Conflict Between Environmental Determinism and Possibilism on the Effect of Climate Change on Palm Production in Nigeria

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Abstract

There had been a lot of controversies on which factor holds sway in the control of activities in our world today. That is if the natural environment or man. Environment, with its numerous components or elements has been assumed by some to be the one in control and whatever happens in it is what it has dictated. Oil palm which is a common rainforest tree in Nigeria had a wild variety harvested locally by traditional farmers in Nigeria. With the industrial revolution, agricultural advancement, technological revolution and other likes, man has been able to influence the environment and make unforgettable impacts. Today, we have hybrid type of oil palm that can fruit within four to five years, oil palm plantations by individuals and corporate bodies, establishment of palm oil processing mills to mention a few. The study made use of theoretical approach (Historical method) using secondary source of information like textbook, journals, newsletter. Some challenges were still in place like high cost of land, shortage of improved plant seedlings, insufficient labour, climate factors, hence the need for this study. The findings show that though technology has made it possible to plant against the nature through irrigation, introduction of high hybrid type of oil plantation. However, people believe the output is lower in standard than the natural one. It is therefore, concluded that, there should be re orientation for farmers and buyers to make them accept the position of possibilism.

Key words: Environmental determinism, possibilism, oil palm, technological advancement.

Introduction

Man is a social being that lives in an environment and carry out cultural activities that influence the environment just as it influences him. Man does not live in isolation but carries out his work. He daily lives in relationship with others. (Mandra 2018). In social science, the activities of man are usually put into consideration. According to Oladapo (2021), man cannot live without interacting with his/her environment in every area of livelihood, which in turn dictates activities the man can undertake. Man, and environment are inseparable in operation and activities. Environment means different concept to people in different field. Certain terms and expressions that relate to the environment are problematic in that they vary widely in usage within and between disciplines and several have been used as synonyms (Johnson et al 1997). Environment is from the French word 'Environia' which means to surround. Environment means surrounding in which organisms live. environment regulates the life of the organism including human beings. Human beings also interact with the environment in a vigorous manner than other living beings. Environment is the sum total of conditions that surrounds us at a given points of time and space. Organisms has to survive under the conditions of the environment and equally maintains its life process (Mondal n.d.).

Encyclopedia Britannica (n.d.) described environment as the complex of physical, chemical and biotic factors that act upon organisms or an ecological community and ultimately determines its form and survival". Environment can be defined as the sum total of all the living and non-living elements and their effect that influence human life. Environment is the physical surroundings in which we live. It can either consist of living factors or non-living factors. The environment provides us with conditions that facilitates growth and development and also with a risk of damage and danger. Everything that is around us, which includes both living and non-living things such as soil, water, animals and plants, which adapt themselves to their surroundings is known as environment. It is the natures gift that helps in nourishing life or the earth. He stated that the components of the environment are mainly divided into two categories.

- Biotic environment – it includes all living organisms such as animals, birds, forests, insects, reptiles and micro organism like algae, bacteria, fungus, viruses e.t.c.
- Abiotic environment – It includes all non-livings components such as air, cloud, dust, land, mountains, rivers, temperature, humidity, waster vapour, sand e.t.c. Bygus 2022.

According to Aladejebi 2022 "Environment deals with living and non-living factors in a particular location and how it inter-relates with human beings in that location". Man relates with the biophysical, social, political and economic component of the environments. Living organisms that involve plants and animals are so vital in the functionality of the system of the various domains of the environment. The physical environment, that is nonliving component, is basis of operation carried out by man. On continuous process, man interacts with all around him which could yield either positive or negative influence.

Environmental Determinism

The relations between human societies and their environment have been age long concept that revealed many facts about human social development. There are various views that can be seen within geographer's and non-geographers. The geographers have different concepts about the question of the subject matter of Geography, but leave alone determinism. The difference subject matter is seen in dynamism, multiplicity of variables, methodology and approaches in the subject. However, this and other factors have given rise to a number of debates and

dichotomies in geography. Among the other dichotomies, dualism in environmental determinism and possibilism are the dominant ones. It has been a great debate for years that flourished from ancient to modern period. Among geographers, a great number of them have strongly emphasized the effect of environmental determinist on man's activity. (Fekadu 2014)

