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# **ANIMAL AGRICULTURE: A VIABLE TOOL FOR RURAL WOMEN EMPOWERMENT AND REDEMPTION FROM POVERTY**

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## **ABSTRACT**

*Women are the backbone of the development of rural and national economies. There is no tool of development that is more effective than the empowerment of the rural women. Nigerian rural women lack sufficient economic resources that will enable them to articulate their needs and interests and organize themselves with a view to developing the nation. The prospects of achieving food security in a rapidly growing population and relative self-sufficiency in animal protein supply calls for the production of all classes of meat animals by rural women to achieve sustainable economic development and empowerment. The animal farming opportunities through which women can be empowered included: snail, broiler, quail, duck, laying chicken, fish, bee, rabbit, pig, sheep and goat farming. The paper concluded that in order to get sustainable productivity in animal production, rural women needed be empowered to be actively involved in the various opportunities available in animal agriculture for advancing development and reducing poverty, since empowered women contribute to the health, productivity of whole families and communities and also improve the prospects of the next generation. It is recommended that Government should play key role in activities involving livestock through the formulation of policies, provision of agricultural credit for women participation in animal production, increased technical know-how in animal production through capacity building for women via livestock extension trainings, and provision of enabling environment for proper growth of the livestock industry. Also, rural development programme packages should involve women empowerment through animal production activities to achieve sustainable development.*

**Keywords:** Agriculture, Women's Empowerment, Animal Production, Rural and Poverty.

**Cite this Article:** Alabi, O. O., Ajala, A.O., Shoyombo, A.J and Ogunjimi, S.I, Animal Agriculture: A Viable Tool for Rural Women Empowerment and Redemption From Poverty, International Journal of Civil Engineering and Technology (IJCIET), 10 (2), 2019, pp. 2365–2373.  
<http://iaeme.com/Home/issue/IJCIET?Volume=10&Issue=2>

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## 1. INTRODUCTION

Nigeria is blessed with a wide variety of agricultural potentials, ranging from varieties of crops to animals and natural agricultural-supportive factors like forest, water, soil and most of all human resources. The country has an expansive landmass covering 923.771km<sup>2</sup>, an estimated arable land of about 68 million hectare; abundance of natural forest and rangeland covering 37 million hectares. Varieties of livestock and wildlife, an agricultural friendly climate, coastal and marine resources of over 960km shoreline, expansive rivers and lakes covering 120,000 square kilometer and large consumer market as depicted by National population of over 140 million in 1999 [1]. Large regional and continental markets, as well as the ever increasing world market exist for the reaping of the potentials that agriculture can offer any economy. Agriculture is a very important sector of all nations of the world; therefore wise nations all over the globe give it a priority by developing and exploiting this sector for the upkeep of their teeming populations through the earning of revenue for development purposes, as well as employment for stemming down crimes, corruption and other forms of indiscipline which work against all factors of life, living and most of all economic production. The economy of Nigeria for now is more of a literature of past successful agricultural production. Nigeria happens to belong among the few that have greatly retarded from their past glorious heights in agriculture, down to a near zero scale of agricultural production. This is because Nigerian economy is now oil-dependent making it a monoculture economy. Nigeria as one of the oil producing countries is facing a serious problem in the era of dwindling oil price. The issue at stake now is to deregulate the oil sector. Nigeria has great agricultural potentials that will outpace oil and gas on the long run. In many countries, government plays a key role in activities involving livestock through the formulation of policies, provision of funds, technical know-how and suitable environment for proper development. In Nigeria government participation in livestock production were geared towards ensuring sound animal production practices. However, since the advent of the oil boom, government has paid more attention to oil as source of revenue for the nation, unstable policies and programmes of the government also affect livestock production making it less effective. Apart from Nigeria's agriculture not measuring up in its food production to meet the food requirements of the increasing population, its greatest problem is that of inadequate animal protein in the diets of a large population, especially in the rural areas which constitute over 70% of the Nigeria population. [2] reported that Nigeria is among the top 12 poorest nations in animal protein consumption. The most critical segment of Nigeria's population that need animal protein and other nutrients from animal products are mostly children, youth, pregnant women, nursing mothers, women of reproductive age and the elderly. Nigeria's agriculture has failed to keep pace with the country's rapid population growth, so that the country, which once exported food, now relies on imports to sustain itself.

