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Labour Utilization and Productivity of Primary Health Care Programmes of Beneficiaries in North-East Benue, Nigeria

Ater P.I.[1]
Odoemenem I.U.[2]
Ama I.I.[3]

[1,2,3]Department of Agricultural Economics, University of Agriculture Makurdi, Makurdi, Benue State, Nigeria
(✉ Corresponding Author)

Abstract

This study assessed labour utilization and productivity of primary health care beneficiaries in the North-Eastern zone of Benue state, Nigeria. Data where sampled from 140 beneficiaries and 100 non beneficiaries making pooled sample size of 240 respondents. Both secondary and primary data were used for this study. The result revealed that beneficiary respondents recorded higher productivities for maize (1.81 tons/ha), rice (2.84 tons/ha), guinea corn (2.39tons/ha), yam (1.42tons/ha), cassava (2.29tons/ha), pepper (1.49tons/ha), melon (1.87tons/ha), bambaranut (1.81tons/ha) and beniseed (2.42tons/ha) when compared with the output of non beneficiaries in soyabeans (1.21tons/ha), groundnut (0.85tons/ha), potato (1.13tons/ha), tomato (0.52tons/ha) and cowpea (0.94tons/ha). The study further revealed that on the average, beneficiary respondents worked on their farms 10 times/week, while non beneficiary respondents worked for 7 times/week indicating that the beneficiaries worked for higher number of times and hours on their farms per week when compared to non beneficiaries. Beneficiary respondents also worked for higher number of hours (9 hours) when compared to the non beneficiaries (6 hours). Similarly, the number of times sampled respondents had fallen sick within the past three years showed that on the average beneficiary respondents had fallen sick for 5 times, while non beneficiary respondents fell sick for up to 10 times within the past three years. The number of days a farmer stayed at home/hospital on the basis of health stood at an average of 11 days per household for beneficiary respondents, while non beneficiary respondents had 26 days. The result for the study showed that 84% and 68% of beneficiary and non beneficiary respondents used hired labour. Respondents who did not use hired labour made used of family labour or did the farm work themselves. However, a greater majority of sampled beneficiary (66%) and non beneficiary respondents (70%) had malaria attack suggesting that malaria is a major sickness that seriously affected farmers' health in the study area when compared to other sicknesses. Respondent's major constraints were high input cost, high cost of tractors and hire services which should be subsidized to encourage mechanized agriculture in the area. Farm inputs such as quality seeds and seedlings and fertilizer should also be sold at a cheaper rate to farmers to further boost their farm outputs. It is recommended that primary healthcare services be extended to all communities at reasonable affordable rate in addition to mechanized tractor hire services along side improved inputs supply for better productivity and healthier rural labour force.

Keywords: Primary healthcare services, Output, Labour productivity, Beneficiaries, Non beneficiaries.

Contents

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1. Introduction

The present food shortage in Nigeria is attributable to a number of factors. Declining productivity and depletion in rural labour-force are highly implicated in the food shortage (Oyenuga, 1985). Other contributing factors could be instability of government and policy, rural urban migration of able-bodied youths leading to old aged farming population in rural areas and most important of all is death and illness of farmers. Furthermore, it has been concluded that bad health condition reduced productivity and generally labour output and thus farmers food output (Barlow and Grobar, 1986; Adewale *et al.*, 2004).

The problems of dwindling labour force and productivity notwithstanding, agriculture remains the largest single employer of labour force both directly and indirectly. There is therefore the need to undertake all in depth study of revitalising health programmes meant to ill health and increase the number of man hours available for agricultural production. Farmers have for a long time borne the brunt of feeding the nation, but only healthy people can practice agriculture successfully (Adewale *et al.*, 2004). By examining farmer's health status one might be examining important factors affecting economic growth and agricultural productivity. Hence, the study broadly identifies prevalent diseases in the study area, describes the health status of the households and examines the effects of the health indices on agricultural output of the households. This is with a view to highlighting the policy implications of our findings. Specifically, the research has the following objectives, to:

i. assess the influence of primary healthcare services on productivity of different crops enterprise in the study area;
ii. examine the influence of primary health care on productive man hours of labour on the farm;
iii. ascertain the level of utilization of hired, family and self labour by respondents in the study area;
iv. examine respondents responses as victims of most common disease.