Environmental determinism originated as a set of idea introduced into main stream of American geographical thought and practice by Ellen C. Semple on 1900's on the basis of her selective interpretation of Fredrick Ratzel's nature culture relationship. In that relationship environment affects all aspects of social and economic development. Environmental determinism was popularized at a time of real change of academic geography; when the discipline was shifting from a focus on exploration to intensive survey and philosophic synthesis… Environmental determinism seemed to offer early twentieth century geographers, a scientific foundation for theories by which it was possible to understand how people lived and acted in a changing world (Frenkel 1992). Environmental determinism is the concept that has to do with the belief that the environment, in particular physical factors such as land form and climate determines the patterns of human culture and societal development. Environmental determinists believe that ecological, climatic and geographical factors alone are responsible for human cultures and individual decisions. Also social conditions have virtually no impact on cultural development (Jerden 2021). Environmental determinism was popularized at a time of change in academic geography. When there is emphasis on 'Intensive survey and philosophic syntheses. The framework of environmental determinism gave room for a connection of climate conditions and other aspects of physical environment to virtually everything from culture, regional character and political organization to the use of civilization. The theory of determinism was developed in the fields of anthropology, sociology and geography. It emphasizes how local regional and global environmental factors shape and determine a particular society' s cultural, economic, political development and evolution. (Jerden 2021)

Jerden, et al 2021 stated that "Examples of some key environmental factors involved in environmental determinism are.

- Global, regional, local climate (e.g arctic vs, tropical)
- Topography and elevation
- The nature of land forms (e.g. mountains, valleys, plains)
- The nature of river systems e.g. broad and slow flowing vs twisting and fast-flowing)
- Connectivity of geographic regions (e.g. societies separated by impossible mountains vs societies connected by flatland or rivers).
- Continental orientation e.g. east-west or north-south)

They equally used the theory to explain how the physical and behavioural characteristics of peoples or races are determined by the physical environment in which they live. It could be seen that the ideas that under lie environmental determinism are nearly as old as civilization itself. For instance, early Chinese philosopher and politician Guan Zhong wrote that nature of major river system (twisting and fast flowing vs straight and slow flowing) determined the cultural and behaviour character of people's living nearby. (Jerden et al (2021). According to Mahapatra (2021). "The interaction between the primitive society and nature is called environmental determinism". In this case nature acts as an active force whereas man is the passive force. Nature dictates the activities of man. There is direct dependence of human beings on nature for resources which sustain them. The physical environment for such societies becomes the "Mother nature" [NCERT (2022)].

Gosmestrria (2019) described environmental determinism as "the theory wherein the physical environment, including the climate, set hard limit within the human society". It is the belief that the setting determines the pattern of its human culture and the societal development in the past generation of traditional ways and beliefs where they live in. Determinism according to him was a recent approach to the formal geographic study, its origin way back to ancient times and even the present generations. The climate factors were used by Strato, Plato and Aristotle have explained why the Greek were so much more matured in the early ages than the societies in hotter and colder atmospheric conditions. (Frenkel 1994).

Ellsworth Huntington worked on expanding the theory around the same time as Semple. Huntington work through, led to a subset of environmental determinism called climate determinism in the early 1900's. His theory slated that the economic development in a country could be predicted based on its distance from the equator. He saw temperate climates with short growing season stimulate achievement, economic growth and efficiency. The ease of growing things in the tropics on the other hands hindered their advancement (Briney 2022).

Environment influences human livelihood, which involves the trade, job, dressing and agriculture. Physical environment also influences the health and talent or knowledge of the people. For instance, people of New Holland (East indices) have closed eyes and cannot see any distance without bending their heads backward to which their back to touch their back. The blacks from the Caribbean had dark skin because of the climate and the tropic cause a host of climatically specific diseases. (Fekadu 2014). Many scientific researchers have shown an obvious fact, that the behaviour of man is also molded by the environment.

The environment determines that different ability among racial groups is due to regional differences in terms of the quality of the natural environment. The environment equally has effect on

resource and rate of civilization. It must be noted that natural endowment creates good opportunity for the existence of civilization. Climates is a principal determinant of culture. The dressing and eating culture of cold and hot areas differs. The case of anatomy and strength is influenced by environment. The people in colder climate are physically stronger and courageous than those in the warm climate. In habitants of warm climate are weak body, indolent and passive in their strength and anatomy (Fekadu 2014).

The main objects of environmental determinism are;

- Environment influences Human action and activities.
- Humans are badly dependent on the natural environment.
- Human live at the mercy of environmental forces.
- Human attitudes, decision making are influenced by environment.

