EISSN: 2707-0425

East African Journal of Science, Technology and Innovation, Vol. 2 (Special issue): May 2021

Capacity building influence on waste management among horticultural processing Micro, Small and Medium Enterprises in Kenya

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Abstract

Waste management includes those activities and actions required to manage wastes from inception to its final disposal. These include collection, transport, treatment and disposal of waste together with monitoring and regulation of waste management process. Inadequate and inappropriate knowledge of handling of horticultural wastes may have serious health implications and a significant impact on the environment as well. This is so because, if people possess good knowledge towards waste management, they can protect themselves from infectious diseases and keep the environment clean. This affects people's attitude and most people due to lack of capacity or training on how to handle wastes, do not bother to dispose wastes appropriately. This study therefore, assesses the influence of capacity building on waste management amongst horticultural processing Micro, Small and Medium Enterprises (MSMEs) in Kenya. Using descriptive research design, the data were collected using structured questionnaires from 31 Certified Horticultural processing MSMEs in Kenya derived from Nairobi, Central and Western regions after undergoing various trainings on waste management. The results indicated that the majority of those engaged in horticultural processing MSMEs business are married (90.3%), affirming the family-oriented business tier. Further, the results showed that, before conducting training to the MSMEs, their level of knowledge on reduction in quantity of waste, waste management was at 58% and 68%, respectively. After training the result showed a high level of improvement at 87% and 83.9% on the same variables. The results further showed changes on waste management before and after capacity building with a mean of 9.29 and 16.70 respectively. Therefore, the study established a significant relationship with a p-value of 0.000 between capacity building and waste management in horticultural processing MSMEs in Kenya.

Keywords: *Capacity building; horticultural processing; MSMEs waste management*

Cite as: *Ouma et al., (2021).* Capacity building influence on waste management among horticultural processing Micro, Small and Medium Enterprises in Kenya. *East African Journal of Science, Technology and Innovation 2(Special Issue).*

Received: 24/04/21
Accepted: 13/05/21
Published: 25/05/21

Introduction

The horticultural sub-sector is the fastest growing industry within the Kenyan sector. The sub-sector employs approximately 4.5 million people directly in production, processing and marketing and value addition chains, while over 3.5 million people benefit indirectly (FAO, 2015).

Nevertheless, this resource use poses significant challenges in terms of sustainability and waste management, especially considering Kenya's vulnerability to climate change. This means that every Horticultural processing Micro, Small and Medium Enterprises (MSMEs) must incorporate Sustainable Consumption and Production (SCP) practices as envisioned by United Nations under Sustainable Development Goals (SDGs) number 12 and 13, clearly outlining the mandate to produce efficiently while consuming sustainably (UN, 2015).

Even though the definition varies from one country to another, the regulatory and institutional framework for the Kenya's MSMEs has been based on the number of employees and the company's annual turnover (Republic of Kenya, 2012). For instance, the micro enterprises have been defined as those employing less than 10 workers with annual turnovers of less than KES 500,000 and capital formation of less than KES 5 million for services or less than KES 10 million for enterprises doing manufacturing. Small enterprises are defined as those that employ between 10 and 50 workers with annual turnovers between KES 500,000 and KES 5 million and capital formation between KES 5 million and KES 20 million for services or between KES 5 million and KES 50 million for enterprises doing manufacturing.

According to (Baran, 2015) waste is the difference between the level of output of useful goods and services that would be obtained if all productive factors were allocated to their best and highest uses under rational social order, and the level that is actually obtained. Waste being one of the contributors of greenhouse gases, affects climate change and in turn affects Horticultural production activities and therefore the need to develop sustainable waste management technologies and initiatives to cub this growing global challenge.

Waste management methods cannot be uniform across regions and sectors because individual waste management methods cannot deal with all potential waste materials in a sustainable manner (Staniškis, 2015). Conditions vary; therefore, procedures must also vary accordingly to ensure that these conditions can be successfully met. Waste management systems must remain flexible in light of changing economic, environmental and, social conditions (Scharfe, 2012). In most cases, waste management is carried out by a series of processes, many of which are closely interrelated; therefore, it is logical to design holistic waste management systems, rather than the alternative and competing options (Staniškis, 2015). For example, integrated waste management.

