

## **Agricultural Performance of Irepodun/Ifelodun Local Government Area in Ekiti State: Implications for Health Challenges**



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**ABSTRACT:** Recent empirical studies gesticulates that farmers' in rural communities are often more prone to health challenges which further worsen Agricultural performance in their respective domains. On this notes, this paper is out to investigate the impact of health challenges on agricultural performance of Irepodun/Ifelodun Local Government Area in Ekiti State using micro data analysis. The study used primary data through the use of questionnaires from the sampled population selected for the study. A total of 71 respondents contributed to the findings of the research. The study sampled sixty (60) respondents which are basically the farmers' to analyze possible health challenges affecting agricultural performance, socio-economic characteristics of farmers', ill-health cases of farmers' and farmers' lost of activities during farming's seasons. The study showed that the most prominent diseases affecting farmers' families were tuberculosis, chronic back pains, lungs and eyes problems, tetanus, malnutrition's among others. Findings also indicates that numbers of days farming activities lost to ill-health in a household might help elicit a clearer picture of the effect of transient ill-health on agricultural production. The study therefore concludes that developmental effort in the provision and accessibility of affordable health care in rural areas should be put in place so as to reduce the incidence of diseases in Ekiti State which can as well be used to justify all other rural area States in the country as a whole. The results further accentuates that good health is more important and major backbones to farmers' in performing their farming activities effectively. Based on the findings of this study, it is therefore recommends adequate provision and sensitization of health and environmental education for rural dwellers from State Ministry of health, Stakeholders and Non-governmental organization to checkmate and also to impose heavy restrictions to the importation of hard drugs into the country such as cigarette, cocaine, alcohol, Tramadol among others causing huge amount of health-illness for farming activities which in turn affecting the agricultural performance in the country as evidence in Ekiti State serving as one of the States producing food for the nation.

**KEYWORDS:** Agricultural performance, Health challenges, Farmers', Irepodun/Ifelodun.

### **INTRODUCTION**

Recent empirical studies gesticulates that farmers' in rural communities are often more prone to health challenges such as malaria, guinea worm infections, HIV/AIDS, tetanus and among others which further worsen Agricultural performance in their respective domains (Onuche, Opaluwa & Edeka, 2014). Thus, if urgent attentions are not put in place on these worsening of Agricultural performance due to health related challenges of farmers', this will further affect the growth of the economy by short changing the food security for the nation (Ilori, 2000). Further estimates by McCarthy, Wolf and Wu (2015) confirmed that malaria and other health shocks cases reduce economic growth by 0.55%. But beside, rural areas have continued to receive more attentions from successive governments in Nigeria owing to their strategic importance as the agricultural base of the nation (Olajide, Ajayi & Tijani, 2012). However, about 90% of the Nigerian food supplies come from small holder farmers (farmers with less than three hectares of land), and most industries are agro based (FAO, 2018; Rahji, 2005). Thus, it has also been noted that about 40% of the country's GDP comes from agricultural sector which also accounts for 70% of non-oil export (FAO of United Nations, 2018). The agricultural products that account for the above are mostly sourced from the rural areas. These areas are prone to a lot of infrastructural and welfare problems. One of these problems is their susceptibility to health hazards.

According to Schultz (1999) and; Strauss and Thomas (1998), positive relationship exists between health and productivity of skilled and unskilled labour. Therefore, good health as related to labour output or better production organization (since people of good health generally have better intellectual capacities), can enhance farmer's/household income and also improve economic growth for the country. The process of agricultural production and the output it generates can contribute to both good and poor health among the producers as well as the entire society. Being an agricultural producer is a determinant of health relative to income and labour

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(Corinna & Ruel, 2006). Labour equally predisposes producers to a range of occupational health hazards including accidents, strains, and diseases and poisoning.

Without missing words, health shocks affects Agricultural performance as evidence from producer's health status, therefore, poor health will result in loss of work days or decrease worker capacity, decrease innovation ability and ability to explore diverse farming practices and by such makes farmers to capitalize on specific knowledge (Clifford, 2006). Ugwu (2006), Douald (2006) and Bradley (2002) also submitted that health capital is affected by a number of preventable diseases such as malaria, musculoskeletal disorders, HIV/AIDS, farm injuries, yellow fever, fever, schistosomiasis, onchocerciasis, diarrhoeal diseases, respiratory diseases, skin disorders and among others. These diseases according to Ngambeki and Ikpi (2002) make farmers not to utilize fully all inputs at their disposal and debilitate farmer's physical performance and equally impacts negatively on the farms profit levels.

There are lots of indications that shown that developing country's agriculture (Nigeria inclusive) is characterized by a widespread productivity decline (Fulginito & Perrin, 1998). However, despite concerted efforts by different Nigerian government in terms of human and material input into agricultural system so as to attain self-sufficiency in food production for the nation, thus, the rate of productivity decline persistently (FAO, 1987; NPC, 2006).

Given the foregoing scenario, the broad objective of this study is to investigate the impact of health challenges on agricultural performance of Irepodun/Ifelodun local government area in Ekiti State using micro data analysis to assess the demographic variables, health challenges affecting agricultural performance indicators, socio-economic characteristics of farmers', ill-health cases of farmers' and farmers' lost of activities during farming's seasons as the specific objectives for the study. However, to achieve the foregoing objectives, the study provided answers to the following research questions analyzed: (i) Do health challenges affecting agricultural performance? (ii) What are the socioeconomic characteristics of farmers? (iii) What are the major ill-health prevalent cases in the rural area? (v) Do farmers' lost any of their activities during farming's seasons?.

