

Socio-Economic Characteristics of Food Crop Farmers and their Perception of Environmental Problems in Ekiti State, Nigeria

***Osundare, F. O.**

Adekunmi, A. O.

Department of Agricultural Economics and Extension Services

Ekiti State University, Ado-Ekiti, Nigeria

**E-mail: foluosun2005@gmail.com*

ABSTRACT

This study examines the socio-economic characteristics of food crops farmers in relation to their perception of environmental problems. The aims are to identify environmental problems affecting food crops production, ascertain respondents' perception of environmental problems and the coping strategies or conservation methods used to combat these problems. Data were collected from 120 food crop farmers in Ekiti State. Data collected were analyzed using descriptive statistics such as frequency tables, simple percentage and mean. Chi-square was used to test the hypothesis formulated for the study. Results revealed that soil erosion, windstorm, pests and diseases; soil Nutrients' depletion, inadequate water supply and sanitation were the major environmental problems affecting food crops production in the State. Majority of the respondents strongly agree that these environmental problems cause serious decline in food crops production. It was also revealed that respondents employed minimum tillage, mulching, crop rotation, cover cropping etc. to halt environmental degradation. Results of tested hypothesis indicate that there was a significant relationship between age, gender, major occupation, farming experience and farmers perception of environmental problems. Based on the foregoing, it is recommended among others that policies that would reduce the deleterious effects of environmental problems must be initiated and formulated early enough by appropriate government body if the aim of increased sustainable food crop production in this era of global warming is to be achieved.

Keywords: *Perception, environmental problems, food crops production*

INTRODUCTION

In recent years, the negative effects of environmental problems on sustainable food production have become increasingly obvious. As in most other countries of the world, the Nigerian environment today presents a grim litany of woes. Every State of the Federation suffers from one form of environmental problem or the other in varying degrees. The environment has been known over the years to have effect on health of man, livestock and crops. Men through their economic and social activities have changed the nature of Nigerian environment consciously and unconsciously and each of these activities has one effect or another on agricultural systems in Nigeria (Ibe, 1998). The Northern part of the country is being literally "blown away" by wind erosion while the southern part is being eroded into the Ocean. Over two million tonnes of soil are lost annually in south central Nigeria and

this has caused great decline in agricultural yield (Dike, 1995). The high level of poverty and illiteracy in Africa directly linked to the current level of environmental pollution and degradation in the continent. The most intractable problems facing the world today include the food, hunger crises and the global environmental degradation. Forest environment whose benefits were known to include conservation of water cycle and climate, soil formation, nutrient recycling and much more has attracted ever increasing demand for forest products and for development purpose; which have adverse effect on the forest eco-system. The poor and the illiterates are often more interested in issues related to their daily survival than environmental management. This lack of interest and awareness often lead to more reckless environmental behaviour which in turn breeds more environmental problems and leads to a vicious cycle of poverty.

Health related environmental problems in Nigeria vary with the level of social and economic development of each State. According to World Development Report (1992), annually, more than 2 million deaths and billions of illness such as typhoid, cholera, river blindness and guinea worm are attributed to water pollution and poor household hygiene. Major public health problems associated with poor environmental sanitation and exposure to communicable diseases and poor personal hygiene predominate and are often compounded by malnutrition which reduces resistance to diseases especially among vulnerable groups such as children, pregnant and lactating mothers and the aged.

The correct perception of environmental problems is very important in order to address the social and environmental challenges inherent in development. Consequent upon this, there is an increasing scholarly attention on environmental perception for the past two decades. Until recently, however, majority of the social science research concentrated on public environmental perception within developed countries. This notwithstanding, they still provide important foundations for further research. Such studies reveal high levels of environmental concern suggesting the possible emergence of environmentalism. Jun, Yorliang and Bing (2010) in their study on the relationship between socio demographic factors and peoples perceived priority regarding environmental and social issues found that level of education, type of employment, socio economic status and urbanization influenced greatly people's perception of environmental problems.

