History of poultry production in nigeria pdf

Our website uses cookies to improve your online experience. They were posted on your computer when you launched this site. You can change your personal cookie settings through your internet browser settings. Privacy Policy Total Poultry Population by Agricultural Areas (2016-17 Livestock Census Data). Nigeria has the largest annual egg production and the second largest chicken population in Africa. Nigerian poultry production has about 180 million birds. Of these, 80 M chickens are raised in extensive systems, 60 M in semi-nigods, and the remaining 40 M in intensive systems. Poultry production in Nigeria is up to 300 million tons of meat and 650 million eggs per year. About 85 M Nigerians participate in poultry farming (many on a small and medium scale). The extensive/free yard/backyard consists of almost half of the chicken population. The pack is up to 50 birds. Manufacturing is focused on subsistence farming, mainly for family consumption with low egg productivity. The herd includes birds of different native species and different ages. Average annual poultry production rates (birds sold or consumed) range from 3 to 7 birds per year (box sites show 10th, 25th, 50th, 75th and 90th percentile) (modeled on VIPOSIM based on LSMS (2016) data). The semi-vague system is a family system of subsistence farming and market production, which comprises about one third of the total chicken population. The average herd size ranges from about 50 to about 2,000 birds, including both improved and indigenous breeds with low to medium-strength, the Intensive Poultry System is a market-oriented production with a high number of birds (2,000 birds) and a high level of productivity of exotic bird breeds. About 21% of chickens in Nigeria are harvested from commercial/integrated farms. Most of them are concentrated in the southwestern region, not far from major cities. Issues and opportunities for poultry Traditional local poultry system is inexpensive and low input, with the potential to handle severe weather conditions and adapt to adverse conditions. Rural poultry systems tend to be small-scale, poorly managed hygiene and have little veterinary resources. The average annual rate of egg production (eggs/chicken sold or consumed) range from 33 to 62 eggs/hen per year (the sites below show the 10th, 25th, 50th, 75th and 90th percentile) (based on the VIPOSIM sample using LSMS data (2016)). The costs of labour, medicine and fluctuations in feed prices account for significant inputs to poultry production. Small farmers suffer from marketing problems due to lack of access to markets with poor infrastructure. Birds prefer most Nigerians for their taste, pigment, leanness and suitability for traditional dishes. Poultry production fails to keep pace with rapid growth domestic consumption. Nigeria's poultry production has great potential to improve food and food security, while contributing to household economic and economic growth. The simulation can help in understanding how activities can improve egg and meat production for extensive backyard systems. Inquiries: FAO 2019. The future of livestock farming in Nigeria. Opportunities and challenges in the face of uncertainty. FAO, Rome, Italy. Hayes et.al. 2015. The poultry market in Nigeria: market structures and market investment potential. International Food and Agribusiness Management Review 18: 197-222. LSMS survey. PAN 2017. History of the Nigerian Poultry Association. Nigerian Poultry Association, Abuja. Subject area (s): Economics essaysReading time: 48 minutesPrice: Free downloadPublished on: November 17, 2019File format: TextNumber pages: 2 Poultry In Nigeria 0.0 rating based on 12345 Rankings Overall ranking: 0 out of 5 based on 0 reviews. The text of the preview of this essay: This page of the essay has 13,814 words. Download the full version above. The bird refers to all birds of economic value to humans, examples include chickens, pigeons, ducks, pheasant, quail, seabirds and recently ostrich all that belong to the zoological class of abes. Atteh,(2004) stated that the bird had been on the ground for more than 150 million years, starting with the original wild jungle birds. The bird offers a number of uses for humans that include: providing meat and eggs, research and medicinal purposes, production guides that have helped improve soil fertility, bird feathers provide a human with aesthetic value (Atteh,2004). Interest in poultry and poultry products has grown significantly over the past 20 years, as stated (Atteh,2004). Almost every country in the world is engaged in poultry farming. Domestic production in Japan of both broilers and eggs is growing steadily, the countries of the Soviet Union have always produced poultry and eggs and continue to increase production to meet new demand. China, the Middle East and Africa are areas where the growing demand for poultry has led to a significant increase in the number of birds that have been sold for meat and eggs (FAO, 2000). Poultry farming in Nigeria is prominent as the main source of animal protein supply to the citizen. For many years, the growth of poultry production followed a model closely dictated by the economic state of countries. The U.S. Department of Agriculture (2013) reported that nigeria's poultry production is estimated at about $800 million. About 25 per cent of the Nigerian economy's agricultural output was contributed to poultry production (FAO, 2010). USDA(2013) is currently rated by Nigeria as the leading egg-producing country in Africa, but the fourth largest broilers, this report showed that Nigeria still needs to about their production in relation to broiler birds. Poultry production is gaining popularity in developing countries due to its role in overcoming protein malnutrition in their diets, expanding the economic empowerment of the resource-poor segment of society (Wishart,2002). Poultry farming is a practice at all levels, from subsistence farming to large-scale commercial operations. Poultry and eggs are the most consumed animal protein; unlimited of any religion or culture in Nigeria. It was recorded that poultry production accounts for about 25% of the country's agricultural GDP (FAO, 2010). Nigeria currently produces more than 550,000 million poultry meat per year and 700,000 million eggs according to (FAO, 2010). Despite this, Nigeria is far from being in the face of domestic demand compared to the developed countries that produced poultry. According to FAO (2010), poultry production reported a 3.2% increase against a global growth of 2.2%; Nigeria's proposal was an increase beyond its internal borders. The countries of Cameroon, Togo, Benin, Benin Republic, Niger and many of its neighbouring countries are supplied, but despite this, Nigeria's supply of broiler production has not been consistent compared to the production of layers. Poultry farming has great potential in Nigeria to create jobs. Nigeria's potential is great, and only farmers who are well-being can actually fill the gap and take advantage of these opportunities. The bird offers the greatest opportunities to increase the quantity and quality of animal protein. Poultry and eggs account for about 30 per cent of Nigeria's total livestock production, of which eggs account for more than 80 per cent. Commercial bird has proven itself in a country with significant infrastructure (bird farms, feeders, incubators and processing plants) already on the ground. However, most of these assets were idle for reasons related to the high cost of strategic resources and working capital, as well as competition from cheap imports. The embargo imposed by the Federal Government on poultry imports in 2002 is aimed at stimulating local production. The challenge, therefore, is how to produce poultry products at a sustainable level in order to narrow the gap in protein supply in the near future. Rice 1. Domestic production and consumption of chicken and eggs (tons) of some African countries FAOSTAT, 2007 Poultry farming in Nigeria has undergone a significant transformation since the early fifties, from backyard, peasant and primitive domestic-oriented husbands to descriptive breeds of semi-wild chickens, to cash-oriented, modern and large-scale birds that dot our country's side and urban Today. It can be said that poultry farming has become a business in Nigeria. Assessment of livestock resources reported by Rome (1993) indicates that local poultry and 15 million commercial (exotic) poultry in the country. It is therefore clear that much remains to be done to accelerate the transformation into a commercial poultry farm and to maintain the interest of current and intentional modern farmers in Nigeria. Animal products provide about five per cent of Nigeria's daily energy supply, well below the West African average of 9.5 per cent. Poultry and eggs together provide 0.82 percent of total daily calorie intake on average, which is close to the regional average. Consumption of chicken and eggs per capita increased by 20 per cent from 2000 to 2007, reaching 5.4 kilograms per capita in 2007. Domestic production shows that Nigeria's domestic poultry production accounts for about 100 per cent of the country's consumption both before and after the import ban in 2002. However, large volumes of unregistered imports entered the country before the ban, which is up to 21 percent of domestic consumption in 2002, according to the U.S. Department of Agriculture. The import ban reduced but did not eliminate unregistered imports (USDA Report, 2007). In 2008, Nigeria produced 1.61 kilograms of chicken meat per capita and 3.66 kilograms per capita of eggs. From 2000 to 2008, per capita production increased only slightly. The place of poultry in Nigerian agriculture bird occupies a unique position in Nigerian livestock. Since the 1960s, global poultry production has been growing faster than that of any other meat in both developing and developed countries. This growth model usually continues because of its inherent feed conversion efficiency and lower production costs associated with intensive production. This efficiency of production is particularly useful for developing countries, which tend to have lower resources and limited agricultural resources. Significant growth in poultry production and consumption (especially broiler chicken) in developing countries has important implications for the global trade in all meat products, as well as feed and related resources (Landes et al. 2004) In addition, since feed costs account for about 70% of the total cost of intensive poultry systems, the availability of cheap feed is one of the most important factors in the development of industry. As expected, broiler industries in the major exporting countries are characterized by modern technology and a high level of vertical integration (World Poultry, 2004). The Bird report, CRC (2003) indicates that differences in resources and government policies have contributed to the differentiation of countries as self-sufficient, net exporters or net importers of broiler meat. In 2003, the main Broilers in the world by volume were the United States, China, Brazil, the European Union (EU 152), Mexico, China, Thailand, Japan and Canada. Teh Teh the main exporters were the United States, Brazil, the EU 15, Thailand, India, Canada, Argentina, Hong Kong and Hungary. The main importers were: Russia, Japan, China, Saudi Arabia, EU 15, Mexico, Hong Kong, United Arab Emirates, Korea, Canada and Romania. The main consumers were the United States, China, Brazil, the EU 15 Mexico, Japan, India, Russia, Saudi Arabia and Canada. 