

IMPACT OF AGRICULTURAL POLICIES ON UNEMPLOYMENT REDUCTION: A CASE OF SUPPLY OF COMPOST FERTILIZER IN ZARIA METROPOLIS, KADUNA STATE, NIGERIA.**MUHAMMAD SULAIMAN***Department of Economics, School of Secondary Education, Arts and Social Sciences, Federal College of Education, Zaria.***ABSTRACT**

Agriculture is the largest sector in the Nigerian economy employing more than 70% of the labour force and has continued to be the major macroeconomic objectives of the government. Unemployment are of different types, such as frictional, cyclical, structural etc. Several efforts were made by the past and present governments in Nigeria to provide an enabling environment for income and employment generation among Nigerians, including Operation Feed the Nation in 1976, Poverty Alleviation Program in 2000, Presidential Fertiliser Initiative in 2016 but yet unemployment rate is on the rise. The rate increased from 17.6 million in Q4 2017 to 23.1 in Q3, 2018. It is a known fact that, land fertility is one of the key requirements for good agricultural practice and it can be improved in case of deficiency with compost fertilizers. The act of making compost fertilizer is called composting. The study was aimed to describe how composting and its related activities were carried out; how income, profitability, and employment are

Introduction:

Agriculture is considered a catalyst for the overall development of any nation. It is thus a critical sector that drives the economic development and industrialization of the developing nation, and also holds the ace for reducing unemployment. Thus, its development is critically important for ensuring food and nutritional security, income and employment generation, and for stimulating industrialization and overall economic development of the country (Ogbalubi and Wokocho, 2013).

Agricultural sector has since independence been the backbone of the Nigerian economy. It is the leading

generated among respondents in the study area. Purposive selection of respondents, an interview method, Descriptive Statistics and Cost and Revenue Analysis were employed for the analysis of this study. It was learned that for every N1 invested, N3.44k was realized by composting respondent while 47 Kobo for every N1 invested by middleman respondent in the study area as profit. It was also found that composting and its related activities generated income and employment for an average number of 14 persons and for every 250 bags supplied.

Keywords: *Composting, Compost Fertilizer, Employment, Profit and Unemployment.*

Sector in provision of employment opportunities, livelihoods sources for the growing population and accounts for more than half of the GDP of the economy (Izuchukwu, 2011).

Background to the Study

For decades unemployment rate in Nigeria has been on the rise due to so many reasons, such as failure of the private sector to operate to its fullest capacity. This to some was as a result of the inability of governments at all levels to provide an enabling environment for the real sector to thrive as expected. Hence, securing jobs and income generation sources become very difficult to so many people who are able and willing to work and at last remained unemployed. According to Kemi and Dayo (2014) the rising of unemployment rate over the years has been one of the greatest challenges faced by the Sub-Saharan African countries nowadays. Unemployment has call for a greater concern in the Nigeria economy since it constitutes a series of serious developmental problems and is increasingly more serious all over Nigeria. The major policy of the government and the international agencies is targeted at reducing the rate of unemployment. Since the population explosion begun, the developing nations have been characterized by unemployment (Muhammad *et al.*, 2011). Most public policies in Nigeria, especially since independence are tailored towards promoting food security, provision of the agricultural raw materials needed by the manufacturing sector to provide adequate employment and income to alleviate poverty as well as earn substantial foreign exchange (Ogbanga 2018).

According to NBS (2018) the working age population (15 – 64 years of age) increased from 111.1 million in Q3, 2017 to 115.5million in Q3, 2018. The number of persons in the labour force (i.e. people who are able and willing to work) increased from 85.1 million in Q3, 2017 to 90.5million in Q3, 2018. The total number of people classified as unemployed, which means they did nothing at all or worked too few hours (under 20 hours a week) increased from 17.6 million in Q4 2017 to 20.9 million in Q3 2018. The unemployment rate accordingly, increased from 18.8% in Q3 2017 to 23.1 in Q3, 2018.

Several agricultural policies were made as efforts by the past and present governments in Nigeria to provide an enabling environment for employment generation among Nigerians. They came in forms of initiatives, projects, programmes, such as Operation Feed the Nation in 1976, Green Revolution Programme (GRP) in 1980, Go Back to Land Programme in 1983, National Directorate of Employment (NDE) in 1987, Family Support Programme (FSP) in 1993, Family Economic Advancement Programme (FEAP) in 1997, Poverty Alleviation Program (PAP) in 2000, National Poverty Eradication Program (NAPEP) in 2001; of recent they include Anchor Borrowers Programme (ABP), The Green Alternative in 2016 and Presidential Fertiliser Initiative (PFI) in 2016 respectively, among others.

