

# **THE EFFECTS OF HIV/AIDS ON THE AGRICULTURAL SECTOR IN ENUGU STATE, NIGERIA**

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## ***Abstract***

*The study assessed the effects of HIV/AIDS on the core development sector of agriculture in Enugu State, Nigeria, using field survey, desk study, and data analysis. The findings showed that HIV/AIDS had contributed to decreased farm output, scarcity of professionals, decreased work force, deterioration of health of citizens, reduced household income, increased poverty, low productivity and malnutrition among the people. Disposal of family assets and deterioration of agricultural infrastructure are also other adverse effects in the state. Assessment of the degree of impact showed that reduced household*

*income ranked first followed by increased poverty and decreased workforce. It is recommended, among others, that the government, development partners and other agencies should promote access of target groups to treatment, prevention, care and support services with the strengthening of existing institutions/structures in the state. Capacity building/training of health professionals, peer health educators and counsellors is also considered crucial. In order to reduce poverty and vulnerability of citizens to HIV/AIDS, micro-credit support through cooperatives and support groups of PLWHAs as well as skills training in income-generating activities are considered critical for the empowerment of the people. A holistic approach integrating all HIV/AIDS programmes is advocated for maximum impact in mitigating the scourge with the entrenchment of a functional monitoring and evaluation system.*

## **Introduction**

Enugu State has the highest prevalence rate in the Southeast geopolitical zone of Nigeria. Documented HIV prevalence rates were 1.3% in 1991, 10.2% in 1995/96, 5.2% in 2001, 4.9% in 2003, and 6.5% in 2005<sup>1,2</sup>.

HIV/AIDS sentinel survey conducted by the FMOH/Policy Project in 2003 estimated that 76,860 individuals, out of a total state

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population of about 3,012,091, were infected with HIV. Further breakdown showed that 4,629 and 6,719 persons infected with the virus are youths aged 15-24 years and pregnant women respectively. The increasing rate of infection has been attributed to early sex debut, child marriage, wife inheritance and multiple sex partners. Others include lack of women empowerment to negotiate sexual matters, polygamy, wife sharing, pervading poverty of access to sustainable income generating activities among women, widowhood practice, female genital cutting and lack of legislation on women rights<sup>3</sup>.

With a total population of 3,267,837 (NPC, 2006), the number of people living with HIV (PLWHIV) in Enugu State is about needing prevention and stands at 3,175,037 (97.2%), if we are to achieve the MDGs & UNGASS targets of 80% of our people accessing prevention to care continuum. Out of 92,800 people living with HIV in the state, about 18, 560 of them require Anti-Retroviral Therapy (ART). However, about 2,200,000 people will need to be counseled and tested in order to reach this high population. Currently, less than 1 million people know their HIV status in the state, in spite of high knowledge of HIV causative factors. The number of women that will require prevention of mother-to-child transmission (PMTCT) services is about 150,400. Out of this, the number of expected HIV positive (+ve) women that will require ART is about 8,729 (5.8%). About 3,055 of their children will require Paediatric

Anti-Retroviral Therapy (PART). However, the number of people accessing ART currently is less than 30%<sup>4</sup>.

In Enugu State, there are one Teaching Hospital, 7 District Hospitals, 56 Cottage Hospitals, 189 Primary Health Centres (PHCs), 131 Health Posts, and 39 Health Clinics. PMTCT and HIV/AIDS Counseling and Testing Services are available in only 28 and 45 facilities respectively, mostly in urban areas<sup>4</sup>.

HIV/AIDS is a developmental problem that has important social and economic consequences. HIV/AIDS has impacted on the different sectors of the Nigerian economy, namely, agriculture, education, wealth creation, commerce and industry, and exacerbates poverty. The HEAP policy document observed that the HIV/AIDS pandemic has impacted on the high man-power intensive sectors of the economy, which includes the agricultural, educational and health sectors, as well as the rural economy<sup>5</sup>.

Despite the perceived impact of the HIV/AIDS epidemic on the key sectors of the Nigerian economy, there is paucity of data/information on the current true extent and impact of HIV/AIDS on our communities, as well as the core development sectors of education, health and agriculture. This research focused on the agricultural sector of the Enugu State economy as a case study.