2. Literature Review

The success of agriculture livelihoods depends on the health of the workforce, and agricultural production systems can have impact on workers' health, nutrition, and well-being. The labour market consequences of poor health are likely to be more serious for the poor, who are more likely to suffer from severe health problems. Similarly the effect will be more on those working in jobs for which strength and energy is more required, therefore good health is required (Strauss and Thomas, 1998). This opinion provides an overview of current knowledge of the impact of agriculture on health, based on a review of the relevant studies of agricultural regions throughout the developing world.

The long-term impact if ill health include loss of farming knowledge, reduction of land under cultivation, planting of less labour-intensive crops, reduction of variety of crops planted, and reduction of livestock. The ultimate impact of ill health is decline in household income and possible food insecurity that is, a severe deterioration in household livelihood (Brieger and Guyer, 1990). Good health must be seen as both an investment and consumption asset, like agricultural production, in that it has compounding returns. Health problems, conversely, may trigger a cycle of lowered agricultural productivity and poor health. At the household level, the investment in health can improve resilience and enhance the ability to cope with emergencies, including ill health. But an investment in health in turn requires an adequate livelihood. Access to appropriate inputs (knowledge, land, tools, fertilizer, and seeds) and remunerative markets is necessary to improve the productivity, health, and resilience of farm households (McNeil, 2001).

Literature has shown that a number of factors can limit the extent to which lost labour time due to illness will reduce farm output though depending on the nature of crop and whether the farmer can fully replace lost labour. When family and hired labour are not perfect substitutes, it is likely to reduce output (Antle and Pingali, 1994). In cases of temporary disability of a farmer, the household workforce may provide a cushion for the period of absence of the disable member, limiting the loss of output. When illness of a productive household member results in death, this leads to a permanent loss of one source of labour in the farm household. In Mozambique, it was found that death of a household head increased the likelihood of the use of child labour (Mather *et al.*, 2004). In Zambia, increased involvement of children in farming activities in households with an AIDS death was observed (FASAZ/FAO, 2003). A household death further affects labour availability as healthy individuals divert their time and energy from the farm to mourn and attend to the funeral and related matters. All these have an impact on agricultural production. When a household member gets sick, arrangements are made to take care of the person and this may further aggravate the household labour situation. In Northern Zambia, AIDS-affected households, particularly those headed by women, reduced the total area under cultivation due to labour shortages (Food and Agricultural Organisation (FAO), 2003).

In Tanzania, women spent 60% less time on farming activities taking care of their husbands suffering from AIDS (Rugalema, 1998). In Ethiopia, women were found to spend about 100 hours a week which is equivalent to about 4 days nursing AIDS-affected household members, largely at the expense of their farms (International Labour Organization (ILO), 2000). This care giving burden can also affect technology adoption, largely because of lack of labour for farm activities. In the Tigray region of Ethiopia, the opportunity costs of caring for sick family members significantly affect adoption of productivity-enhancing technologies (Ersado *et al.*, 2003). Beyond the direct impacts due to loss of labour, illness undermines long-term agricultural productivity in a number of ways: when illness leads to long-term incapacitation, households may respond through withdrawal of savings, the sale of important assets (such as jewelry, textiles, breeding animals, farm equipment, and land), withdrawing children from school, or reducing the nutritional value of their food consumption. All of these responses can have adverse effects on the long-term labour productivity of household members.

3. Methodology

3.1. The Study Area

Benue State is one of the 36 states in Nigeria located in the North-Central part of Nigeria. Its geographic coordinates are longitude 7^0 47' and 10^0 0' East and Latitude 6^0 25' and 8^0 8' North. Benue State has a population of 4,780,389 (National Population Commission (NPC), 2006) and occupy a landmass of 35,518km^2, comprising 23 local government areas which are divided into agricultural zones A, B and C. The climate is tropical manifesting of two distinct seasons. The rainy season is from April to October and the dry season is from November to March. Annual average rainfall varies from 1750mm in the Southern part to 1250mm in the North. Benue state is the Food Basket of the Nigeria because of the abundance of its agricultural resources, with 80% of the population deriving their livelihood from agriculture. Crops produced are cassava, yam, rice, beniseed and maize. Others include sweet potato, millet, soya beans, sugar cane, oil palm, mango, citrus and bananas.