Saungweme, (2016) in his research of integrated solid waste management in Mbare, similarly opines that at a consumption level reduction can include reuse of containers and bags, changing buying habits, reducing the use of disposable products, and packaging. Source separation makes collection, recovery and, reuse of solid waste easy. TARSC (2013) argues that less than 10% of waste paper, plastics and, scrap metals are recycled nationwide. Davis, et al., (2017) is of the view that resource recovery which includes the extraction of economically usable material or energy from solid wastes has not been set up in developing countries.

On the other hand, the concept of waste reduction, or waste minimization, involves redesigning products or changing societal patterns of consumption, use, and waste generation to prevent the creation of waste and minimize the toxicity of waste that is produced (USEPA, 2010). Common examples of waste reduction include using a reusable coffee mug instead of a disposable one, reducing product packaging, and buying durable products which can be repaired rather than replaced. The reduction can also be achieved in many cases by reducing the consumption of products, goods, and services. The most effective way to reduce waste is by not creating it in the first place, and the reduction is placed at the top of waste hierarchies (USEPA, 2015). In many instances, a reduction can be achieved through the reuse of products. Efforts to take action to reduce waste before waste is produced can also be termed pre-cycling. However, not all waste products can be displaced and even reusable products will eventually need to be replaced. It is inevitable waste will be created as a by-product of daily human living (Kim, 2012), but in many cases, this

waste can be diverted and recycled into valuable new materials.

A major constraint seen throughout the developing world is the lack of education and awareness of effective waste-management practices. A study conducted in Gaborone, Botswana, the results indicated that despite citizen's awareness of recycling and other sustainable waste-management techniques, it did not translate into participation in pro-environmental activities such as recycling initiatives (Bolaane, 2010). Low or no interest in environmental matters yields a culture of non-participation of communities in decision-making processes. The results of a study done in Malaysia by Aini *et al.,* (2009) indicated that, in order to overcome the solid waste crisis, the "conscience of the individual needs to be aligned towards environmental awareness and concern, inculcation of sustainable consumption practices and education on waste management." Environmental awareness and knowledge about environmental conservation were found to affect recycling attitude positively but positive attitude may not have resulted in recycling if knowledge about it was poor (Aini *et al.,* 2009), so waste managers need to take steps to help adapt and be consistent the information disseminated in public with those already possessed.

According to Connolly& York. (2016), Capacity building is an intervention to strengthens an organization's ability to fulfil its mission by promoting a blend of sound management, strong governance and, a persistent rededication to achieve results. Harsh S. (2015), postulates that capacity building can be viewed as a change process aimed at aligning norms, need or, refined practices with desired growth objectives within an organization and for effectiveness, an organization's capacity building requires deliberate and planned change. According to Duda *et al.,* (2013) organizations go through the capacity-building process, one of three types of outcomes can occur; Developmental (first-order change), Transitional (second-order change) and, Transformational (third-order), change. Further, he opines that developmental outcomes result from an improvement of a skill or process. In this case, employees within the horticultural are processing MSMEs to improve within their skills on waste management, and practice. On the other hand, transitional outcomes occur when an organization begins moving from its initial state of production to sustainable consumption and production practices (SCP)-a new desired state. Lastly, Transformational outcomes are achieved when there is a paradigm shift in culture and beliefs among employees of an organization thereby changes in organizational structures and processes (Beesley, A., D. & Shelbby, S (2016). Therefore, the main objective of this research was to find out the influence of capacity building on waste management amongst horticultural processing MSMEs in Kenya.

Capacity building programmes play a vital role in the development of any sector. Likewise, horticultural training programs targeting horticultural processing MSMEs will help develop entrepreneurial skills and enable them to adapt to efficient production and management of wastes. Another study conducted on Bangladeshi small farmers concluded that building the capacity of farmers through training is more valuable than the provision of financial support in terms of raising production and income (Murshed-E-Jahan & Pemsl, 2011). However, a study on effectiveness of training for farmers showed that not all programmers meet success as most failures of programmes in the developing countries are attributed to the tendency of excessively concentrating on a particular technology transfer rather than a broader spectrum of farmer empowerment including knowledge dissemination (Oreszczyn & Carr, 2010).

According to UNESCO report, (UNESCO, 2018b), climate change education is essential for reducing vulnerability and increasing resilience to climate change. The power of education on climate change responses was acknowledged at the Paris Climate Conference (COP, 21) in 2015 with Article 12 on Education (UN, 2015). Climate change education helps citizens understand the causes and consequences of climate change and its impact on lifestyles. Environmental training helps in changing consumption patterns, promoting sustainable practices and lifestyles, and promoting environmental stewardship – Sustainable Development Goal (SDG) number 4.7.1 (UNESCO, 1996). Further, it postulates that,

unsustainable patterns of consumption and production have been declared the primary cause of environmental deterioration and therefore, SCP practices should be reflected in the formulation and implementation of SDGs.