1.2 Broiler production, import, export and consumption of rice 2. Broiler Meat Production, Selected Countries, in'000 Metric Tons (USDA, 2013) reported that the United States is the world's largest producer of broiler meat, followed by China, Brazil and the EU-27. Its reports indicated that broiler production in the United States had increased from 671,000 tons to 17.0 million as a result of higher prices and weight gain. China saw a 50,000-tonne decline to 14.1 million due to tighter margins at higher feed costs and lower prices. Production in the EU fell by 30,000 tonnes to 9.6 million tonnes, as France and the United Kingdom saw more declines than France and Poland. Brazil's broiler production has been reduced by 170,000 tonnes to 12.8 million as a result of low demand. In Thailand, production was increased by 110,000 tons to 1.6 million as a result of increased demand. Production of broilers in Russia was increased by 100,000 tons to 3.0 million tons, this was due to strong support from the state, as well as high market demand (fueled by a growing preference for products with added value and increased prices for red meat). Reports from the USDA (2013) indicate that between 83,000 and 903,000 tons were used in Ukraine as a result of new production capacity. Mexico experienced an increase in production of 25,000 tons to 3.0 million, despite the high costs of feed and those associated with bio-safety measures. Production in Argentina and Turkey remained unchanged, 2.0 million and 1.7 million tons, respectively. Table 1. Leading countries in Broiler Meat Imports, in '000 MTUSDA, 2013 USDA, (2014) pointed out that Brazil has become the world's leading exporter of meat broilers, the United States was second in the magazine. United States exports increased from 114,000 tons to 3.3 million, owing to strong demand in Cuba and Mexico. The U.S. Department of Agriculture also reported that Brazil's exports had increased from 25,000 tons to 3.6 million due to higher demand in the Middle East and East Asia. The EU has the lowest exports. Rice 3: Exports of broiler meat, individual countries, in '000 Metric TonsUSDA, 2013 Exports of Argentina increases from 30,000 tons to 315,000 due to greater demand from Venezuela, China and Chile. China's exports remain unchanged at 400,000 tonnes due to competitive supply prices from U.S. in some markets, but growing demand in other markets. In Russia will also increase from 25,000 tons to 80,000 due to preferential access to the Kazakhstan market in connection with the Customs Union. Imports increased by 60,000 tonnes to 580,000 due to high demand for low-cost protein sources. Mexico's exports fell by 4,000 tons to 8,000, due to an outbreak of avian influenza. In Africa, broiler production is not yet expressed in comparison with the production of layers, and the log is led by South Africa, followed by Nigeria. Table 2. Leading the country in Broiler Meat Consumption in '000 MT USDA, 2013 1.3 Artificial insemination artificial insemination involved the introduction of sperm in female egg methods, in addition to natural mating, it is one of a group of technologies (ART) in which offspring are generated by facilitating the encounter of gametes (spermatoa and zyoote). Artificial insemination attracted considerable attention and was widely used in poultry farming. The process of artificial insemination has been considered by many researchers, which include Sexton (1998) Lake (1995) and Donoghue (2006). Burroughs and quinn (1937) were the two main pioneers who developed a method of abdominal massage and pressure to collect sperm. In their research they explain the AI process, the procedure involves collecting sperm from male birds and fertilizing in female eggs, the main use of AI in heavy birds whose fertility is usually low under the mating pen. It is also practiced when laying birds are stored in cages. Excellent fertility was obtained through artificial insemination in many cases than obtained by natural mating (Wishart, 2001). 1.4 BEFORE THE INSEMINATION IN BROILER PRODUCTION It is well established that artificial insemination in avian species has relative advantages (Fuquay and Reden, 1976), (Penfold et al.2000) and (Brillard,2003). Benefits include an increase in the number of settable eggs, better overall fertility and hatchability, thus reducing the production cost per unit of day chickens (Brillard,2003). According to Petitte et al, (1996) broiler breeders placed in cages produce heavier eggs than those controlled on litter floors; he also compared the production efficiency of broilers artificially fertilized in cells with those naturally mating in floor handles that are higher in artificially fertilized breeders. For optimal success of in vitro fertilization it is necessary to synchronize several factors, such factors include the management of the breeder's stock, sperm quality and quantity, sperm dosage, depth of fertilization, frequency and timing of artificial insemination (Lake 1978; Van Kray and Siegel 1980; King et al 2002). Terms of artificial insemination in commercial poultry are important for optimal success Insemination. Braillard and Baxt (1990) demonstrated that sperm sperm be deposited 1-3 hours before or immediately after the oviposition. USDA,(2000) summarizes the benefits of in vitro fertilization as follows: This allows for the effective use of male birds, this is because the ratio of males to female birds in artificial insemination is small compared to when in vitro fertilization is not practiced. This eliminates the bias against preferential mating. 'This allows for an accurate record of the pedigree possible ' Artificial insemination has higher fertility and hatchability, compared to natural mating ' Since artificial insemination makes the use of sperm, so the question of the size of men relating to women is released. Since men and women do not physically contact, so helps prevent infection of diseases. 'The rate of genetic development can be improved with high quality sperm.1.5 Statement of the problem Despite a number of radical measures that have been taken by the federal government to increase poultry production in Nigeria in the last few decades, however, this expectation has yet to be realized as poultry production (e.g. poultry, egg, etc.) lags behind other livestock products (Afolabi,2007). Nigeria has the highest poultry farms, as well as the highest rate of human participation in poultry farming in Africa, but despite this, various studies have shown that most of these farmers manage their farms with very unsustainable profits due to lack of technical experience, poor production practices, and poor management that prevent most farmers from quitting the industry (FAO ,2010). Due to the federal government's food security policy, many people in Nigeria have started producing poultry, ranging from backyard to commercial production. As the population increases, there is a need to increase the broiler industry, as well as to meet the demand for broiler meat. Meat broilers are known to produce quality meat than red meat, the average Nigerian diet lacks the quantity and quality of animal protein to maintain a normal life, but past efforts to address this problem have not yielded the desired results. The decline in industrial poultry production is also due to the lack of MLC (day chicks), substandard feed, problems of effective tverts and the availability of medicines and vaccines, insufficient capital and the necessary technical skills in poultry management and many other problems affecting poultry farming in Nigeria. However, for the broiler industry to function optimally, it is necessary to improve its production methods in order to increase the production of meat and eggs in However, some broiler farmers are now adopting the AI method in order to improve their production as well as the income generated from the enterprise. Therefore, this study aims to address the following problems: What is what are the socio-economic characteristics of broiler farmers using artificial insemination? 'What are the costs and incomes of broiler farmers using artificial insemination? What is the technical effectiveness of broiler farmers using in vitro fertilization? What are the determinants of inefficiency of broiler farmers using artificial insemination? What are the limitations faced by broiler farmers using in vitro fertilization? 1.6 The main purpose of the study is to study the economic production of broilers using in vitro fertilization in the state of Oyo, Nigeria. Specific goals include 'describe the socio-economic characteristics of broiler farmers using artificial insemination in the field of research' to estimate the costs and incomes of broiler farmers through in vitro fertilization ' to determine the technical efficacy of broilers farmers using artificial insemination ' to identify factors affecting the technical inefficiency of broiler farmers using in vitro fertilization in the study. 