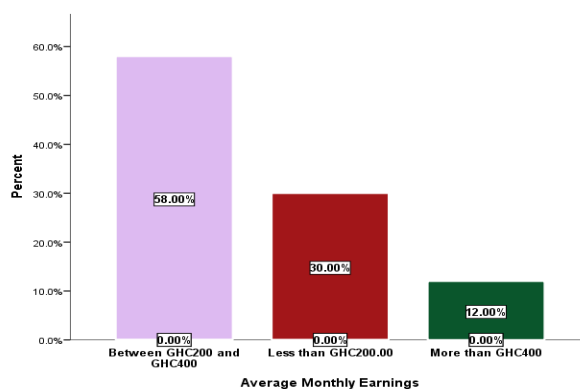


Figure 7: Average Monthly Earnings of Respondents

Source: Field Data, 2018

The figure 7 above indicates that overall, urban farmers within the selected sample areas in Accra have their monthly average earnings ranging between GHC 200 and GHC 400 as this is accounted for by 58% of respondents. 30% have their monthly earnings less than GHC 200 and 12% of them with monthly earnings more than GHC 400.

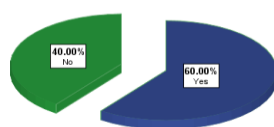


Figure 8: Farming Innovation by Farmers

Source: Field Data, 2018

The figure 8 shows that 60% of farmers have actually introduced some innovation into their business over the period while 40% indicated that they have not introduced any such innovation over the period.

Table 9: Nature of Innovation

		Frequency	Percent
Valid	Improved Seedlings	10	20.0
	New Planting Methods to Improve Growth	19	38.0
	Explore Additional Markets to Increase Revenue	21	42.0
	Total	50	100.0

Source: Field Data, 2018

As indicated on table 9 and as a follow-up question to figure 9, the vegetable urban farmers provided a range of innovative approaches to improving their business. As a topmost priority to them is the exploration of additional markets to improve revenues. This accounts for 42% of responses. Others indicated that over the period they have instituted new planting methods to improve vegetable growth (38%) and improved seedlings as innovation account for 20% of responses.

Table 10: Business Expansion

		Frequency	Percent
Valid	Yes	26	52.0
	No	24	48.0
	Total	50	100.0

Source: Field Data, 2018

As indicated on table 10, 52% of respondents showed that they would consider the possibility of future business expansion of their farms while 48% indicated that they would maintain the status quo by managing the same farm. This is linked to the unavailability of land area to facilitate such expansions, which is not available within the urban areas due to excessive competition for land for construction and other purposes.

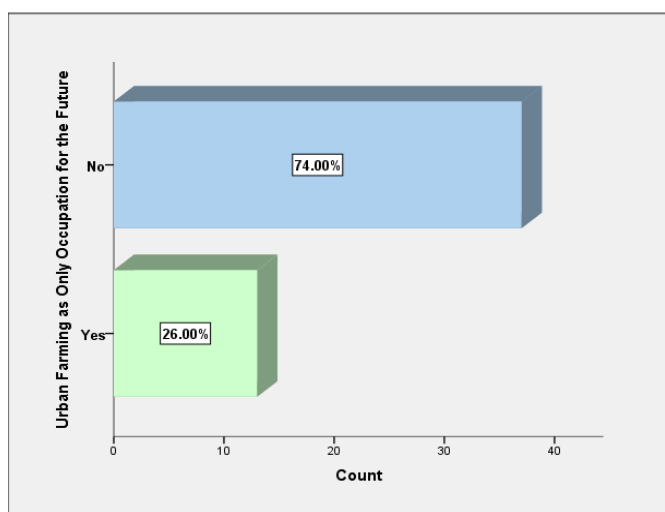


Figure 9: Urban Farming as the Only Occupation for the Future

Source: Field Data, 2018

The responses in figure 9 indicate that most a significant percentage of the respondents (74%) do not envisage undertaking urban vegetable farming in future due to current challenges the encounter as they see themselves as pursuing opportunities in their fields of endeavor. However, 26% indicate that they will pursue urban vegetable farming for the foreseeable future.

Table 7: Major Challenge of Urban Farmers

		Frequency	Percent
Valid	Land Tenure	26	52.0
	Finance	16	32.0
	Market	3	6.0
	Inputs	5	10.0
	Total	50	100.0

Source: Field Data, 2018

As shown table 7 above, the major challenge encountered by these urban farmers has to do with the land tenure system they encounter. This account for 52% of responses, this is followed financial challenge, accounting for 32% of responses, inputs 10%. In respect of receiving any form of assistance from state agencies such as the Ministry of Agriculture or its agencies, all respondents indicated they had no such form of assistance.