It is undisputable that nowadays, agricultural sector in Nigeria is experiencing a significant growth which leads to income and employment generation among citizens. According to Chief Audu Ogbeh, the Nigeria Minister of Agriculture and Rural Development, Nigeria is currently the largest producer of maize in Africa, largest too worldwide in yam production, second largest producing in sorghum and the third in Millet (Vanguard, 2018). According to ECOWAS (2018) Nigeria has gradually closing rice demand gap with increased local production.

It is a known fact that, land fertility is one of the key requirements for good agricultural practice and it can be improved in case of deficiency with compost, organic (manure) or even inorganic fertilizers. The recent Presidential Fertiliser Initiative (PFI) made inorganic fertilizers available and affordable in most areas across the country which as a result, increased the number of people engaged in agricultural activities, area of land cultivated and volume of farm produce. This goes in accord with Notore (2018) report. On the other hand, one of the thriving agricultural activities engaged in by households, especially in the North West Nigeria, Kaduna state in particular is the supply of compost fertilizer.

Supply of compost fertilizer is seen by many farmers as a nutrient supplementary to their land and job opportunity to the unemployed. Hence, it is on this background this paper examined the economic benefits derived from sales and supply of compost fertilizers in the study area.

Research Objectives

The broad objective of this paper is to examine the income and employment generated through supply of compost fertilizer. While the specific objectives are to:

- (i) describe the socioeconomic characteristics of respondents engaged in composting activities in the study area;
- (ii) determine the number of individuals employed by composting activities in the study area;
- (iii) determine the profitability of composting in the study area, and
- (iv) describe the problems associated with composting in the study area.

LITERATURE REVIEW

Unemployment

There is no universal standard definition of unemployment as various countries adopt definitions to suit their local priorities. The International Labour Organization (ILO) definition covers persons aged 15–64 who during the reference period were available for work, actively seeking work, but were unable to find work. Thus, unemployment is the proportion of those in the labour force who were actively looking for work but could not find work for at least 20 hours during the reference period to the total currently active (labour force) population. Accordingly, you are unemployed if you did absolutely nothing at all or did something but for less than 20 hours during the reference week (NBS 2018).

Unemployment or joblessness occurs when people are without jobs and they have actively sought work within the past five weeks. Hence, persons in unemployment are those of working age who were not in employment, carried out activities to seek employment during a specified recent period and were currently available to take up employment given a job opportunity (International Labour Organization, 1982)

According to Arthur (1976) and Jhingan (2003) unemployment is defined as involuntary idleness of a person willing to work at the prevailing rate of pay but unable to find it. It implies that only those persons are to be regarded as unemployed who are prepared to work at the prevailing rate of pay but they do not find work. Voluntarily unemployed persons who do not want to work like the idle rich, are not considered unemployed.

Types of unemployment

There are several types of unemployment, some of which according to Jhingan (2003) and Frank and Bernanke (2009) are as follows:

- **Frictional Unemployment:** This type of unemployment exists when there is lack of adjustment between demand for and supply of labour. People voluntarily transfer from one job to another, looking for a more convenient alternative to applying their knowledge, skills and experience. The period of unemployment between losing one job and finding another is included under frictional unemployment.
- **Seasonal Unemployment:** Seasonal unemployment results from seasonal fluctuations in demand. Example is the case with agricultural workers who are employed during harvesting and sowing seasons and remain idle for the rest of the year.
- **Cyclical Unemployment:** Cyclical unemployment arises due to cyclical fluctuations in the economy (the actual performance of the economy is below potential output). The main feature of cyclical unemployment is generally the surplus in labour supply. This is the fact that, the number of people looking for work exceeds the firms' demand for labour. It may also be generated by international forces. A business cycle consists of alternating periods of booms and depressions.
- **Structural Unemployment:** It results from a variety of causes. It is caused by the mismatch between the qualification requirements for different types of work and the existing workforce skills. It may be due to lack of the co-operant factors of production, or changes in the economic structure of the society. The word structural implies that the economic changes are massive, extensive, deep-seated, amounting to transformation of an economic structure, i.e. the production functions or labour supply/distribution. More specifically, it refers to changes which are large in the particular area, industry or occupation.

- **Technological Unemployment:** Modern production process is essentially dynamic where innovations lead to the adoption of new machineries and inventions thereby displacing existing workers, leaving behind a trail of unemployment. When there is automation or displacement of old technology by a new one requiring less workers than before, then there is a technological unemployment.