## **2. ECONOMIC ROLES OF WOMEN**

Globally, the poor economic condition has resultant effects such as poverty, unemployment, breakdown in health, divorce, violence, riot, crime, kidnappings etc. If the women folk are economically buoyant, they would be able to participate more effectively in the national development process. Most unfortunately, Nigeria women lack sufficient economic resources that will enable them to articulate their needs and interests and organize themselves into strong persons that will develop the nation. The importance of women in nation building and economic development cannot be easily quantified because they make up the homes and homes make up towns, towns to states and states to countries. Women role in the family context is complementary to that of man in the economic well being of the family. Women are the backbone of the development of rural and national economies. They comprise 43% of the world's agricultural labor force, which rises to 70% in some countries. In Africa, 80% of the agricultural production comes from small farmers, who are mostly rural women [3]. Women comprise the largest percentage of the workforce in the agricultural sector, but do not have access and control over all land and productive resources. Agriculture is the world's oldest and largest primary industry. It plays a vital role in the economic life of virtually all nations regardless of their state of development. It employs more than one-half of the world's population. In developing countries, more than two-third of the people live on farms and ranches. Around the world women are decision-makers for themselves, their families, villages, businesses, and governments. There is no tool of development that is more effective than the empowerment of women. In subsistence economies, women spend much of the day performing tasks to maintain the household, burdened with family life and social taboos. Traditionally, women are treated as a production unit for bearing and rearing children, women are politically exploited, socially oppressed, legally ignore and technological deprived. A large number of women work as unpaid labour especially in many developing countries where women are responsible for agricultural production and selling, they are seen as agricultural partners' helper when needed on the farm. Most women are often responsible for farm income which provides a cash flow for the household. Women desperately need to be empowered. Empowerment refers to increasing the economic, political, social, educational, gender, or spiritual strength of individuals and communities. Empowerment can also be the process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes. Empowerment occurs through improvement of conditions, standards, events, and a global perspective of life. Empowering women is an indispensable tool for advancing development and reducing poverty; empowered women contribute to the health, productivity of whole families and communities and also improve the prospects of the next generation. When women are empowered, whole families benefit, and these benefits often have ripple effects to future generations [4]. Despite the important roles women play in agricultural economies, rural women in Africa suffer from the highest illiteracy rates and are the most visible face of poverty. Fighting hunger and malnutrition are some of the measures which should be taken to guarantee higher income and better living conditions for the most vulnerable communities, which are mostly formed by rural women who practice small-scale agriculture, especially in developing countries hence the need for animal agriculture.

## **3. NIGERIA'S ANIMAL AGRICULTURE**

The world's population is expected to increase from 6 billion to more than 7.5 billion by 2020. This burgeoning population may require a doubling of animal protein and a corresponding doubling of feed grains demand. Nigeria is currently the most populous black nation in the world with the threat of nutritional deficiency facing its citizens as a result of high cost and inadequate supply of animal protein. Malnutrition has been blamed for the physical handicap