The significance of the study at this period is not farfetched from the role agriculture played in rural communities to improve economic growth and as a means to an end by providing food security for the nation. However, this has been a subject of controversy and debate in the literature for a very long time. Thus, to finally neap it on board, this study considers to investigate the impact of health challenges on agricultural performance in rural selected areas. While the outcome of the study may be used by the policymakers in health and agricultural sectors to improve more robust policy for growing economy.

This study was carried out with the aid of field research extracted through the questionnaires elicited from the respondents. The questionnaires were addressed to the peasant farmers' of the targeted area from Irepodun/Ifelodun local government area in Ekiti State focusing on Iworoko-Ekiti, Odo-odo, Are Road and Yem Kem located within the region of the Ifelodun/Irepodun local government area in Ekiti State. Thus, the study targeted peasant farmers' in rural communities because they are the most vulnerable to health challenges.

The study is structured as stated in what follows. Following this introductory section is section two that presents the literature review. Section three deals with methodology used for the study while section four dwells on the analysis and discussion of results. Finally, section five concludes and provides policy recommendations for the study.

### **LITRATURE REVIEW**

#### **Conceptual Literature**

Health is wealth, therefore, the important of it became imperative for country's growth and development through farmer's healthy in the society. On this note, individual life's can be prolong when there are abundant foods in the country. However, in 1948, the World Health Organization (WHO) Trusted Source defined health with a phrase that modern authorities still apply. "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." In 1986, the WHO Trusted Source made further clarifications: "A resource for everyday life, not the objective of living. Further, literature asserts that there exists a significant positive relationship among health, personal and social, resources and also physical capacities. Thus, aided individual to function adequately in the society than think health as a resource ends itself. A healthful lifestyle provides the means to lead a full life with meaning and purpose (Barry, 2016). Therefore, health can simply put as a pragmatic concept of ability to conduct a socially and economically productive life which is an essential goal for a nation to be productive (Zahra, 2014), and this was also adopted by WHO Global Strategy, that is "Health for All nation by the Year 2000".

In a related development, to define health in operational and working terms was vital for creating policies and programs for maintaining and improving health, and is considerably managed to exceed the widely rooted notion that health simply means the absence of disease. The Ottawa Charter from the 1st International Conference on Health Promotion, held in Ottawa, Canada, in 1986, says that health is created in the context of everyday life and environment, where people's live, love, work, and play. However, the main goal of health and purpose of health can be re-sounding. Hence, the goal of health promotion is to combine the approach for addressing the social determinants with the resolution and commitment to motivate and encourage the individual and the community for their active approach toward health and embracing healthy lifestyles (Ebeloku, 2010). Again, the role of agriculture in economic development can be realized through immensely contributions of agricultural sector to the economy Omowale and

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Rodrigues (2014). To Reynolds, therefore, agricultural development can promote the economic development of underdeveloped countries in four distinct ways. Which includes, (i) by increasing the supply of food available for domestic consumption and releasing the labour needed for industrial employment. (ii) Enlarging the size of domestic market for the manufacturing sector. (iii) Increasing the supply of domestic savings; and also by providing the foreign exchange earned through agricultural exports.

Ayodele (2014) opined that the promotion of self-sufficiency in food for the teeming and fast expanding population and also for the supply of inputs (raw materials) into the industries, especially the manufacturing firms became necessary as a result of generations of employment opportunities for countries labour force as well as foreign exchange-earnings through increased agricultural exports arising from the adoption of appropriate technologies in production and distribution. Improvement of socio-economic welfare of people engaged in agriculture, particularly, the rural people reroute the generation of regular income. Holistically, the emergency of agriculture in the society towards on economic and social factors became imperative. It is a source of food for the teeming population as well as providing employment opportunity to large extent. Among others, is to reduce poverty level and bring about income generation for the country if all things are equal.

In effect, it has been the main source of gainful employment, from which the nation can feed its teeming population, a regenerative, providing the nation's industries with local raw materials and as a reliable source of government revenue.

In a related development, Omowale and Rodrigues (2014) gesticulates that for most developing countries agriculture has been assigned an important role in national development. Thus, agriculture has been seen as a means of reducing dependence on certain importations, containing food price increases, earning foreign exchange, absorbing many new entrants to the labour market as well as significant reduction on the level of unemployment and poverty rate in the rural area.

In agreement with the foregoing views, Johnston (2014) also submitted that the appraisal of agriculture's contributions or role in the national economy can be made using for primary criteria, such as, the proportion of the population engaged in agriculture, the share of agriculture in the gross domestic product, the proportion of the nation's resources (other than labour) devoted to or employed in agricultural production, and finally, the contributions of the agricultural sector to foreign trade.

Further, one of the important of agriculture to health is to provide basic food items for the World and vis-à-vis each of the country such as medicinal plants, fiber and also materials for shelter. It also serves as an avenue for poor people in developing countries to sustain themselves. Examining health in an agricultural context is therefore important because agriculture presents not only opportunities for improving health but also risks to health. By and large, the effect of health on agriculture cannot be overemphasized because of its role played in the society. For instance, in agricultural communities, poor health reduces income and productivity which in turn decrease people's ability to address poor health and inhibiting economic development more holistically. While in a large population, the level of morbidity, malnutrition, infirmities amongst others bring about market for agricultural products demand produce by the farmers'. Therefore, the links between agriculture and health are thereby bidirectional. That is, agriculture influences health and likewise health influences agriculture. The recognition of the importance of inter-sectoral work to health is not new as earlier gesticulated by (BCHP, 2014). That is Bangkok Charter for Health Promotion. An integrated policy approach it states, is "essential if progress is to be made in addressing the determinants of health." In agriculture, the emergence of joint animal and human health concerns such as avian influenza, and epidemics among agricultural communities (Akpe, 2013).

