

The Changing Pattern of Palm Oil Production in Nigeria

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Abstract

This work examines the development of the palm oil industry in the Nigeria area between 1850 when production in the oil rivers was expanding which tops the entire Africa continent and 1950 when palm oil mills was affecting the nature of local production which brought several conflicts in the oil palm producing areas. The paper identifies local techniques of production in the North, South and Eastern parts of the Nigeria area, the traditional flexibility of palm oil, increase in production and the changes that took place over time was as a result of the quest by the Metropolitan demand in Europe during the Industrial Revolution. The major findings of the paper is that despite the introduction of the new method of producing palm oil through the hand press technology in the 20th century, it have not yielded so much impact compared to the native traditional method of production, the introduction of the oil mills which is a sure way of increasing output have only triggered unrest as it threatens women's income in the local sense and led to increase in land use for the expansion of oil palm plantation. These changing pattern of innovation could not maintain the global leading role of the oil rivers since the 1940s for export. Some of the challenges of the industry are also articulated in the paper. In order to reduce the dwindling role of Nigeria's palm oil production, government needs to develop the industry to be in tandem with the customs of the people and make good policies of land which have been a major concern in the oil palm belt among others.

Keywords:

Changing Pattern,
Endocarp Mesocarp,
Oil Mills, Oil Rivers,
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Background to the Study

The oil palm (*Elaeisguineensis*) as the name implies is believed to have originated from the guinea coast rainforest of West Africa, it is the most valuable resource in the region and native to Nigeria,¹ oil palm has been produced in the Nigeria area since time immemorial. Oil palm thrives in the humid lowland tropical Africa. The evidence for this is geological, historical and linguistic; fossilized pollen have been uncovered in the soils of the Miocene era from the Niger Delta; oral tradition maintained that the tree is native to this region for thousands of years, the tree have been mentioned by the first European explorer of the West African coast in the closing decades of the 15th century, the name "oil palm" is indigenous and have no any reference elsewhere.² The oil palm industry started developing through the network of internal trade among the natives of the coast and hinterland of the Nigeria area, this trade was intensified in the 19th century which followed the abolition of slave trade by the British Parliament in 1807. The abolition of the trade prompted the British to device a means of engaging the natives in a 'new deal' of trade known as legitimate commerce. It was this trade that led to the development of palm oil production not for the benefit of the natives but the imperialist interest. The trade flourished in areas like Bende, Bonny, Brass, Forcados, Lagos, Opobo, Calabar, Ngwa and Warri, the palm tree grows in the entire Southern part of Nigeria reaching more than 450 miles north from the coast.

Changing pattern of palm oil production of palm oil developed from the native traditional system which differs in different communities from North, West, South and Eastern parts of the Nigeria area, production was later aided by the import of the hand press oil extractor and later on the pioneer oil mills and some few factories for extraction. The palm is distinctively divided into soft and hard oil, the soft oil undergoes excellent refining which reduced rancidity while the hard oil contains significant amount of acid that easily ferments. Several socio-economic constraint associated with the process are discussed vividly.

Flexibility of Palm Oil

Oil palm, is of great antiquity, it is a monocotyledonous tree belonging to the *palmae* family, It produces bunches of fleshy fruits, the pulp (mesocarp) of two which yields a solid, edible, orange-red oil called palm oil, the endosperm or kernel yields a clear, yellowish oil that is also edible and solid, and is called palm kernel oil, the very young leaves is used as vegetable (palm cabbage). These two products are important in world trade beginning from the 18th century when the industrial revolution in Europe was intensified. Palm oil thrives in a rainfall of between 1600mm to 5000mm per year in tropical climates within 10^o north and south of equator.³ The oil palm tree has a wide adaptability range of soils to low pH but sensitive to high pH (above 7.5) and stagnant water. Neutral pH soils are most favoured. The temperature requirement varies between 180C and 340C, oil palm tolerates even higher temperature provided there is adequate moisture. It requires plenty of sunshine; it thrives under conditions of high relative humidity.⁴