'explore the limitations facing broiler farmers, Using artificial insemination in the study area1.7 The rationale for the study is Nigeria has the largest number of poultry farms in Africa, despite the large number of farms in Nigeria, a parallel record of the Nigerian Poultry Association (PAN) shows that Nigeria currently produces more than 553 million tons of eggs and 708 million tons of broiler meat per year, despite this volume, Nigeria is far from the demand in the domestic production of broilers (FAO , 2010). The study as being proposed to evaluate broilers farmers using in vitro fertilization is timely as it will show the extent of profits that can be generated by improving poultry production. This study will also highlight cost-effective measures to improve efficiency, the study is also important because it will provide empirical indicators of the profits of broiler farmers using artificial insemination Finally, this study will also stand for the benefit of the country in its desire to ensure self-sufficiency in poultry production, as well as improve its methods of poultry production. Many studies have been carried out in the field of poultry farming, but few of them are working on artificial insemination in the production of broilers (Atunbi and Sonaiya, 2009). Therefore, it is extremely important for the Nigerian poultry sector to improve broiler production in order to become an active player in the industry, as in the rest of the developed world.1.8 The study plan was organized in five chapters. In the the chapter focuses on the introductory aspects of poultry production in broiler production, and the second chapter examines the review of relevant literature, Chapter 3 presents research methodology and analytical tools used. Chapter 4 explains the findings the study finally gives a summary of the findings, conclusions and recommendations. CHAPTER TWO LITERATURE REVIEW 2.1 Broiler-produced World Broiler industry has been a very dynamic industry due to the nature of broiler birds. Van der Slya (2004) stated that broiler birds were typical with unprecedented growth, in his research he also explained the trends in the growth of broiler production in the world. It depicts the world making 6.5 billion in 1961, in 1990, more than 27 billion 35.3 billion in 1999, while more than 60 billion in 2012.FAO, (2010) reported that the production of broilers in the world is growing faster than any other meat production in the world, especially in developed countries that are active participants in the production of broilers. Since the 1960s, global production of broiler meat has been increasing. This upward trend can be expected to continue because of its inherent feed conversion efficiency and lower production costs associated with intensive poultry production. This efficiency of production is particularly useful for developing countries, which tend to have limited agricultural resources but a growing and often poor population. The decline in poultry prices and income growth are attributable to an increase in per capita poultry consumption, which is sensitive to both price changes and changes in income (Taha 2003). Significant growth in poultry production and consumption (especially broiler chicken) in developing countries has important implications for the global trade in all meat products, as well as feed and related resources (Landes et al. 2004 Taha 2003). 2.2 Restrictions on broiler production 2.2.1 Fatokun Climate Restrictions (1996) reported that climate was a factor in the development of broiler production in Nigeria. Some breeds of broilers are imported into the country from a temperate region, most of these birds work below optimal levels because of differences in climatic conditions. The climate has a limited impact on livestock production through its associative effects of humidity, temperature, precipitation and air movement, and its indirect effects Although, all livestock are subject to environmental stress in the tropics, the bird appears to be less susceptible than mammals. Previous comparisons between temperate and tropical environments have shown that the bird shows the most comparative performance between the two environments than any other class of livestock, but their figures are not up to standard as a result of climate impact, (FAO,2012). 2.2.2 Economic difficulties, according to Adnia, 2000, the most important socio-economic constraints affecting broiler production in Nigeria are lack of capital, illiteracy and lack of technical expertise. The amount of capital in broiler production is, to some extent, one of the the size of the operating units, since broiler farmers with sufficient working capital tend to make better use of other production factors, thereby increasing their holding than relatively poor farmers. However, most broiler farmers in Nigeria do not have sufficient capital to invest in large-scale production (Essang, 1996). The shortage of agricultural credits is partly due to the country's low level of agricultural production. Even with the creation of more agricultural and commercial banks in the country, most broiler farmers still face limited credit opportunities, not only because of the lack of acceptable collateral, but also because of the general uncertainty and serious risks associated with broiler production. 2.2.3 Technical limitations, according to Olayemi, (2005), the potential for the development of technical technologies in accordance with environmental and economic conditions, is the most important, which explained the growth of broiler production in Nigeria. He also stressed that the continuous flow of new technical knowledge and the flow of inputs, in which new knowledge is embodied, is a prerequisite for modern broiler production. Another breakdown in their study identified other limitations that affect broiler production, they include capital inadequacy, poor management, inadequate technical know-how and poor disease control Persistent problems for the breeder's broiler manufacturer are providing high-quality products for sale at a price competitive with other food sources. Over the past two decades, the industry has become very successful in incorporating technological advances in genetic selection, nutrition and disease control into its management scheme. Another important factor in the effective management of the breeding of broiler birds has not changed since the creation of the industry, recent advances in artificial insemination technology now provide alternative methods for use in the primary breeder industry segment. 2.3 Broiler Breeder Managements Management's goal is to provide the conditions that ensure optimal bird performance (Bell and Weaver, 2001). Given reasonable conditions, brooding chickens are very successful in hatching their chicks, but good hatching using artificial incubation (both large and small) relies on good management in regards to temperature, humidity, ventilation, feeding and vaccination. Appropriate conditions for reverie, cultivation and styling must be ensured. It is also important to ensure that recommended vaccinations are given and appropriate nutrition programmes are used. In developing countries such as Nigeria, it is often difficult to achieve optimal birds due to less optimal living conditions and lack of quality feed, vaccines and skilled personnel (Weaver, 2001). A highly genetic hybrid is often used in developing countries, but Well suited to a tropical environment. Diseases of bird transmission can be either horizontally from a sick bird to a healthy or vertical by transferring the pathogen from the chicken to the chicks through the eggs. Horizontal spread can be when contact between birds, air contaminated with garbage, food or water in contact with sick birds (Atteh, 2004). Most important poultry diseases include coccidiosis, smallpox birds, Newcastle diseases, Infectious Bronchitis, Infectious Diseases of Bursa, Small Birds, Salmonella Infections and Mareca Disease, etc. 2.3.1 Temperature farmers must compensate for undesirable climatic conditions by manipulating control systems or changing the house to meet the health and environment needs of birds. Environmental extremes (heat and cold stress, excessive or inadequate ventilation, poor air quality) can be managed if the design of the poultry farm is suitable for conditions. Broiler birds require sufficient space, sufficient feed to meet their nutritional needs. The thermal requirements of broilers change with age, and the recommended ambient temperature may be lower than birds would prefer at an early age when stocking density is low. The risk of cold stress is low after the thermoregulatory ability is fully developed in birds. The risk of heat stress increases with age and stocking density as heat production increases and as the space between birds decreases (and therefore their ability to lose heat) (Reuters and Bessie,2000). 2.3.2 All broiler homes need some form of ventilation to ensure adequate oxygen supply, carbon dioxide, other waste and dust. In commercial operations, minimal ventilation is often practiced in colder climates, but mostly not in tropical (Glats, 2004). In large-scale automated operations, the correct distribution of air can be achieved through a negative pressure ventilation system. Because of the nature of broiler birds adequate ventilation is very important for them when the chicks are very young or in a cooler climate the air from the bays should be directed to the roof to mix with the warm air there and circulate throughout the barn. With older birds and in warmer temperatures, incoming air is directed to birds and helps keep them cool (Glats, 2004). Tunnel ventilation is the most effective ventilation for large houses in hot weather, this system is popular in hot climates, exshaust fans are placed at one end or middle of the shed and air is stretched The length of the house removes heat moisture and dust. 2.3.3 Wasper Nutrition Management, (2009) highlighted on the importance of nutrients in feeds given to broiler he further explained in his study that because of the nature of broiler birds, protein and energy content should be correlated with their different stages of life, which include the chicken, producer and breeder stage. Protein levels in feed are very important, as it can affect the weight of the body and overall performance of broiler birds, and the level of protein in the feed should vary depending on the season (Hapoa, 2003). Figure 4. Showing the link between the protein content of the feeder and the chick's weight (Hapoa,2003) further showed that the protein and energy levels in the broiler feed should be clearly defined, he cited the example that a broiler feeder with energy of 2750Kcal/Kg should have a protein content of up to 15 percent (15%). as it can reduce fertility and hatchability, it also clarifies that the same can be felt when a protein level is lacking in feed, bt it has concluded that there is a need for a balance between the two continuum. that optimal energy suitable