Horticultural processing MSMEs in Kenya utilize raw agricultural produce converting them to processed products for human utilization. During processing large quantities of solid and liquid wastes are generated that depends on the nature of raw materials, scale of processing and adopted practices. However, there is limited empirical data on knowledge, attitude and current waste management practices especially among Horticultural processing MSMEs in Kenya. Even though, Capacity building has been shown to improve waste management practices (Yohanis and Genemo, 2015), but this has not been substantially studied generally among the processing Horticultural MSMEs in Kenya.

Materials and Methods

The research adopted descriptive survey method to gather data on the influence of capacity building on waste management amongst selected and trained horticultural processing MSMEs in Kenya. In the first stage, the researcher recruited 60 Horticultural processing MSMEs in order to undergo several stages of capacity building on waste management, environmental management system and environmental audit. In the second stage, those who did not meet the required thresholds as per the project's specifications were dropped remaining with population of 34 horticultural processing MSMEs spread across Nairobi area and its environs, central and western regions in Kenya. Therefore, to determine the sample size from a population of 34, the researcher used Taro Yamane's formula (1967) as indicated below.

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

Where;

$\boldsymbol{n}$ = the sample size,

$\boldsymbol{N}$ = the population size and

$\boldsymbol{e}$ = the level of precision.

$$\boldsymbol{n} = \frac{34}{1 + 34(0.05)^2}$$

$$\boldsymbol{n} = \frac{34}{1 + 34(0.0025)}$$

$$\boldsymbol{n} = \frac{34}{1.085}$$

$$\boldsymbol{n} = 31\ \boldsymbol{Certified\ horticultural\ processing\ MSMEs}$$

Equation (1)

While both interview and questionnaire augurs well with descriptive research design, a questionnaire was the most appropriate for the study (Saunders, 2007). The questionnaire sought to get information on influence of capacity building on waste management among the trained and certified owners/key employees of horticultural processing MSMEs in the three regions in Kenya. The results of the research were both qualitative and quantitative. Using Online Data Kit (ODK) platform primary data collected and analysed using Statistical Package for Social Sciences (SPSS). Descriptive statistics were presented on the research objective followed by

inferential data analysis using regression. This was so, because the regression analysis is a reliable method of identifying which variables has impact in the topic under study. It allows the researcher to confidently determine which factors matter most, those which can be ignored and how the factors influence each other (Field A., 2013).

Results

This section presents the findings and interpretation of the results of the research. It includes the demographics of the respondents, capacity building influence on waste management amongst the processing MSMEs and the relationships between the variables.

Demographic information of respondents

Table 1 show that the majority of the respondents (58.1%) were females, while 41.9% males. On Marital status, the results in Figure 2 indicates that 90.3% of those engaged in horticultural processing MSMEs businesses are predominantly married thereby demonstrating the family business tier, while 9.7% respondents were either single, separated or divorced. The results further indicated that the majority of those involved in Horticultural processing MSME businesses are aged between 31-40 years (38.7%), followed closely by 18-30 (25.8%), 41-50 (19.4%) and 51- 60 (12.9%) years of age respectively, while those above 61 years of age, was only one person at 3.2%.

Among the respondents, 64.6% indicated that they had undertaken College/Diploma and undergraduate degree courses to certification, while 22.6%, 9.7% had Master's degree and secondary school level respectively as shown in Figure 2. In Figure 3, the results showed that most of the Horticultural processing MSMEs business were started between 1-3 years ago (41.9%), 38.7 % were above 6 years, 16.1% and 3.2 % accounted for 4-6 years and below one year respectively.

