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Research Application Summary

Consumers’ knowledge and preferences for organic vegetables in Tanzania

Sendewa, D. D[1]., Elepu, G.[1] & Temu, A.[2]
[1]Department of Agribusiness and Natural Resources Economics, Makerere University,
P. O. Box 7062, Kampala, Uganda
[2]Department of Agriculture Economics and Agribusiness, Sokoine University of Agriculture,
P. O. Box 3000, Morogoro, Tanzania
Corresponding author: danieldoris30@yahoo.com

Abstract

In the last few years, organic food consumption has increased globally. This increase is due to widely reported incidents of some dangerous diseases related associated with consumption of food products produced with high levels of industrial pesticides and fertilizer. Consumers’ consciousness on health and food safety has been reported globally and has stimulated the growth of the organic market in the world. Tanzania is one of the countries in which consumers are conscious of what they consume, although the domestic market for organic products is still very low. Consumers’ food knowledge and preferences contributes to the growth of domestic market of selected products, yet this is unknown in Tanzania. Therefore, the aim of this paper was to examine consumers’ level of knowledge and their preferences with regard to organic vegetables in Tanzania. Data were collected in Dar es Salaam from 250 respondents. Descriptive statistics using SPSS software was used to determine the level of awareness/knowledge among consumers and their preferences. Results indicated that majority of consumers (82.4%) were aware of organic products in particular organic vegetables. The critical issue observed was how to get pure organic products in the local market since it is difficult to differentiate organic from conventional products in the absence of labeling. Fifty six percent (56%) of the respondents did not know how to differentiate organic from conventional vegetables. About 54% and 46% of respondents prefer quality cabbages and tomatoes, respectively, when making purchase decisions in the market. These results will provide key information for the organic food industry to promote the growth of domestic organic food markets along the value chain in Tanzania.

Key words: Awareness, consumer preferences and perception, organic vegetables, Tanzania

Résumé

Au cours des dernières années, la consommation d’aliments biologiques a augmenté au niveau mondial. Cette augmentation est due à des incidents largement rapportés de certaines maladies dangereuses liées à la consommation de produits alimentaires produits avec des niveaux élevés de pesticides industriels et d’engrais. La conscience des consommateurs sur la santé et la sécurité alimentaire a été signalée à l’échelle mondiale et a stimulé la croissance du marché biologique dans le monde. La Tanzanie est l’un des pays où les consommateurs sont conscients de ce qu’ils consomment, même si le marché intérieur des produits biologiques est encore très faible. Les connaissances et préférences alimentaires des consommateurs contribuent à la croissance du marché intérieur des produits sélectionnés, mais cela n'est pas connu en Tanzanie. Par conséquent, le but de cet article était d'examiner le niveau de connaissance des consommateurs et leurs préférences en matière de légumes biologiques en Tanzanie. Les données ont été recueillies à Dar es Salaam auprès de 250 répondants. Des statistiques descriptives à partir du logiciel SPSS ont été utilisées pour déterminer le niveau de connaissance / connaissance parmi les consommateurs et leurs préférences. Les résultats indiquent que la majorité des consommateurs (82,4%) connaissent les produits biologiques, en particulier les légumes biologiques. La question cruciale a été de savoir comment obtenir des produits biologiques purs sur le marché local car il est difficile de différencier les produits biologiques des produits conventionnels en l'absence d'étiquetage. Cinquante-six pour cent (56%) des enquêtés ne savaient pas comment différencier les légumes biologiques des légumes conventionnels. Environ 54% et 46% des personnes enquêtées préfèrent respectivement les choux de qualité et les tomates, lorsqu'ils prennent des décisions d'achat sur le marché. Ces résultats fourniront des informations clés pour l'industrie de l'alimentation biologique afin de promouvoir la croissance des marchés d'aliments biologiques domestiques le long de la chaîne de valeur en Tanzanie.

Mots clés: sensibilisation, préférences et perception des consommateurs, légumes,

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Background

Globally, consumer interest in organic food products has grown considerably due to increasing concerns about the negative impacts associated with the effects of intensive farming systems on both human health and the environment (Wang *et al.,* 2010). This positive trend has also been attributed to increasing consumer awareness about numerous food scares in relation to some diseases like cancer and the perception that eating healthy organic foods can potentially alleviate some effects of HIV/AIDS (Taylor, 2006). The demand for safe and health food has therefore stimulated the growth of organic agriculture in the world.