Agricultural outputs affect health in a variety of ways. The major output food can carry food borne illnesses and affects nutrition. Food borne illnesses are caused by unsafe food that may originally have been contaminated during agricultural production. This may be arise as a result of a microorganism capable of causing disease like bacteria, viruses or fungi effected farmers' food such as vegetables and raw fruits due to inadequate treated wastewater. The volume of food available in the society led to the influence of nutrition in term of its quality, price and likely differences; and as well the channel of distribution. Thus, resulted to agricultural production and its policy that governs it. Through agricultural framework policies much can be done which include but not limited to availability of incentives for different foods production, alcohol and tobacco and their prices for the people, thus enable them to make choices about these products, and their subsequent level of exposure to risk factors for chronic disease. Another agricultural product is medicinal plants, many of which are believed to be effective in the treatment of certain diseases. Incorporating production of medicinal plants into agricultural systems, such as agro forestry, has the potential to address some of the problems related to over-harvesting of medicinal plants in the wild, while meeting the demand for these plants on global export markets. In a related development, healthcare needed essential things such as consumption of good food which aided people to contribute more energy to farming activities and afterward leads to more agricultural system demand (Vasanth, 2010).

The literature linking health to labor productivity is built on the concepts of household production theory developed by Becker (1965). In Becker's framework, households are treated also as producers of "commodities" instead of solely consumers of goods and services. This framework was extended by Grossman (1972, 1999) to analyze the demand for health. According to Grossman's view, health can be intertwined as a durable capital stock which in turn produces an output of healthy overtime. However, this capital stock owned by people depreciates over time and through investment, it can be increased. By investing in health, households expect to increase the stock of available healthy time, which will increase the amount of time available for earning income or for producing consumption goods. According to Rosenzweig and Pitt (1989), put forth a framework (model) towards the significant

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influence of health on productivity, as well on farmer's income. In their analysis, health variable became a yardstick for utility function and afterwards produced an explicit production technology for health.

### Theoretical Underpinning

As pointed out earlier, following Becker's theory of production (1968) consumption or labor supply analysis of agricultural households must account for the interdependence between household production and consumption decisions. To account for the sequential nature of agricultural households' decision-making processes, Singh, Squire, and Strauss (1986) propose a recursive analytical model with profit- and utility maximizing components. More specifically, every household is assumed to maximize a utility function as given thus;

$$U = U(C_a, C_m, C_1), \quad (1)$$

Where the commodities comprise an agricultural staple ( $C_a$ ), a market-purchased good ( $C_m$ ), and leisure ( $C_1$ ). Utility is maximized subject to a cash income constraint:

$$p_m C_m = p_a (Q_a - C_a) - w(L - L^f) - w_x X + E, \quad (2)$$

where  $p_m$  and  $p_a$  are respectively the prices of the market-purchased commodity and the staple;  $Q_a$  is the farmers' production of the staple;  $w$  is the market wage;  $L$  is total labor inputs;  $L^f$  is family labor input (so that the difference  $L - L^f$ , if positive, is hired labor or off-farm labor if negative);  $X$  is a variable input (for example, fertilizer);  $w_x$  is the variable input's market price; and  $E$  is any non-labor, non-farm income such as remittance.

Every farmer also faces a time constraint: he cannot allocate more time to leisure, on farm production, or off-farm employment than the total available amount of time ( $T$ ). Welch (1970) suggests that farmers' management ability should be reflected in both the technical efficiency of the production process and the allocative efficiency of input and output decisions. Accordingly, the total stock of farmers' time available for farm production ( $L^f$ ) is divided between management  $M$  and field work. As earlier gesticulates by Ster and Bliss (1980), the mathematical input for management can be given as:

$$M^e(I, M) = m(I)M, \quad \partial m / \partial I < 0 \quad (3)$$

Where;  $I$  is the index of health impairment. Similarly, effective family labor input is given by

$$F^e(I, F) = f(I)F, \quad \partial f / \partial I < 0 \quad (4)$$

Theoretically, the decrease in production is due to reduced effective management input and effective family labor input. However, the comparative static effects of illness  $I$  on actual family labor inputs  $M^e$  and  $F^e$  and on other inputs are not straightforward (Antle & Pingali, 1994): the effect of lower overall productivity may be partially offset by the substitution of hired labor or other inputs for family labor input, ii) the allocation of family labor to management and field labor depends on the relative marginal productivities of management and field labor and the relative impacts of illness on the ability to perform field labor and management tasks.

Further, Pitt and Rosenzweig (1986) concludes that production performance is independent from change in farmers' health only if input markets are perfect and there is no missing market for any commodities to be consumed. Therefore, prediction is low in respect of farmers' income and the health environment at the rate working schedule for farmers' is based on unknown utility function and on the characteristics of the health production and efficiency labor functions (Battese & Coelli, 1995; Kumbhakar & Lovell, 2000)

### Empirical Evidences

Audibert and Etard (2003) examined worker's productivity benefits of health using quasi-experimental design and also employed a generalized linear model for longitudinal data analysis. Study showed that family members and hired labor exhibits imperfect substitutes due to cost of hired labor and low agricultural yield. The results also showed that agricultural households prefer to utilize the additional time available to them for leisure activities or for cultivating crops other than those currently under cultivation.