Table 1: Gender and Age of Respondents (N= 31)

Gender	**Frequency**	**Percentage**	**Valid Percentage**
Male	18	58.1	58.1
Female	13	41.9	41.9
Total	**31**	**100.0**	**100.0**
Age of Respondents	**Frequency**	**Percentage**	**Valid Percentage**
18 - 30 years	8	25.8	25.8
31 - 40 years	12	38.7	38.7
41 - 50 years	6	19.4	19.4
51 - 60 years	4	12.9	12.9
Above 61	1	3.2	3.2
Total	**31**	**100.0**	**100.0**

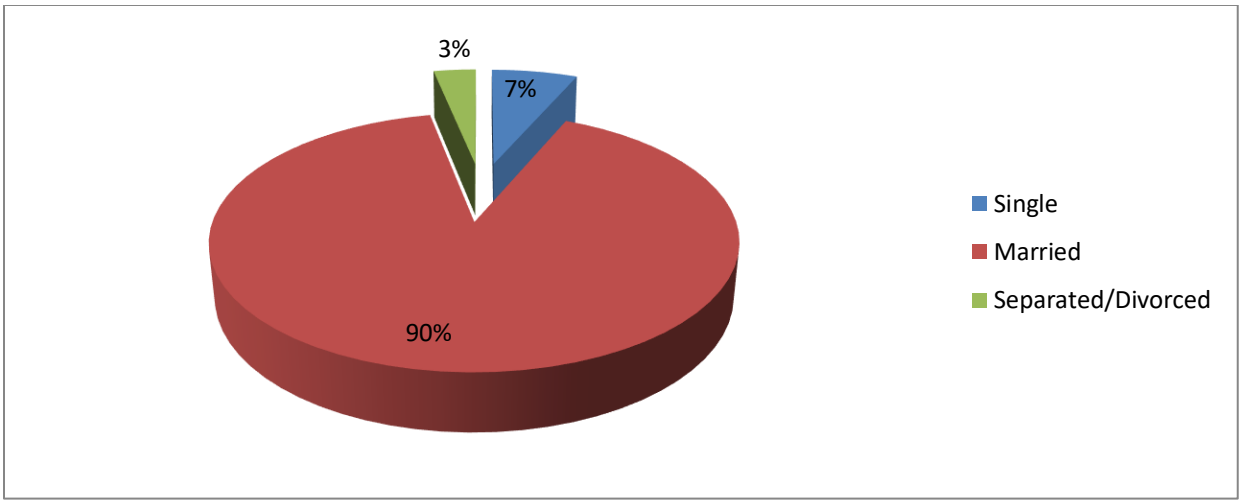

Figure 1: Marital status of the respondents

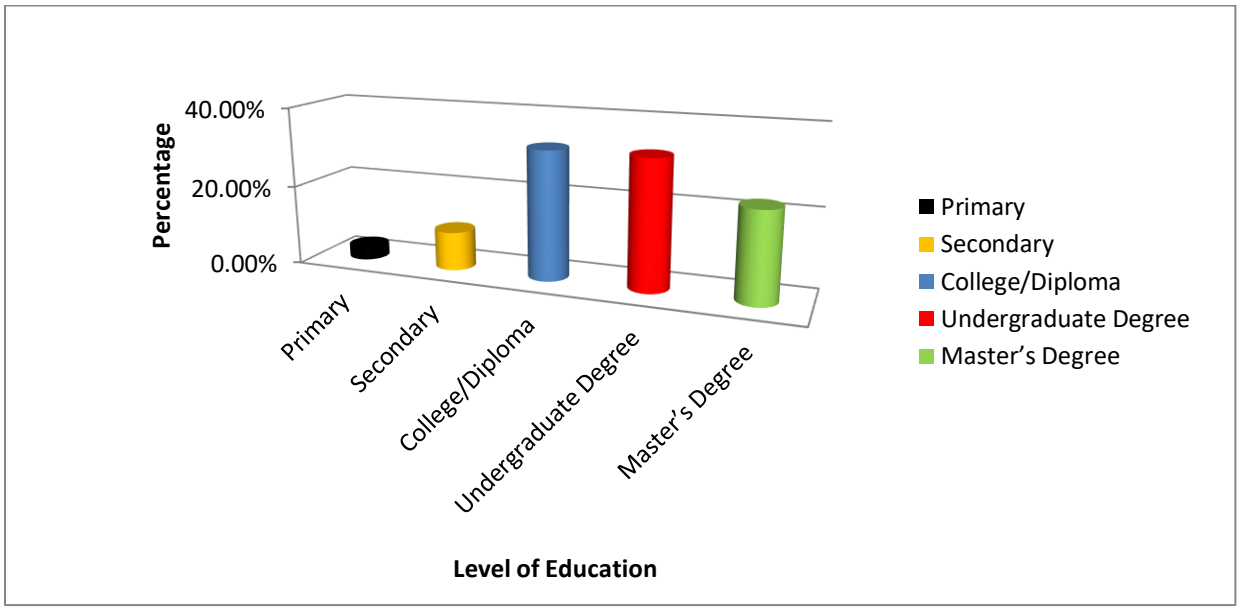

Figure 2: Education level of the respondents

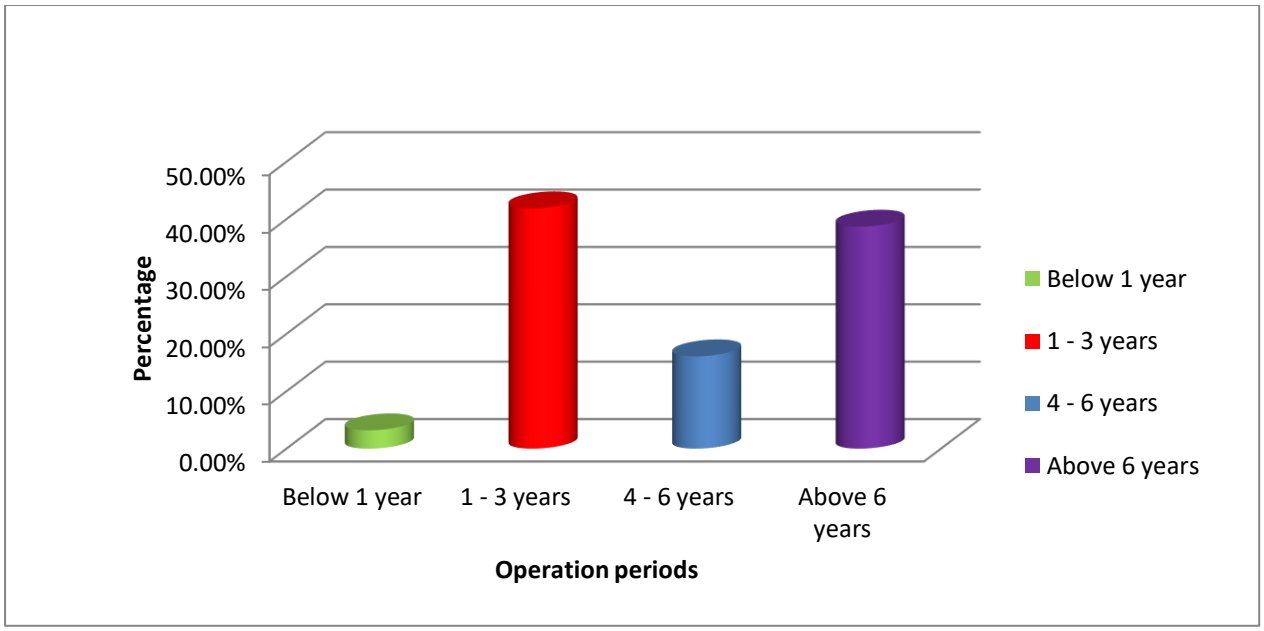

Figure 3: Period in Operation/ Business of the respondents

Table 2: Descriptive analysis of Capacity Building on Waste Management

Statement	Percentages		
	Yes	**No**	
a) Have you ever attended any training on waste management?	96.8	3.2	
b) Has the knowledge acquired on wastes management during the training been implemented in your firm?	96.8	3.2	
c) Does the management support Training and capacity building on waste management?	100	0.0	
d) When was the last training conducted?	**1 - 6 Months ago**	**7 - 12 Months ago**	**1 year and above**
	90.3	6.5	3.2
e) How often do you attend trainings on wastes management?	**Once a year**	**Twice a year**	**Above Twice a year**
	12.9	77.4	9.7

Capacity building on wastes management

According to the results in Table 2, the majority (96.8%) respondents surveyed had attended training on waste management and had started implementing knowledge gained in their respective firms. This was confirmed by all respondents agreeing 100% that management supports capacity building initiatives. On

conducting capacity building on waste management, 90.3% of the respondents indicated to have attended between 1-6 Months, while 77.4% indicated a frequency of two times annually.