3.2. Population, Sampling Technique and Sample Size

The population for the study was 12,767 beneficiaries and 9,315 non beneficiaries making a total defined population of 22,080 respondents from 5 different villages in Vandeikya and Kwande local government areas of Benue State. The sample sizes are 140 sampled beneficiaries and 100 sampled non beneficiaries making a total sample size of 240 respondents. Sampling methods used include purposive, stratified and simple random techniques. Beneficiaries and non beneficiaries of primary healthcare programme in Vandeikya and Kwande L.G.As were selected by means of simple random sampling using Benue State primary healthcare programme list of communities that have benefited and those that have not benefited from primary healthcare programmes, and the National Population Commission list of households as sampling frame. In the first stage, two (2) local government areas were selected because they have excelled so well in primary health care programmes when compared to other local government areas in the zone (Benue State Ministry of Health, 2013).

The second stage involved a random selection of five council wards from each of the two local government areas. Furthermore, five (5) different villages were randomly selected from all the five council wards in the third stage. The fourth and the final stage involved sampling of 1.1% of beneficiary and non beneficiary household population in all selected villages using simple random sampling technique to give a sample size of 140 and 100 beneficiary and non beneficiary household respectively.

3.3. Method of Data Collection

Both secondary and primary data were used for this study. Secondary data used include research reports, official statistics from Benue State Ministry of Health, publications in the internet, library materials such as text books and journals. Primary data were gathered via questionnaire administered to sampled beneficiary respondents of the two local government areas with the aid of trained enumerators.

3.4. Data Analysis/Model Specification

Simple descriptive statistics, mean, median, mode, percentage, frequency and standard deviation were used to analyse the data. The null hypothesis was tested using student t-test.

The T-Test Analysis

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{\sum S_1^2}{n_1} + \frac{\sum S_2^2}{n_2}}} \quad (1)$$

where:
t= calculated standard value
X_1 and X_2 are parameters of interest
S_1 and S_2 are variance for the parameters
$\sum$=summation sign
n_1 and n_2: are sample sizes of relevant variables

4. Results and Discussion

4.1. Influence of Primary Healthcare Services on Productivity of Different Crop Enterprises by Respondents in the Study Area

Analysis in Table 1 compared the productivity of different crops obtained by beneficiaries and non beneficiaries. The result showed that, on the average, the beneficiary respondents had about 1.81ton, 2.48tons, 2.39tons, 1.42ton, 2.29tons, 1.21ton, 0.85ton,1.13ton, 1.49ton, 0.52ton, 1.87ton, 1.81ton, 0.94ton and 1.42ton of maize, rice, guinea corn, yam, cassava, soyabeans, groundnut, potato, pepper, tomato, melon, bambaranut, cowpea and beniseed were 1.62ton, 1.04ton, 1.07ton, 1.19ton, 1.18ton, 1.88ton, 1.37ton, 1.22ton, 0.70ton, 1.11ton, 1.20ton, 0.56ton, 1.12ton and 1.25ton respectively. However, the overall output of crops indicates that sampled beneficiary respondents recorded higher output of maize, rice, guinea corn, yam, cassava, pepper, melon, bambaranut and beniseed, implying that beneficiary respondents are healthier and more fit in carrying out farming activities thereby making them to generate higher output per unit.

In contrast, the output of rice, guinea corn, cassava, soyabeans, groundnut, pepper, tomato, melon and bambaranut obtained by beneficiaries are significantly different ($-3.567 \leq t \leq 4.328$; $p<0.1$) from that of non beneficiaries. The result further suggests that primary healthcare services and programmes have made significant impact on labour productivity in the production of rice, guinea corn, cassava, soyabeans, groundnut, pepper, tomato,

melon and bambaranut. This agrees with the findings of Barlow and Grobar (1986) that good health status and conditions of farmers increases their productivity and labour.