The specific objective of the study is to assess the effects of HIV/AIDS epidemic on agriculture and food security in Enugu State and proffer recommendations for solution based on the results of the study.

## **Research Methodology**

### **The Study Area**

The baseline study was carried out in Enugu State, Nigeria. Enugu State occupies a surface area of about 8000 sq km within the West African tropical rainforest region between latitudes 5<sup>0</sup>55' and 7<sup>0</sup>10' North and 6<sup>0</sup>50' and 7<sup>0</sup>55' East. It is bounded in the East by Ebonyi State, in the West by Anambra State, in the North by Kogi and Benue States and in the South by Abia State.

The state has 17 federally recognized local government areas (LGAs). An additional 39 LGAs were created in 2003, but have not yet been given constitutional recognition and so remain development centres. According to 2006 national census figures, the population was 3,267,837 in 2006. About 59% of the population live in rural areas<sup>6</sup>.

### **Sampling Strategy**

Multi-stage sampling technique was used in the selection of respondents for primary data collection. The first stage involved the random

selection of six (6) LGAs from the three (3) senatorial zones of Enugu North, Enugu East and Enugu West. The second stage entailed the random selection of three (3) communities per LGA based on gender, age and willingness, among other criteria. Thus, a total of eighteen (18) communities were sampled for the study. The third stage sampling involved random and purposive sampling of ten (10) households per community.

In addition, 18 key stakeholders were purposively sampled as key informants including community leaders/traditional rulers, town union executives, church leaders, representatives of community-based organizations (CBOs), age grades, women and youth organizations, etc. for in-depth interviews (IDIs). In total, 180 respondents were used for the study. The sampling frame consisting of the LGAs and communities for the study is shown below:

### **Data Collection and Analysis**

Data collection involved participatory methodologies, including observations, focus groups discussions (FGDs), personal interviews (PIs), and in-depth interviews (IDIs) for primary data collection, and desk review/desktop analysis for secondary data collection.

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**Table 1: Sampling Frame for the Survey**

<b>S/N</b>	<b>Senatorial Zone</b>	<b>LGAs</b>	<b>Communities</b>
1	Enugu North	1. Nsukka 2. Uzo-Uwani	Edem-Ani, Obimo Ehalumona Nimbo, Nkporogu, Abbi
2	Enugu West	1. Ezeagu 2. Awgu	Obinofia Ndiuno, Akama Oghe Aguobu – owa Amabo, Nenwenta, Mgbowo
3	Enugu East	1. Nkanu East 2. Enugu North	Abakpa 1, Emene, Ugwogo Nike Iva Valley, Ogui Nike New Haven

The questionnaire and the FGD guide were pretested in one of the non-target communities in Enugu State to validate the instruments. In all, 180 questionnaires (10 questionnaires/community), 18 IDIs (1 per community) and 18 FGDs (1 per community) were employed in data collection for the study.

Descriptive statistics, such as percentages, cross tabulations, frequencies, averages, bar charts, were used in the analysis of data. The analyses were facilitated by the use of the Excel package.

## **Results and Discussion**

### **Socio-economic Background of Respondents**

The socio-economic characteristics of the respondents focused on their sex, age, childhood place of residence, place of residence, education, religion, marital status and occupation. Such background information, as their total income per annum and other sources of support, reproductive and sexual behaviours, were also discussed. These characteristics were described against the background of the peoples' Local Government Areas (LGAs) and communities.

**Sex:** Survey results showed that across all the six sampled LGAs for the study, namely, Nsukka, Uzo-Uwani, Ezeagu, Awgu, Enugu East and Enugu North, 56.5% were males and 43.5% females. Within LGAs, Nsukka had 52.8% males and 47% females; Uzo-Uwani 63.9% males and 36.1% females; Ezeagu 61.3% males and 38.7% females. In Enugu East 41.7% were males and 58.3% females while in Enugu North 42.9%

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were males and 57.1% females. These figures portend that there was a fair distribution of male and female gender in the sampled population.