In the 19th century, a high proportion of the oil palm and kernel were locally processed and consumed. The sweet palm wine which serves as a beverage was obtained from tapping the crown parts of the roots, while the branches were used for making basket and brooms as well as for shelter and fences. The death palm tree was also a valuable source of local fuel and a breeding place for edible fungi mushroom.⁵ In Igalaland, oil palm grew along the water courses and in the more densely populated areas with a rainfall of about 1270mm a year.⁶ It is also propagated in the derived savannah, forest and riverine forest vegetation.⁷ In the 19th century, palm oil was the basis of most of the portable wealth and was privately and state controlled, production of palm oil varies in different communities of the Nigeria area, the paper will focus on some selected communities. What was obtainable in the North specifically Igalaland is different from the production system in adopted in the western parts of Nigeria likewise the South-South and South-East who were the dominant producers.

Palm Oil Production in the Pre-Colonial Period

Production patterns in the North; the greatest output of palm oil came from the individual homesteads, it was a true example of a cottage system of production. The methods were traditional with simple implements in some parts of the communities of Igalaland. Traditionally the work of oil palm fruit collection and preparation was shared by the whole household. The young men, cut down the fruit bunches, the women carried them to the compound, the men cut the bunches into pieces and then the women boiled the fruits to soften it and then pounded with mortar and pestle to separate the oil from the kernels and waste fibre. Women then mashed the fruits with their feet for half an hour until the fruits were reduced to a mass within which oil begun to appear, women and young girls then remove the mass which they wash and squeezed to obtain the oil. The oil was boiled and the whole mass of fibre would then be squeezed in earnest, the boiling of the fruits and the oil itself destroyed the enzyme, which created the fatty acid and produced the high quality 'soft' oil.⁷

As a result of the division of labour involved, the men had sole right over the oil, while the women prerequisite was the palm nuts which were essentially their property rights. From the nuts, they produced the kernels, *aledi* 'hair oil' and *oche-okele* 'local soap'. They also produced *ite* 'oil for eating yam' and *odugo* 'by-products use for light'.⁸ It is also use in a greater extend as extract oil for skin care, the uses of this tree are many, it supply such necessary things as timber for building, the wood for fuel, powder from the kernel, local drugs, materials for roofing huts and making baskets, mats, fishing-nets, and ropes.⁹

Production patterns in the South; Production pattern in most of the Edo societies specifically among the Uzairhue people of Benin Province is different from Igalaland. Oil from the palm fruit commonly known as palm oil, *avbhi*, was an essential dietary needs of the people. It had a wide range of uses in their medicinal and spiritual lives. Apart from beverages, Uzairhue diet was incomplete without the palm oil. Palm oil was a major source of income for the people. Harvest of ripe oil palm fruits brought income for young men, the processing of oil was also an income earner for women who engaged as well in

its trading. In Uzairhue, the extraction of palm oil, was the exclusive occupation of the women folk.¹⁰ The harvest of the oil palm fruit bunches is done and kept for seven (7) days in the compound for it to wither and ferment which makes the separation easier, the fruit bunch is hit on a wooden lump for several times, fruits that could not be separated are picked with the hands, after that the palm fruits are boiled to soften and enhance separation between the mesocarp (outer fruit layer) and the endocarp (inner hard kernel). This is followed by de-pulping, a separation of the fruits done by pounding in a mortar and pestle or a wooden canoe shape *oko* a trough use as a mill to separate the fruit from the nut usually mashing with feet, water was added at intervals to facilitate separation.¹¹ After mashing, the kernels and fibres are removed from the container with a basket to filter the liquid, leaving the water and oil. The final stage was the heating of the oil in a large pot on fire until it reaches a specified period when water is dehydrated from the oil and stored in kegs or containers of various sizes,¹² this method results in the production of 'hard' oil with some proportion of acid.