In all cases of higher productivity of beneficiaries, in relation to non beneficiaries, the difference was statistically significant at 10% level of t-statistics. However, non beneficiary's productivity for soya bean, groundnut, potato and cowpea though higher was not statistically significant even at 10% level of t-test comparison.

Table-1. Summary Statistics of the Productivity of Different Crop Enterprises Cultivated by Respondents in East Zone of Benue State

Variables (tons)	Category	Mean	Medium	Mode	Std dev	Min	Max
Maize	Beneficiary	1.81	0.79	0.78	2.16	0.03	8.00
	Non Ben.	1.62	0.84	0.06	1.82	0.03	6.00
Rice	Beneficiary	2.48	0.90	0.60	2.43	0.45	9.00
	Non Ben.	1.04	0.36	0.15	1.27	0.09	5.00
Guinea Corn	Beneficiary	2.39	1.75	3.00	1.80	0.30	6.00
	Non Ben.	1.07	0.18	0.06	1.43	0.03	5.60
Yam	Beneficiary	1.42	0.85	3.00	1.15	0.12	4.50
	Non Ben.	1.19	0.24	0.06	2.29	0.02	12.0
Cassava	Beneficiary	2.29	1.75	3.00	1.85	0.30	8.00
	Non Ben.	1.18	0.30	0.30	2.11	0.09	9.00
Soya Bean	Beneficiary	1.21	0.43	0.09	1.63	0.03	6.00
	Non Ben.	1.88	1.10	0.78	1.86	0.30	8.00
Groundnut	Beneficiary	0.85	0.42	0.30	1.30	0.06	8.00
	Non Ben.	1.37	0.66	0.60	1.87	0.24	10.0
Potato	Beneficiary	1.13	0.64	0.67	1.49	0.02	8.00
	Non Ben.	1.22	0.29	0.15	2.37	0.03	10.0
Pepper	Beneficiary	1.49	1.22	3.00	1.15	0.03	4.69
	Non Ben.	0.70	0.32	0.03	0.96	0.03	4.00
Tomato	Beneficiary	0.52	0.25	0.15	0.69	0.01	4.00
	Non Ben.	1.11	0.67	0.45	1.13	0.03	4.50
Melon	Beneficiary	1.87	1.10	0.78	1.86	0.30	8.00
	Non Ben.	1.20	0.42	0.09	1.63	0.03	6.00
Bambaranut	Beneficiary	1.81	0.79	0.78	2.16	0.03	8.00
	Non Ben.	0.56	0.34	0.34	1.38	0.10	10.0
Cowpea	Beneficiary	0.94	0.58	1.00	0.94	0.03	4.50
	Non Ben.	1.12	0.85	0.78	0.86	0.15	4.00
Beniseed	Beneficiary	1.42	1.00	1.00	1.05	0.15	4.00
	Non Ben.	1.25	1.00	1.00	0.97	0.09	4.50

Source: Field Survey, 2014

Table-2. Test of Difference between Enterprise Productivity of Beneficiaries and Non Beneficiaries in Benue East

Variables (tons)	t	df	sig (2-tailed
Maize	0.494	238	.662^{NS}
Rice	3.828	238	.000*
Guinea corn	4.328	238	.000*
Yam	0.703	238	.484^{NS}
Cassava	0.385	238	.003*
Soya beans	-2.080	238	.040*
Groundnut	-1.813	238	.072*
Potato	-0.254	238	.800^{NS}
Pepper	3.964	238	.000*
Tomato	-3.567	238	.001*
Melon	2.070	238	.040*
Bambaranut	3.606	238	.000*
Cowpea	-1.100	238	.274^{NS}
Beniseed	0.907	238	.366^{NS}