Table 2: Descriptive analysis of Capacity Building on Waste Management

	Statement	Percentages		
		Yes	**No**	
f)	Have you ever attended any training on waste management?	96.8	3.2	
g)	Has the knowledge acquired on wastes management during the training been implemented in your firm?	96.8	3.2	
h)	Does the management support Training and capacity building on waste management?	100	0.0	
i)	When was the last training conducted?	**1 - 6 Months ago**	**7 - 12 Months ago**	**1 year and above**
		90.3	6.5	3.2
j)	How often do you attend trainings on wastes management?	**Once a year**	**Twice a year**	**Above Twice a year**
		12.9	77.4	9.7

Changes on waste management before and after capacity building

In Table 3, the respondents indicated a low- level of responsibilities in waste management before undergoing capacity building on waste management and related topics. Outstanding results indicating not practiced includes; "Reduction in quantity of wastes realized" (58%), "Reuse of wastes is practiced" (52%), "waste management is another department all together (81%) "EMS is practiced" (68%) and "we are aware of the importance of waste management practices," at (68%).

Table 3: Extent to which changes have occurred on management of waste in the firm before Training

N=31; Mean= 9.29

		Percentage	
Statement		**Yes**	**No**
a)	Reduction in quantity of wastes realized	45.20	54.80
b)	Reuse of wastes is practiced	48.40	51.60
c)	Waste segregation is practiced	41.90	58.10
d)	Repair of waste pipes undertaken	45.20	54.80
e)	Treatment of wastes done	16.10	83.90
f)	Burning plastic bottles/paper discouraged	35.50	64.50
g)	I understand that improper waste disposal has adverse effects on the environment	67.70	32.30

		N=31; Mean= 9.29	
		Percentage	
Statement		**Yes**	**No**
h)	Waste is segregated according to category	45.20	54.80
i)	Healthy and clean environment is given priority at our firm	64.50	35.50
j)	It's everyone's responsibility to manage wastes	54.80	45.20
k)	Safe transport / transfer of wastes is practiced	48.40	51.60
l)	The main principles of waste reduction i.e. reduce, reuse and recycle, are embraced	45.20	54.80
m)	Waste management is another department all together	19.40	80.60
n)	Waste is a resource to the firm	54.80	45.20
o)	Employees are aware of the effects of wastes on the environment	61.30	38.70
p)	Energy savings and recovery is possible	48.40	51.60
q)	Environmental management system is practiced	32.30	67.70
r)	Our firm has adopted sustainable production and consumption practices	41.90	58.10
s)	There has been reduction in cost of resources used in the firm	45.20	54.80
t)	We're aware of the importance of waste management practices	32.30	67.70

The results in Table 4 show that, high level of waste management responsibilities mainly after undertaking training on how to manage wastes. Ranking the results, the respondents agreed that; "It's everyone's responsibility to manage wastes, "waste is a resource to the firm, employees are aware of the effects of wastes on the environment", and "we are aware of the importance of waste management practices, (87.1%) each respectively. This was followed by the respondents also acknowledging that; "reduction in quantity of wastes realized", "Reuse of waste is practiced", "our firm has adopted SCP Practices, and "the main principles of wastes reduction i.e. reduce, reuse and recycle are embraced, each at 83.9 % respectively.

Table 4: Extent to which changes have occurred on management of waste in the firm After Training

		Mean =16.70
		N= 31
		Percentages
Statement	**Yes**	**No**
a) Reduction in quantity of wastes realized	83.9	16.1
b) Reuse of wastes is practiced	83.9	16.1
c) Waste segregation is practiced	74.2	25.8
d) Repair of waste pipes undertaken	71.0	29.0
e) Treatment of wastes done	45.2	54.8
f) Burning plastic bottles/paper discouraged	77.4	22.6
g) I understand that improper waste disposal has adverse effects on the environment	87.1	12.9
h) Waste is segregated according to category	77.4	22.6
i) Healthy and clean environment is given priority at our firm	83.9	16.1
j) It's everyone's responsibility to manage wastes	87.1	12.9
k) Safe transport / transfer of wastes is practiced	80.6	19.4
l) The main principles of waste reduction i.e. reduce, reuse and recycle, are embraced	83.9	16.1
m) Waste management is another department all together	54.8	45.2
n) Waste is a resource to the firm	87.1	12.9
o) Employees are aware of the effects of wastes on the environment	87.1	12.9
p) Energy savings and recovery is possible	77.4	22.6
q) Environmental management system is practiced	74.2	25.8
r) Our firm has adopted sustainable production and consumption practices	83.9	16.1
s) There has been reduction in cost of resources used in the firm	80.6	19.4
t) We're aware of the importance of waste management practices	87.1	12.9