Production Patterns in the East; In the Eastern part of Nigeria specifically among the Ngwa and neighbouring areas, palm oil was originally a 'female' product. Women obtained the oil by boiling and pounding windfall fruit and squeezing the resulting mass of pounded fibres by hand and boiling and squeezing again rather than fermenting and washing.¹³ The innovations of the nineteenth century brought men into palm production but they did not lighten the labour burdens of women, who still had to carry the harvested fruit home to be processed and then carry out the unpleasant and laborious tasks of boiling it, squeezing the pounded fibre by hand, and finally rinsing out the last remnants of oil by washing the fibre in small basins. The entry of men into palm production made a difference to women mainly in that, it deprived them of their right to initiate and control the production process and to control the use of the resulting oil. Women were rewarded for their role in oil production by being allowed to keep some oil for cooking as well as the by-products of oil processing, the dried fibre for use as kindling, and the palm nut which had no major local use.¹⁴

It was in the 1870s, when the export trade in palm kernels began, women gained directly as they were able to crack their own nuts which was erstwhile not utilized and keep the proceeds from the sale of the shelled kernels. The fact that they were able to enter the new trade is perhaps an indication that, despite the strains which palm-oil production had put upon them, women still had some time which they could use as they chose after fulfilling their farming and household obligations. In this case the well-known central tenet of vent-for-surplus theory - that within an area little involved in internal trade, export production can be expanded initially by using resources not normally absorbed in food production would seem to hold true.¹⁵

The New Deal of Palm oil trade in the 19th Century

Palm oil was the "pioneer staple" and leading commodity for export in the first half of the 19th century. Europe's industrial revolution created the need for oil and fat. Palm oil was used as a lubricant to oil the machinery, to manufacture candles needed for lighting and

to make soap, Europe turned to West Africa for oil.¹⁶ During the legitimate trade era, production centres were concentrated in areas like Lagos and the Niger Delta known to the Europeans as the Oil Rivers. Specifically; Calabar, Brass and Bonny in the Delta were the "home of oil". Britain's import was 223 tons in 1800,¹⁷ production rose to 4,700 tons in 1827 to 13,945 tons in 1834 and 25,000 tons in 1845,¹² by 1855 production output reached 47,113 tonnes,¹⁸ these figures represent more than half of the total production for the whole of Africa.¹⁹

The trade in palm oil facilitated the growth of export economy of the coastal region of the Nigeria area, K.O. Dike and A.J.H. Latham focused their study on the coastal states, their works are helpful in understanding how south-eastern Nigeria played a major role in the overseas export trade. They showed that a network of trade existed between the hinterland peoples and the coastal states of the eastern Delta. This system of trade enabled the Aro, who dominated trade in the hinterland, to exchange its products with those marketed by coastal middlemen.²⁰ Germany and the Danes who were second to Britain and France joined the trade in the second half of the 19th century and by 1880s it handled a third of the total West African Trade. Germany's rise was attributed to three main reasons; the rise of palm kernel market which was dominated by Hamburg farmers whom were main buyers of cattle cake, the largest manufacturers of margarine and the development of the steam ship services between Germany and West Africa.²¹ Palm oil which was in high demand in metropolitan Europe was used in the production of soap, lubricants and candles especially in Britain which became known as the world's workshop.²² This development increased the number of producers in the Oil Rivers and the hinterland, European companies like SCOA, John Holt and the Royal Niger Company (RNC) were the major players in the trade.