In a similar study carried out by Micheal and Lori (2005) in Ghana on policy issues focusing on environmental perception, it was revealed that a significant amount of environmental awareness with education and political engagement consistently predicted higher levels of concern for environmental problems. In Nigeria, Ogunjimi (2008) investigated perception of environmental issues from the perspectives of fuel wood sellers in Borgu local government area of Niger state. Their results indicate that fuel wood sellers had adequate information on environmental issues both at local and global levels and they were aware of environmental problems militating against food production.

Marquart-Pyatt (2007) and Dunlap (1998) explored public perception of environmental issues such as air/water pollution, global warming across a variety of settings. They found that even where knowledge levels are low, concern for environmental issues is often high. Nigeria has witnessed increasing economic activities and human impacts ranging

from fishing, farming, mining, road construction to oil exploration in recent years. Therefore an investigation into the perception of environmental problem is a step towards the right direction. The objectives of the study therefore are to:

- (i) Describe the socio-economic characteristics of respondents in the study area in relation to their perception of environmental problems;
- (ii) Identify environmental problems affecting food crops production ;
- (iii) Examine the methods adopted by the respondents to reduce the effect of these problems and.
- (iv) Ascertain respondents' perception of environmental problems.

Based on these, the following questions were asked to guide the study:

- 1 How are the socio-economic characteristics of farmers affect their perception of environmental problems?
- 2 What are the environmental problems affecting sustainable food production?
- 3 How are the farmers perceive these environmental problems and
- 4 What are the conservation methods used to tackle these environmental problems?

A comprehensive research hypothesis was formulated for the study. Thus, there is no significant relationship between farmers' socio-economic characteristics and their perception of environmental problems.

PARTICIPANTS AND PROCEDURE

The study was conducted in Ekiti State of Nigeria. Four local government areas were randomly selected from the state, three communities randomly selected from each local government and ten farmers were randomly selected from each of the selected villages making a total of 120 food crop farmers. Data collected were through the use of structured questionnaire. Data collected were then analyzed using descriptive statistics such as frequency counts, percentage and mean whilst Chi-square was used to test the relationship between selected variables such as age, gender, educational attainment, farming experience, income and their perception of environmental problems.

RESULTS AND DISCUSSION

Socio-economic Characteristics of Food Crop Farmers in Ekiti State: Table 1 shows that majority of the respondents fell between the ages of 20 and 50 years with a mean of 37.5 years. This shows that they were still young and were in their active productive years and can still actively adopt effective measures for cushioning the effects of environmental problems on crop production. About 72% were male while 28.3% were female. The male dominance implies the laborious nature of farming activities which are very tedious for female farmers to handle. It also reveals that majority of the respondents were married. This shows that the gender roles in food crops production and perception of environmental problems can be effectively shared among the men and women. Further results on table 1 show that majority of the respondents had primary education followed by 13.2% with

post secondary education. The import of these findings is that majority of the respondents could read and write. It has been reported by Agwu and Anyanwu (1996) that increase in educational status of farmers positively influenced their perception and adoption of improved technologies and practices. In addition, results on table 1 also show that 70% of the respondents indicated that their main occupation was crop production. 7.5% of the respondents are civil servants, while traders and teaching are 17.5% and 5.0% respectively. They all still engage themselves in food crops cultivation as their secondary occupation. The table shows that only 32.5% of the respondents had farming experience of between 1 and 5 years, while 67.5% of the respondents had more than 5 years of farming experience. This indicates that majority of the respondents were not new in crop farming and this could have helped them to have sufficient knowledge and experience of environmental problems, their effects on food crops production and what can be done to reduce the effect in the area. Their income was low with 74 percent earning N100,000.00 and below per annum.

Environmental problems Encountered by Food Crop Farmers in the State: Findings show that environmental problems in Ekiti State cannot be divorced from ecological problems arising from erosion. The destructive effects of erosion are attributable to many natural and man-made factors such as rapid clearing of forests, indiscriminate exploitation of trees, topography, climate anthropogenic activities etc. There is therefore interconnectedness between erosion and all the other problems analyzed and discussed in this study. This explains why 66 out of 120 respondents claimed they had erosion and flooding problems. These problems are more pronounced during the raining season when farmer is most busy on farm operations.