Source: Data Analysis, 2014

*= t-ratio significant at 10%

4.2. Primary Health Care Influence on Productive Man Hours of Labour on the Farm

Table 3 summarized the number of times a respondent goes to farm in a week. The result indicates that, on the average, sampled beneficiaries worked on the their farm 10 times/week, while sampled non beneficiaries worked for 7 times/week which indicates that sampled beneficiaries worked for higher number of times on their farms per week when compared to non beneficiaries. This agrees with the findings of Ogunbekun *et al.* (1999) that healthy individuals can work as many time as possible daily when compared to unhealthy persons. The distribution on the number of times of work on the farm specifically indicates that 64% and 18% respectively of sampled beneficiary and non beneficiary respondents worked on the farm 9-12 times a week. Furthermore, sampled beneficiary and non beneficiary respondents who worked for between 5-8 times in a week were 36% and 72% respectively. The result implies that greater majority of the sampled beneficiary respondents worked on their farms 9-12 times in a week. The results further implied that most of the sampled beneficiaries and non beneficiaries that worked between 9-12 times in a week are full time farmers, while farmers that visit their farms 1-4 times and 5-8 times a week have other secondary occupations they carryout apart from farming. Overall, the result implies that sampled beneficiaries visited the farm as many times as possible in a week (9-12 times/week) probably because they are healthier and more fit when compared to non beneficiaries.

The result on the number of man hours utilized on the farm by sampled respondents per working day shows that the average response for sampled beneficiaries is 9 hours per working day, while that for sampled non beneficiaries is 6 hours per working day, indicating that beneficiary respondents worked for more hours when compared to non beneficiary respondents. Furthermore, 39% and 78% respectively of sampled beneficiary respondents worked for 5-8 hours per working day. Similarly, 61% and 2% respectively of sampled beneficiary and non beneficiary respondents worked for between 9-12 hours in a day. The result indicates that greater majority of sampled beneficiary and non beneficiary respondents worked on their farms between 5-8 hours in a day, the result further implies that greater percentage (61%) of sampled beneficiary respondent worked for longer number of hours when compared to non beneficiaries probably because they are healthier and have benefited so well from primary healthcare initiatives in the area. This agrees with the findings of Ravallion *et al.* (2007) that the success of agricultural livelihoods depends on the health of the workforce.

The result for the number of times sampled respondent felt sick within the past three years showed that on the average, sampled beneficiary respondents had fallen sick for 5 times, while sampled non beneficiaries felt sick for more than 10 times within the past three years, suggesting that sampled beneficiary respondents had fallen sick for a lesser number of times compared to non beneficiary respondents. Moreover, sampled beneficiary and non beneficiary respondents who felt sick between 1-5 times within the last three years were 59% and 18% respectively, while 39% and 40% of sampled beneficiaries and non beneficiary respondents felt sick for between 6-10 times within the last 3 years. This implies that greater majority (59%) of sampled beneficiary respondents in the study area felt sick for a shorter period of time when compared to the non beneficiaries. Obviously, sampled beneficiary respondents felt sick for shorter period of time. It would imply good and quality healthcare services they might have received from primary healthcare centres thereby shortening the duration of illness.

The result on the number of days sampled respondents stayed at home/hospital on the basis of sickness showed an average of 11 days per sickness period for sampled beneficiary respondents, while that for sampled non beneficiary respondents was 26 days. The distribution of number of days lost to sickness shows that sampled beneficiary respondents who stayed in the hospital between 1-15 days are 90%, while 50% of sampled non beneficiaries stayed in the hospital for the same number of days. However, sampled beneficiary and non beneficiary respondents who stay in the hospital between 16-30 days are 6% and 14% respectively, while sampled beneficiaries and non beneficiaries who stayed in the hospital between 31-45 days during the course of illness are 1% and 20% respectively. The result implies that majority (90%) of sampled beneficiaries stayed for lesser period time in the hospital, when compared to non beneficiaries. The result further implies that sampled beneficiaries never stayed more than a period of one month in the hospital, while non beneficiaries stayed for more than one month in the hospital during the course of their illness.