Composting

Composting is the biological process of breaking up organic waste such as food waste, manure, leaves, grass trimmings, paper worms and general house hold wastes etc into an extremely useful humus-like substance by various micro-organisms including bacteria, fungi and actinomycetes in the presence of oxygen (Bellamy 2007).

Composting is one of the four universally accepted methods of waste disposal and it is a method of converting organic materials into a drier-odoriferous form through bacterial action, primarily to supply humus to the soil (Ayuba 2005).

FAO (2015) defines composting as the mixture of organic matter digested aerobically that is used to improve soil structure and provide nutrients (FAO Term Portal). Composting provides the chance to safely transform organic waste into inputs for agricultural production.

The term “composting” is used here to mean the process of controlled bio-logical maturity under aerobic conditions, where organic matter of animal or vegetal origin is decomposed to materials with shorter molecular chains, more stable, hygienic, humus rich, and finally beneficial for the agricultural crops and for recycling of soil organic matter (Sequi, 1996).

Compost

Compost can be defined as an organic multi-nutrient fertiliser and substitutes. Besides its soil improving ability (humus reproduction, liming effect), macronutrients such as phosphorus, potassium and magnesium can be fully accounted for plant nutrition during a crop rotation (Florian *et al.*, 2007).

Compost is a complex mixture of organic and inorganic components. It contains dissolved organic carbon (DOC) and solid components in a range from labile to resistant with respect to degradability (Kaplan *et al.*, 1995).

According to Federal Ministry of Agriculture, Forestry, Environment and Water Management, Austria and European Communities (2003) compost is the product

of mostly aerobically processed organic (waste) materials, with a broad origin. Compost may originate from sewage sludge, municipal solid waste (either or not collected in separate organic and inorganic fractions), bark, wood chips, agricultural waste products including manures or any mixture of these materials.

METHODOLOGY

The Study Area

According to Adegboyega and Abioye (2017) and Uba *et al.*, (2008) Zaria metropolis is a guinea savannah region in the north western Nigeria located at latitude $11^{\circ} 3'N$ and longitude $07^{\circ} 40'N$ with an estimated population of 698,348 as at 2006 population census, making it the second biggest metropolis in Kaduna. It is the home of the famous Ahmadu Bello University, Zaria, with a temperature range of 22.7° December-January during the harmattan as high as $28-30^{\circ}$ in April. Rainfall is between April and October. Maximum rainfall occurs in August. The Zaria metropolis consists of two local government areas (LGAs): Sabon Gari and Zaria and its population is projected to be 1,016,759 as at 2018 using 3.18 annual population growth rate.

Methods of Data Collection and Analytical Techniques

Purposive selection of 100 respondents was made for this study. Out of which 50 were self-involved in the real composting work, 20 were middlemen in compost supply between the makers and the users while the remaining 30 were those who load and off-load compost fertilizers onto and from the conveying vehicle. The data sourced for this study was predominantly primary where face-to-face interview method was applied.

The objectives of this study were achieved using the following tools of analysis: (i) Descriptive Statistics and (ii) Cost and Revenue Analysis (CRA)

Descriptive statistics

Descriptive statistics analysis was employed to have summary description of the data collected and to see how composting and its related activities have the potential of generating employment in the study area. It involved the use of figures, percentages, maximums, minimums, averages and frequency distribution to group the respondents into a number of classes with respect to socio-economic characteristics.

Cost and revenue analysis (CRA)

Cost and Revenue Analysis was employed to have breakdown of the costs incurred in and income generated from composting and its related activities in the study area. According to ICAI (2015), the term 'cost' is a measurement, in monetary terms, of the amount of resources used for the purpose of production of goods or rendering services. While on the other hand, revenue is defined as the income received by a company from its sales of goods or the provision of services (CFI, 2017).

The cost and revenue function is symbolically expressed in Ekanem and Iyoha (1999) as follows:

$$TC = TFC + TVC$$

$$TR = P \times Q$$

$$ATC = TC/Q$$

$$ATR = TR/Q$$

$$\pi = TR - TC$$

Where:

TC = Total Cost: this is the cost incurred on all types of inputs towards producing a given amount of output (Q);

TR = Total Revenue: this refers to the total amount of income received by the respondent from selling a given amount of output (Q);

P = Unit price of output;

Q = Given amount of output

ATC = Average Total Cost (TC/Q);

ATR = Average Total Revenue (TR/Q);

π = Profit: this is the excess of total revenue (TR) over total cost (TC).

If:

TR > TC: this implies profit realization;

TR < TC: this implies loss incurring;

TR = TC: this is a break-even point where neither profit realized nor loss incurred.