Environmental Possibilism

Posibilism means that the environment only limits the numbers of choices that a person has. As its heart, possibilism follows the notion that human has the commanding power over their environment, albeit within certain limits. According to Wikipedia (n.d) possibilism "is the theory that the environment sets certain constraints or limitations but culture is otherwise determined by social conditions". Man can make things happen by their intelligence over time.

In the opinion of Fekadu, 2021 "the determinists rely more on physical geography but the possibilism rely more on human geography". The concept of environmental possibilism has been accepted by Geographers in the 20th century in France in the school of human geography. Man is seen to be free in choosing the pattern of human activity on earth. Possiblism is the view that the physical environment provides the opportunity for a range of possible human responses and their people have considerable discretion to choose between them. (Dictionary of Human Geography (1994). Man has brought changes to the environment by increasing its capacity to meet his largely increased needs and demands. These could be prominently seen with regards to industrial revolution, agricultural advancement, technological revolution and other likes. (Fekadu, 2014).

The theory of possibilism emerged as a reaction to German environmentalism which focuses on the role of man as a geographic agent and a modifier of physical environment. The approach was developed by French geographer Vidal de la Blache and his followers including Brunches, Demangeon, Blanchard in early twentieth century. Using socio-cultural and technological development people moved from a state of necessity to a state of freedom. Man creates possibilities with the resources he got from the environment. There are no necessities but everywhere possibilities and man as a master of these possibilities is the judge of their use.

The core explanation of environmental possibilism include.

- Human are free to choose and decide their activities.
- Nature do not control human beings
- Nature provides opportunity and possibilities to human.

French historian Lucien Febvre was the first who coined the term possibilism and contrasted it with environmental determinism (GK today 2010) In other words, the essence of possibilism is that.

- Nature provides possibilities and man utilizes them according to his culture traditions and levels of socioeconomic development.
- People are not just the products of their environment or just pawn of natural environment.
- Nature is never more than an adviser.
- There are not necessities but everywhere possibilities.
- The range of possibilities in every region is limited more by the price man is willing to pay of what he wants than by the dictates of the environment. For instance, man through his technical skill can grow banana, rice and rubber plants in tundra, Greenland, Sahara Desert, although has to take the input cost into considerations (GK today 2016)

Environmental possibilism is the idea that there is more than one kind of environment. Contrary to determinism that limits our education and development to one way, possibilism expands it to include alternative. The belief is about the idea that all people are free to choose what they want and how they want to live. humans can be masters of their own lives and create what they want, not just accept it. Urbanization is an example of environmental possibilism. It is the process of more people moving to cities every year. There is a healthy balance between nature and humans. (Brian C. 2021) Extreme application of possibilism may cause great hazards to the environment. According to Sanduni Inalisha (2021) "following example emphasise how the human-environmental relationship has deteriorated as people consider the extremist approach of possibilism in this way.

1. 1984 gas leak at a factory in Bhopal, India. Approximately 5000 died, another 50,000 where affected and at least 1000 were blind.
2. Horizon oil spill in the deep water zone of the Gulf of Mexico in 2010, considered one of the biggest environmental disaster in American history
3. London's killer fog.
4. Johnstown Dam failure, May 31, 1889
5. 2021 Suez Canal obstructions due to the blocked of Ever Given ship
6. Laos Dam failure in 2017"

Environmental Determinism Versus Environmental Possibilism

Environmental determinism is theory that environment causes social development or the idea that natural environment influences people can adjust or overcome an environment. Possibilism theory is interesting as it let us explore different ideas and new experience without feeling afraid or limited, as we do with a specific belief in an ideological determinism (Brian, 2021). Environmental determinism argues that environment of a place determines how the people there will behave. On the contrary possibilism allows for more human freedom in behaviour. An environmental determinist may argue that people in warm countries must act with less economic innovation than people in cooler countries. A possiblist will argue that people can act with as much economic innovation anywhere they want. (study.com 2022). When nature dominates man, it is called determinism whereas when man dominates nature it is called possibilism. Determinism asserts that development of human history, culture, society, lifestyle e.t.c are shaped by their physical environment, whereas due to intelligence man makes changes in natural environment, impacting possibilities in the society. There are no limitations or impacts of physical environment on human activities when determinism is considered but considering possibilism limitations abound to changes made by man in nature. (Maharshta State Board 2022) and (Fekadu 2014).