West Africa witnessed price fluctuation during the century, Palm oil was on the increase from 1810 reaching 45 pounds per ton up to 1861 from when prices began to fall from 45 pounds per ton to 35 pounds per ton in 1862 to 10 pounds per ton in 1886 and fluctuating up to the end of the century.²³ This over-reliance on Europe and fall in price of the commodity affected local production, the cause of this decline were; increase in supply of vegetable oil facilitated by the entry of Indian Groundnut and Australian Tallow after the opening of the Suez Canal in 1869 and the outbreak of the Great Depression greatly checked the demand of raw materials in Europe in the closing decades of the 19th Century.²⁴

Changing Pattern of Oil Palm Production in the Colonial Period

The laborious nature of the palm oil industry which have lasted for centuries and was in great demand in Europe witnessed a revolutionary effort by the Europeans to develop it. Looking purely from the side of a native industry, it is pitiable to think of the 233,249 tons of palm kernels imported into the United Kingdom during 1915, and to reflect on how "the industrious native" can only prepare about four pounds of kernels per day, making a presumable proportion of oil in the process. The beginning of the 20th century prompted the British to intensify efforts in increasing production for export to the metropolis with the invention of modern crushing mills to increase production.²⁵

In 1902, a German named Preuss went to the Cameroons to investigate the production of palm oil. The results of his work were published under the title *Der Tropenpflanzer* in the same year. He first of all established the fact that the native process was distinctly wasteful. As a result of his experiment "it was found that 133 lb. of fruits actually containing 30 lb. of palm oil yielded by the native method of extraction 8.85 lb. of oil, equivalent to a loss of more than two-thirds of the oil. Such a loss implies that a native preparing a ton of palm oil has to gather and work 1,370 bunches of fruits of average size instead of the 405 bundles which would be required to produce one ton of oil if thoroughly efficient methods were in use.²⁶ Following this investigation, the German government in 1904 offered a price for an invention of a machine that could improve the oil palm technology. F. Haake in Berlin produced a fairly compatible machine that appears good and since then several inventions in Britain and France were made. In order to increase the supply of this commodity, improved varieties with good yield have to be studied and produced.

During the First World War, there was a decline in prices of commodities in the international market, despite this effect, production was stimulated by the construction of the Eastern Railway, commodity prices slowly recovered as a result of renewed rise in export production, in the post-War boom of 1919-1920, exports of palm oil and kernels from Port Harcourt and Opobo reached levels of over 35,000 tons of oil and 30,000 tonnes of kernels per annum.²⁷ Some of these exports came from areas which had not previously been involved in export production, this period also saw a renewed expansion of palm production in the Ngwa region of Eastern Nigeria. The increase in production in this period and expansion into new areas affected the quality of palm oil produced, some of the crucial methods were skipped during production which reduces the cost of labour, the over increasing entry of men into the process form part of the problem as a result of wealth chase. In June 1921 British officials received a complain from the Liverpool merchants trading in the Ngwa region that 'in many localities where formerly good soft oil could be relied on, the stuff brought in today is hard oil which has been vilely prepared, this 'hard oil' contained a high proportion of free fatty acids and was unsuitable for some industrial uses such as margarine industry.²⁸ Production of the 'hard oil' involves softening of the pericarp through fermentation followed by pounding of the fruits, squeezing the pulp, boiling the pulp and skimming of the oil as the final product.

The later part of the 1920s marked the beginning of the Great Depression, which lasted from 1929 to 1939, the period has been largely treated as a time of stagnation. It was a period in which nothing happened due to the bankruptcy that befell colonial powers and their subsequent preoccupation with economic recovery to the detriment of public works and social projects. Scholars argue that the depression is a period of unprecedented exploitation of African resources and peasants as colonial powers sought to transfer the burdens and sacrifices of recovery to Africans.²⁹ In Eastern Nigeria, where oil palm produce was the major export crop, land was a major issue for cultivation, the Agricultural Department of the colonial government criticized "the communal system of land ownership," which it described as "constituting a considerable handicap to the

enterprising farmer who wishes to establish a small plantation of palms." After a number of "experiments," the Department concluded that plantation oil palm trees were better yielding and easier to harvest than "wild" palms. The entire process of palm produce preparation from cultivation, palm oil extraction to kernel preparation was subsequently subjected to intense colonial supervision and tinkering. The government distributed palm fruit from its newly established experimental farms to volunteer farmers who were required to register their plots with the government.³⁰