for broilers for proper growth between 440-480kcal/bird/day, this is equivalent to 160-175g/bird/day at 2750Kcal/kg. Simon, (2002) Explain that the necessary attention should be paid to the composition of fat, especially unsaturated fatty acids, he stated that essential fatty acids are necessary for the development of embrayo, the immune system thereby affects the quality of chickens . Simon, (2002) also reported that there are some macro elements that include calcium, phosphorus and sodium, these macro nutrients are very important in the formation of the shell, The bone there that led to chicken quality.2.3.3.1 Effect of feed distribution on Chick quality Bekan, (2007) reported that malnourished broiler chickens can have a big impact on the quality of chickens especially at an early stage of their lives .the chicken may have an impact on chicken exotic hybrid herd parents start producing at a faster rate than in the past, and therefore egg production increases over a short period of time. In his work, he also explained that the distribution of feed during this period did not necessarily increase in line with this trend of egg production. The Avagen Manual stated that the low distribution of feed by young commercial breeding herds was shown to jeopardize the transfer of nutrients to the egg, which could lead to an increase in late embryonic death, increased viability and homogeneity of chicks (Aviagen Ltd 2002). In the Leeson study (2004) broiler breeders fed different feed levels through the peak range from 140 to 175 grams. Several studies have shown that the nutritional components of feed feed Breeders are a major determinant of chicken quality and product performance when management procedures are strictly enforced. This puts more emphasis on the nutritionist ensuring the correct diet nutrient density and herd manager to ensure proper consumption of poultry feed in coming and going through the production period. The most important aspects of broiler production are the management and feeding of breeding herds, as they can have a significant impact on reproductive performance, including the number of eggs produced, the fertility rate, and the percentage hatchability (Adeolu,2000). Experience has taught us that the closer we respond to the actual nutritional needs of birds, the more they grow and the more efficiently they use their feed. Thus, the savings from a three to four phase feeding system will be increased by increasing efficiency. Food restriction is commonly used in broiler breeding stock to limit weight gain and optimize reproductive activity. Slowing early growth can improve the quality of leg bones during the important first 3 weeks, when the bones appear to be most susceptible to the initial development of lesions (Lilburn et al., 1989). This slowdown in growth can be achieved by feeding the starter diet to lower nutrient density (e.g. 11.5 MJ ME, 190 g CP/kg). Feeding a diet of higher nutrient density during later periods of growth will allow birds to catch up with lost body weight, although full compensation is easier to achieve in birds grown in old age. However, birds grown in this way tend to show lower cases of leg abnormalities. Thus, food restriction programs allowing for more growth during the limitation period (up to 75% ad libitum growth) less (Su et al., 1999) stated that good nutrition is essential for nurturing healthy broilers, reducing early growth of broilers through qualitative or quantitative dietary restriction or by providing nutrition rather than declaring libitum can reduce the incidence of foot disease or cardiopulmonary disorders. The use of vitamin D metabolites as dietary supplements may play a role in promoting foot health. Broiler nutrition is more important than in other livestock species for many reasons ' digestive process quickly, feed intake is voided within 2 to 3 hours ' Breathing and circulation faster ' Body temperature 8-10F higher than most other livestock species ' They grow faster and mature at an earlier age than other types of 'the ability to use roughness is minimal' The main purpose of feeding broilers is to make it possible to low quality feedtuufs in high quality animal protein for human consumption. In this respect the broiler out-performs all other kinds of livestock with current efficiency at close to 2:1 (Atteh, 2004). The economic importance of feeding broilers becomes apparent when it that 55 and 75% of the cost of producing eggs and broiler meat is related to the cost of feed. Broiler is usually fed a starting diet (0-4 weeks) and a finishing diet from 5-8 weeks. It is recommended that the broiler starter be in the form of mashed or crumble. Finisher diet should be served in the form of pellets, studies have shown that birds eating pellet diets are more effective than those on a mashed-up type diet. There is general agreement that as the energy content of the broiler diet increases the less feed is required to achieve market weight, and feed conversion improves, however, it is necessary to weigh the increase in the cost of such feeds with increased growth and feed conversion to make sure it is profitable. Using calorie-related protein ratios is useful in arriving in realistic nutrient intake. For broilers recommended calorie, protein ratio 136-141, while for producers of broilers and finishers, the ratio is 154-158 and 167 -176 respectively. 2.3.3.2 Nas Meat Chicken Nutrition Program (1999) assesses peak feed consumption and weight gain in broiler birds. In their report they look at the correlation between feed consumption and weight gain, the table below shows a correlation between feed consumption and weight gain in broiler birds. Table 3. Feeding programs and weight gain in Broiler Birds Age (weeks) Type feed consumption (weekly on poultry) Live body weight kg pound-pound. 1 Chicken Starter 0.13 0.29 0.15 0.33 2 Chicken Starter 0.28 0.62 0.36 0.79 3 Chicken Starter 0.47 1.7 02 0.65 1.43 4 Chicken Maker 0.67 1.48 1.03 2.2 6 5 Chicken Manufacturer 0.85 1.87 1.46 3,21 6 Chicken Maker 1.07 2.36 1.91 4.4 21 7 Chicken Finisher 1.18 2.60 2.36 5.20 8 Chicken Finisher 1.30 2.86 2.79 6.14 9 Chicken Finisher 1.41 3.11 3.20 7.03 Total 7.36 16.20 Source : HTN 1994 (National Academician of Science, USA)2.4 Litter Management (Bell and Weaver, 2001) identified litter as materials used as bedding in poultry farms so that the floor of the house absorbs fecal waste from birds and makes the floor of the house easy to manage. Garbage management is very important in poultry farming, most natural mating systems usually occur in a deep garbage system, so knowledge about garbage management is very important. An important feature of this system is the presence of debris on the floor, a good material for garbage should be the absorption of water provided good insulation from heat stress, light weight, dry quickly absorbs the minimum atmospheric water and be inexpensive. In Nigeria, litter materials with some or all of the above qualities include wood shaving, corn cob, sliced straws and peanut enclosures, litter originally 5-7 cm thick for chicks and 10-15 cm thick for adult birds designed to prevent pathogens in by mixing with litter, to perform this function well well should be regularly washed with litter. The presence of litter in the litter provides a suitable environment for the growth of microbes that produce the so-called Animal Protein Factor (APF), which includes vitamin B12. Well-managed litter has a crumbly consistency, a low concentration of pathogens and is relatively free of ammonia (Atteh, 2004). Well-managed deep debris stored in dry condition without wet sports around the water has the effect of sterilization, the level of coccidosis and infestation of the worm much lower watered stored on good deep garbage than with birds (or chickens) in bare yards and bare floor shed especially where water spill is allowed (Dagir, 2000). The effects of poor garbage management have been further discussed (Atteh, 2004) poorly managed debris either too dusty or too wet, forming a ball when compression in the palm, the concentration of ammonia will also be high, leading to a tracheitis that pre-recycles birds to other respiratory diseases, it has also been found that when the concentration of ammonia is too high, it can lead to a delay in puberty. Wet litter contributes to the growth of aspergillus, coccidian and worms, while old litter can also be a means of transmitting diseases such as pulorium, infectious bronchitis and Newcastle disease. For a well-managed litter house, you need to start with enough rubbish, and it is also recommended that the rubbish be turned off with rakes at least three times a week to prevent boredom, which can lead to a blemish of habit, some feed can be sprinkled on litter to entice the birds to scratch for it and inadvently helped to mix the garbage. 2.5 Lighting management programs for broilers vary greatly from company to company, and also depend on the type of bird used, the type of shelter (naturally ventilated compared to a controlled environment), geographic location and season. Where light can be removed from sheds, birds are usually grown at low intensity (5 to 10 lux) lighting to keep them calm and prevent feather pecking during early reverie, 25 suites used to stimulate feeding (Lewis and Maurice,2006). While it is important to know the intensity of light that falls on each bird, it is the duration of exposure to light per day that changes the age of the bird at the time when the first egg is laid. During the day, egg production cannot be started for less than 11 hours. Therefore, during the upbringing, where possible, maintain a daily duration of about 8 hours. The minimum light intensity required for egg production is 0.1-0.2 feet of candles (1-2lux) and must be available for at least 12 hours each day (Atteh, 2004). Nikais, (2002) stressed the importance of light intensity the life of breeders' broilers, he explains that the intensity of light plays an important role in the development of the reproductive system in broiler birds of birds the difference in the length of the day and the intensity of light between the phases of education and styling is the main factor responsible for controlling and stimulating the development of the ovaries and testicles (Lewis and Morris, 2006). The reaction to the increase in the length of the day and the intensity of the lighting depends on the body weight profile during the upbringing, which in turn depend on the nutrition of the regim. The effects of light are mainly on the rate of puberty and egg production. With the exception of the first days, problems can occur if broilers get less than 2 hours of darkness per day. Modified lighting programs that provide shorter (12-16 hours) photoperiode between the ages of 4 and 14 days appear to provide benefits to broiler welfare without necessarily compromising performance. Brighter lighting (e.g. over 100 lux) is essential for stimulating activity and is essential for survival in the first week of life. There are various welfare problems at light intensity below 20 lux. Equivalent light intensity in suite units is 25% lower with fluorescent than with incandescent bulb (Prayito et al, 1997). 2.6 Stocking density Reuters and Bessay (2003) stated that there was a clear downward trend in the rate of growth with high density stocks in broilers. (Blokhuis