**Education:** Overall, 18.5% of the respondents had no formal education, 3.7% had adult literacy, 36.6% attained primary education, and 32.4% completed secondary education. Thus, majority of them had only primary education. However, 6.5% of the respondents attained tertiary/post secondary education, and 1.4% postgraduate studies.

**Religion:** In total, majority (89.3%) of the respondents were Christians, while only 7.4% and 2.8% of them were traditional religionists and Muslims respectively across the selected six LGAs in the state.

**Marital Status:** Survey results showed that 91.6% of the males were married, 5.6% widowed, 0.5% separated, 1.4% divorced and 0.9% unmarried. Their mean age at first marriage was about 30 years, while the mean age of their spouse at first marriage was recorded as 20 years. In terms of number of marriages, 89.9% of the respondents married once, 7.2% twice, 2.4% thrice, and 0.5% more than thrice. On the type of current marriage, 88.3% of the respondents practiced monogamy, while 11.7% of them engaged in polygamous marriages. The dominance of monogamy among the respondents could be associated with the

influence of Christian faith and education. With respect to the total number of wives per household, the study indicated that 41.5% and 41.4% of the respondents had one wife and two wives respectively, 7.3% three wives and 9.8% more than three wives.

**Primary Occupation:** Majority of the respondents were found to be farmers while others engaged in other primary occupations, such as public service, trading and artisan work. The study revealed that 14% of them were public servants, 37.4% farmers, 25.7% traders, 8.9% artisans, and 7% craftsmen. Those of them that engaged in artisan work were mainly vulcanizers, cobblers, carpenters and masons. The craftsmen were mainly into hair dressing, fashion designing and tailoring. Although their spouses were distributed along the lines of these various primary occupations, some of them were contractors.

**Income:** During the period under review, 19% of the respondents had less than N70,000.00 annual income, while 18.1% of them earned between N70,001 and N80,000 per annum. Again, a total income of N80,001 to N90,000 belonged to 16.2% of the respondents, N90,001 to N100,000 belonged to 16.7%, and above N100,000 belonged to 30.1% of those interviewed. Thus, those that earned more than N100,000 per annum ranked highest across the sampled six LGAs. However, there are

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variations in total income per annum of the respondents within selected LGAs.

***Other Sources of Support:*** These were identified to include help and donations from relations (46.4%), help and donations from support groups (2%), and support from development agencies and NGOs (30.1%), CBOs, churches and philanthropic organisations/individuals (21.4%). Figures in parentheses are percentage respondents with respect to their sources of additional support.

***Reproduction Behaviour:*** Survey results showed that the average number of children per household of those interviewed is five (5) comprising of two (2) males and three (3) females. With respect to mortality, the average number of children no more alive is two (2), male or female. About 52% of the respondents had never lost any of their children within their households, while about 48% of them had lost at least one of their children at a certain period of their family life. It was not possible for these respondents to identify the possible causes of death for those that lost their children. However, they perceived that such diseases, as malaria/fever, diarrhea/abdominal pains, measles, convulsion and HIV/AIDS, could have been implicated. On their satisfaction with the number of children they had, about 64% of the respondents opined

that they were satisfied, while only 36% of them claimed they were not satisfied. The mean number of more children desired by these households was recorded as three (3).

**Sexual Behaviour:** With respect to awareness about HIV/AIDS, all (100%) of the households interviewed stated that they were aware of the disease condition. Their sources of information about HIV/AIDS were identified as radio/newspaper/television (60%), clinics/hospitals (15%), spouse (12%), friends (5%) and NGOs (8%). Figures in parentheses are percentage respondents.

On their knowledge about how HIV/AIDS spreads, 96.2% of them claimed that they understand how it spreads, while only 3.8% of the respondents were ignorant across the six (6) selected LGAs for the study. As a preventive strategy, 62% of them had gone for test to know their HIV sero-status, while 38% of them did not, as at the period of this investigation. It was noted that the knowledge of how HIV/AIDS spreads and one's HIV sero-status were higher in urban LGAs, such as Enugu North, Enugu East and Nsukka, and lower in rural areas, like Uzo-Uwani, Ezeagu and Awgu.