RESULTS AND DISCUSSION

Composting in Zaria Metropolis

Like other many metropolises in northern Nigeria, Zaria metropolis has been facing problem of improper waste disposal which in turn results to environmental pollution. This garbage according to Pearse and Ahanaike (2016)

usually came from common household wastes such as paper, plastics, glass, metals, appliances, kitchen and garden wastes as well as range of industrial and commercial wastes, such as construction and demolition waste, organic wastes from agriculture and food processing. Suleiman (2014) regarded these wastes as municipal solid waste (MSW) which is a heterogeneous mixture of various kinds of solid wastes including biodegradable food waste and non-biodegradable solid waste like polythene bags, glass, rags, metal items etc. Santosh *et al.*, (2015) opined that, these wastes decompose quickly because they are organic in nature. Most a times, these wastes are collected and disposed of by children and teenagers. Some of whom are doing that for money earning while some for discharging one of their respective home responsibilities. The state waste collection centres/provisions are not made sufficient if not at all available in most cases. Hence, the residents dump their wastes any where possible. They do that most in either governments' or private individuals' owned neglected open fields, landfills, uncompleted buildings etc. This accounts for high rate of refuse dumpsites in the metropolis. These refuse dumpsites are claimed/owned by no one, as such the composting can be done by anyone so wishes.

Composting in the study area is usually carried out in dry season when rain totally stops and this is from late October to May or early June when the rain is steady (i.e. about 7 months period). The composting process is attributed with smoke, dust, bad odour and other health hazards. Sometimes if care is not properly taken, those involved in the composting job sustain injuries. As such, protective measures were taken in the study area in form of wearing thick gloves or socks, boots or shoes, mouth or nose masks, caps or hats, eye glasses etc.

Socio-Economic Characteristics of the Respondents

The socio-economic characteristics of the respondents in the study were revealed in Table 1. The composting and middlemen respondents have similar characteristics, in that most of their respondents (58% and 70%, respectively) were of the ages 40 and above. This signifies less involvement of youths for composting activities in the study area. All of the respondents (100%) were males and this could be as result of the fact that, composting is a rigorous activity which demands and consumes strength and time. Furthermore, from both respondents it was found that more than 80% of them (100% in case of the middlemen) were married individuals with an average number of 7 persons whom they are taking care of. About half of the composting respondents (46%)

had only Qur'anic education, 36% of them had primary education, 18% of them had secondary. In case of the middlemen, 55% of them had primary education, 25% of them had secondary while 20% of them had Qur'anic education. But none of them had attended a tertiary institution in both cases. This indicates that, most of the respondents had little Western education. It was also learned that, majority of the respondents have involved in composting activities as a means of income generation for an average of 5 years in the study area.

Table 1: Socio-economic characteristics of the respondents in Zaria metropolis, Kaduna state

	Composting Respondents		Middlemen		Loading/Off-loading Respondents	
	No	Percentage (%)	No	Percentage (%)	No	Percentage (%)
Age						
Below 20	2	4	0	0	23	77
20 – 40	19	38	6	30	7	23
Above 40	29	58	14	70	0	0
Total	50	100	20	100	30	100
Sex						
Male	50	100	20	100	30	100
Female	0	0	0	0	0	0
Total	50	100	20	100	30	100
Marital Status						
Married	41	82	20	100	3	10
Single	9	18	0	0	27	90
Divorced	0	0	0	0	0	0
Total	50	100	20	100	30	100
Household Size						
0 – 4	12	24	5	25	30	100
5 – 9	33	66	14	70	0	0
10 – 14	4	8	1	5	0	0
15 & above	1	2	0	0	0	0
Total	50	100	20	100	30	100

Educational Level						
Qur'anic Only	23	46	4	20	24	80
Primary	18	36	11	55	6	20
Secondary	9	18	5	25	0	0
Tertiary	0	0	0	0	0	0
Total	50	100	20	100	30	100
Work Experience						
0 – 4	28	56	17	85	28	93
5 – 9	19	38	3	15	2	7
10 – 14	3	6	0	0	0	0
15 & above	0	0	0	0	0	0
Total	50	100	20	100	30	100
Source: Field Survey, 2019						

The loading/off-loading respondents on the other hand, were found most (77%) of below 20 years of age, single not married (90%) and all were males also. Most of them were gotten from traditional Qur'anic schools (*Makarantar Allo*) and were popularly known as '*Almajirai*' (i.e. pupils or students from traditional Qur'anic schools). Very few of them (20%) had primary education and none of them had ever attended a secondary school. They had 1 to 5 years experience of their job.