Vander Haar,2009) also stated the impact of stocking density on growth rates. He stressed on the need for adequate ventilation for birds, as this can lead to heat dissipation, which is one of the main reasons for poor growth when broiler birds are highly stocked. The effect of stocking density on feed conversion and mortality is not consistent with experimental reports. It seems that poor feed conversion and high mortality occur only at the same time as other stressors such as heat stress. Pathologies (breast blisters, chronic dermatitis and foot disorders) are the result of high stockings and the presence of infectious agents and hock born has been shown to be worse at 30-40 kg/m2 than at 24 kg/m2 (Gordon,2000). Studies have shown that the ability to walk strongly affects 45 kg/m2 and is worse at 32 kg/m2 than 25 kg/m2. It has been found that increasing stocking density reduces the behavioral activity of broilers. Studies have shown that locomotive behavior, pre-installation and overall activity decrease, and resting disorder increases at higher stocking density compared to 25 and 30, 24 and 32, 28 and 33 and 30 and 36 kg/m2. All these findings suggest poorer well-being at higher stocking density (Bolten-Thompson,2003).2.7 Housing management in modern poultry farming is an important factor in the main component of the initial investment, in modern poultry farming structure is built and developed taking into account the welfare of birds and the efficiency of production (Weaver Weaver Bhagwat, 1996). Broiler housing in rural areas is in its infancy and surveys have shown cases where housing or housing has not been provided (Huchzermeyer, 1990), (Atunbi and Sonaiya, 2006). Research on the economic effectiveness of housing broiler birds in rural Africa, however, has been reported that where housing is provided village broiler chickens houses are made from local materials such as wood, clay brick, sugar cane stalks, bamboo and cereal ovens (Atunbi and Sonaiya, 2006). Tauson, (2005) listed four housing systems generally found to follow among broiler keepers. The type of housing adapted largely depends on the amount of land and capital available A. Free range or extensive system B. Intensive system C. Semi-consensus system2.7.1 Free range system or extensive system This method is the oldest of all and has been used for centuries by common farmers where there is no shortage of land. This system allows enough space for birds on land where they can find a noticeable amount of food in the form of herbs, seeds and insects provided they are protected from predatory animals and infectious diseases, including parasitic infestation. Atteh, (2004) explains this housing system as full freedom of movement and exposure of birds to the sun and pastures while shelters are provided for sleep at night. In this system the birds give several grains in the morning and they can collect for supplement freely. When provided shelters are made from a variety of materials from local trees or shrubs, the birds in the family herd are usually placed overnight in the shelter and released in the morning for food during the day (happars et al, 2009). Figure 5: Free range housing system2.7.2 Intensive system In this system of birds are limited in the house completely without access to out-of-prison, and it is usually accepted where the land is limited and expensive. This was only possible by allowing direct sun rays on the floor of the house, so that the par to the windows are removable, or either fold or slide down like a train window to allow the birds to have access to ultraviolet rays. Within the intensive battery cell system and Deep Litter methods are the most common.2.7.2.1 Battery Cell System Is the most intensive poultry system and useful for those with only a small amount of area at their disposal . Currently, in large cities hardly a bird lover can save open land for the cultivation of birds, for all such people this system allows farmers to keep birds where the land is scarce. Battery cells is the most popular housing system for laying chickens used in North America, the cell consists of a small wire unit with access to feeders and water. In this system debris falls through the belt or into the pit for removal, this system also provided a number of for birds that include proper hygiene, hygiene, exposure to diseases and parasites due to feces removal, good air quality and the availability of clean eggs (Appleby 1998, Ducan 2000). There are drawbacks, and in this system, space is very limited in battery cells and birds do not have room to perform important behaviors like nesting, poor bone strength due to cell fatigue is also one of the flaws of the cell system (Baxter, 1994). In the battery system each chicken is limited to a cage just large enough to allow very limited movement and allow it to stand and sit comfortably, the usual area is 14x16 inches and the height is usually 17 inches, the floor has a standard strong galvanized wire installed on the slope from back to front, so that the eggs can roll out easily, under the tray to fall. Both the food and the water vessel are located outside the cell, many small cells can be combined together if necessary, it can be multi-storey, the whole structure must be made of metal, so that no parasites will be sheltered and through disinfection can be carried out as often as required. Provided that cell batteries are installed in a place that is well ventilated and illuminated rather than hot, and that the food provided for birds meets all nutritional needs, the system has proved very successful in tropical countries. Feeding birds in cages should be carefully considered as birds are completely dependent on puree for maintenance and production. To supply vitamins A and D, cod liver oil, yeast powdered milk powder is useful/and fish or other animal proteins, as well as balanced minerals and some forms of sand should be available 2.7.2.2.2 Deep litter system According to Atteh, (2004) a deep garbage system consists of a fixed house usually without windows in temperate regions and open sideways in tropical areas. An important feature of this system is the presence of debris on the floor, good material for garbage should be a water absorbent, provided good insulation from heat stress should also be light in weight, dry quickly absorbs the minimum atmospheric water and be inexpensive. In Nigeria, garbage materials with some or all of the above qualities include shaving wood, corn cobs, sliced straws and peanut casings. The litter should initially be 5-7cm thick for chicks and 10-15cm thick for adult birds, this is necessary because it prevents the accumulation of pathogens when mixed with litter, to perform this function well the litter should be turned regularly mixed with litter. The presence of litter in the litter provides a suitable environment for the growth of microbes that produce the so-called Animal Protein Factor (APF), which includes vitamin B12. Well-managed litter has a crumbly consistency, low concentration organisms and relatively free of ammonia (Atteh, 2004). Well-managed deep debris, which is stored dry, prevents infection infection and a warm infection. The effects of poor garbage management have been further discussed (Atteh, 2004), poorly managed debris either too dusty or too wet, forming a ball when compressed in the palm, the concentration of ammonia will also be high, leading to tracheitis, which pre-disposses of birds to other respiratory diseases, it has also been found that when the concentration of ammonia is too high, it can lead to a delay in puberty. Wet litter contributes to the growth of aspergillus, coccidian and worms, while old litter can also be a means of transmitting diseases such as pulorium, infectious bronchitis and Newcastle disease. For well-managed litter at home, you need to start with enough garbage, and it is also recommended that the garbage be turned with rakes at least three times a week. To prevent boredom, which can lead to vice habits, some small feed can be sprinkled on litter to entice birds to scratch for it and unentadveniously helped to mix litter.2.8 Semi-intensive system of birds, grown under this production system have limited freedom, a system characterized by the presence of a fixed unit that acts as a shelter, and a number of fenced runs attached to a fixed unit, a fixed unit can be a fixed unit. Birds stay in the house and have the freedom to move in runs to clear for insects and pastures during the day and return to a fixed unit during inclement weather and for overnight stays in the evening, birds can be given less feed and allowed to increase this with insects and pastures (Atteh, 2004). Petitte, (1990) explains a semi-vague system as a system that combines the pros and cons of both an intensive and extensive control system. For commercial broiler production, the system is out of date, as the density of stockings depends on the quality of pastures available in mileage. A semi-intensive system, a space of 20-30 square meters should be allowed on every bird outside to run 2.9 Artificial insemination artificial insemination involved the introduction of sperm in female egg methods, apart from natural mating, it is one of a group of technologies (ART) in which offspring are generated by facilitating the encounter of gametes (spermatozoic and oozytes). Artificial insemination attracted considerable attention and was widely used in poultry farming. The process of in vitro fertilization has been considered by many researchers, which include Sexton (1998), Lake (1995) and Donoghue (2006). Burroughs and quinn (1937) were the two main pioneers who developed a method of abdominal massage and pressure to collect sperm. In their research, they explain the AI process, a procedure involving sperm collection from males and fertilization in female eggs, the main use of AI in heavy heavy fertility is usually low under the mating pen. It is also practiced when layers are stored in cells. Excellent fertility was obtained through artificial insemination in many cases than obtained by natural mating (Wishart, 2001). 