

Attitudes of Local People Toward Home Gardening in Gezira State, Sudan

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Abstract: *The current study was conducted to study the attitudes of local people toward home gardening in Gezira state. The study depended on primary data that were collected via structured questionnaires and direct interviews with respondents. The study used a random sampling technique while SPSS soft word was run for descriptive measures. The results showed that the majority of the respondents prefer fruit and vegetable gardening because they can consume it for home consumption. Moreover the respondent has very good attitudes toward home gardening at 4.6 points on Likert scale. This indicates favorable attitudes in environmental issues also.*

Keywords: Home gardening, Attitudes, Gezira State, Sudan.

Introduction:

Home gardens are found in both rural and urban areas in predominantly small-scale subsistence agricultural systems (Nair,1993). The very beginning of modern agriculture can be dated back to subsistence production systems that began in small garden plots around the household. These gardens have persistently endured the test of time and continue to play an important role in providing food and income for the family.

Generally, home gardening refers to the cultivation of a small portion of land which may be around the household or within walking distance from the family home (Odebode, 2006). Home gardens can be described as a mixed cropping system that encompasses vegetables, fruits, plantation crops, spices, herbs, ornamental and medicinal plants as well as livestock that can serve as a supplementary source of food and income (Kumar, 2004) while acknowledging that there is no standard definition for 'a home garden', summarize the shared perception by referring to it as 'an intimate, multi-story combinations of various trees and crops, sometimes in association with domestic animals, around homesteads', and add that home garden cultivation is fully or partially committed for vegetables, fruits, and herbs primarily for domestic consumption. The importance of trees in farming systems for ecology and rural livelihoods has received ample attention during the last decades. This resulted in many specific case studies about the actual situation and importance of trees in rural farm fields (Deweese, 1992). Fruit consumption in Africa is far below the recommended minimum intake per day. Indigenous fruit trees contribute much to nutrition and food security by providing year round vitamin- and mineral-rich products for consumption and sale, particularly for women and children. However, the abundance of indigenous fruit trees is decreasing in the natural vegetation of many East African regions including the Nuba Mountains in Central Sudan. Home gardens may offer an opportunity for cultivating these trees, but information about the diversity of indigenous fruit trees in Nuba home gardens is lacking (Wiehle, et. al, 2014).

Wad Medani is the big town in central Sudan. Houses with a surrounding garden are a very common feature in the city. However, no information is available about plant type and its significance for household food security. To gather information a survey was conducted to identify the attitudes of local people toward home gardening and describe people attitudes toward plants in gardening and to determine demographic and socioeconomic variables influence these attitudes.

Methodology

The study was undertaken in Gezira state is located in central Sudan, occupying the tract between the White and the Blue Niles south of their convergence at Khartoum. Wad Medani is the state's capital. It has an area of 27,549 km² (CBS, 2008). Its consists of six administrative units. Namely Alwaha, Wad Medanicentre, Public market, Central market, Hantoub, and Alshabarga. The total number of the household of greater Wad Medani locality in the year 2008 was estimated at 69008 households. The households' guardians enrolled are mainly engaged in agriculture, trade and as employees in public services. The Primary data were obtained through both formal and informal interviews. For formal interviews, a questionnaire for basic information at the household level was designed before the field's work to collect both qualitative and quantitative information. The questionnaire was first tested in the field with 20 heads of households. The questionnaire was adequate and very slight modifications were made to suit the conditions of the study area. The questionnaire was administered to two hundred heads of households from wad Medani town. These interviews were accompanied by personal observations which allowed the author to judge the reliability of the answers given. Selection of town was done according to the intervention of local government to distribute fruit trees to the household in medani to increase fruit production for both home and marketing. Secondary data were obtained largely through the analysis of various documents relevant

to the study. This includes institutional reports, records, and papers that provide baseline information for the study. The data were analyzed using the Statistical Package for the Social Sciences (SPSS) Version 20. Calculation of the percentage was used as a tool of analysis for interpreting the qualitative information gathered from respondents.

Sample Selection:

The study was used a multistage sampling method. The first stage includes a purposive selection of wadmedani locality where the project implements its activities. In the second stage, a systematic random sample will be adopted to select households from each administrative unit as a sample size for the study. The sample will be select from each administrative units proportionally, using systematic random sample techniques according to Yamane formula:

$$n = \frac{N}{1 + N(e)^2}$$

Where :

n = sample size. N = community size. e = the level of precision 0.05

Sample size: n = $\frac{69008}{1 + 69008 * .0025} = 397$

Results:

Table (1) age category:

age of the respondents		
Age group	Frequency	Percent
21 – 30	22	5.5
31 – 40	101	25.5
41 – 50	111	28.0
more than 51	163	41.0
Total	397	100.0

Source: field survey 2019

Table (1) shows that majority of the respondents 41% their age more than 51 years old and 53% of the respondents their age 31-50 this indicate the majority of respondent were adults.