and low performance of Nigerian workers, lack of initiative and drive, susceptibility to endemic and infectious diseases and of course poverty. Supply of meat and milk in Nigeria must be increased considerably through animal agriculture in the next 20 to 50 years so as to fast-track nutritional well-being and economic development. The prospects of achieving food security in a rapidly growing population and relative self-sufficiency in animal protein supply calls for the production of all classes of meat animals, notably poultry, swine, sheep, goat, cattle and rabbit, which are currently produced at subsistence level. The future of animal agriculture as a panacea to increased protein intake is brighter if governments and those involved in policy formulation should realize that livestock is a security factor and tackle the problems head-on. This will usher in an era of nutritionally stable Nigerian population indicated by improved standard of living and other economic indices [5]. Nigeria is endowed with 13.8 cattle million, 22 million sheep, 72.4 million local chicken, 4.7million guinea fowl, 3.1 million pigs yet the average Nigerian consumes less than 25% of the recommended 34gm/head/day animal protein. 90% of the cattle are in the hands of the nomads. 100% of sheep and goats are in small holder units, 70% of poultry breeds are in the backyard. The success of human beings on earth is attributed largely to the animals that have fed, clothed, carried and cultivated their fields [6]. There is no reason whatsoever to import poultry of any kind into the country because Nigeria has the climate, the personnel and the wherewithal to produce enough chicken for the populace. Above all, a good policy framework in the Agricultural Transformation Agenda of the Federal Government; The Federal Government's ban on the importation of certain frozen items such as chicken and other poultry products is a good policy because Nigeria has no business importing what she can produce. There is a supply gap in Nigeria, but any tendency to fill that gap by importation other than by production should be discouraged, otherwise, Nigeria will continue to be a net importer of livestock products that she can abundantly produce in the country. Livestock account for one third of Nigeria's agricultural GDP, providing income, employment, food, farm energy, manure, fuel and transport. Women are not helpless in face of existing challenges. Livestock contributes a higher share of income to rural households, improves food security and possibly enhances women's participation in civic activities. Livestock development projects seek to empower women through increased household incomes, improve household incomes of women and nutritional status of women and other members of the households.

#### 4. CONSTRAINTS TO ANIMAL AGRICULTURE

- Reported the number of constraints that are known to militate against livestock production in Nigeria among which are;
- Increasing cost of production due to increase in input cost (feeds, vaccines, equipment etc.)
- The absence of grandparent stock and the collapse of the livestock breeding and multiplication programmes have reduced high-quality livestock production.
- Public veterinary services have declined and livestock diseases account for 30-40% of production losses.
- Poor packaging facilities for animal products.
- Lack of cold storage facilities in abattoirs at whole sale and retail markets.
- Absence of standards for meat, livestock feed and other livestock products.
- Primitive marketing infrastructure and inconsistent government policies.
- Inadequate Manpower for Animal Agriculture

There is short supply of manpower, especially skilled labour in the animal production industry in Nigeria. For example, in some quarters one man does the work of many people leading to inefficiency in productivity. This is a point for major concern because of the potentials of a nation of over 170 million people. If more people are encouraged to go into animal production as was the case in China [7]. Nigeria will have adequate manpower involved in animal production. There is inadequate labour supply in the country and many times farmers have to hire temporary workers or forfeit it to the detriment of their farms due to costs. It is gratifying to note that women like men counterparts are actively involved in animal production in Nigeria [8]. Despite all of these, the manpower is still inadequate for the industry and for sustainable animal production. Many Nigerians moving to the urban areas in search of scarce white-collar jobs would earn income if they join the little group of wise Nigerians investing in animal farming in their localities. Nigerian agricultural educational policies and its attendant objectives point towards self-sufficiency in food production for consumption and provision of raw materials for agrobased industries [9]. Further, creation of employment opportunities is noticeable in Nigerian Government policy [10]. These contentions point to increasing global and regional inclination towards improvement of the standard of living of the populace. However, sustainable agriculture development, which is potent against poverty and hunger, requires a revolution in the practice of agriculture particularly in animal production.

## **5. ECONOMIC VALUE OF LIVESTOCK**

Livestock are very important in the supply of the following products which are of very high economic value in the community. Such products include:

### **Meat:**

Livestock are useful sources of dietary protein and energy, adequate protein is required for normal maintenance of body tissues and functions and additionally for growth, maturation, pregnancy, lactation and recovery from disease, supply of protein are particularly scarce and costly in the developing nations [11]. Malnutrition is the world's number one health problem. It adversely affects mental and physical development, productivity and the span of working years, all of which significantly influence the economic potential of the people, if the protein consumption status of Nigeria is to improve, animal production and distribution must increase at an unprecedented rate.