Ethiopia, Croppenstedt and Muller (2000) examined the impact of farmer's health and nutritional status on productivity and efficiency of Ethiopia using generalized linear model for longitudinal data for data analysis. Their results showed that the distance to the source of water as well as nutrition and morbidity status affect agricultural productivity; elasticities of labor productivity with respect to nutritional status are very significant. The results also showed a large scope for productivity improvement through better nutrition.

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Using cross-section data on hoe-cultivating farm household data from Sierra Leone, Strauss (1986) investigates the efficiency wage hypothesis and the relationship between nutritional quality and agricultural productivity. They find that “effective family labor,” which is a function of actual labor and per capita daily calorie intake, is a significant input in the production process

Anowor, Nwonye, Okorie and Ojiogu (2019) examined the impact of health outcomes on agricultural output in Nigeria, using dynamic error correction built an econometric model. Variables were used which includes, mortality and life expectancy rates proxies for health outcomes and others like HIV/AIDS while agricultural output serves as dependent variable for the study. Results showed that HIV/AIDS has lethal effects on health outcomes and aggregate output. It also revealed that health outcomes have significant impact on agricultural output potentials; as well as causal relationship exists between health outcomes and agricultural output. Further robust policy for public and private sectors for expanding healthcare services is necessary to boost more agricultural output.

Onuche, Opaluwa and Edoke (2014) analyzed the impact of ill-health on agricultural output in rural areas of Kogi state, central Nigeria. The study used multistage random sampling procedure for the selection of 263 rural households for questionnaire administration in order to elicit relevant data related to their farming enterprises and health. The study used descriptive statistics as estimation technique as well as and production function analysis. The study indicates that the average age of the household heads was 46.4 years while the average household size was 6.5 persons.

Osei-Akoto, Clement and Robert (2013) examined the impact of idiosyncratic health shocks on farm labour use at all the stages of farming activities, use of non-labour inputs and the value of agricultural output using a two-wave panel data. The results showed that family labour used in land preparation and farm management are very sensitive to ill-health. Households are able to do the needful of substitution method for family labour lost during the farm management stage. Substituted labour however do not replace the lost of family labour.

Munogo, Chitungo and Shallone (2013) examined the impact of farmers’ health and nutritional status on agricultural technical efficiency as evidence from Masvingo Rural Communities. The study used a structured questionnaire that had 123 respondents in Masvingo rural to investigate the efficiency effects of health status. Data were collected on health status and production characteristics of the farmers and analyzed using the Maximum Likelihood Estimation Method of Stochastic Production Frontier model. The result of the effect of ill-health on technical efficiency of the farmers showed that land, labour, fertilizer and seed were positively related to output. In the inefficiency model, adverse health, age, household sizes have positive effects on inefficiency of the farmers. The study concludes increase in productivity through improvement on the stock of health status of the farmers.

Lleras-Muney and Jayachandran (2007) reported that decreases in maternal mortality led Sri Lankan girls to stay in school longer; the reduced probability of dying in childbirth increased the return to schooling by increasing life expectancy for girls. However multiple regression was adopted at the micro level, empirical evidence of the link between health and agricultural productivity results from the implementation of agricultural household models.

As extended by Pitt and Rosenzweig (1986) using cross-sectional data on hoe cultivating farm household data from Sierra Leone, Strauss (1986) investigates the efficiency wage hypothesis, or the relationship between nutritional quality and agricultural productivity. The study found that “effective family labor,” which is a function of actual labor and per capita daily calorie intake, is a significant input in the production process. The results also showed a large scope for productivity improvement through better nutrition.

Hailu, Tandon, and Kim (1997) assessed the effect of onchocercal skin disease (OSD) on productivity of coffee plantation in southwest Ethiopia. The results showed that permanent male employees, the core of the plantation labor force, suffer significant losses on economic productivity (in the form of lower daily wages earned) as a result of OSD. The use of multistage random sampling procedure was employed in the selection of 134 rural households for questionnaire administration in order to elicit relevant data related to their farming enterprises and health. Results showed that relative older (35+) permanent male employees have the biggest OSD-related loss in economic productivity in terms of diminished earnings and an adversely impacted labor supply.

### **METHODOLOGY**

The research methodologies used for the study includes research design, population of the study, research instrument both on validity and reliability majorly on micro data analysis.

#### **Research Design**

The survey research design was adopted for study. The choice of the design is informed by the objectives of the study so as to provide quick, efficient and accurate means of assessing information about the population of interest. Thus, evidence in health status of the people and agricultural performance in Ekiti State.

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## Population of the Study

The population for this study are the peasant farmers of targeted area of Iworoko Ekiti, Odo-Odo, Are Road and Yem-Kem located within the region of Ifelodun/Irepodun local government area in Ekiti State. A total of 71 respondents were selected from the population figure out of which the sample size is determined and justified.