Table (2) family members:

no of family members		
Family members	Frequency	Percent
2- 5	103	26.0
6 – 8	272	68.5
more than 8	22	5.5
Total	397	100.0

Source: field survey 2019

Table (2) shows that the vast majority of the respondents 68.5% have 6-8 family members they were in a productive family they consume more food. Home gardens play an important role in food security and nutrition, especially when food supplies are inadequate or unreliable. In urban areas, fresh produce may be costly and hard to find, and in rural areas, much of the agricultural land is devoted to staple-crop monocultures maize, cotton, sorghum, etc. Home gardens help fill the nutritional gaps even a small plot can supply a variety of fruits and vegetables at a relatively low cost. In Sri Lanka, for example, urban home gardens produce an estimated 50-60% of the leafy vegetables and 20% of all the vegetables consumed by the households (Pushpakumara, 2012).

Table (3) owner of home:

owner of home		
Home	Frequency	Percent
Mined	212	53.5
Rent	82	20.5
Other	103	26.0
Total	397	100.0

Source: field survey 2019

Table (3) shows that more than half of the respondents 53.5% have their home. The common criticism is that gardening is only feasible for households with access to land, water, and technical assistance, leaving out many of the food insecure. The size of the plot also matters. Many of the home gardens visited in the Burkina Faso study were too small to support even one tree. A study for the Food and Agriculture Organization of the United Nations (FAO) estimated that to grow three to five trees, a household would need at least 167 m² of land (Mitchell, 2004).

Table (4) period of living in home:

when do you live in home		
Period of living	Frequency	Percent
2 - 3 years	9	2.3
4 - 6 years	184	46.3
more than 6 years	204	51.4
Total	397	100.0

Source: field survey 2019

Table (4) shows that 51.4% of the respondents live more than 6 years in their home that means gardening needs more stable people because it needs a period for planning and planting.

Table (5) type of garden:

what do you prefer		
	Frequency	Percent
fruit and vegetable	266	67.0
trees and flower	131	33.0
Total	397	100.0

Source: field survey 2019

Table (5) delineate majority of the respondents 67.0% they prefer fruit and vegetable gardening because they can consume from it for home consumption, while others prefer trees and flower for their enjoying their time and shadow. Aguilar, 2009 cited that home gardens come in many different forms, depending on both gardener's own choices, and on external conditions like local climate, soil quality, culturally defined dietary and agricultural practices, and access to land, water, seeds, fertilizer, tools, and other key resources.

Many households have simple vegetable gardens with mostly annual crops, perhaps with ornamentals or trees on the margins. Others, especially in the tropics, build dense, multi-layered landscapes with trees, shrubs, vines, and shade-tolerant perennials.

Table (6) attitude toward garden:

	Strongly agree		agree		Neutral		Disagree		Strongly disagree		Weighted mean
	f	%	f	%	f	%	f	%	f	%	
home garden offer good food	317	80.0	80	20.0	-	-	-	-	-	-	4.8
home garden can save a money	347	87.4	50	12.6	-	-	-	-	-	-	4.9
home garden need more effort	-	-	50	12.6	163	41.0	184	46.5	-	-	2.7
home garden educate family members joint action	266	67.0	131	33.0	-	-	-	-	-	-	4.7
home garden can support neighborhoods with some products	347	87.4	50	12.6	-	-	-	-	-	-	4.9
home garden environmentally sound	317	80.0	80	20.0	-	-	-	-	-	-	4.8
home garden is important for fill leisure time	215	54.0	182	46.0	-	-	-	-	-	-	4.5
home garden offer food without pesticides	347	87.4	50	12.6	-	-	-	-	-	-	4.9
i have interest to know more about home garden	347	87.4	50	12.6	-	-	-	-	-	-	4.9
home garden is income generation activities	266	67.0	131	33.0	-	-	-	-	-	-	4.7
Weighted mean											4.6

Source: field survey 2019

Table (6) delineates that the respondents have very good attitudes toward home gardening at 4.6 points on the Likert scale. Research on the role of home gardens for socio-ecological resilience in Trinidad de Cuba, for example, found a wealth of traditional knowledge about medicinal plants in home gardens; households also shared useful plants with friends and neighbors, building resilience as a community (Buchmann, 2009). Similarly, a study in Oaxaca, Mexico, found that home gardeners learned extensively from one another, diversifying their gardens by exchanging plants and seeds. This highlights the value of participatory interventions that engage households in a dialogue with scientists and with one another, to build knowledge together (Simelton, 2014).

Conclusion:

From the study it is concluded that the majority of the respondents were in the productive family they consume more food. They live in their home for a long time that means gardening needs more stable people because it needs time for planning and planting to gain benefits. Most of them prefer fruit and vegetable gardening because they can consume it for home consumption, while others prefer trees and flowers for their enjoying their time and shadow. Moreover, the respondents have very good attitudes toward home gardening. Also based on the findings the study found there was a positive attitude in the area of the study so the government can support the local population to increase gardening for a good and healthy environment.

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