### **Milk:**

Among all foods, milk is the most complete and most balanced in nutritional contents[12]. Animals are good sources of milk which are in turn processed into other dairy products such as yogurt, cheese, butter, ice cream etc. Hunger and malnutrition are significant problems in Nigeria 29 per cent of children in the country are undernourished and underweight, according to the Food and Agriculture Organization. Milk, meat, eggs and cheese from animals provide a much-needed source of animal protein for a more balanced, healthy diet. The demand for animal protein is reported to be on the increase worldwide.

### **Egg:**

Livestock is very rich in iron, vitamin B12, E and D3. Poultry egg is low in calorie and high in protein. Quail egg for instance is considered to contain mixture of amino acids that are indispensable for the healthy growth and development of children, adolescents and young adults. In addition, the high levels of antioxidants in quail egg helps in preventing the age-related muscular degeneration [13].

### **Clothing:**

Today, the chief contributions of animal life to clothing for man are in the forms of wool, leather, hair and furs. In addition to serving as source of clothing, each of these articles has many other uses. For example, leather not only provides boots and shoes, jackets and helmets, gloves and belts.

### **Organic Manure:**

Manure from animals is spread on agricultural land to increase crop yield.

### **Labour:**

In many parts of the world, animals are still used for the purpose of ploughing, transporting goods.

## **6. OPPORTUNITIES IN ANIMAL FARMING**

Livestock farming is a profitable business, which guarantees higher income for those involved in the business. Among the animal farming opportunities are:

### **Snail farming**

Snails are minor forest products that are being domesticated as micro-livestock, and are used as animal protein source to compliment the conventional and regular sources of animal protein supply in Nigeria. They are cheaper and safer to handle and require low capital outlay. Snail meat is high in protein, iron, calcium and phosphorus, but low in sodium, fat and cholesterol and contains almost all the amino acids needed by man [14]. Snail production is seen as an honest approach towards realizing improved meat protein intake because of its inherent potentials in meeting the animal protein needs of the rural populace [15]. Commercial snail farming is profitable, if one stocks 1,000 snails, all of them are potential egg layers because snails are hermaphrodite. A snail has both male and female reproductive organs. A snail can lay eggs between nine to ten times a year. This means that one snail can give over 100 eggs in a year, this will amount to 100,000 snails in a year [16].

### **Broiler Farming**

Broilers are fast growing birds reared to provide tender meat for human consumption as they appear more frequent than any other animal protein source of meat [17].

**Quail Farming-** Quail is the smallest avian species farmed for meat and egg production in Nigeria. Quail production is gradually becoming an important business in Nigeria poultry industry especially among small and medium scale poultry producers.

### **Duck Farming**

The Muscovy duck is wide spread in distribution and forms the largest proportion of ducks available in Nigeria [18]. Little information is available on Muscovy duck due to neglect by both farmers and researchers. The Muscovy duck is hardy, less susceptible to diseases than chicken, spends less energy on feed quality and is quite promising among indigenous poultry species because of its rapid growth rate. Muscovy duck is the least exploited poultry species in Nigeria in spite of its adaptability to different agro-ecological zones and its innate potential to enhance food security.

### **Poultry Chicken Farming**

Eggs from chicken are good source of animal protein. Eggs are commonly eaten in both urban and rural areas. The word 'layer chicken' refers to a female chicken that is more than 20-22 weeks of age and are expected to produce up to 300eggs per year depending on feed and management [19]. Egg producing chickens have been bred for maximum egg production rather than meat yield.

### **Fish Farming**

Fish farming has continued to grow among the many investor-practitioner in Nigeria with leaps and bounds. Despite the production contribution of practicing fish farmers, the demand for fish and fish products as a valuable source of protein has continued to increase alongside escalating costs [20]

### **Bee Farming**

This is a new and important area in agriculture in Nigeria. It involves the setting up of an apiary management of different classes of bees, harvesting and processing of honey, wax, bee pollen and propolis, royal jelly and other products [21]

### **Rabbit farming**

Rabbits have a number of characteristics that would make them particularly suitable as meat producing animals. Rabbits could contribute significantly in solving the problem of meat shortage [22]. Meat of rabbits has a low cholesterol level, high in protein/energy ratio and is relatively rich in essential fatty acids.