## Sample and Sampling Techniques

The study make used of Taro-Yamane's formula to determine the sample size from the population as given thus:

$$\text{Taro-Yamane's formula: } k = \frac{K}{1 + K(\epsilon)^2}$$

Where K = Population of study; k = Sample size (?);  $\epsilon$  = Level of significance at 5% (0.05); 1 = Constant

## Research Instrument and Instrumentation/ Method of Data Collection

Data for the study were sourced from primary sources using a structured questionnaire and further designed to elicit information on the impact of health status on agricultural sector in Ekiti State. A total of 71 questionnaires were administered for the study. Thus, analysis was based on two different parts. That is, demographic variables and research questions using 60 respondents. However, the primary data for the study consist of raw data generated from questionnaire's responses emanated from respondents interviewed.

## Validity of Instrument

The instrument used for the study was subjected to face validation. Face validation test the appropriateness of the questionnaire items. This is because face validation is often used to indicate whether an instrument on the face of it appears to measures what it contains. Face validations therefore aims at determining the extent to which the questionnaire is relevant to the objectives of the study. In subjecting the instrument for face validation, copies of the initial draft of the questionnaires are validated by researchers of this study. Given the above, the instrument was adjusted and re-adjusted before being administered for the study.

## Reliability of Instrument

The coefficient of 0.81 was considered a reliability coefficient because according to Etuk (1990), a test-retest coefficient of 0.5 will be enough to justify the use of a research instrument.

## ANALYSIS AND DISCUSSION OF RESULTS

Analysis of the study was done using demographic variables, health challenges affecting agricultural performance indicators, socio-economic characteristics of farmers', ill-health cases of farmers' and farmers' lost of activities during farming's components. These are analyzed and discuss thus:

### 4.1 Demographic Analysis

Demographic analysis comprised questions 1-7 inquiring about age, sex, religion, educational level, marital status, number of children and area of settlement of respondents.

**Table 4.1.1. Sex Distribution**

Options	Frequency	Percentage
Male	47	78.3%
Female	13	21.7%
<b>Total</b>	<b>60</b>	<b>100</b>

Table 4.1 indicates that 47 respondents (78.3%) were males while the remaining 13 respondents (21.7%) were females.

**Table 4.1.2. Age Distribution**

Options	Frequency	Percentage
25-35 years	2	3.3%
36-45 years	8	13.3%
46-55 years	10	16.7%
56-65 years	15	25%
66-75 years	25	41.7%
<b>Total</b>	<b>60</b>	<b>100%</b>

Table 4.2 above indicates that 2 respondents (3.3%) were between the age brackets of 25-35, 8 respondents (13.3%) were between the age brackets 36-45, 10 respondents (16.7%) fall between the age bracket 46-55, 15 respondent (25%) were between

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the age 56-65 while the remaining 25 respondents (41.7%) fall within the age classification of 66 and above.

**Table 4.1.3. Religion**

Options	Frequency	Percentage
Christian	18	30%
Muslim	30	50%
Traditional	12	20%
<b>Total</b>	<b>60</b>	<b>100</b>

Table 4.3 above indicates that 18 respondents (30%) were Christian and 30 respondent (50%) were Muslim while the remaining 12 respondent (20%) are Traditional and Religion

**Table 4.1.4. Educational Level**

Options	Frequency	Percentage
None	11	18.3%
Primary	24	40%
Secondary	18	30%
Tertiary	7	11.7%
<b>Total</b>	<b>60</b>	<b>100</b>

Table 4.4 above indicates that 11 respondents (18.3%) were none educated and 24 respondent (40%) attended primary school level education while 18 respondent (30%) while the remaining 7 respondent (11.7%) attended tertiary institution.

**Table 4.1.5. Marital Status**

Options	Frequency	Percentage
Single	4	6.7%
Married	42	70%
Divorce	6	10%
Widow(er)	8	13.3%
<b>Total</b>	<b>60</b>	<b>100</b>

Out of the respondents as shown in table 4.2.5, 4 respondents (6.7%) were single, 42 respondents (70%) were married and 6 respondents (10%) were divorced, while 8 respondent (13.3%)

**Table 4.1:6. Number of Children**

Options	Frequency	Percentage
1-4	14	23.3%
5-8	28	46.7%
9-12	18	30%
<b>Total</b>	<b>60</b>	<b>100</b>

Table 4.6 showed that 14 respondents (23.3%) have 1-4 numbers of children were 28 respondents (46.7%) gave birth to 5-8 numbers of children while 18 respondents (30%) also gave birth to 9-12 numbers of children.

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**Table 4.1.7. Respondent's Residential Area**

Options	Frequency	Percentage
Iworoko	11	18.3%
Odo-Odo	7	11.7%
Are	33	55%
Yem-Kem	9	15%
<b>Total</b>	<b>100</b>	<b>100</b>

Table 4.7 showed that 11 respondents (18.3%) have their settlement in Iworoko and 7 respondents (11.7%) also have their settlement in Odo-Odo, while 33 respondents (55%) also have the settlement in Are and the remaining 9 respondents (15%) were based in Yem-kem

### Demographic Analysis Findings

Findings from demographic analysis showed that people who fall between the ages brackets 25-45(16.6%) are young farmers, while 46-75(83.4%) are majorly the ones that take active part in farming activities. However, this further validates the findings that old people tends to engage in farming activities as a means to an end for food security in the country. Another interesting factor is that; people who mostly participate in farming are married ones. To this end, 42 respondents (70%) constitute the majority of marital status for married option who only attend primary level education to further validates these findings.