Overall, the confirmatory test of significance in Table 4 indicates that the number of times sampled beneficiaries go to farm in a week and the number of hours they worked on the farm were significantly ($7.773 \leq t \leq 11.637$; $p<0.05$) higher than the number of times sampled non beneficiaries go to farm in a week (7 times per week) and the number of hours they worked on the farm (6 hours per working day), implying that non beneficiaries of primary healthcare programmes lost significant number of labour hours as a result of sickness

However, the number of times sampled beneficiary respondents felt sick and the number of days they stayed at home/hospital within each sickness period were significantly ($-7.223 \leq t \leq -3.237$; $p<0.05$) lower than the number of times non beneficiary respondent felt sick (10 times within the past three years) and the number of days they stayed at home/hospital within each sickness period (26 days). Similarly, this also implies that non beneficiaries of primary health care programmes lost significant number of labour hours as a result of illness. This agrees with the findings of Brieger and Guyer (1990) that bad health condition reduces productivity and generally labour output during sickness. Overall the result implies that primary healthcare services have tremendous impact on beneficiary communities. Thus the number of times beneficiary respondents felt sick and the number of days they stayed in the hospital as a result of sickness were drastically reduced compared to those observed among non beneficiaries.

Table-3. Summary Statistics of Respondents Responses on, Weekly Farm Visits, Productive Labour Hours, Sickness Period and Illness Frequency for Beneficiaries and Non Beneficiaries

		Beneficiary		**Non Beneficiary**	
Variables	**Response**	**Frequency**	**Percent %**	**Frequency**	**Percent %**
Weekly Farm Visits:	1-4	-	-	10	10
	5-8	50	35.7	72	72
	9-12	90	64.3	18	18
TOTAL		140	100	100	100
Mean		9.51		7.10	
Median		9.00		8.00	
Mode		8.00		8.00	
Std Dev		1.67		1.69	
Min		6.00		2.00	
Max		12.00		9.00	
Productive Man Labour Hours Per Day:	1-4	-	-	20	20
	5-8	54	38.6	78	78
	9-12	86	61.4	2	2
TOTAL		140	100	100	100
Mean		9.26		5.92	
					Continue

Median		9.00		6.00	
Mode		8.00		7.00	
Std Dev		1.48		1.64	
Min		6.00		2.00	
Max		12.00		9.00	
Illness Frequency:	1-5	82	58.6	18	18
	6-10	54	38.6	40	40
	11-15	4	2.9	32	32
	16-20	-	-	10	10
TOTAL		140	100	100	100
Mean		4.84		9.78	
Median		4.00		9.00	
Mode		2.00		8.00	
Std Dev		2.94		4.54	
Min		1.00		1.00	
Max		12.00		18.00	
Illness Duration:	1-15	126	90	50	
	16-30	8	5.7	14	14
	31-45	2	1.4	20	20
	46-60	-	-	8	8
	>60	4	2.9	8	8
TOTAL		140	100	100	100
Mean		11.00		26.00	
Median		6.00		16.00	
Mode		7.00		3.00	
Std Dev		23.96		27.09	
Min		1.00		2.00	
Max		180		150	

Source: Field Survey, 2014

Table-4. Independent Sample T-Test for Weekly Farm Visits Frequency, Illness Frequency, Illness Duration and Productive Labour Hours Per Day for Beneficiaries and Non Beneficiaries in Benue East

Variables	t	df	Sig (2-tailed)
Weekly Farm Visits	7.773	238	.000**
Productive Man-Labor Hour Per Day	11.637	238	.000**
Illness frequency	-7.223	238	.00**
Illness duration	-3.237	238	.002**

Source: Data Analysis, 2014
** = t-ratio significant at 5%

4.3. Utilization of Hired, Family and Self Labour by Respondents

Table 5 summarized the opinion of respondents on the type of labour used in their farms. The result showed that 84% and 68% of beneficiary and non beneficiary used hired labor. Respondents who did not use hired labour made use of family labour or did the farm work themselves. Furthermore, analysis of the use of family labour shows that 59% of beneficiary respondents made use of family labour compared with 38% of non beneficiary respondents, implying that beneficiary respondents relies on family labour than the non beneficiaries.

Analysis of the use of self labour revealed that 60% of beneficiary respondents executed their farm work themselves compared with 52% of non beneficiaries. The result implies that greater majority of sampled respondents do the farm work themselves. However larger majority of beneficiaries participate actively in farming activities. This is because they are healthier farmers.