Composting Costs and Returns

The results of the findings also showed that, a set of digger, shovel, garden fork and hoe is used as the basic required tools for composting in the study area with an average cost of N1500, N1200, N700 and N400 per piece, respectively as stated on Table 2. From the table it can be seen that, after having refuse dumpsite one needed an average of N10,710 for a start to get the basic inputs for supplying compost fertilizer to customers in the study area. It was further found that, this amount (i.e. N10,710) could drop for subsequent year(s) supplies to about N5,638.33k, as such augments profit realization.

Table 2: Inputs average cost for composting

Inputs	Required Quantity (Unit)	Cost (N/Unit)	Life Span (Years)	Depreciation (N/Year)
Digger	1	1500	5	300.00

Shovel	1	1200	5	240.00
Garden Fork	1	700	3	233.33
Hoe	1	400	5	80.00
Booths	Set	2000	5	400.00
Glove	Set	250	2	125.00
Mouth/Nose Mask	1	100	1	100.00
Eye Glasses	1	300	2	150.00
Cap	1	500	2	250.00
Box of Matches	1	10	1	10.00
Empty Cement Bags	250	3750	1	3750.00
Total		10,710.00		5,638.33

Source: Field Survey, 2019

With an assistance of two persons averagely, it took the respondent an average of 7 hours (Man-hour/day) to prepare 50 bags (5,000kg) and an average of 4,500 bags (225,000kg) per season of compost fertilizer in the study area. The assistants were paid N10 for each bag prepared. The compost is packaged usually in empty 50kg cement bags, such as Dangote, Sokoto, BUA cements bags. On demand, a 50kg bag of compost was sold at an average price of N50 less costs of the empty bag, loading and offloading. As shown on Table 3, using the Cost and Revenue Analysis (CRA), the respondent generated an average revenue of N250,000 while incurring averagely the sum of N50,638.33k as total inputs costs per season in the study area. Hence, on average basis, a respondent realized a margin of about N38.75k per bag and N174,361.67k per season as profit in the study area. It was also found that, for every N1 invested, N3.44k was realized as profit.

Table 3: Average cost and return per season in composting	
A. Return:	Value (N)
i- Average Output (kg/season)	225,000.00
ii- Average Price (N/kg)	1
Total Revenue (TR) = (i*ii)	225,000.00
B. Costs:	
1. Variable Cost	
a- Labour (Man-day)	45,000.00

Total Variable Cost (TVC)	45,000.00
2. Fixed Cost:	
a- Depreciation	5,638.33
Total Fixed Cost (TFC)	5,638.33
Total Costs (TC) = (TVC + TFC)	50,638.33
Gross Margin (GM) = (TR - TVC)	180,000.00
Net Income (NI) = (TR - TC)	174,361.67
Benefit-Cost Ratio = (TR/TC)	4.44
Source: Field Survey, 2019	

Another interesting issue concerning the supply of compost fertilizer in the study area was the fact that, one can be a middleman between the sellers (compost makers) and the users (farmers). From Table 2 it can be seen that, each empty cement bag was sold at N15 only; loading the compost onto the conveying vehicle was done at N5 per bag and so it was for offloading. The cost of conveyance depended on the distance to be covered from the point of sale to the farmer's land. The average distance between point of sale and the farmer's land was estimated to be 25 kilometres in the study area. And one spent N12,500 for every 12,500kg of compost fertilizer (i.e. 250 bags which normally *Canter* lorry conveys per trip) in the study area. That is to say, a bag of compost fertilizer was conveyed per every kilometre at the rate of N2 in the study area. In summary, a middleman spent an average of N18,750 to supply 250 bags of compost fertilizer (i.e. N75/bag) up to the farmer's land in the study area.

Table 4: Average cost and return for supplying compost as a middleman

Activity	Average Unit & Km	Cost Per Unit or Km (N)	Average Cost (N)
A. Costs:			
a- Empty Cement Bags (Unit)	250	15	3750
b- Conveyance (Km)	25	500	12500

c- Loading (Unit)	250	5	1250
d- Off-Loading (Unit)	250	5	1250
Total:		525.00	18,750.00
B. Return:	Average Supply (Kg)	Unit (N)	Price
i- Compost Supply (kg)	250	110	27500
Total:			27,500
Net Income (NI) = (AR - AC)			8,750.00
Benefit-Cost Ratio = (AR/AC)			1.47
Source: Field Survey, 2019			