### 4.2 Do Health Challenges have effect on Agricultural Performance?

**Table 4.2.1 It reduces the quality of farm product**

Variable	Frequency	Percentage
Strongly Agree	38	63.33%
Agree	19	31.67%
Undecided	0	0%
Disagree	3	5%
Strongly Disagree	0	0
Total	60	100%

**Source: Author's Fieldwork 2021**

Table 4.3.1 above, reveals that (63.33%) of the respondent strongly agreed and has the highest percentage, and (31.67%) of the respondents agreed; while a minimum rate of (5%) respondents disagreed that health status reduce the quality of farm product.

**Table 4.2.2 Is farmer's income degenerate daily?**

Variable	Frequency	Percentage
Strongly Agree	32	53.33%
Agree	15	25.1%
Undecided	5	8.33%
Disagree	5	8.33%
Strongly Disagree	3	5
Total	60	100%

**Source: Author's Fieldwork, 2021**

Table 4.2.2 above, reveals that (53.33%) of the respondent strongly agreed and has the highest percentage, and (25.1%) of the respondents agreed; while a minimum respondent of (8.33%) were undecided and disagreed, and the minimum rate of (5%) of the respondents strongly disagreed that health status degenerate the income made by farmers daily.

**Table 4.2.3 It reduces innovation in farming product**

Variable	Frequency	Percentage
Strongly Agree	45	75%
Agree	10	16.67%
Undecided	3	5%



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Disagree	0	0%
Strongly Disagree	2	3.33%
Total	60	100%

Source: Author's Fieldwork, 2021

As presented in the table above that (75%) of the respondents strongly agreed reduction of innovation in farm product which has the highest percentage and (16.67%) respondents agreed; while the minimum of (5%) were undecided and (3.33%) strongly disagreed on the reduction of innovation in farm product.

**Table 4.2.4 It reduces the life expectancy /life span**

Variable	Frequency	Percentage
Strongly Agree	30	50%
Agree	18	30%
Undecided	0	0%
Disagree	10	16.67%
Strongly Disagree	2	3.33%
Total	60	100%

Source: Author's Fieldwork, 2021

Table 4.3.5 above, indicates that (50%) who are majority strongly agreed that health challenges reduce the life expectancy of farmers' while (30%) respondents agreed, and (16.67%) disagreed, and (3.33%) strongly disagreed, with that view.

### 4.3 Socio-Economic Characteristics of Farmers'

What are the socio-economic characteristics of farmers?

**Table 4.3.1 Farmers contributes to income generation of government**

Variable	Frequency	Percentage
Strongly Agree	40	66.67%
Agree	15	25%
Undecided	0	0%
Disagree	5	8.33%
Strongly Disagree	0	0%
Total	60	100%

Source: Author's Fieldwork, 2021

Table 4.3.1 above, reveals that (66.67%) of the respondent strongly agreed and has the highest percentage, and (25%) of the respondents agreed; while a minimum rate of (8.33%) respondents disagreed that farmers contribute to the generation of government income.

**Table 4.3.2 It brings satisfaction pertaining to peoples want and needs**

Variable	Frequency	Percentage
Strongly Agree	50	83.33%
Agree	10	16.67%
Undecided	0	0%
Disagree	0	0%
Strongly Disagree	0	0%
Total	60	100%

Source: Author's Fieldwork, 2021

Table 4.3.2 above, reveals that (83.33%) of the respondent strongly agreed and has the highest percentage, and (16.67%) of the respondents agreed that farmer brings satisfaction pertaining to peoples want and needs.

**Table 4.3.3 It fosters technological improvement and industrialization**

Variable	Frequency	Percentage
Strongly Agree	38	63.33%
Agree	10	16.67%
Undecided	8	13.33%
Disagree	4	6.67%

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Strongly Disagree	0	0%
Total	60	100%

Source: Author's Fieldwork, 2021

As presented in the table above that (63.33%) of the respondents strongly agreed that farmers foster technological improvement and industrialization which has the highest percentage and (16.67%) respondents agreed; while the minimum of (13.33%) were undecided and (6.67%) disagreed on the view.

**Table 4.3.4 Do farmers' reduce the level of Unemployment?**

Variable	Frequency	Percentage
Strongly Agree	52	86.67%
Agree	4	6.67%
Undecided	1	1.67%
Disagree	1	1.67%
Strongly Disagree	2	3.33%
Total	60	100%

Source: Author's Fieldwork, 2021

Table 4.3.4 above, indicates that (86.67%) who are majority strongly agreed that farmers' reduce the level of unemployment in the country while 80 (6.67%) respondents agreed, and (1.67%) undecided, and (3.33%) strongly disagreed, with that view.

**Table 4.3.5 Farmers eradicate Poverty level**

Variable	Frequency	Percentage
Strongly Agree	49	81.67%
Agree	7	11.67%
Undecided	0	0%
Disagree	3	5%
Strongly Disagree	1	1.67%
Total	60	100%

Source: Author's Fieldwork, 2021

Table 4.3.5 above, reveals that (81.6%) of the respondent strongly agreed and has the highest percentage, and (11.67%) of the respondents agreed; while a minimum rate of (5%) respondents were disagreed and about (1.67%) were strongly disagreed that health status of farmers brought eradicate poverty level.

### 4.4: Ill-Health Cases

What are the major ill-health conditions prevalent in the area?