Effect of Capacity Building on waste management among horticultural processing MSMEs in Kenya
The regression results in Table 5 showed a high level of individual awareness and change in waste management among the horticultural processing MSMEs surveyed, M=7.567, Standard deviation of 9.46 and significant relationship with ***a p-value of 0.000***

Table 5: Effects of training on waste management among horticultural processing MSMEs in Kenya

	Paired Differences							
				95% Confidence Interval of the Difference				
	Mean	Std. Dev	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
The extent to which changes After Training - Before Training	7.567	9.460	1.727	4.034	11.099	4.381	29	0.000

Discussion

According to the demographic characteristics results, majority of the respondents engaged in horticultural processing MSMESs business were married (90.3 %) affirming the family-oriented tier. Sharma et al., (1997) also recognizes that the strategic management of family firm is dynamic and interactive. He further postulates that this approach focuses on dynamic capabilities and resources both elements and their interactions being the key antecedents of the firm's dynamisms in doing business together. Chrisman et al., (2012) in their research opines that a family's intangible resources such as values or traditions impacts the choice of strategies employed to manage their enterprises. Family enterprises is linked to economically and viable or noneconomic performances, the latter being main variations from non-family businesses seeks the idea of maintaining theirs into the future (Chu, *et al.,* 2011). Scholars says the same sentiments and argues that, family owners seek to maintain control of the firms to satisfy family goals of wealth, tradition, job security, status as well as power and future generations (Claassen et al., 2012).

Results on period the respondents have been in horticultural processing business showed that; those Below 1 year were (3.2%),1-3 years (41.9%), 4-6 years (16.1%) and those above 6 years in operation were (38.7%.). This showed that the importance of business age, size and their influence on firm performance are highlighted by many researchers. Past studies have shown positive relationships between business size and firm performance (Wiklund and Shepherd, 2005). Small businesses tend to perform better but up to a specific size where they become sluggish. in keeping with (Urban, 2004) these businesses if they're entrepreneurial tend to perform well and if not, they're more likely to fail than older businesses who are gone through and better resourced endowed. This affirms the explanations on why many of MSMEs dies or collapse during the start-up's periods. During the pilot period of my study, I visited many initiate MSMEs thereafter, some couldn't proceed to the subsequent level by the project indicators and yardsticks. Therefore, a better understanding of the motivations for business ownership can help policymakers design policies that encourage and promote the creation of companies in an exceedingly given environment. Being a business owner, offers a private challenge that several individuals prefer over being an employee. The entrepreneurs accept the non-public financial risks of owning a business but also like potential success of the business. The high failure rate of small businesses makes it necessary to further examine if demographic factors like age and

business size influence start-ups to achieve business. (Alasadi and Abdelrahim, 2007) Most scholars argue that tiny firms should enjoy the best performance in environments characterized by local institutions that don't unduly favour large firms at their expense. MSMEEs firms lack the tangible or intangible resources necessary to effectively construct or gain access to those informal networks; they rely totally on the publicly available markets that lead to higher-than-average transaction costs (Li Puma, *et al.,* 2011). According to Takahashi,(2009), empirical evidence suggests that little firms in emerging economies have historically suffered because of lack of managerial and technical skills that constrains their performance which small firms that receive both monetary and managerial resources are more likely to survive, grow and to compete.

The results of this study further validated that Capacity building have a positive relationship with waste management activities amongst horticultural processing MSMEs in Kenya. Therefore, Capacity building on waste management will help Horticultural processing MSMEs understand the dangers of indiscriminate disposal of wastes to the environment and human health thereby empowering them to act appropriately and produce sustainably (Chakrabarati *et al.,* 2010). Active participation in implementing environmental management systems (EMS) is important for successful environmental protection and sustainable consumption and production practices amongst horticultural processing MSMEs.

To successfully adopt suitable methods of waste management by horticultural processing MSMEs, Mbeng *et al.,* (2010) suggested making awareness programmes simple and accessible to change the mind-set of the perceive wastes as resource rather than something without value. More so, the role of private sector, NGOs, CBOs and the informal sector should strengthen to minimize waste in the environment while at the same time, providing social and economic benefits to the MSMEs in horticultural processing business.