### **Sheep and Goat Farming**

Sheep and goat are referred to as small ruminants. They are important because of their ability to provide meat, milk, skin and fibre for man. They can survive on poor quality foods. They are good converter of fodder, agro-industrial by-products and crop residues to meat. They are affordable to farmer to keep and easy to manage. The importance of sheep in the socio-economic lives of the people of Nigeria cannot be over emphasized. Sheep are among the domestic livestock owned by more production units in African farming systems, as they are known to have lower feed requirement, rapid reproduction cycle and can be handled with ease [23] There is no cultural barrier to rearing or eating of sheep and goat meat.

### **Pig Farming**

In Nigeria and else-where, pigs are reared for meat (pork, bacon, sausage), skin, bristle and manure as by-products. Pig farming is also profitable. Pigs have the most rapid turnover of all farm animals due to high food conversion rate and fast growth. Pigs have short gestation interval and can produce many offspring as high as 20 piglets per birth. The business requires patience. Anyone who wishes to go into pig farming must have passion for the business. Feeding pigs takes a period of 5 to 7 months before they mature for selling.

### **Grasscutter Farming**

This is one of the most popular mini-livestock and high in demand. The nutritive value of grasscutter is relatively high. The crude protein content of the meat is about 22.7% compared to convectional chicken which is about 19.25% [24]. Social acceptance of grasscutter meat is a major issue in its development. The acceptability cuts across either religion or cultural beliefs. Grasscutter farming in Nigeria has gained much popularity because of its low capital input, these days it is reared by farmers, individuals, government and nongovernment organization for

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commercial purpose. Grasscutter seems to be the easiest and cheapest to invest in, the reason being that in grasscutter farming, you don't need to buy feed. "With N50,000 one can start grasscutter farming business. This enables the beginner to purchase a family of grasscutter comprising one male and four females referred to as a colony. A colony is sold for between N35,000 and N45,000 depending on the age, weight and specie. They can be reared in cages which cost N5,000. For him, grasscutter farming is probably the easiest way for people to become involved in agriculture. Grasscutter can be reared at home. The cages can be kept in the house, compound, under staircase or within a kitchen space if there is no money to rent or buy a land for the business. Grasscutter feed on grass" [16].

### Antelope Breeding Farming

There is a huge market for antelope. For example, antelope breeding stock of one male and one female is in high demand by recreation centres, zoos, research institutes, game reserves, holiday resorts, children amusement parks operators. Many households and restaurants serve antelope meals.

## 7. CONCLUSION AND RECOMMENDATION

The paper concluded that in order to get the maximum productivity from the national animal husbandry production, women should be empowered to be actively involved in the various opportunities available in animal agriculture for advancing development and reducing poverty, since empowered women contribute to the health, productivity of whole families and communities and also improve the prospects of the next generation. It is recommended that Government should play key role in activities involving livestock through the formulation of policies, provision of agricultural credit for women participation in animal production, increased technical know-how in animal production through capacity building for women via livestock extension trainings, and provision of enabling environment for proper growth of the livestock industry. Also rural development programme should involve women empowerment through animal production activities to achieve sustainable development.

## REFERENCES

- [1] National Population Commission (NPC) 2006. Population Census Figures, National Population Commission, Abuja, Nigeria.
- [2] Nigerian Institute of Animal Scientists, NIAS/Animal Scientists Association of Nigeria, ASAN, (2014). Eat Meat for Good Health and Long Life. Information Bulletin no.1. [www.nias.org.ng](http://www.nias.org.ng)
- [3] Walingo, M. K., (2009). Role of livestock projects in empowering women smallholder farmers for sustainable food security in rural Kenya, African Journal of Food, Agriculture, Nutrition and Development. Vol.9. No. 7 Network
- [4] Meetika. S. (2009). Essay on Women Empowerment, Social Science Research. SSRN, Papers.ssrn.com) Moses, N., 2012 animal-farming-easiest-way-of gaining – employment in come <http://www.vanguardngr.com/2012/06/expert/#sthash.FE0E8rVp.dpuf>.
- [5] Nkwocha G.A, Anukam K.U, Oguoma O.N, and Nkwocha V.I (2010). Animal Agriculture as Panacea for Increased Protein Intake in Nigeria Animal Production Research Advances Vol 6, No.3
- [6] Lamorde, A.G., (1998). Scenario building for the Nigerian Livestock Industry in the 21<sup>st</sup> century. A paper presented at the Silver Anniversary Conference of the Nigerian Society for Animal Production-Gateway Hotel, Abeokuta, Nigeria. March 21-26, 1998. <http://ag.udel.edu/>