**Table 4.4.1 People get infected by chronic back ache and pain**

Variable	Frequency	Percentage
Strongly Agree	48	80%
Agree	10	16.67%
Undecided	2	3.33%
Disagree	0	0%
Strongly Disagree	0	0%
Total	60	100%

Source: Author's Fieldwork, 2021

Table 4.4.1 above, reveals that (80%) of the respondent strongly agreed and has the highest percentage, and (16.67%) of the respondents agreed; while a minimum rate of (3.33%) respondents were undecided that people get infected by chronic back ache and pain.

**Table 4.4.2 Farmers get infected by lungs problem**

Variable	Frequency	Percentage
Strongly Agree	30	50%
Agree	12	20%

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Undecided	3	5%
Disagree	8	13.33%
Strongly Disagree	7	11.67%
Total	60	100%

Source: Author's Fieldwork, 2021

As presented in the table above that (50%) of the respondents strongly agreed that farmers get infected by lungs problem which has the highest percentage and (20%) respondents agreed; while the minimum of (5%) were undecided and (13.33%) disagreed and (11.67%) were strongly disagreed on the view.

**Table 4.4.3 Excess smoking, alcohol affect farmers'**

Variable	Frequency	Percentage
Strongly Agree	29	48.33%
Agree	16	26.67%
Undecided	0	0%
Disagree	7	11.67%
Strongly Disagree	8	13.33%
Total	60	100%

Source: Author's Fieldwork, 2021

Table 4.4.3 above, reveals that (48.33%) of the respondent strongly agreed and has the highest percentage, and (26.67%) of the respondents agreed; while a minimum rate of (11.67%) respondents were disagreed and about (13.33%) were strongly disagreed that excess smoking and alcohol affect farmers.

**Table 4.4.4 Tuberculosis is easily contagious in the area**

Variable	Frequency	Percentage
Strongly Agree	18	30%
Agree	15	25%
Undecided	7	11.67%
Disagree	6	10%
Strongly Disagree	14	23.33%
Total	60	100%

Source: Author's Fieldwork, 2021

Table 4.4.4 above, indicates that (30%) who are majority strongly agreed that tuberculosis is easily contagious in the area while (25%) respondents agreed, and (11.67%) undecided, (10%) disagreed and (23.33%) strongly disagreed, with that view.

**Table 4.4.5 Tetanus is one of the major ill-health prevalent cases affecting farmers'**

Variable	Frequency	Percentage
Strongly Agree	37	61.67%
Agree	14	23.33%
Undecided	5	8.33%
Disagree	4	6.67%
Strongly Disagree	0	0%
Total	60	100%

Source: Author's Fieldwork, 2021

Table 4.4.5 above, reveals that (61.67%) of the respondent strongly agreed and has the highest percentage, and (23.33%) of the respondents agreed; while a minimum rate of (8.33%) respondents were undecided and (6.67%) disagreed that tetanus is one of the major ill-health prevalent cases in the rural area.

**Table 4.4.6 Do Eye problem / diseases common among the farmers?**

Variable	Frequency	Percentage
Strongly Agree	52	86.67%
Agree	4	6.67%
Undecided	1	1.67%

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Disagree	1	1.67%
Strongly Disagree	2	3.33%
Total	60	100%

Source: Author's Fieldwork, 2021

As presented in the table above that (86.67%) of the respondents strongly agreed that eye problem or diseases is common among the farmers which has the highest percentage and (6.67%) respondents agreed; while the minimum of (1.67%) were undecided, (1.67%) disagreed and (3.33%) were strongly disagreed on the view.

**Table 4.4.7 Malnutrition caused by ill-health prevalent cases**

Variable	Frequency	Percentage
Strongly Agree	18	30%
Agree	30	50%
Undecided	0	0%
Disagree	2	3.33%
Strongly Disagree	10	16.67%
Total	60	100%

Source: Author's Fieldwork, 2021

Table 4.4.7 above indicates that (30%) who are majority strongly agreed that malnutrition is also one of the major ill health prevalent area while (50%) respondents agreed, and (3.33%) disagreed and (16.67%) strongly disagreed with that view.

### 4.5: Farmers' lost of activities during Farming period due to Ill-health

**Table 4.5:1 It takes 3 to 4 days to recover from chronic back pain or diseases by farmers'**

Variable	Frequency	Percentage
Strongly Agree	4	6.67%
Agree	52	86.67%
Undecided	1	1.67%
Disagree	1	1.67%
Strongly Disagree	2	3.33%
Total	60	100%

Source: Author's Fieldwork, 2021

As presented in the table above that (6.67%) of the respondents strongly agreed that it takes 3 to 4 days to recover from chronic back pain or diseases by farmers' which has the highest percentage and (86.67%) respondents agreed; while the minimum of (1.67%) were undecided and (1.67%) disagreed and also, (3.33%) were strongly disagreed on the view.

**Table 4.5:2 Farmers' with lungs ailment could not take positive active farming activities for a year**

Variable	Frequency	Percentage
Strongly Agree	30	50%
Agree	12	20%
Undecided	3	5%
Disagree	8	13.33%
Strongly Disagree	7	11.67%
Total	60	100%

Source: Author's Fieldwork, 2021

Table 4.5.2 above indicates that (50%) who are majority strongly agreed that with farmers' with lungs ailment could not take positive active farming activities for a year while (20%) respondents agreed; while (5%) undecided, (13.33%) disagreed and (11.67%) strongly disagreed with that view.