Table-5. Summary Statistics of Respondents Opinion on the Type of Labour Used on the Farm

		Beneficiary		Non Beneficiary	
Variables	**Response**	**Frequency**	**Percent%**	**Frequency**	**Percent%**
Hired Labour	No	22	15.7	32	32
	Yes	118	84.3	68	68
	TOTAL	140	100	100	100
Family Labour	No	58	41.4	62	62
	Yes	82	58.6	38	38
	TOTAL	140	100	100	100
Self Labour	No	56	40	48	48
	Yes	84	60	52	52
	TOTAL	140	100	100	100

Source: Field Survey, 2014

4.4. Respondents' Response as Victims of Most Common Disease in Benue East

Analysis in Table 6 summarizes respondent's responses on the kind of sickness that have affected their productivity. The result showed that (14%, 4% and 66%) and (24%, 6% and 70%) of beneficiary and non beneficiary respondents respectively suffered from typhoid fever, hepatitis, and malaria. The result implies that lesser percentage of beneficiaries and non beneficiaries have suffered typhoid fever and hepatitis implying that these diseases are not

common among the respondents relative to Malaria. A greater number of the sampled respondents have suffered from malaria suggesting that malaria is a major sickness that have seriously affected farmers health in the study area. This agrees with the study conducted by Roll (2003) programme that malaria may have slowed down economic growth in African countries by as much as 1.3 percent per year.

Contrary to the almost widespread infection by typhoid, hepatitis and malaria, the result shows that guinea worm is not a major disease in the study area as 100% of the sampled respondents have never been infected with the disease.

Table-6. Respondents Victims of Most Common Diseases in Eastern Zone Of Benue Nigeria

		Beneficiary		Non Beneficiary	
Variables	**Response**	**Frequency**	**Percent%**	**Frequency**	**Percent%**
Typhoid	No	120	86	76	76
	Yes	20	14	24	24
	TOTAL	140	100	100	100
Guinea Worm	No	140	100	100	100
	Yes	-	-	-	-
	TOTAL	140	100	100	100
Hepatitis	No	134	96	94	94
	Yes	6	4	6	6
	TOTAL	140	100	100	100
Malaria	No	48	34	30	30
	Yes	92	66	70	70
	TOTAL	140	100	100	100

Source: Field Survey, 2014

5. Conclusion and Recommendations

The study concludes that beneficiary respondents recorded higher productivity in cereals: (maize 1.81tons/ha, rice 2.84tons/ha, guinea corn and 2.39tons/ha) as well as in tubers: (yam 1.42tons/ha, cassava 2.29tons/ha). Vegetables that recorded higher productivity were pepper (1.49tons/ha) and melon (1.87tons/ha). Bambaranut 1.81tons/ha and beniseed 1.42tons/ha were the two legumes that recorded higher productivity among beneficiaries. Productivity of non beneficiaries for soya beans (1.21tons/ha), groundnut (0.85tons/ha), potato (1.13tons/ha), tomato (0.52tons/ha) and cowpea (0.94tons/ha) were slightly higher than that of beneficiaries but not statistically significant at 10% level.

The study further revealed that on the average, beneficiary respondents worked on their farms 10 times/week, while no beneficiary respondents worked for 7 times/week. Beneficiaries recorded higher number of farm visits per week and also worked for higher number of hours (9hours) when compared to non beneficiaries (6hours). Similarly, comparison of illness frequency shows that beneficiary respondents felt sick for 5 times within the last 3 years, while non beneficiary respondents felt sick for 10 times within the same period of years. The number of days respondents stayed at home/hospital on the basis of sickness showed an average of 11 days per sickness period for beneficiary respondents, while that for non beneficiary respondents was 26 days per sickness period. Absence of primary healthcare services more than doubled wasted man-hour labour in non beneficiary households.

Obviously beneficiaries (84%) and non-beneficiaries (68%) utilised hired labour while 59% and 38% of both respondents categories respectively utilised family labour. However, the proportion of beneficiaries (60%) who actively utilised self labour was higher than non beneficiaries (52%). Healthcare services benefits could have assisted greater proportion of beneficiary household to be actively involved in energy demanding farming activities. Both respondents category used rudimentary implements for farming with small parcels of cropped area indicating that use of tractors and improved inputs could bring about increased productivity.

The study therefore recommends scaling up healthcare services to cover all communities and villages alongside improved inputs provision for enhanced productivity among rural communities for economic growth and development.

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