The findings showed a paradigm shift of behaviour and responsibility on wastes management after the respondent's undertaken training-with results indicating 64.6% of the respondents had college/diploma and undergraduate degree courses to certification while 22.6% and 9.7 % had acquired Master's degree certification and Secondary level respectively. Meaning, an individual's rapid uptake of capacity building on awareness of impacts of wastes on the environment facilitates them to initiate strategies on sustainable waste management. A study done in Palestine focused on the influence on education came to the conclusion that there was a positive relationship between the extent of education and therefore the participatory behaviour of the people in recycling activities (Al-Khatib *et al.,* 2015). This is supported by the Situated Learning Theory which is anchored on the principle that knowledge is made if the learner becomes an active participant of a highly connected community during which knowledge and culture are integrated. Learning should even be an unintentional process instead of a deliberate one – a process which will happen through "legitimate peripheral participation" (Lave & Wenger, 1991). One of the first goals of education is to make sure that learners can apply their acquired knowledge in various ways and under different circumstances. However, this expected transfer doesn't always occur and therefore, the acquired knowledge can't flexibly be employed in several contexts, (Gilbert *et al.,* 2011).

According Noor and Dola (2015) study, their findings suggested that generally training intervention provided was seen as imperative, timely and brought forth positive impact to the farmers. Even though it was difficult to measure and quantify immediate impact, the evidence they gathered implied that majority farmers considered themselves as better farm managers after undergoing trainings. As postulated further by Brown *et al.,* (1989), learning and transfer occurs when learners are given a chance to "observe and practice in situ".

Learning transfer has a very specific meaning in the cognitive psychology domain (Gick & Holyoak, 1983). However, in the training domain, transfer refers to the extent to which learning during training is subsequently applied on the job or affects job performance. Thus, training transfer can be estimated by a correlation between

learning scores (in training) and performance metrics (on the job). Successful training not only considers the factors which will influence training beforehand, but it also examines facets within the transfer environment (O'Connell, 2011). Given the context, education is vital to waste management initiatives. Educating people on waste management will help them understand the connection between indiscriminate disposal of waste to the environment and human health and empower them to act accordingly (Chakrabarati *et al.,* 2010).

A study conducted in over twenty-two developing countries (Guerrero *et al.,* 2013) suggests that when citizens receive information about the advantages of recycling, the way they sort the waste and they participate within the designing of the programs; they're more likely to participate in recycling campaigns. Social norms can also play a crucial role in changing waste behaviour and participate in recycling activities, (O'Connell, 2011). People are more likely to recycle once they observe others in their community recycling, so it might be beneficial to succeed in bent key members of the communities to be at the forefront in changing negative environmental behaviours (Olli *et al.,* 2011).

Interestingly, the results also revealed a shared consciousness effort by both employees and management towards effective waste management that the previous supports 100% waste management initiatives in the MSMEs. This was further validated by the results showing that employees have attended training on waste management and that knowledge on wastes management acquired during the training has been implemented in their respective firms at 96.8% respectively.

Conclusion and Recommendations

This study has showed that Training and Capacity building has a relationship with waste management amongst horticultural processing MSMEs in Kenya. Therefore, Capacity building on waste management will help Horticultural processing MSMEs understand the dangers of indiscriminate disposal of wastes to the environment and human health thereby empowering them to act appropriately and sustainably produce. Active participation in implementing Environmental Management Systems (EMS) is important for successful environmental protection and sustainable consumption and production practices amongst horticultural processing MSMEs in Kenya.

To successfully adopt suitable methods of waste management by horticultural processing MSMEs, it is important to make awareness programmes simple and accessible to change the mind-set of the perceive wastes as resource rather than something without value. Also, the role of private sector, Non-Governmental Organizations (NGOs), Community Based Organizations (CBOs) and the informal sector should be strengthened to minimize waste in the environment while at the same time, providing social and economic benefits to the MSMEs in horticultural processing businesses in Kenya. Seminars/capacity building on waste management should be conducted amongst horticultural processors, consumers in the communities to encourage them on effective waste management.

Acknowledgment

My sincere appreciation, thanks and gratitude goes to "Switch African Green" Horti-Green, Project through funds received from the European Commission. The support from Duke Gekonge, Elmah Odhiambo and Linda Obiero of the University of Nairobi, Kenya Bureau of Standards, Kenya Industrial Estates and therefore the Ministry of Trade and Industry and Project leaders for the chance to conduct the research. Also, many thanks to all the Horticultural processing MSMEs in Nairobi and its environs, Central and Western regions of Kenya who participated in this research.

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