Another important problem encountered is inadequate water supply and sanitation. Oral interview report shows that some farmers find it difficult to get clean drinking water on the farm particularly during the dry season. Deforestation is another major problem sequel to agricultural activities and indiscriminate felling of trees by the timber contractors. Felling and transportation of logs destroy crops and the ecological system. Bush burning is very rampant in the State especially in the rainforest areas because it is a cheap means of land clearing in labour intensive farming communities. All these and many more lead to soil nutrient depletion as claimed by 42 respondents.

Perception of Environmental Problems by Food Crop Farmers in Ekiti State: The solution to a problem lies in the correct perception of the problem and this differs from person to person depending on the socio-economic background. The perception of environmental problems by the food crop farmers in Ekiti State is presented on table 3. About 67% of the respondents agree that environmental degradation is a serious problem in their communities. About 81% of the respondents agree that it would result in decline in food production. That it would make life more difficult for them, their animals and crops was the response of 50% of the participants, while 51.7 and 60 respectively say it would make them diversify into non farming activities and generally more devastating than economic problems. However, 61% of them agreed that environmental problems are too enormous to be controlled while 74.2% believe that the problems are above their knowledge

and skill and probably aggravated by the changing climatic conditions. About 51% of them disagree that indiscriminate disposal of wastes constitutes health hazards in their communities.

Strategies/Conservation Methods Used to Reduce the Effects of Environmental Problems on Crop Production: Different strategies/conservation methods have been adopted by food crop farmers in different parts of the State for environmental problems adaptation. Table 4 shows the percentages of respondents that adopted different strategies/conservation methods. It shows that minimum tillage was the most frequently used method as indicated by 55.8% and following this method was mulching employed by 53.3%. Forest management was used as a conservation method against environmental problem as indicated by 65.0% of the respondent. This involves selective felling and forest regeneration.

Constrainta encountered using Environmental Conservation Methods: Findings based on table 5 reveals that government was not giving adequate support to farmers in the study area. This is as indicated by 47.5% of the total respondents. This is followed by the fact that environmental conservation methods are sometime capital intensive (33.3%). Lack of technical knowhow equally constituted a constraint with 17.5%. On the whole, it is evident from the above that the government is not living up to its expectation in terms of fighting against environmental related problems in the study area.

Relationship between Perception of Environmental Problems and Selected Socio-economic Variables: The results of chi-square on table 5 indicate that there was a significant relationship between perception of environmental problems and the selected variables: Age, gender, major occupation and farming experience. This implies that these socioeconomic variables significantly influenced farmers' perception of environmental problems in Ekiti State and they have important implications. For instance a farmer who earns his highest possible income from food crop production would perceive environmental problems as serious and would want to reduce its deleterious effects to the barest level

Table 1: The Socio-economic characteristics of respondents (n = 120)

Age (in years)	Frequency	Percentage
Less than 20	08	6.7
20-30	43	35.8
31-40	28	23.3
41-50	18	15.0
>50	23	19.2
Sex		
Male	86	71.7
Female	34	28.3
Marital status		
Married	96	80.0
Single	3	2.5
Widow	12	10.0
Widower	9	7.5

Educational level		
No formal education	9	7.5
Primary education	84	70.0
Secondary education	11	9.3
Post secondary education	16	13.2
Main Occupation		
Farming	84	70.0
Civil service	9	7.5
Trading	21	17.5
Teaching	6	5.0
Farming experience (in years)		
Between 1 and 5	39	32.5
6-10	37	30.8
11-15	13	10.8
16-20	11	9.2
>20	20	16.7
Income (₦ per annum)		
>60,000	36	30.0
60,001-100,000	38	31.7
100,001 -160,000	32	26.7
Above 160,000	14	11.7

Source: Field survey, 2012

Table 2: Distribution of respondents based on environmental problems affecting food crops production (n =120)