On their HIV sero-status, 11.9% of them confirmed that they were HIV positive and 71.3% HIV negative, while 16.9% of these respondents did not know their sero-status. For the HIV positive

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persons, 44% of them fell sick every month, 16% once in three (3) months, 8% once in six (6) months, and 32% once a year, with some variations across the six (6) sampled LGAs. Overall, 50% of the respondents were on anti-retroviral drugs, while 50% of them stated that they were not on anti-retroviral drugs. Ezeagu LGA recorded 100% compliant to the use of anti-retroviral drugs, followed by Enugu East LGA (75%) and Nsukka LGA (66.7%). However, Awgu LGA (71.4%), Uzo-Uwani (60%) and Nsukka (33.3%) registered the highest percentage of non-users of anti-retroviral drugs.

On the amount spent on anti-retroviral drugs (ARV) by users on monthly basis, 18.2% of the respondents spent N1,500, 63.6% of them spent N2,000, while 9.1% of these HIV positive persons spent N2,500 and N3,000 respectively, as at the time of this survey. Regrettably, 92.9% of the respondents did not always have access to the ARV drugs whenever they wanted it while 7.1% of them claimed otherwise. In other words, majority of the HIV positive persons hardly get these drugs as and when due. It was not always available to those that needed them, especially among the rural dwellers. The reasons for non-availability were unaffordability (61.5%), bureaucracy/protocol (30.8%), and ignorance of where to get the ARV drugs (7.7%). Figures in parentheses represent percentage respondents. In other words, they consider the price tag on the anti-retroviral drugs as costly and out-of-reach of the people,

especially the poor in the rural communities of Enugu State. The administrative bottle-necks encountered in purchasing the drug from designated ARV Centres or hospitals actually discouraged the HIV positive persons from visiting these clinics/hospitals/centres in search of ARV drugs. Ignorance on where to purchase the drug compounded the problem and actually constituted a critical factor that adversely contributed to their worsening health condition.

### **Impact of HIV/AIDS on the Agricultural Sector**

Generally, the citizens had the perception that the HIV/AIDS scourge adversely affected the economy, human resources and livelihood systems of the state. Survey results showed that 90.7% of the respondents admit that HIV/AIDS had adverse effects on Enugu State, while only 9.3% of them did not agree with this view point. The impact of the epidemic on agriculture are hereby discussed

The general perception of the people based on the survey was that HIV/AIDS significantly impacted on the agricultural sector in Enugu State. About 78% of the respondents opined that HIV/AIDS adversely affected the agricultural sector, while 16.4% of them disagreed with this position. However, only 5.6% of the respondents claimed they do not know anything about the impact of HIV/AIDS on agriculture. The study

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showed that HIV/AIDS had significant impact on agriculture with respect to farm output, number of professionals, workforce, health and poverty. It also adversely affected household income, productivity, nutrition, and agricultural infrastructure.

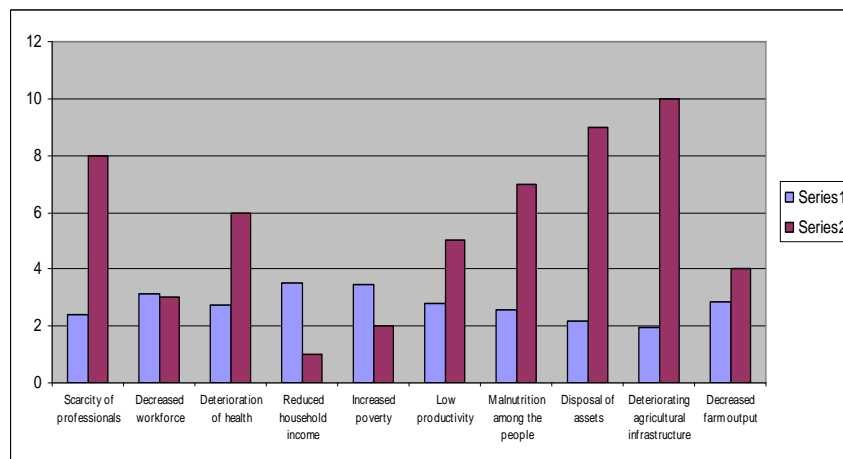
Survey results indicated that HIV/AIDS decreased farm output and lowered productivity of affected farmers with increased poverty and malnutrition among the people. HIV/AIDS has also constrained infected households to dispose family assets, such as land, grinding machines and processing equipment in order to care for their sick family members, as well as deterioration of agricultural infrastructure among the people. It has caused deterioration in the health of the citizens, scarcity of professionals and decreased agricultural workforce as a result of opportunistic infections/sickness or death from AIDS. The degree of impact of HIV/AIDS on the agricultural sector is ranked in Fig. 1 below. Reduced household income was ranked first (1<sup>st</sup>), increased poverty second (2<sup>nd</sup>) and decreased workforce third (3<sup>rd</sup>) in that order as perceived by the respondents or the people.