The argument of the determinist was on the fact that environment influences more human livelihood, health, culture, civilization, politics, intelligence religion and others, so human actions is determined by physical environment. Whereas, the possibilists opined that many things have changed by human decision and attitude. Although, possibilists believed that cannot be entirely free from the influence of environment, but there is also a room for man to control his activities with regard to technology, attitude, habits and values (Fekadu 2014). Man influences environment just as the earth influences man. Both are interdependent on each other. Environmental possiblism has become so popular that "control has been replaced by 'influence' and influence is also replaced by response or adjustment' among scholars.

According to Fekadu 2014'

"The effect of environment on them is obvious and no one can deny it but it is not the only factors that determines human's actions. To physical geographers or determinist nature influence man…
geographers or determinist nature influence man…

Whereas, the human geographers… believed that nature is never more than an adviser. Therefore, both viewers should lessen their stand rather elasticize it into different wings but come to common ground and do more on how much environment can influence man and man the environment as well".

Environment and farming activities

Agriculture refers to the cultivation of land and rearing of animals for the purpose of producing food for man, feed for animals and raw materials for industries. The relationship between agriculture and environment is a great one. The relationship between environmental change and their impact on agriculture is of great concern and gaining great importance. Environment is the great determinant for the productivity of agriculture. About one-third of the earth surface is used by agriculture. The occurrence of extreme events will rise by the global warming, that is, water deficient condition, flood, tornado that would greatly harm the water balance and agriculture in upcoming years. Climate change affects agriculture by emission of greenhouse gases such as nitrous oxide, methane and carbon dioxide. The tillage practices, fossil fuels, manuring of livestock and use of fertilized agricultural sources of these emissions (Kaisoom 2020).

The rising temperature and weather fluctuations have influence on farming activities. Temperatures rise as climate change wears on, distributing farmer's effort to raise viable crops. The planet's surface air temperature has increased by 1.41 degree Celsius. Since the 1880's. Colder regions heat up, and warm locations become even hotter, causing once thriving plants to succumb to unfamiliar temperature. Crop yield will inevitably decrease as these organisms struggle to survive in conditions they haven't adapted to. Growers lose profit as a result – this can ruin livelihood of small farmers. (Nichols 2020).

There has been effort throughout history how people have had to adjust to climate variability and cope with climate extremes. It has been discovered that there is an increasing frequency of events such as changes in the distribution and quantity of rainfall and changes in temperature and extremes in different part of the world. Long term changes in temperature and precipitation are being experienced. The effects of these on crop and terrestrial food production are evident in several regions of the world. Climate related disasters, in particular drought are main drivers of food insecurity prices of food and other vital crops are increasing in recent years (Opladen 2015).

Crop are highly sensitive to extreme day-time temperatures of $30^{\circ}C$ or above. If they occur at a critical moment of plants development, the result can be devastating. (Kaisoom 2020). High level of (CO_2) has a stimulatory effect in most crops, while elevated tropospheric ozone (O_3) level depress crop yields. Rapid and uncertain changes in rainfall pattern and higher temperature can also result in geographical shifts of crops and cropping through changes in seasonal extremes as certain species can no longer be cultivated in certain regions. Longterm impact of climate change leads to overall decrease in production (Opdladen 2015). Just as environment influences agriculture, so also agriculture has impact on the

environment. There is variation on environmental impact of agriculture based on farming practices employed by farmers. Farming communities that try to reduce environmental impacts through modifying their practice will adopt sustainable agriculture practices. Modern animal agricultural practices are environmentally destructive than agriculture practices focused on fruits, vegetables and others. (Wikipedia n.d).

Although agriculture operations provide unique opportunities to conserve biodiversity, they also can threaten wild species and spaces. From habitat loss to pollution, agriculture contributes to many of the environmental challenges (World Wildlife Fund 2022) Agriculture is a leading source of pollution in many countries. Pesticides, fertilizers and other toxic farm chemicals can poison fresh water, marine ecosystems, air and soil. The processing of farm produce in many instances lead to pollution of the environment. For instance, oil palm produces while under processing can lead to air, water and land pollution.

History of Oil Palm Production in Southern Nigeria

Oil palm is a tree crop grown in the Southern part of Nigeria. It belongs to the family palmate and sub family conoidic of which it is the most important member. Every part of the tree is useful and of economic value. The palm fruit is the principal product which after processing can come up with three commercial products, which are palm oil, palm kernel oil and palm kernel cake. (Ibitoye O.O et all (2011).