2.9.1 The process of artificial insemination in the production of Broilers Brillard, 2003 explain the following as an important process in artificial insemination, These include the 'Training Men' Training Equipment' Collection (Milk) Sperm From Men's 'Semen' Sperm Dilution and 'Sperm Deposation in Female Vagina 2.9.1.1.1 Training Men Used for A.I. Should Be Healthy and Free from Any Physical Anomalies or Disability, They should also be supplied with high quality feed balanced diets in their diets actual collection will take place (Brillard, 2003). It was also established by Walser, (2002) that a male bird can be housed in individual cells, but they need to have enough space to be able to move, 45 centimeters wide, 60 centimeters deep and 60 centimeters high were recommended as a soyte cell size. Their various reports also found that feed and water containers should hang outside the cage. Brillard in his report further explained that male birds during sperm collection should be treated gently. Dukan, (1996) also suggested that during sperm collection, it is important that visitors should not be allowed into the home pen as this can cause birds to fear, and this can also lead to sperm being removed. It is a good practice to know that men are placed in close proximity to chickens, so the time between harvesting and insemination is minimized as it will prevent sperm to be cold, this is of paramount importance because when sperm is too cold it can reduce fertility. It was revealed by Morgan, (2005) that herds should be fumigated quickly as to reduce the incidence of external parasite especially lice. He also reported that for easy sperm collection, the feathers around the male organ should be trimmed. In his study he also emphasized the importance of classifying male birds before insemination began in particular to the herd, as it would allow the continuous use of sperm before such a herd became spent. 2.9.1.2 The preparation of artificial insemination equipment equipment is simple. The image below shows the tools most commonly used in fertilization of a small number of birds. More sophisticated equipment used when produced on a large commercial scale, they include injectable cannons, collection of aspirators and temperature containers of sperm, syringe, trolley, bucket, etc. Rice some of the artificial insemination equipmentmany researchers talked about the equipment needed for artificial intelligence, they include (Brillard, 2003) , (Duncan, ,,,Duncan, (petite et al, 2000), in their various studies they have the same finding that showed that before the start of artificial insemination there are some materials that are needed that include: a syringe, a connecting tube, a tube and a funnel, a trolley, an injectable cannon, an aspirator, etc. , inserminator, a person changes the advice and finally the person opening the ventilation so that the injector can inject sperm into the ventilation.2.9.1.3 Sperm collection from men's in vitro fertilization technique begins with sperm collection. It has been found from the Indian Poultry Association (IPA) that, the amount of sperm in male broiler birds can be increased if they receive feed that supplies them with all the necessary nutrients, it has also been collected from their reports that garlic and sperm fort can be used to increase sperm volume. Burton, (2006) shows the importance of limiting feed from broilers to male birds, in his study he made it clear that birds must be limited from feed for twelve hours to collect sperm in order to have clean sperm or avoid sperm being contaminated. Brillard, (2003) suggested that the should be held with the left hand and allows the head to protrude under the arm. The rooster is then massaged with its right hand to stimulate ejaculation. The fingers of the right hand spread at the beginning of the stroke, but gathered at the end of the stroke to converge on the ventilation. The stroking of the males continues until the thumb and forefinger converge in the ventilation pipe. This incentive causes the trained male to prevent or perform in the ventilation area. When this stroking occurs, the rapid movement of strokes will cause the sperm to be ejaculated from the male. The pressure is applied to the thumb and index finger both inside and down at a point just above the ventilation. Figure 7: Collecting sperm from male broiler BirdField Suevey,20142.9.1.4 Precautions when collecting the seed of 'males' birds should be separated from the females at least a week before attempting to collect sperm to prevent a reduction in sperm volume. Feathers around the ventilation should be trimmed, as this will facilitate a light collection of sperm. ' Sperm collection must be done at least three times a week. Contaminated sperm should not be used during the collection process. 2.9.1.5 Grade Seed Mistle, (2003) reported that poultry ejaculate is characteristic of high concentration and low volume. The amount of sperm obtained while artificial harvesting varies quite, the sperm are mixed with the fluid from the engorged phallic apparatus and for a while mixed with waste from the digestive and urinary tract It is reported that the contribution of these factors to the overall composition of sperm is the smallest. The ability to fertilize sperm depends on its quality. Sperm can be estimated based on its volume, sperm motility, pH, sperm concentration, relative percentage of live dead sperm. (Bosovers-Nikais, 2010). Good quality chicken sperm pearly white and opaque. It has also been revealed (Maurice,2006) that the volume of sperm ejaculation is about 0.5 -0.75 ml, with a sperm concentration of about 4 billion per milliliter. 2.9.1.6 Sperm dilution begins to lose its potency after its collection, fertility drops dramatically when sperm is stored for a longer period of time without fertilization (IPA, 2001). Their report also found that sperm should be used within 30-45 minutes of harvesting to avoid fertility being reduced. Successful short-term preservation of unfrozen avian sperm requires the collection of pure, quality samples, which should be handled with care after its collection. With most dilutions, bird sperm survive best when kept cool (5-15?? Fertility levels obtained with frozen chicken sperm are high enough to allow the preservation of selected germ plasma by poultry breeding organizations, but too low to allow widespread commercial use. (IPA,2001) has also been informed from their studies that concentrated sperm can be diluted so that large numbers of birds can be fertilized. However, sperm can be used directly without dilution, it has also been explained that A.I. should be done as early as possible after dilution, because fertilization is reduced for storage. Mine should be added in a ratio of 1: 2' 4. 2.9.1.7 Fertilization Seeds The recommended dose for undiluted, good quality sperm to be used is 0.05 ml, but for a diluted dose of sperm varies from 0.03 to 0.06 ml/every 3' 4 days to maintain good fertility (Brillard, 2003). The IPA report (2001) explained the importance of in vitro fertilization, and their report stated that the best time for in vitro fertilization in broiler production ranged from 2.2 ppm to 4.0pm, and found that the timing of in vitro fertilization was an important factor that affects fertility. A report from McDaniel and Sexton, (2002) suggested that reduced fertility is usually tested in inseminated chickens in the morning. These authors also conclude that this effect of time in in vitro fertilization is relative to the time of oviposition. The egg in the upper egg during fertilization seems to drastically reduce fertility. Late in the evening or early evening inseminations therefore seem ideal. However, such a time frame fit the most efficient workload on the farm, and the treatment of breeders during early shell calcification (late at night) can lead to more body-checked eggs that are rarely hatch due to reduced porosity of the shell. The process of artificial insemination requires two people. One man with his left hand holding the lower thighs of the chicken and right hand puts pressure on the abdomen below the cloaca to prevent the vagina. As the vagina is opened the second person carefully inserted a syringe into a depth of 3 cm into the eggs and the sperm released. Shortly after fertilization, the optimal amount of sperm enters the primary storage (sperm storage glands) at the vaginal junction of the uterus. Sperm is rarely found in the storage site infundibulum, if sperm is injected into the egg so that it passes the uterus' vaginal glands, finally fertilization of the egg occurs in infundibulum. In most cases, c after one mating or fertilization, the eggs will remain fertilized for 3 to 4 weeks, but fertility will be reduced over time. When preparing for fertilization of the female, the egg should be exposed. In fertilization of the female; one man holds the bird in both legs in a horizontal position with his head to him and under his right hand. The second person inserts the index finger of his left hand into the ventilation and, the egg hole is located. The syringe is inserted into the ventilation and into the egg and finally the sperm is released. Adezen,(2004) suggested that female birds for fertilization should be fertilized with 0.05 ml doses of sperm, which must be three to four times a week to be on the safer side. In his study he also explained that birds should not be stressed before fertilization, and also when there are no obstacles in the uterus, in others to have a good result. Fertile eggs can be produced by artificial insemination, and if done correctly, fertility levels can be as high or higher than those obtained with natural mating. The man collecting sperm to keep the bird on the hip, which is then stimulated by stroking gently the back from the middle to the tail fether, while at the same time stroking the belly to the vent on the other side. After this several times, the pubic bone massage lightly with the index finger and thumb, it causes the male bird broiler to produce sperm through ejaculation along the base of the phallus, which the second man is being collected