Although Tanzania is the fourth highest organic crop producing country in the world after India, Uganda and Mexico, the domestic market for organic products is still very low. The growth of domestic market for any products including organic products can be influenced by various factors associated with consumers' knowledge, preferences and perception toward the product and willingness to pay (WTP) for such products (Ngigi *et al.,* 2011; Senyolo *et al.,* 2014). These attributes have barely been understood in Tanzania with respect to organic foods. Therefore, this study was done to assess consumers' knowledge and preferences towards organic vegetables in particular organic tomatoes and cabbages in Tanzania.

Literature summary

Knowledge of products and their benefits play a great role in determining demand for such products in a given market (Sriwaranun *et al.,* 2015). Peoples' knowledge is affected by type and quality of information made available to consumers. Knowledge and awareness have direct and indirect effects on consumers' attitudes towards a product and their willingness to pay a price premium for such a product (Senyolo *et al.,* 2014; Sriwaranun *et al.,* 2015). Therefore, knowing consumers' knowledge and their preferences on organic vegetables provide a great opportunity for the development of domestic organic market and organic sector in general.

Study Description

The study was conducted in Dar es Salaam region, Tanzania. The region is located between latitudes 6°49′24″ to the South of Equator and longitudes 39°16′10″ to the East of Greenwich. It is bounded by the Indian Ocean on the East and by the Coast Region on the other sides. A survey research method was adopted in which a semi-structured questionnaire was administered to collect data. Face-to-face interview was preferred in this study to increase the response rate and to provide respondents with a better understanding of the questions. Interview with key informants from organic foods special outlets were conducted to gain more insight into consumers' preferences of organic vegetables. Secondary data were also collected through review of literature. Data were analyzed by the Statistical Package for Social Sciences (SPSS).

Research Application

Results showed that about 82.8% of the respondents were aware of organic products in particular organic vegetables (Table 1). However, only 53.4 % of those who said they were aware of the organic products in particular organic vegetables could provide a clear definition of the term "organic product". The common organic vegetables that most of the respondents were aware of were leaf vegetables such as amaranths (17.8%), sweetpotatoes leaves (16.4%), nightshade (10.3%), cassava leaves (6.3%), and pumpkins leaves (5.9%). Others vegetables were okra (8.70%), african eggplant (6.2%), onion (5.0%) and tomatoes (9.1%).

About 40% of consumers knew the mentioned organic vegetables from their homes, friends and family members. About 30% and 16% of consumers were introduced to organic products from television and radio, respectively, especially through adverts of herbal clinics and the different organic products. Other sources of information on organic products reported were newspapers, schools, books and internet (Table 1).

Social demographic characteristics such as nature of one's work, education level, number of children less than 18 years of age and income were shown to have a direct impact on consumers' awareness/knowledge on organic vegetables.This makes sense as we expect individuals who are educated to be more conscious about their health and what they consume. Moreover, individual who are educated are exposed to different literature that provide information on organic food products. Likewise, since organic products cost more than their conventional counterparts, individuals with high income are expected to access organic products more than those with a low income.

This was also the case in this study (Table 2). The study results also indicate that households with children less than 18 years are likely to be more aware of organic products especially vegetables since they are more sensitive about the health and growth of their children. Results of this study are similar to those of Alphonce and Alfnes (2015) who pointed out the positive relationship between education levels, income level and occupation of consumers with the level of knowledge of a product.