Okitiupa Local Government Area is one of the Local Government Areas in Ondo State, Southern State of Nigeria. The rainforest is highly favourable to oil palm production because of the heavy amount of rainfall available for greater part of the year. (Odefadehan (2017). The development of economic activities in oil palm production increased with the Urhobo Migrants from the Delta State between 1850 and 1968 to Ikale land where we have the present Okitipupa and Irele Local Government Areas and part of Ijebu waterside Local Government in Ogun State (Ogen 2003). Rural to rural Migration that involves people of low education and incentives make them to move to exploit familiar resources in new rural environments. Otile (1979). The Ikales and Urhobos were noted for harvesting the oil palm species in African Forest using traditional methods. The development of oil palm growing went hand in hand with the establishment of research organizations. (Cochard et all 2009). In early 1970's, the government of Western Region of Nigeria, developed interest in mass production of palm oil and associated products thereby establishing farm settlement in Okitipupa Ondo State.

Although different crops were grown at different centres but oil palm was majorly grown in okitipupa. The development was not unconnected with the low yielding "dura" materials which the products cannot meet the demand for local consumption not to talk of export. The need to step up production to a sustained planting of up to 250000 hectares per annum so as to meet domestic demand was taken into consideration and the need to compete favorably with the far East countries, Malaysia and Indonesia, that had pursued more aggressive plantation establishment with improved high yielding materials made the government take proactive measure in oil palm production. [Ugba and Nwame 2013]. According to Wikipedia [n.d] "a nucleus of oil palm estate project was initiated by the western Nigerian government under Adeyinka Adebayo as a way to boost the economy of small towns and rural areas" . The development started in 1969 and more acreage were added between 1975 and 1983. There was Smallholder Management Unit [SMU] that encouraged small scale farmers to grow oil palm in Okitipupa, Ode Aye, Ilutitun, Ikoya and other areas in the environment. The expansion of work was to be financed by Western state government and by multilateral loans. In 1974, oil palm processing mill was established at Okitipupa and it was incorporated as a limited liability company in 1976.

Environmental Determinism and Oil Palm Production

Oil palm has some conditions under which it could thrive. The crop is tropical so it grows best in stable warm areas with sufficient soil moisture all year round. Oil palm requires temperature of 30-32^{O}C for about 88 days minimum. Temperature below 20^{O}C and above 40^{O}C are critical for growing, adversely affect crop production. Oil palms require at least 5 to 6 hours of bright sunshine per day and 80% humidity. The crops require annual evenly distributed rainfall of 2500 to 4000mm or 150cm to 180cm monthly. (Pirker et al 2016). Oil palms can grow on wide range of soil. However, they thrive best in well drained deep loamy moist and alluvial soils rich in organic matter. This rock requires at least one-meter soil depth. Farmers should avoid highly saline coastal sandy and water stagnation soil (WWF 2020).

Availability of land for all palm production is becoming limited with the rate of urbanization and the extent of agricultural activities in suitable land. Pirker (2016) stated that

> "Governments of developing and emerging countries in all tropical regions increasingly promote oil palm cultivation as a major contributor to poverty alleviation, as well as food and energy, independence. However, being under pressure from several non - governmental environmental organizations and consumers, the main palm oil traders have committed to sourcing sustainable palm oil. Against this backdrop assess the area of suitable land and what are the limits is future oil palm expansion when several constraints are considered… we find that 234 million hectares or 17% of worldwide suitable area are left".

Topography is always considered when growing oil palm. Steep slope restricts oil palm cultivation in different ways.

They increase planting, maintenance and harvesting costs, and shallow soil mean weak anchorage of the plants and surface run off of fertilizers. Topsoil erosion of exposed sites is also commonly associated with sloping land. Ideal conditions for oil palm cultivation can be found on flat areas with $0^{o} – 4^{o}$ slope inclination. Although palms can successfully be grown on slopes up to 160. Common opinion is that slopes above 25^{0} should not be planted at all (Pirker et al 2015). Both slope and elevation are of influence to oil palm production.

Climate, soil, topography are of great factors in determining if the oil palm can be produced in a place or not. On a final note, there are three types of land that are not available for oil palm expansion (i) Land that is prevented from being converted to other uses such as built-up land (ii) land which is already used such as cropland and pasture and (iii) non-protected areas which are nevertheless important for biodiversity conservation and carbon storage. (Kaisoom 2020).

Environmental Possibilism and Oil Palm Production.