What are the opportunities inherent in urban agriculture in Accra?

The major opportunity inherent in urban agriculture has to do with the creation of employment opportunities for urban agricultural farmers as indicated on figure 5. This therefore resulted in their ability to undertake a host of entrepreneurial activities to improve upon their farm operations. Without receiving any formal technical training as indicated on table 5, the urban farmer is able to appreciate market uncertainties (Figure 8) and able to introduce innovations which are entrepreneurial in nature such as exploration of additional markets for produce aimed at improving their market visibility and revenues. Findings of this survey are consistent with the works^{27,28} who see these actions as entrepreneurial in nature and conceived as a human attribute, such as the willingness to face uncertainty, accepting risks, the need for achievement, which differentiate entrepreneurs from the rest of society. The study is also consistent with the findings²⁹ who consider entrepreneurship as an essential element for economic progress which manifests its fundamental importance in different ways such as identifying, assessing and exploiting business opportunities; creating new firms and/or renewing existing ones by making them more dynamic; and driving the local economy forward through innovation, competence, job creation and by generally improving the well-being of society.

What are the entrepreneurial challenges faced by urban farmers engaged in vegetable farming in Accra?

Urban farmers within the Greater Accra Region experienced the challenges which hamper their entrepreneurial activities as indicate on table 9. With respect to the local farmer, the major challenge has to do with the land tenure system where most of the farmers occupy temporary land-by-land owners who drive the farmers out when they are ready to use the land. The unavailability of land for use in this type of farming also results in farmers making use of little available spaces around the “No man” zones to farm with its attendant risks. Consistent with the findings³⁰ urban farmers do not have access to urban land, water and other resources to facilitate their business operations.

What is the viability of urban agriculture in Accra?

Urban agriculture is viable within the medium to long-term as their average monthly income lies between GHC 200 and GHC 400 as indicated. Current conditions of the state of farming indicate that consideration will be given to the expansion of the farm due to future prospects of the farms. The viability of the urban farmer is imminent in them earning at least twice as much as rural farmers by farming on only about 20 percent of the farm area of the rural farmer, which is consistent with the findings³¹.

VII. Conclusion

The major of the study was to find out the nature of entrepreneurial dynamics of urban agriculture with focus on vegetable farmers across selected areas of the Greater Accra Region. The study sought specifically to determine the nature of entrepreneurial opportunities involved in urban agriculture in Accra, challenges faced by urban farmers engaged in vegetable farming within Accra and the general viability of urban agriculture within Accra. In order to measure the entrepreneurial dynamics, challenges inherent in urban farming as well as the general viability of urban agriculture, the researchers administered questionnaires to respondents within selected areas such as Airport, Achimota and vegetable farmers along the Weija Lake. Overall, the questionnaires administered showed that urban vegetable farmers within Accra exhibited entrepreneurial tendencies in how they identify opportunities in the midst of challenges to maximize revenue. This they do to make viable the business of urban vegetable farming within the medium to long-term. The study attracted attention of the researchers due to the near neglect of the role of the urban agriculture farmer to employment generation, food security and equitable use of land for economic activity. Although entrepreneurial nature of urban agriculture has been emphasized in this study, challenges are also driving away potential urban farmers into other endeavors as more urban farmers do not see themselves remaining in their profession due the challenges they encounter.

Based on the findings of the research, the study made some recommendations which when implemented could go a long way to improve entrepreneurial activities of the urban farmer. First, state lands which are not currently in use can earmarked for the use of the urban vegetable farmers who will also serve caretakers of the land and to forestall the practice of indiscriminately selling such properties to other private individuals. Second, there should be policy focus on the economic contribution of the urban farmer to the food needs of the society. Here, workers of the Ministry of Food and Agriculture should render extension services to them. Through the Ministry also, these farmers should be able to have access to subsidized seeds for the business operations. Thirdly, Government and NGO's as well as development agencies should also institute capacity building program for these farmers increase their entrepreneurial capacity to access additional markets for their produce and create additional employment through improved service delivery. Further studies can also be conducted in relation to the employment generation capacity of urban entrepreneurial vegetable farming in the Greater Accra Region.

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Ewurabena Aniniwa Darkwah. "The Entrepreneurial Activities of Urban Vegetable Farmers in Accra." IOSR Journal of Agriculture and Veterinary Science (IOSR-JAVS) 12.3 (2019): PP-22-31.