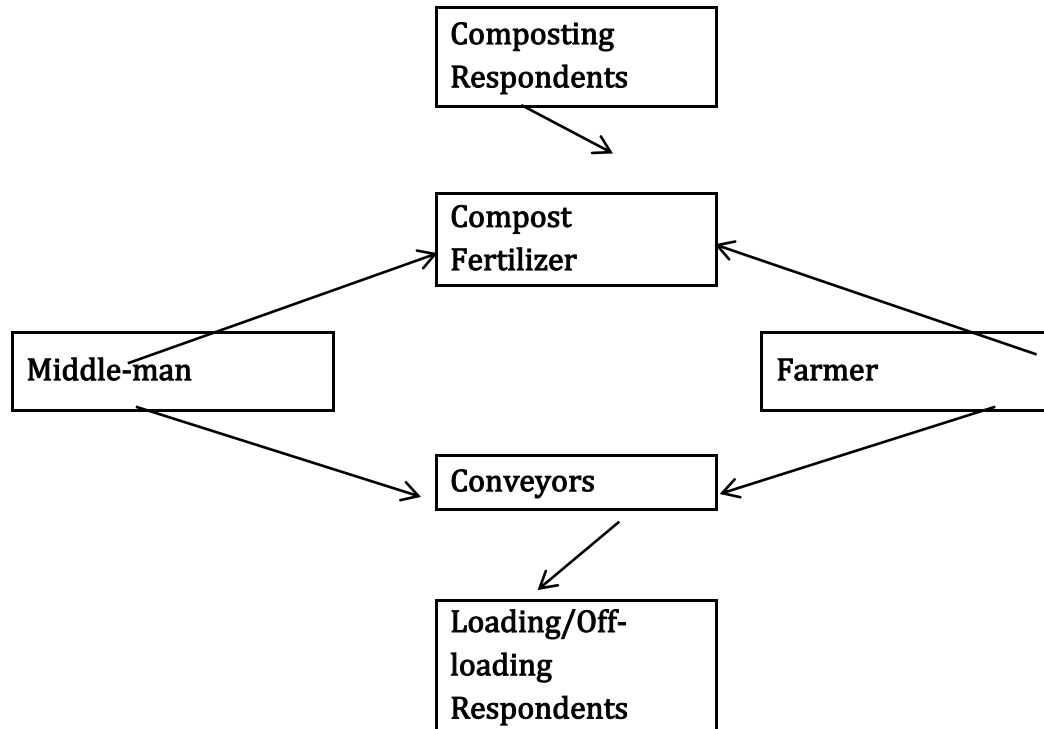
On the other hand, farmers who chose to buy from the middlemen did that at an average price of N110 per bag. That is, N27,500 for 250 bags of compost fertilizer supplied. Using the Cost and Revenue Analysis (CRA) in this regard, the middleman generated the sum of N27,500 for the supply of 250 bags of compost fertilizer (i.e. 12,500kg) in the study area. This gave him a margin of about N8,750 as profit per supply. Hence, every one Naira (N1) invested by the middleman yielded an average gain of about 47 Kobo in the study area. It was also found and noted that, the profit realized could be increased in the subsequent supplies since the cost of purchasing empty cement bags may not necessarily be incurred again until they are completely wore out.

Employment Potentials

It was evident from the foregone paragraphs that, composting is profitable and involved lot of related activities from making to delivery. These related activities provided employment opportunities for about 14 individuals as shown on Figure 1. It was found that a composting respondent is a self-employer and employs further about 2 individuals as assistants working altogether. On demand, customers buy the compost fertilizers either directly from the composting respondents or middlemen. In either case, a conveying vehicle is needed for transporting the compost to the buyer's land. Like the middleman, the vehicle driver is a self-employed individual but assisted by a conductor. An average

number of 8 persons were engaged in the loading and off-loading of compost fertilizers on and from the conveying vehicle.

Figure 1: Composting employment potential



Source: Field Survey, 2018

In summary, composting in the study area generated income and employment opportunities for an average number of 14 persons and for every 250 bags supplied.

Problems Associated with Composting in the Study Area

Like other income earning activities, composting and its related activities in the study area were found to be associated with numerous problems as shown on Table 5. The major ones were identified as follows:

- a) **Exposure to fumes and toxin:** Especially during burning of unwanted materials, respondents were exposed to smokes, toxic emission etc which resulted to coughing, headache, nausea and other health complications.
- b) **Disposal of leather bags in dumpsites:** Nylon and other synthetic materials were found full all-over the refuse dumpsites. Removal of these materials is the most difficult activity in the processes of composting in the study area.