Table 1: Knowledge on organic vegetables and source of information by consumers in Dar-es-Salaam region, Tanzania

Variable		Percentage (n =250)
Consumers awareness on organic vegetables		
	Yes	82.8
	No	17.2
Source of information		
	Radio	16.2
	Newspapers	7.4
	Television	29.7
	Friends/Family member	39.9
	School/classes/Books	5.4
	Internet	1.4

Source: Authors field survey data, 2016

About 46% and 54% of the respondents indicated that quality of tomatoes and cabbages respectively was the most attribute they considered before purchasing. Other characteristics attributes mentioned were freshness and size of tomatoes and cabbages, respectively (Table 3). These characteristics were also applicable to all organic vegetables in the market. Since it is difficult to differentiate organic vegetables from conventional vegetables, about 46% of respondents suggested that organic vegetables should be labeled for easy identification in the market while 42% suggested the organic vegetables should be sold in special organic shops/markets (Table 3). It was observed that many consumers of vegetables purchased vegetables in local markets hoping that they are organically produced. In reality however, these vegetables are conventionally produced.

Consumer perceptions of organic vegetables are given in Table 4. Many consumers perceived organic vegetables to be good to their health, to have good quality, to be tastier and better for the environment. The results are similar to findings from other studies such as Xia and Zeng (2008) who pointed out that organic products are safe and have no harmful effects to human health since they are chemical-free.

Table 2: Socio demographic characteristics and awareness of organic vegetables in the Dar-es-Salaam region, Tanzania

Variable	Categories	Awareness (%)	
		Yes	No
Age	18-35	61.6	11
	36-55	31.2	2
	56-60	1.2	0
	60 and above	0.8	0
Gender	Female	54.8	3
	Male	40.0	10
Education level	Primary education	20.0	1
	Secondary education	36.0	3
	High level education	34.0	9
	Vocational or Technical education i.e VETA	4.4	0
	Did not go to school	0.4	0
Average income (Tsh)	0 – 49000	14.0	3
	50000-150000	16.8	3
	155000-350000	21.2	0
	355000-600000	22.0	6
	650000-900000	14.4	1
	950000-1300000	6.0	0
	1350000 and above	0.4	0
Occupation	Full time employed	26.8	6
	Not yet employed	13.6	4
	Self employed	54.4	3
Number of children	None	28.4	4
	1-5	64.8	9
	6-10	1.6	0
Summary			
Variables	Chi square value	P- value	
Education	27.440	0.001	
Gender	7.533	0.006	
Age	3.878	0.693	
Number of Children	16.519	0.002	
Occupation	30.581	0.000	
Average income	29.285	0.004	

Source: Author field survey data, 2016

Table 3: Vegetables characteristics and mode of differentiation

Organic vegetables	Characteristics	Percentage response
Tomatoes	Freshness	31
	Color	5
	Size	14
	Labelling	3
	Hardness	2
	Quality	46
Cabbages	Freshness	20
	Size	22
	Labelling	4
	Quality	54
Mode of differentiation		
Labeling		46
To be sold in a special market		42
Labeling and selling in the special market		12

Source: Author field survey data, 2016

Table 4: Consumers perception about organic vegetables in the Dar-es-Salaam region,Tanzania.

	Percepective index (%)						
Variables	Strongly disagree	Disagree	Neutral	Agree	Stroongly agree	Mean	S.D
Not harmful to human health	3.2	0.8	6.0	45.6	44.4	4.27	0.87
Good quality	0.0	0.0	8.0	36.4	55.6	4.48	0.64
Healthier	1.6	0.0	4.4	26.0	68.0	4.59	0.72
Testier	5.2	2.4	21.2	41.2	30.0	3.83	1.03
No negative impacts to the environment	2.0	3.2	22.8	5.6	18.4	3.83	0.83
Expensive	8.8	3.6	29.6	42.8	15.2	3.52	1.08

Source: Author field survey data, 2016

Conclusion and Recommendation

The study concludes that, respondents were aware of organic vegetables although only a few of them were purchasing them from organic shops and consuming them. Few respondents purchase organic products just because their outlets were nearby without necessarily intending to purchase organic food. The most limitation mentioned was was how to differentiate organic from conventional vegetables since in many markets organic products are mixed up with conventional vegetables.

It is therefore recommended that more sensitization be done to create awareness on organic products and their benefits. Efforts should also be made to differentiate organic from conventional products in open markets through labeling. In addition, organic shops should be advertised to create more awareness among consumers, location of these shops and products sold. Producers and other actors of the organic vegetables value chain should take note of vegetable attributes that consumers' like such as quality and freshness to ensure growth of the domestic organic products market in Tanzania.

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