Man has made a lot of effort in developing farming activities to ensure a boost in the national economy. In Nigeria an institute known as Nigeria Institute for Oil Palm Research (NIFOR) was established to address the issue of oil palm production. The colonial masters had Oil Palm Research Station (OPRS) between 1939 and 1950, which the basis for NIFOR today (Ujaduighele and Osagie 2016). It was discovered that through the highly rated scientists of the institute there was transformation of wild oil palm of the pre-colonial era to the improved and high yielding one being cultivated in individuals and corporate plantations today. The institute has also invented simple and cost-effective equipment for the processing and preserving palm products such as oil, kernel and palm wine. (Mojeed 2020).

Agricultural advancement has taken over in many areas as against the peasant way of activities in yester years. One of the factors leading to a significant increase in oil palm yields was the discovery of the better production potential displayed by crosses between the African 'origin' and the Deli introduced and improved in South East Asia. The breeding has led to a major breakthrough in the sector. (Cochard 2009).

Industrial Revolution. Before the mid-19^{th} Century, all palm oil was produced by hand in West African. Where the oil palm is indigenous and has been closely linked with local livelihoods for thousands of years. But the industrial revolution caused a surge in demand for palm oil in Europe and the need to secure reliable supplies led to the development of oil palm plantation. (Phillips 2021).

Technological revolution has also made the advancement in oil plantation production feasible. The use of machine in the plantation and processing of palm fruit using modern technology have been major key to the development. Manufacturers found palm oil to be an ideal substitute for the animal based fatty wax traditionally used in soap manufacturing and candle making, the lather production by palm oil-based soap was more satisfying and candle were odourless upon burning. Palm oil was also used as industrial lubricants all leading to massive production of palm oil (Philips 2021). The modern palm oil mills employed the use of machine in production. The following stages are concerned, weighing, loading, sterilizing (boiling or cooking), stripping (separating of fruits from bunches), digesting, pressing, depericracking, cracking, clarifying and purifying (Ayegbidun 1993). Small scale refineries or processing factory are now available as against the traditional method of palm oil processing that was so unhygienic.

According to Odefaderin (2017) "The production of oil palm and palm oil can only succeed when there is timely and adequate supply of labour in the production time". Man has various nursery stage of palm seedlings, to the clearing of farmland, planting of the seedlings, guiding and guarding the plants from pests, pruning, application of fertilizer, harvesting of palm **fruits**, processing of palm fruit to get palm oil and other likes. There is no way meaningful efforts could be made without the impact of labour. In this use both skilled and unskilled labour are required from time to time either in the farm or the processing mill of oil palm. Labour factor is a major input in oil palm production. It could be noted that, the wages of labour gulp a reasonable percentage of the expenditure incurred by the farmers or palm oil merchants. The cost of labour is high which by implication leads to the general rise in the price of oil palm products.

There is unusual delay in the processing of oil palm products and the turnaround expected over time. The small holder farmers as well as commercial farmers are affected by human labour challenge. There have been records of wastages of resources because of inability to get the right caliber of labour to carry out the harvesting of palm fruits. This is so common with palm trees that have fully grown and need to be climbed or on the other hand required the use of chisel with long poles which pose serious threat to lives and health of harvesters. (Odeleye (2015).

Family labour is grossly inadequate for the enormous task to be carried out in oil palm plantation and palm oil mill. In a situation where commercial farming is practiced, a lot of labour has to be hired by the farmers and this complimented by the family labour. Labour is a major determinant of the level of output in oil palm production. Paucity of labour may spell down to the scope of marketing profits by the farmers. The rate of maintaining oil palm in the farm will determine the proportion of the fruiting and eventually quantity of palm oil to be produced. Low labour will yield low productivity. (Odefaderin 2017). Man is seen as very vital to the development of oil palm

farming and the overall development of the national economy. The strength of man in conjunction with his knowledge have helped in creating avenue for modern techniques of farming and the processing of palm oil and palm kernel.

Conclusion and Recommendations

It could be observed that environment has impact on man's activities but with technological advancement and new method of farming there could be explosion in oil palm production in Nigeria. Improve oil palm seedlings that could start fruiting from four to five years, especially Tenera should be planted. Oil palm industry should be granted tax free regime. Tractors should be provided to oil palm farmers union at subsidized rate to ease unemployment problem. Youth should be encouraged to be actively involved in growing of the crop. Government should make land available for intending investors in the oil palm sector to encourage massive production. Government should also put in place enlightenment program to erase the belief that whatever is planted with technology is harmful to body.

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