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c) **Inadequate working capital:** Sometimes it became difficult for some respondents to have adequate cash for which they start up the composting with or finance the day-to-day activities related to it. That is to say, insufficient funding harnessed smooth running of composting and its related activities in the study area.

d) **Clash with host community:** It was found that sometimes the host community have some grudges, especially with the composting respondents and mostly from two circumstances. One was during burning of unwanted materials; the host community complained of smoke and to the respondents, there is no way one does composting without burning unwanted materials. The other was during refuse dumping; the host community may decide to dispose of the refuse anywhere in the dumpsite where the respondents may find it inconvenient for his work. As such, they clashed.

Table 5: Problems Associated with Composting and Its Related Activities in the Study Area

Problems	Frequency	Percentage (%)	Rank
a) Exposure to fumes and toxin	Nil	0	1
b) Disposal of leather bags in dumpsites	Nil	0	2
c) Inadequate working capital	Nil	0	3
d) Clash with host community during burning	Nil	0	4
e) Sustaining injuries due to sharp objects	Nil	0	5
f) Theft	Nil	0	6
g) Bad roads to the farms during delivery	4	4	7
h) Looking inferior by some	2	2	8
i) Options a & b	12	12	-----
j) Options a, b & c	8	8	-----
k) Options a, b, c & d	28	28	-----
l) Options a, b, c, d, e & f	9	9	-----
m) Options a & e	16	16	-----
n) Options a & g	21	21	-----

Total	100	100		
Source: Field Survey, 2018				

CONCLUSION AND RECOMMENDATIONS

Conclusion

Unemployment has continued to be the major macroeconomic objectives of every economy and constituted a series of problems in Nigeria. The total number of people classified as unemployed increased from 17.6 million in Q4 2017 to 23.1% in Q3, 2018 in Nigeria. Despite several efforts made by the past and present governments in Nigeria, such as Operation Feed the Nation in 1976, Green Revolution Programme (GRP) in 1980, Presidential Fertiliser Initiative (PFI) in 2016, unemployment is still on the rise.

It is a known fact that, land fertility is one of the key requirements for good agricultural practice and it can be improved in case of deficiency with compost fertilizers. The process of making compost fertilizer is what known as composting. From the results of this study, it was learned that composting and its related activities in the study area generated income and employment opportunities for an average number of 14 persons for every 250 bags supplied.

Recommendations

Based on the findings of this study, the following recommendations are made:

- i. Governments at all levels should strategize ways to reduce production of nylon materials as containers or bags to the barest minimum. This will ease production of compost fertilizers;
- ii. Governments and other stakeholders should provide convenient refuse collection points and dumpsites so as to have pollution free host communities, and
- iii. Both agricultural and micro-finance banks should financially support small-scale enterprises like that of the composting and middlemen respondents in the study area.

REFERENCES

- Adegboyega, O. and Abioye, K. (2017). Effects of Health-Care Services and Commodities Cost on the Patients at the Primary Health Facilities in Zaria Metropolis, North Western Nigeria. *Nigerian Journal of Clinical Practice*. 20(8). Pp 1027-1035. DOI: 10.4103/njcp.njcp_61_16.

- Arthur, S. (1976). *Everyman's Dictionary of Economics*. 2nd edition. J M Dent & Sons Ltd. ISBN-13: 978-0460030281.
- Bellamy, P. (2007). *Academics Dictionary of Environment*. Academic Publishers, India: New Delhi, 2007, pp. 101.
- Corporate Finance Institute (CFI) (2017). Sales Revenue: The Starting Point of the Income Statement. Available at: <https://corporatefinanceinstitute.com/resources/knowledge/accounting/sales-revenue/>
- de Bertoldi, M., Vallini, G. & Pera, A. (1983). The biology of composting: a review. *Waste Management & Research*, 1, 157-176.
- ECOWAS (2018). Rice Factbook. <https://www.growafrica.com/file/rice-factbookpdf/download?token=bdVTFdPl>. Date Accessed: 29/10/2018.
- Ekanem, O. T. and Iyoha, M. A. (1999). *Microeconomic Theory*. Mareh publishers, Benin City, Edo, Nigeria.
- FAO Term Portal (FAOTERM): <http://www.fao.org/termportal/thematic-glossaries/en/>
- Federal Ministry of Agriculture, Forestry, Environment and Water Management, Austria, and European Communities. (2003). Applying Compost, Benefits and Needs (2001). Seminar Proceedings. Brussels, 22 - 23 November 2001.
- Florian, A., Stefan, P., Jutta, G., Kompost, E. and Beratung, P. (2007). Beneficial Effects of Compost Application on Fertility and Productivity of Soils: Literature Study. Federal Ministry for Agriculture and Forestry, Environment and Water Management, Germany.
- Food and Agriculture Organization of the United Nations (2015). Farmer's Compost Handbook: Experiences in Latin America. <http://www.fao.org/3/a-i3388e.pdf>.
- Frank R. H. and Bernanke, B. S. (2009). *Principles of Economics*. Fourth Edition. USA: McGraw-Hill, 2009. 836 s. ISBN 978-0-07-128542-1.
- Institute of Cost Accountants of India (ICAI) (2015). Cost Accounting Standard (Revised). Available at: <http://icmai.in/upload/Students/CAS-1-24-CASB.pdf>.
- International Labour Organization (1982). Resolutions Concerning Statistics of the Economically Active Population and Underemployment. Adopted by the 13th International Conference of Labour Statisticians, 182. *ICLS-Resolution-I-[STATI-131114-1]-En.docx*.