through a suitable funnel. Figure 8: Artificial Insemination Broiler BirdsField Survey,2014CHAPTER THREE METHODOLOGY 3.1 Area Study conducted in Oyo. The state of Oyo was established in 1976 from the official western state .it's capital was located in Ibadan. The state of Oyo consists of 33 local government districts. The state of Oyo covers approximately an area of 28,454 square, it is limited to the south of Ogun State, in the north of the state of Kwara to the west it is partially limited to the Ogun State and partly to the Republic of Benin, while like the east east Osun state. It has a population of 5,591,589 (Census Report, 2006) with a population density of 211 people/sq km. The main cities and towns include Ibadan (metropolis), Erava, Igbo-ora, Igboho, Ilora, Isain, Keshi, Ogbomoso, Okejo, Oyo and Saki. Christianity and Islam are the main religions in the state of Oyo, although a certain amount of traditional religion is also practiced. The main ethnic group in the state of Oyo is the Yoruba people, and Yoruba is the only indigenous language spoken in the state. The state has two different climatic seasons; The climate is equatorial, especially with dry and humid relatively accompanied by high humidity. The dry season began from November to March, and the rainy season began in April and ends in October. The average temperature d fluctuates between 25?? c(77.0 ?? F) and 35?? c(95.0 ?? F), almost all year long. This climatic state, as well as fertile soil, make it favorable for livestock and crop production (OYO, MANR), the Department of Agriculture and Natural Resources of the State of Oyo.3.2 Data sources and sampling procedures Data for this study were collected from both primary and secondary sources. The initial data were obtained from a cross-examination of 60 registered broiler farmers using in vitro fertilization in their various farms, who were randomly selected because of their active participation in in vitro fertilization in broiler production. The data used for the study were collected from a schedule of interviews and a well-structured questionnaire, information sought included socio-economic characteristics of farmers, input and production data, production efficiency and the limitations they face. The secondary data source was derived from the Project Coordination Unit (PCU), the annual report of CBN, the Federal Statistical Office (FOS), the Federal Department of Agriculture (FDA), the PAN (Nigerian Bird Association), the Internet and journals. 3.3 Data analysis of the Target population in this study was recorded by poultry farmers, as reported in the Nigerian Poultry Association (PAN), the head of the State of Oyo. The sample method was used in the selection of respondents at one stage; this included the random selection of 60 broiler farmers using artificial insemination in the State of Oyo based on information from the Nigerian Poultry Association (PAN). 3.4 Analytical methods ' The data collected were subjected to frequency and percentage analysis, so that the socio-economic characteristics of farmers were clearly presented. Gross margin analysis was used to estimate the costs and profits of broiler farmers using in vitro fertilization. Were some profitability ratios are used. This includes determining the gross profits of farmers, returning to farm and labour management, operating ratio, gross ratio and return on capital invested by farmers. Gross margin is the difference between gross gross (Gross Farm Income, GFI) and economic analysis of broiler farmers using artificial insemination in the state of Oyo. Total variable cost (TVC). It is a useful planning tool in situations where fixed capital is only a small part of agricultural enterprises. GM - GFI ' TVC Where GM - Gross Margin, GFI - Gross Farm Income (Gross Value of Products), TVC - Total Variable Value. A return to farm and manpower management - imputed gross profit costs - is a profitability factor that measures the overall success of a farm. The lower the ratio, the higher the yield per naira. GR - TFE/GI Where GR - Gross Ratio, TFE - Total Farm Costs and GI - Gross Income Ratio is directly related to the use of variable farm input data. The lower the ratio, the higher the profitability of the farming business. OR - TOC/GI Where operating ratio, TOC - Total Operating Costs and GI - Gross Profit Capital Profit, Invested is defined as gross margin divided by total variable value of RI - GM/TVC Where RI - Return on Capital Invested, GM - Gross Margin and TVC - Total Variable Value ' To Know That We Brotile Farmers Are Using In vitro The original shape of the model will be written this way: Yi q f(Xi, ') (Vi ' Ui) Where: Yi was the output of the ith farm Xi was k x l was the vector of the input quantities of the farm ith ' denotes the vector of unknown parameters to be evaluated by Vi Was random variables, which are supposed to normally be distributed N (0,'v2). It is assumed that this can be explained by the error of measurements and other factors that are not under the control of farmers. Cobb-Douglas production model of the boundary that was used for this study was presented as follows: lnY 'o '1lnX1 ' '2lnX2' '3lnX3' '4lnX4' '5lnX5' 6lnX6 ' Vi' Ui, where ln'natural logarithm i'it h sample poultry farming Land (ha) X2'Feed (kg) X3'Vaccine (litre) X4 No egg set X5'Labour (man-day) X6'Stock size Tei'exp (-Ui) Inefficiency part of the model was presented by Ui, which is defined as follows: Ui - Technical inefficiency Ui dnzn' z1 - Age (years) z2 - Education z3 - Business commitment z4 - Visit to expansion (Yes-1,No 0) z5 - Experience of birds z6 - Association membership (Yes No 1, No 0) d0, d1, d2,'- - Options that need to be evaluated. Since the dependent variable of the inefficiency model is a way of inefficiency, the positive sign of the intended parameter indicates that the associated variable has a negative impact on efficiency, but has a positive impact on inefficiency and vice versa (Yao and Liu, 1998; Rahji, 2005). The stochastic border model was used to determinants of determinants farmers. 'In order to examine the limitations affecting broilers farmers using in vitro fertilization, likert analysis was used, where the frequency of six major problems affecting poultry farmers were placed on three points likert scale, where one indicated not severe, 2 severe and 3 severely severe. CHAPTER FOUR AND DIACUSIA 4.1 The socioeconomic characteristics of respondents This section examines the socioeconomic profile of farmers using artificial insemination in the study. The socio-economic features of the survey are considered: age, gender, marital status, business obligations, status, source of capital, stock size and experience of poultry farming. The following was an analysis of these socio-economic features. Table 4: Shows Socioeconomic Characteristics of Respondents (N 60) Frequency Percentage of Men 48 80.0 Women 12 20.0 Marital Status One 8 13.3 Married 52 86.7 Educational Status No Formal Education 1 1.7 Education for Adults 2 3.3 3 11.7 Secondary Education 31 5.1 7 After Secondary Education 19 31.7 Age 30-39 3 5 40-49 20 33.2 50-59 32 52 53.5' 60 5 8.3 Source Capital Savings 1 1.7 Banks 45 75 Co-ops 13 21.7 And Friends 1 1 1.7 Poultry (years) 1-3 8 13.3 4-5 25 41.7 6-7'8 207 33.311.7Extension Visit No 28 4 6.7 After 29 48.3 Twice 3 5.0 Part-time Business Commitments 15 25 Full-time 45 75 Field Survey,2014 Table 4 shows that 80% of farmers were men, while 20% of them were women. This may be a result of the fact that poultry farming is very stressful. This may explain why many women are not involved in in vitro fertilization in the production of broilers in the field of research. About 86.7% of respondents were married, indicating their chances of getting family labor for use on the farm. None of the respondents was divorced or windowed, while 13.3 percent were single-parent respondents indicating that both secondary and higher education had the highest percentage of respondents who were 51.7 and 31.7 respectively, while respondents with adult education and those with no formal education had the lowest percentages of 3.3 and 1.7 respectively. The reasons why secondary and higher education have the largest number of respondents may not be too far-fetched because in vitro fertilization is a modern method in poultry production especially. This app requires strong education and knowledge that may not be available to less educated people. Age is an index of the number of years that farmers have lived. Table 4 shows that the highest number of respondents fell in the age category 50-59 (53.5%), while the lowest number of respondents Respondents fell within the age range of 30-39 (5%). were found in the 50-59 age group. It is agreed that in vitro fertilization huge amounts of capital for its proper use, and most young people do not have the necessary capital to adopt in vitro fertilization in poultry farming. Farming experience is a prerequisite for acquiring skills. Table 4 shows that 41.7% of farmers have 5 years of experience in poultry farming, while 33.3% of them have 7 years of experience, 13.3% of respondents have the lowest work experience between the ages of 1 and 3. Meanwhile, the average agricultural experience of farmers was 5.2 years. Most farmers (75%) said they would like to have a poultry production associated with artificial insemination on a regular basis. Those who practice part-time were 25%. Investigations carried out by the survey showed that part-time farmers were mostly professionals, such as teachers, lawyers, bankers and politicians. Information services provide farmers with vital information about their production. Expansion agents mediate between farmers and quarantine agents. Table 4 shows that 48.3% of farmers have had an extension visit once per production cycle. Only 5% of farmers visited twice. While 46.7 per cent of farmers did not have access to distribution services. Table:5 Shows the characteristics of the Land Percentage Farm (ha) 20-34 8 13.3 35-49 14 23.3 50-64 15 25 65-79 8 13.3 80-94 15 25 65-79 8 13.3 80-94 15 15 25 65-79 8 13.3 80-94 15 25 65-79 8 13 80-94 15 25 65-79 8 13.3 80-94 1 8 13.3 95-109 6 10 110-124 1 1.8 Inheritance land 24 40 Acquired 36 60 Field Review,2014 4.2 Distribution of farmers' land characteristics by farm size, shows that most farmers had large expanses of land for their activities. The average size of the farm was 60.9 gektras. Table 5 shows that 38.4% of farmers have a farm size larger than the average. Table 5 shows that 60% of farmers purchased