Environmental problems	Frequency	Percentage
Pests and Diseases	21	17.5
Wind storm	14	11.7
Deforestation	40	33.3
Erosion	16	13.3
Bush burning	7	5.8
Soil Nutrients depletion	22	18.4
Total	120	100

Source: Field survey, 2012

Table 3: Distribution of respondents according to farmers' perception of environmental problems (n =120)

Perception statement	Agree	Disagree	Undecided
Environmental degradation is a serious problem in our communities	80 (66.7)	28(23.3)	12 (10.0)
Environmental problems resulted in decline of good production	97 (80.8)	10 (8.3)	13 (10.8)
Environmental conservation technology helps increasing food production	93 (77.5)	93 (77.5)	18 (15.0)
Environmental conservation methods is a waste of time and capital	29 (24.2)	29 (24.2)	20 (16.7)
Environmental require skill and knowledge	89 (74.2)	89 (74.2)	13 (10.8)

Figures in parentheses are percentage

Source: Field survey, 2012

Table 4: Distribution of respondents according to the strategies/conservation methods to reduce/alleviate the effects of environmental problem (n =120)

Conservation methods/strategies	Frequently Used	Rarely Used	Not use at all
Mulching	64 (53.3)	40 (33.3)	16(13.3)
Cover cropping	53 (44.1)	46 (38.3)	21(17.5)
Minimum Tillage	67 (55.8)	32 (26.6)	21(17.5)
Controlled grazing	24 (20.0)	47 (39.2)	49(40.8)
Crop rotation	54 (45.0)	26 (21.7)	40(33.3)
Organic manuring	46 (38.3)	47 (39.1)	27(22.5)
Taungya farming	24 (20.0)	33(27.5)	63(52.5)
Growing and management of forests	18 (15.0)	24(20.0)	78(65.0)

Figures in parentheses are percentage

Source: Field survey, 2012

Table 5: Distribution of respondents according to constraints encountered, using environmental conservation methods

Benefits	Frequency	Percentage
Lack of fund from the government	57	47.5
Lack of technical know-how	21	17.5
High cost or capital intensiveness	40	33.3
Others	2	17
Total	120	100

Source: Field survey, 2012

Table 6: Chi-square table testing the relationship between socio-economic characteristics of respondents and the perception of environmental problems affecting sustainable crop production (n =120)

Variables	X ² cal	X ²⁺ tab	Df	Decision
Age	13.8	11.1	4	Significant
Gender	16.7	3.84	1	Significant
Educational level	3.81	7.81	3	Not significant
Marital status	0.74	9.49	3	Not significant
Major occupation	11.02	9.28	3	Significant
Farming experience	9.26	8.04	4	Significant
Income	4.36	7.93	3	Not significant

Source: Field survey, 2012

CONCLUSION AND RECOMMENDATIONS

In this survey, we have been able to highlight the environmental problems food crop farmers' encounter, their perception of these problems and coping strategies adopted to forestall these problems. Investigations show that there was a significant relationship between farmers' socio economic parameters and their perception of environmental problems. The farmers in Ekiti State perceive environmental problems as being more devastating than economic problems resulting into decline in food production, making life difficult for them and their animals and make them diversify into non farming activities. Also inadequate water supply as claimed by the farmers in the study area is a very serious problem. In a rain – fed agriculture typical of Ekiti State, extending the growing season through irrigation will be a mirage when the farmer does not have access to good drinking water. All these point to the need for the State to break the cycle of short – planning and evolve a forward –looking environmental control programme that can stand the test of time. Policies that would reduce

the deleterious effects of environmental problems must be initiated and formulated early enough if the aim of increased sustainable food crop production in this era of global warming is to be achieved. Also the fact that some farmers perceived environmental problems as being too enormous to be controlled implies that the State Environmental Protection Agency should embark on rigorous enlightenment campaign on methods of controlling environmental problems using radio, television and other audio-visual aids that will give farmers the correct perception of environmental problems and what they can do on their own to reduce their deleterious effects.

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