- Izuchukwu, O. O. (2011). Analysis of the Contribution of Agricultural Sector on the Nigerian Economic Development. *World Review of Business Research*. 1(1): Pp 191 – 200.
- Jhingan, M. L. (2003). *Macro-economic Theory*. 11th ed. Vrinda Publications Limited.
- Kaplan, L. A., Standley, L. J. and Newbold, J. D. (1995). Impact of Water Quality of High and Low Density Applications of Spent Mushroom Substrate to Agricultural Lands. *Compost Science and Utilization*. 3: 55-63.
- Kemi, F. A. and Dayo, B. O. (2014). Unemployment and Economic Growth in Nigeria. *Journal of Economics and Sustainable Development*. 5(4).
- Muhammad, S. A., Inuwa, I. and Oye, N. D. (2011). Unemployment in Nigeria: Implication on the Gross Domestic Product (GDP) over the Years. *International Journal of Economics and Research*. 2(1): 66-71.
- National Bureau of Statistics (NBS) (2018). Labour Force Statistics - Volume I: Unemployment and Underemployment Report. (Q4 2017-Q3 2018).
- Notore Chemical Industries Plc (2018). Listing by Introduction on the Nigerian Stock Exchange. Available at: <https://www.proshareng.com/admin/upload/reports/11440-NotoreChemicalIndustriesPLCFactsBehindTheListingPresentationfin-proshare.pdf>.
- Ogbalubi, L. N. and Wokocho, C. C (2013). Agricultural Development and Employment Generation: The Nigeria Experience. *Journal of Agriculture and Veterinary Science*. Vol 2, pp. 60-66. Available: www.iosrjournals.org
- Ogbanga, A. (2018). Agricultural Development and Employment Generation in Nigeria. *International Journal of Advanced Studies in Ecology, Development and Sustainability*. 5(1).
- Olajide, O. T., Akinlabi, B. H. and Tijani, A. A. (2012). Agriculture Resource and Economic Growth in Nigeria. *European Scientific Journal*. 8(22).
- Pearse, O. F. and Ahanaiku, I. E. (2016). Development of a Solid Waste Management Strategy for an Emerging Urban Centre, Samaru, Zaria, Kaduna State, Nigeria. *International Journal of Scientific & Engineering Research*. 7(6).
- Saleh, A. T., Rakmi, A. and Mohd, S. K. (2011). A Literature Review on the Composting. *International Conference on Environment and Industrial Innovation IPCBEE*. Vol.12.

- Santosh, K. G., Ranjini, G. and Rajeshwari, G. (2015). *Environmental Science and Ecological Studies*. Khanna Publishers, India: New Delhi, pp. 365.
- Sequi, P., 1996, The role of composting in sustainable agriculture, in: *The Science of Composting*, M. Bertoldi, P. Sequi, B. Lemmens, and T. Papi, eds., Blackie Academic & Professional, London, pp. 23–29.
- Suleiman, I. L. (2014). Composting as a Sustainable Waste Management Method in Katsina Metropolis, Northern Nigeria. *International Journal of Bioscience, Biochemistry and Bioinformatics*. 4(1). DOI: 10.7763/IJBBB.2014.V4.301.
- Uba, S., Uzairu, A., Harrison, G. F. S., Balarabe, M. L. and Okunola, O. J. (2008). Assessment of Heavy Metals Bioavailability in Dumpsites of Zaria Metropolis, Nigeria. *African Journal of Biotechnology*. 7(2). Pp. 122-130. DOI: 10.5897/AJB08.812.
- United States Department of Agriculture (USDA) (2000). National Engineering Handbook.
https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_02222_9.pdf.
- Vanguard, (2018). FG Targets Production of 8m Tonnes of Rice in 2018 Wet Season. Published on May 28th, 2018.
<https://www.vanguardngr.com/2018/05/fg-targets-production-8m-tonnes-rice-2018-wet-season/>. Date Accessed: 16/02/2019.