To increase the production of palm produce, the colonial government also offered export duty rebates to plantation owners whose farms were registered with the government and whose oil met the fatty acid requirement of the government. The success of this quality standardization effort was mixed at best. The government also distributed oil extraction machines to aid both in the efficient extraction of oil and in the improvement of the quality of palm oil exports. The machines were sold to farmers on a hire-purchase basis. The data for 1930, 1931, and 1932 show a significant expansion in the acreage devoted to oil palm plantations. Palm oil production rose modestly throughout the depression and the export of palm kernels experienced a significant boom.³¹ Whether this was a direct result of the colonial intervention or the result of local initiative borne out of local agricultural dynamics, it's not known. But the government was quick to credit the modest gains to the agricultural element of its economic recovery programme. No doubt colonization intensified the palm oil production which became a major source of income for the people. While the harvest of ripe oil palm fruits brought in an income for young men, the processing of oil was also an income earner for women who engaged as well in its trading in the south-west, south-east and south-south region of Nigeria, in Uzairhue, the extraction of palm oil was the exclusive occupation of the women folk.³²

By 1938 when modern palm oil presses adopted in the oil belt region, in parts of the Owerri Division, particularly in the Mbaize area, here, as elsewhere, the attitude towards the government's push for increased production was generally unenthusiastic, due partly to traditional tendencies to resist untested innovation. But more importantly, there was no assurance that increased production would result in higher prices. On the contrary, those who bought the new machines in anticipation of higher produce prices were rudely disappointed. For, instead of prices rising, they actually fell precipitously. In the words of the senior administrator, "press owners everywhere have been hard hit by the low prices of oil and sales have dropped badly...even in those districts where presses were becoming popular." Thus, it was extremely difficult for the government to convince the farmers that its policy of "increased production" was in their interest. For Nigeria generally, only 834 machines were reported to be in the hands of farmers by 1938. The push for plantation agriculture was equally a failure.³³

By the beginning of the 1950's decline of world market prices in agricultural exports prompted the establishment of the Nigerian Marketing Boards, which handled almost exclusively exports of primary products from 1954. The East Regional Marketing Board, in particular, did the bulk of its business in the export of palm oil and palm kernel in the

region. Nevertheless the U.A.C. continued to maintain a skeletal operation until the outbreak of the Nigerian civil war which turned the establishment into rubble.³⁴

At the beginning of the 20th century, Nigeria was virtually the sole provider of the world's requirements in palm oil and kernels. The situation has deteriorated and persisted based on the fact that competition from other oil palm producers will dislodge the British markets, there was the need to imbibe technology if it was to survive the competition from the West Indies. There are two major factors pointed out by the United African Company (U.A.C) in that period that have been affecting production and lack of improvement in the oil palm industry, the first is poor quality of the palm tree in use and the second is lack of mechanical technology.³⁵ In the early 1930s, the United Africa Company (UAC) developed a small-scale power unit, which fell midway between the screw-press and the large-scale plantation oil mills.³⁶

The real weakness, however, of Nigeria, lay in the fact that the output of her competitors is of far higher quality than her own. The quality of oil is dependent on the percentage of free fatty acids which it contains, the higher the percentage, the greater the decomposition and consequently the lower the quality. There is little doubt that in the post-war years of 1945 the entire output of the N.E.I. and Malaya, as well as the greater part of the Belgian output, will contain less than 2% free fatty acids, whereas in Nigeria the only oil to reach that standard will be the relatively negligible quantity produced on the plantations of The United Africa Company Limited.³⁷ The failure of Nigeria to make the best of her resources and to hold her own with other countries is due both to mechanical and agricultural shortcomings. On the mechanical side, existing practice leads to the extraction of oil which is both quantitatively and qualitatively deficient. On the agronomy side, the wild palm is less productive in oil and kernels than the plantation palm and does not lend itself to such economical and efficient cultivation and harvesting.³⁸ Moreover, according to U.A.C report on crop figures of 2/5 million tons of clean fruit, the respective oil extractions of the four methods are; ordinary native method 243,00 tons 55% which is poor, hand press method 287,000 tons 65% fair widely in use during the colonial period, pioneer mill method 375,000 tons 85% good extraction and factory mill method 418,000 93% excellent extraction.³⁹