their land through acquired land, while the remaining 40% purchased their land through inheritance. This should be due to the fact that large expanses of land will be needed because artificial insemination in poultry farming tends to work on a large scale Table 5: Shows the use of labor by farmersLabour use frequency Percentage hired 45 75 Family 5 8.3 Families and hired 10 16.7 Field Survey,2014 4.3 Use of labor by farmers is a human labor force. Of all the factors of production, work is very important and is provided by both men and women. Table 5 shows that the labour force is the main source of labour used by farmers, accounting for 75 per cent. Since artificial insemination in poultry production is usually carried out on a large scale, the amount of manpower required will be higher. Table 5 also indicated that family labour had the lowest percentage of Table 6: Shows Capital Use FarmersSource:Capital Savings Percentage 1 1.7 Banks 45 75 Cooperatives 13 21.7 Friends and Family 1 1.7 Field Review,2014 4.4 Capital Resources Farmers Access to Credit is is a tool that allows farmers to typically have teams to use working capital. According to the results of the study, it was noted that 75% of farmers prepared their capital in banks. Table 6 also indicated that a large proportion of farmers had sources of capital through the cooperative. Only about 3.4% of farmers have acquired their capital through personal savings, friends and family. These results show that the artificial insemination-related poultry industry is a capital-intensive enterprise whose fund cannot be satisfied with mere individual efforts. Table 7: Farmers' Stocks Size (No of Birds) Percentage Frequency Less Than 25000 3 5 25000-45000 8 13.3 450001-65000 27 44.9 650001-85000 15 25 .1 850001-105000 6 10 1050001-125000 1 1.7 Field Survey,2014 4.5 Farm Size Farmers Table 7 shows that about 95% of farmers had stock sizes of at least 25,000 birds. The average stock size of farmers was about 60,000. This indicates that artificial insemination is practised mainly on a large scale. Table 7 also indicated that 31.8 per cent of farmers had a stock size higher than average. Table 8: Shows Profitability Analysis of the respondents Variables Value(#) A.Gross Value of output 421,215,250 B.Variable Cost Cost of Stock 14,400,000 Cost of Feed 46,032,383 Cost of Vaccines and Drugs 8,623,256 Cost of Hatching 4,062,476 Cost of Labour 6,0998,25 Cost of Litter 17497 Cost of Charcoal 46407 Total Variable Cost 79,281,844 C.Fixed Cost Depreciation on equipment 9,328,166 Imputed cost on Rent 3,632530 Total Fixed Cost 12,960,696 D. Total production Cost 92,242,540 E. Gross Margin= A-B 341,933,406 Net farm Income 332,605,240 F. Returns to farm management and labour=E-C 328,972,710 Gross Ratio=B+C/A 0.22 Operating Ratio=B/A 0.20 Return on Capital Invested=E/B 4.3 Field Survey,2014 4.6 Analysis of Costs and Returns Among the Farmers Given the gross margin of N34 .933,406 returns to farm management and farmers' labor N325,340,180 . The operating ratio for respondents was 20%, which means that 20% of gross income was used for operating expenses. The return of capital invested in the amount of 4.3 funds received means that for each invested N1 N4.3 was received as a profit from the production of broilers. Thus, the results of Table 9 show that the production of poultry by broiler farmers using in vitro fertilization was a profitable venture Table 9:Shows the distribution of respondents by estimates of technical efficiency. Level efficiency (%) Percentage Minimum Maximum 1-20 1 1.7 18.50 20.0 21-40 3 5.0 24.00 29.08 41-60 2 3.3 55.35 57.03 61-0 80 18 30 .0 66.94 80.47 81-100 36 60.0 82.62 99.40 Total 60 100 18.50 99.40 Source: Field Suevey, 2014 Table 9 that the level of technical effectiveness of farmers in the field of research. The technical efficiency of farmers ranges from 18.5% to 99.40%. Average Average efficiency was 80.70% Average indicates that if the efficiency of the inputs is increased by 19.30% (100-80.70), farmers will work on the production boundary. This shows that farmers still have opportunities to increase productivity and income by making better use of existing agricultural technology. 4.7 Determinants of technical inefficiency The result of assessing the maximum probability of the production boundary function used for this study is presented in Table 10. The table shows that the scale has a significant coefficient. This means that there is a technical inefficiency in poultry production among respondents. With an estimated gamut value of 0.807, this study shows that about 81% of the difference in respondents' exit from the border is due to their technical inefficiency. The inefficiency model shows that only expansion service ratios were positively linked and significant. The educational rate, however, is significant but negatively linked to inefficiency. feed ratios, stock sizes and vaccines are positive and statistically significant. This indicates that increased use of inputs will lead to an increase in poultry production. The inefficiency model shows that only expansion service ratios were positively linked and significant. The educational rate, however, is significant but negatively linked to inefficiency. The use of extension services is positively associated with technical inefficiency. It would be expected that this variable would be negatively related to technical inefficiency. Positive relationships, however, may be due to a lack of trust among farmers on the potency of information received from the expansion, this according to Rapheal (2008). The level of education is negatively associated with technical inefficiency. This means greater technical efficiency as the level of education increases. This is my result from the fact that educated farmers are more innovative and can easily adopt best practices that would better produce them more than less educated. Table 10: Shows the Stochastic Production Frontier of Farmers. Odds SE t-value Constant 6.532 1.050 6.218 Earth 0.016 0.062 0.188 Feed 0.681 0.093 7.315 Vaccine 0.009 0.025 3.475 But 0.009 Egg Set 0.148 0.127 1.165 Labor 0.006 0.079 -0.825 Stock Size 0.032 0.026 1.675 Inefficiency Model Constant -1,137 1 1,017 -1,118 Age0.161 0.289 0.558 Education -0.486 0.231 -2.100 Business Commitments -0.165 0.344 -0.478 Expansion Visit 0.929 0.445 2.086 Birdman Experience -0 .292 0.635 -0.460 Member Association 0.451 0.491 0.918 Sigma Deviation Options Square 0.297.059 5.05 0.807 0.004 8.032 Significant at 10% probability, significant at 5% 5% Significant at the probability level of 1% Source: Analysis of data 2014.Table 11: shows the limitations faced by poultry farmers using artificial insemination in the field of study. Heavily Cut Not Chopped Weighted Rating Average Rating Inadequate Capital 5 (8.3) 44 (73.3) 11 (18.3) 114 1.90 2nd Poor Market for Production 5 (8.3) 30 (50) 25 (41.7) 70 1.20 6th Infection 18 (30) 20 (33.3) 22 (36.7) 116 1.. 93 1st Inadequate Work 10 (16.7) 15 (25) 35 (58.3) 95 1.60 5th Transport Problem 12 (20) 27 (45) 21 (35) 111 1.85 3-I technical problem 13 (21.7) 19 (31.7) 28 (46.6) 105 1.75 4th place in brackets represent a percentage of each of the problems severely severed 3 Severed 2 Not torn No 1 4.8 Analysis of limitations Influencing broiler farmers using artificial insemination Table 11 shows that the main limitation affecting farmers using AI in broiler production in the study was infection diseases. Other problems faced by farmers include: inadequate capital, inadequate transport, technical problems, inadequate labour, poor production market. FIVE SUMMARY, DETAILS AND RECOMMENDATION 5.1 SUMMARY Data were collected from 60 respondents using a questionnaire using a combination of direct and random sampling techniques. The analysis used cost-and-return analysis tools, likert analysis, and a stochastic model. The majority of respondents were men (80%), married (86.7%), most of them educated. return to management and labour, gross ratio, operating ratio and return to capital invested by farmers were N338 300 876 325 325 180, 0.23.0.20 and N4.3, respectively. using artificial farmers who use artificial insemination in broiler production. The random sampling method was used in the selection of 60 respondents distributed across all of the state's Oyo farms. The stochastic boundary was used in the study. The study shows that differences in effectiveness exist among poultry broilers. In addition, feed, vaccines and stock size are a major factor in the production of broilers using in vitro fertilization. The technical efficiency of broilers ranges from 18.5% to 99.40% with an average of 81%. The study also shows that the level of education, the expansion of the visit are significant factors that make up the observed differences in efficiency among respondents, This study recommends the need to expand the farm, increase access to based on the findings of this study, it can be concluded that in vitro fertilization is a lucrative enterprise in poultry farming among broiler farmers.5.3 broilers.5.3 improve the efficiency of farmers using artificial insemination of broiler production in the state of Oyo. recommendations are proposed: 1. Respondents should be assisted in improving access to the necessary production resources, such as feed, vaccine and MLC, as these resources increase and output increases. 2. Education among poultry farmers using artificial insemination in the study should be encouraged, as this has a positive effect on their effectiveness. Distribution services in the State should be reviewed. This is done in order to gain the confidence of participants in the usefulness of the expansion information. Finally, the Government must play a role in reducing the marketing problem faced by farmers by improving the marketing system. 5. Since artificial insemination is a capital-intensive but profitable enterprise, so the government should come by allowing farmers to have access to low-interest-rate loans, Sekoni A, Abdumalik M 2008, the impact of the management system on the performance of hep-bookmarks. (Editors) No, no. Oduguwa O , Fanimo O and Osinowo O A) Proceedings Silver Anniversary Conference, Nigerian Livestock Society. Hotel Gateway, Abeokuta. March 21-26, 1998, p.538-539. Abdelkader, A., Wollney, K. and Gauley, M. (2005). Mortality limits the efficiency of small locally produced chicken production in Jordan. Workshop on the global food and grocery chain of dynamics, innovation, conflict and strategies. 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