- [7] Nwankwo S.U and Nwankwo F.E, 2010. Animal Agriculture a way out in the era of global economic meltdown in Nigeria, *Journal of Women in Colleges of Education*, volume 14 number 1, 2010ISBN:1118-5384 published by association of WICE, printed by Akins press &services (NIG.)
- [8] Osikabor,B. Adesope, A. Ibrahim, A.G. Ibrahim F, Babayemi, O and Olatunji B 2011. Animal agriculture Based Entrepreneurship. *Asian Journal of Agricultural Sciences* 3(2): 87-93, ISSN: 2041-3890
- [9] Potter, N.N. and Hotchkiss, J.H., 1995. *Food Science*.5th ed. Chapman and Hall, New York.
- [10] National Policy on Education (NPE), 2004. Federal Ministry of Education. 4th Edn., FME Publication.
- [11] Awogbenle, A.C. and Iwuamadi, K.C., 2010. Entrepreneurship development programme as an intervention mechanism. *Afr. J. Bus. Manage.*, 4(6): 831-835.
- [12] Haenlein, G.F., 2002. WHY Goat milk? Cooperative Extension Dairy Specialist. University of Delaware.
- [13] Owosibo, A. O., Odetola, O. M., Odunsi, O. O., Adejinmi, O. O. and Lawrence-Azua, O. O. (2013) Growth, haematology and serum biochemistry of broilers fed probiotics based diets. *African Journal of Water Conservation and Sustainability*. Vol. 1 (4), pp. 061-065
- [14] Akinnusi, O., 2002. Introduction to snails and snail farming, 2nd ed. Abeokuta, Nigeria. Triolas Exquisite Ventures.
- [15] Okon, B. Ibom, L., Etuk,N. and Akpan E.(2008).Variation in Growth Patterns and conformation of Snails. *Journal of Agriculture, Forestry and the Social Sciences*. (JOAFSS). 6 (2):218-227
- [16] Moses, N, 2012 Animal-farming-easiest-way-of-gaining-employment-income-expert/: <https://www.vanguardngr.com/2012/06/>
- [17] Ruttanavut, J and Yamauchi, K., (2010) Growth Performance and Histological Alterations of Intestinal Villi in Broilers Fed Dietary Mixed Minerals. *Asian Journal of Animal Sciences*. 4. 96-106. 10.3923/ajas.2010.96.106.
- [18] Chia S. S. and Momoh, O.M. (2012). Some physical and reproductive characteristics of Muscovy ducks under free range management system in two locations in Benue State of Nigeria.
- [19] Kekeocha, C.C., (1984). *Pfizer Poultry Production Handbook* Macmilan Publishers, London.166pp.
- [20] Ajana, A. M., Adekoya, B. B. O., Agankanuwo, J. O. (2006): *Practical fish farming by alliance for community information*, Nigeria, 88pp.
- [21] Crane, E., (1990). *Bees and Beekeeping Science*. Practice and World Resources. London: Heinemann. ISBN0-8014-2429-1
- [22] Lebas F, (1983). *Small Scale Rabbit Production*. Feeding and Management Systems. *World animal Review*, 46: 11-17
- [23] Iyiola, T. and Issa, F., (2010). Small ruminant production and characteristics by rural farm families in NAERLS- adopted and non-adopted villages in North Western Nigeria. *Continental Journal of Animal Veterinary Research*, 2: 18 -24.
- [24] Kabir, P. (2005). The market potential for grasscutter production: a case study in Sunyani Metropolis of Brong-Ahafo Region. University of Education, Winneba, Ghana, Bachelor of Education Dissertation, p. 54