**Table 4.5:3 Excess smoking and alcohol could slow down the effective hour of farm's work**

Variable	Frequency	Percentage
Strongly Agree	10	16.67%
Agree	38	63.33%
Undecided	8	13.33%
Disagree	4	6.67%

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Strongly Disagree	0	0%
Total	60	100%

Source: Author's Fieldwork, 2021

As presented in the table above that (16.67%) of the respondents strongly agreed that excess smoking and alcohol could slow down the effective hour of farm work which has the highest percentage and (63.33%) respondents agreed; while the minimum of (13.33%) were undecided and (6.67%) disagreed on the view.

**Table 4.5.4 Chronic Malaria inhibits effective performance of farmers' in the farm and takes longer time to be recovered**

Variable	Frequency	Percentage
Strongly Agree	7	11.67%
Agree	49	81.67%
Undecided	0	0%
Disagree	3	5%
Strongly Disagree	1	1.67%
Total	60	100%

Source: Author's Fieldwork, 2021

As presented in the table above that (81.67%) of the respondents agreed that chronic malaria inhibits effective performance of farmers' in the farm and takes longer time to be recovered which has the highest percentage and (11.67%) respondents strongly agreed; while the minimum of (5%) disagreed and (1.67%) strongly disagreed on the view.

**Table 4.5.5 The care of effected ill-patient farmers' takes four to five days**

Variable	Frequency	Percentage
Strongly Agree	10	16.67%
Agree	50	83.33%
Undecided	0	0%
Disagree	0	0%
Strongly Disagree	0	0%
Total	60	100%

Source: Author's Fieldwork, 2021

Finally, table 4.5.5 above indicates that (16.67%) strongly agreed that taking care of infected ill patient takes four to five days while (83.33%) who are majority respondents agreed, to the statement.

## DISCUSSION OF FINDINGS

In line with demographic analysis, inquiring about age, sex, religion, education level, marital status, number of children and areas of the settlement of the respondents. It is deduced that male farmers have larger percentage in farming activities in the area with the total percentage of 47 (78.3%) while 46-75 years of age are mostly the ones that take active part in farming activities and this has a positive effect on agricultural performance in that, their age and experiences have significant contribution to agricultural output. This is in line with the proposition of Onuche, Opaluwa and Edoka (2014). Again, from the micro analysis, the study showed that health status micro data exerts positive influence on agricultural productivity. This is evidence through increase in the quality of farm product, innovation in farm work, ensures quality lifespan of the farmers as a result of significant impact on agricultural output in Ifelodun/Irepodun local government area in Ekiti State. This is in line with the findings of Ethiopia, Croppenstedt and Muller (2000).

Furthermore, the result of the study also revealed that there is a casual relationship between health status and agricultural output, in that there is a positive effect on agricultural productivity. Moreover, farmers who are not infected by lung problems, excess smoking and alcohol, tuberculosis, tetanus, eyes problems, malnutrition which are the major ill-health condition prevalent in the area. Showed that farmers who are healthy has a significant impact on agriculture productivity. This is in agreement with the work of Anowor, Nwonye, Okorie and Ojiogu (2019).

In addition, the study further observed that the policy instruments in the economy have not been able to prioritize the health sector and hence there is no adequate man power to propel agricultural sector. The result revealed that health outcome has a significant impact on agricultural output in Nigeria. This implies that if health care in Nigeria can be taking as policy priority, a tremendous increase in the agricultural sector is unaggreable expected. This is in line with Munogo, Chitungo and Sallone (2013)

Lastly, the period of agricultural activities lost revealed that, it takes three to four days to recover from chronic back pain or diseases. However, with lungs problems, farmers might also not be able to take active part in farming activities for a year, excess smoking

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and alcohol could slow down effective hours of farm work, injury from farm implement could brought about two to three weeks before adequate recovery. Chronic malaria could also take seven to eight days before recovery taking care of effected ill patients takes four to five days. In view of this, if the healths of the farmers are well taking care of, this will further leads to positive effect on agricultural productivity (Osei-Akoto, Clement & Robert, 2013).

### **CONCLUSION AND POLICY RECOMMENDATIONS**

This study x-rayed the impact of health status on agricultural performance in Ekiti State. Thus, focusing on socio-economic characteristic of farmers and the major ill-health conditions in the study choosing area. The study used primary data through the use of questionnaires from the sampled population selected for the study. A total of 71 respondents contributed to the findings of the research. The study sampled sixty (60) respondents which are basically the farmers, to analyze the effect of health challenges on agricultural performance. The study showed that the most prominent diseases affecting farmers' families were tuberculosis, chronic back pains, lungs problems, tetanus, eyes problems, malnutrition's among others. Findings also indicates that numbers of days farming activities lost to ill-health in a household might help elicit a clearer picture of the effect of transient ill-health on agricultural production. The study therefore concludes that developmental effort in the provision and accessibility of affordable health care in rural areas should be put in place so as to reduce the incidence of diseases in Ekiti State which can as well be used to justify all other rural area States in the country as a whole. The results further accentuates that good health is more important and major backbones to farmers in performing their farming activities effectively. Based on the findings of this study, it is therefore recommends adequate provision and sensitization of health and environmental education for rural dwellers from State Ministry of health, Stakeholders and Non-governmental organization to checkmate and also impose heavy restrictions to the importation of hard drugs into the country such as cigarette, cocaine, alcohol, Tramadol among others causing huge amount of health-illness for farming activities which in turn affecting the agricultural performance in the country as evidence in Ekiti State serving as one of the States producing food for the nation.

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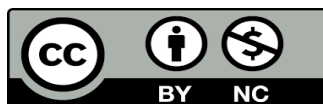
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