With respect to the ways of mitigating the impact of HIV/AIDS on agriculture, the respondents suggested sustained community mobilization/sensitization of the people on HIV/AIDS prevention (20%), provision of ARV drugs and other medicaments to PLWHAs (10%), establishment of more HIV/AIDS counseling centres (14%), as well as

empowerment of the farmers through micro-credit support and income generating activities (24%). In addition, they also considered the provision of rural infrastructure (e.g., access roads, portable water, etc.), as well as farm inputs (15%), capacity building/training for farmers in modern farming practices (17%), among others. Figures in parentheses represent percentage respondents.

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*Fig. 1: Impact of HIV/AIDS on the Agricultural Sector*

## **CONCLUSION AND RECOMMENDATIONS**

The mainstreaming of HIV/AIDS by government and all other partners, therefore, offers a great opportunity for proactive measures to be developed by all stakeholders to deal with the problems of HIV/AIDS in

Enugu State. The challenge is to promote and support the HIV/AIDS multi-streams awareness and action process and consolidate the process towards supporting preventive, care and support interventions as well as promoting mitigation measures as provided in the recommendations hereunder.

Based on the results/findings from this study, the following key recommendations are considered necessary for prompt action:

1. The government, development partners and agencies should focus on ensuring increased access to treatment, prevention, care and support services for the benefit of HIV positive persons and vulnerable groups, such as women, children and the poor. This could be achieved through medium and strategic plan development for the establishment of more health facilities and VCCT centres at strategic locations in the various communities of Enugu State. This will reduce the traveling time and distance of the target groups to the health facilities and VCCT centres, as well as encourage them to easily patronize such facilities/centres. Existing institution/structures should also be strengthened for the management of HIV/AIDS services in the state.
2. Capacity building/training and recruitment of more health professionals, peer health educators and teacher counselors need to be intensified through regular conferences, seminars, and

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workshops. This is meant to address the present challenges of increasing number of HIV positive persons and orphan and vulnerable children (OVC) in the state, especially in the rural communities.

3. Government, development agencies, and Non-Governmental Organisations (NGOs) should also facilitate support to micro-finance institutions and co-operative societies in terms of technical assistance and micro-credit facilities as an empowerment strategy to alleviate poverty among HIV positive persons, vulnerable groups (women, children, care-givers). Empowerment of these target groups through provision of micro-credit and income-generating activities will reduce their vulnerability to HIV infection and death from AIDs. They will be in a position to raise their household income base and provide for their households.
4. Government should provide the enabling environment for healthy living through provision of adequate rural infrastructure, such as access roads, portable water, and electricity in addition to health facilities.
5. There is the need to establish a functional database and a monitoring and evaluation system to cater for the data needs of the state with respect to HIV/AIDS prevalence, programme

interventions, responses and performance. With paucity of data in this respect, it will be difficult to measure achievements/progress of interventions, as well as the impact of the HIV/AIDS epidemic on the citizens and the various development sectors in the state. In the light of the above, it will be difficult to leverage support from development partners and donor organizations.

6. Finally, a holistic approach integrating all HIV/AIDS programmes into an overall strategy in the state needs to be adopted to combat the root causes of the transmission of the disease in poverty, ill health, inequality, ignorance, discrimination and exploitation.

With commitment and government political will in addressing the above issues/recommendations, significant progress will be made in mitigating the impact of HIV/AIDS on the core development sectors of the economy and the agricultural sector in particular.

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