Advance in processing technology was also marked by the stork hydraulic hand-press designed by a Dutch company in 1950. The extraction and efficiency of stork hand-press was found to be higher than the pioneer mill. Studies, however, show that average extraction rate was lower than that of the pioneer oil mills. It was also discovered that average capacity utilization was under 30%,⁴⁰ this led to the promotion of the hydraulic hand-presses. The promotion of hand-presses led to the increase of machines used in eastern Nigeria for oil processing from 734 in 1938 to 1,400 at the end of the Second World War. Though the growth rate in the use of machines appeared impressive, the overall impact was negligible. On the average, traditional methods of oil extraction yielded 13 pounds of oil from 100 pounds of fruit, while hand-presses yielded 16 pounds of oil from 100 pounds of fruit. In addition, one hand press cost about £28, an amount deemed too expensive for an average local farmer.⁴¹

Moreover, as part of the efforts to sustain British imperial objectives in the Nigerian oil palm industry, the Nigerian Local Development Board (NLDB), in 1946, allocated £60 000 to the Department of Commerce and Industries (DCI) to construct Pioneer Oil Mills.⁴² The establishment of these mills became necessary for greater efficiency in palm oil extraction, which guaranteed a source of income resulting from tax to the government. There were only ten Pioneer Oil Mills operating in Nigeria by 1950. Each of the mills had the capacity to process 2000 tons of fruits and 400 tons of oil per year.⁴³

The establishment of the oil mills led to the famous women protest who saw it as threatening their economic survival and financial independence as a group. A protest letter to the District Officer for Aba by the Ogbako Umunwanyi Ngwa (The Ngwa Women's Association) in 1950 attests to the fact that this fear was the fundamental reason for their pro-test. The women said they were protesting against the installation of the oil mills for two reasons: The preparation of palm fruits and extraction of oil there from has by custom been the duty of the women and their means of gaining a living and any attempt to deprive them of this right will be visited with anger. The deprivation of any woman of the right of preparing oil for a husband and taking her shares which consist of the palm kernels and the unrefined portion of the oil is a good ground for divorce.⁴⁴ This protest have greatly affected the mills in terms of palm fruit supply for production. Find overleaf a table showing the effects of the Ngwa women activities on the production of the oil mills by not supplying the palm fruits for production purposes in Eastern part of Nigeria.

Table 1: Showing the Quantity of Fruit milled and oil produced by Oil Mills in Eastern Nigeria 1950-1951: Fruit milled and Oil Produced in tons.

Mills	Fruit Milled in Tons	Oil Produced in Tons
Azumini	865.27	137.54
Umuchima	968.82	165.27
Umuduru	674.87	122.35
Ahoda	1,757.47	269.24
Akpabuyo	1,720.22	312.19
Usungllyang	588.87	91.18
HcotAkpabong	276.61	36.84
Oyubia	613.41	114.08
IkotAma	104.85	14.74
Oraifite	11.59	2.50

Source: Second Annual Report of the Eastern Region Production Development Board, 1950-1951.

When the mills were established prior to 1951 costing for the mills was being done, that the capacity of a mill would be (12 cwt.) of fruit per hour, and that each mill would handle (2,000) tons per year which with an extraction of 20.7 % oil to fruit (mill efficiency assumed to be 85 %) should give an oil output somewhat in excess of 400 tons per year.

But the table above shows that this dream was far from being realized.⁴⁵ The non-cooperative attitude of the producers continued after the riots, preventing an adequate flow of fruit to the mills, thereby rendering them economically non-viable. The mills never won the confidence of the producers. In a short time many of them fell into disuse, leaving the traditional method of extraction and the hand-presses dominant in the oil production in Eastern Nigeria.⁴⁶

Challenges of Oil Palm Production

Like in many underdeveloped territories in the tropics, efforts of colonial administrations in Nigeria were directed towards expanding the production of export crops to increase government revenue. This quest was faced with a serious setback, the natives of the Nigeria area depended heavily on cultivating wild palm which accounted for over 97.7% of export,⁴⁷ due to agronomic issue and low quality of some of the varieties, the British attempted to make changes through the introduction of improved seed varieties to local farmers and persuading them to adopt better cultivation practices which have failed in so many occasions.

Shortage of funds was another reason for the lack of progress in research into hand methods of oil extraction in the 1920s; the belief, held until the late 1920s, that modern central mills were only just around the corner led to the neglect by research officers of indigenous processing. Some, indeed, believed that the Nigerian farmer had no future in the export side of the industry and the chief investigator, Barnes, gave more attention to central mills than to hand methods of extraction.⁴⁸ The colonial regime underestimated the natives and local production system which later led to a riot and boycott of pioneer oil mills, forcing them to close down between 1948 to 1951.

A survey begun in 1937 into the obstacles hindering the expansion of small native-owned plantations was carried out and completed in 1939. The officer in charge, A. F. B. Bridges, gave two fundamental reasons for the slow progress made: low palm oil and kernel prices and suspicion on the part of the Nigerian farmer of the European merchant firms and of the Nigerian Government. The price of palm oil during the Great Depression fell from £23.14s per ton in 1929 to a low point of 4£ per ton in 1934, rising to £12 in 1937 and dropping to £5.2s. in 1938. Kernels were £13 per ton in 1929, £3.12s. in 1934, £9.4s. in 1937 and £5.1s. in 1938. The average price of palm oil in 1921-9 was £21s.; between 1930 and 1938 it was £9.3s. The average for kernels was £13s. and £6.14.98. A price fall of this magnitude was bound to cause hardship amongst producers and lead to demands that the government take ameliorative action. All the major markets for Nigerian palm products - Britain, Italy, Germany, U.S.A. and the Netherlands - were contracting, whilst world exports were increasing.⁴⁹ This was caused by the Great Depression which affected demand of the oil palm.

The failure of Nigeria to make the best of her resources and to hold her own with other countries is due both to mechanical technology and agricultural short-comings. On the mechanical side, existing practice leads to the extraction of oil which is both

quantitatively and qualitatively deficient. On the agricultural side, the wild palm is less productive in oil and kernels than the improved plantation palm varieties and does not lend itself to such economical and efficient cultivation and harvesting.⁵⁰

Conclusion

This paper has examined the origin and development of oil palm production from the pre-colonial period to the second half of the 20th century; oil palm is a major ingredient in the preparation of food in the local society and was in great demand in the metropolis for the production of margarines, lubricants, animal feeds, candles and soap. The method of oil palm extraction developed from the traditional manual labour, to the hand-press, hydraulic presses introduced in the 20th century and the pioneer oil mills which facilitated increase in production. A major incident happened towards 1950 that halted the utilization of the oil mills which was seen by the Igbo women as threatening their economic base and customs. Some of the challenges of oil palm production were also discussed which include; inadequate funding, economic depression which led to low prices of palm oil in the international market, thus affecting the development of the industry, mechanization and agronomic issues, challenges of land use due to the local communal ownership among others.

In setting up plantations like this, government need to understand the social and economic implication of a project before establishing it, if not, it will end up like the pioneer mill riot which virtually crippled the companies. There should be adequate education of people on the implication of development to their communities, good agronomic practices should be adopted and developed always to increase yields and good pricing of produce should be in place to avoid loss to the farmer.

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