

# The State of Farm Animal Welfare in Nigeria: Challenges and Recommendations

Oluwapelumi Victoria Boluwaji\*

Department of Animal Production and Health, Federal University Oye Ekiti, Ekiti, Nigeria

## Abstract

Animal welfare is a complex concept with three areas of concern which include whether the animal is functioning well (eg good health, productivity etc), whether the animal is feeling well (eg absence of pain etc) and whether the animal is able to perform its natural/species-specific behaviour that are thought to be important to them (eg grazing). The World Society for the Protection of Animals (WSPA) also gave these three states in its definition, in the veterinary training resource 'Concepts in Animal Welfare'.

**Keywords:** Animal welfare • Specific behaviour • World Society

## Introduction

The United Kingdom's Farm Animal Welfare Council highlighted animal welfare under five 'freedoms' to include

- Freedom from hunger and thirst—ready access to water and a diet to maintain health and vigour,
- Freedom from discomfort—by providing an appropriate environment including shelter and a comfortable resting area,
- Freedom from pain, injury and disease—by prevention or rapid diagnosis and treatment,
- freedom to express normal behaviour—by providing sufficient space, proper facilities and company of the animal's own kind,
- Freedom from fear and distress—by ensuring conditions and treatment which avoid mental suffering.

Furthermore, the World Organization for Animal Health (OIE) also defined animal welfare as how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if it is healthy, comfortable, and well nourished, safe, able to express innate behavior, and if it is not suffering from unpleasant states such as pain, fear, and distress. Good animal welfare requires disease prevention and veterinary treatment, appropriate shelter, management and nutrition, humane handling and humane slaughter or killing [1]. This article reviews existing literature on the welfare of farm animals and relates it to the state of farm animal welfare in Nigeria cutting across issues in production, transport, slaughtering and trade.

## Literature Review

### The case for animal welfare

It has been recognised that animals are sentient beings, and hence the need to protect their welfare. Sentience means that animals

- Are aware of their own surroundings,
- Have an emotional dimension,
- Are aware of what is happening to them,
- Are able to learn from experience,
- Are aware of body sensations such as pain, hunger, heat and cold,
- Are aware of their relationship with other animals and,
- Are able to choose between different animals, objects and situations.

Human concern for animal welfare is based on this awareness that animals are sentient. Farm animals provide humans with food, such as meat, milk and eggs. However, humans have the obligation to ensure that animals have a good quality of life.

Paying attention to the welfare of farm animals can improve productivity, quality, food safety and economic returns, therefore contributing to food security and economic prosperity. For instance, it has been found that lameness of dairy cows caused a reduction in milk production and reproductive capacity and also farm profit. Adhering to animal welfare guidelines can therefore increase farm profits by improving animal productivity and efficiency and also by reducing losses [2]. Also, according to OIE, animal welfare has been

\*Address to correspondence: Dr Oluwapelumi Victoria Boluwaji, Department of Animal Production and Health, Federal University Oye Ekiti, Ekiti, Nigeria, Tel: 8166370218; E-mail: oluwapelumi.adameji@fuoye.edu.ng

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linked to animal health and food security, and in turn linked to human health. A reduction in animal diseases has been found to have a direct link to a reduction in human diseases. Animal welfare has also been found to affect local and international trade. Animal welfare is therefore important to everyone on the supply chain, from the producers to the retailers and then, the consumers [1].

### **Advancement in animal welfare considerations in developed countries**

Animal welfare is increasingly becoming a global issue, especially since the beginning of the 21st century [2]. Legislations and regulations are set in place to guide the welfare of animals. Also, standards for trade have been put in place to ensure compliance with animal welfare concerns. In most developed countries, greater attention to the welfare of animals on-farm, during transport and at slaughter, have already led to changes at the policy level, sometimes with development of specific legislation, and in the production practices of producers. Animal welfare legislation started in Britain in 1822 with the 'Act to Prevent the Cruel and Improper Treatment of Cattle' which was steered by Richard Martin – known as 'Humanity Dick' because of his campaigning for both animal and human rights. Richard Martin subsequently founded the Society for the Prevention of cruelty to animals (SPCA) in 1824. The charity attracted the patronage of Queen Victoria and went on to become the Royal Society for the Prevention of Cruelty to Animals (RSPCA), well-known today as one of the world's leading animal welfare organization [3].

One of the first national laws to protect animals was the UK "Cruelty to Animals Act of 1835" followed by the "Protection of Animal Act 1911". The "Animal Welfare Act 2006" consolidated many different forms of animal welfare legislation. Other European countries followed suit. For example, since 1974, the EU has established a wide range of legislative provisions concerning animal welfare [3]. The use of battery cages for laying hens has been banned since 1999. Any system of housing used (enriched cages or alternative systems) must have a nest, perching space, litter to allow pecking, scratching and unrestricted access to a feed trough.

Also, EU legislation on pig welfare prohibits the use of sow stalls other than during the sow's first four weeks of pregnancy. The legislation also requires pigs to be given enrichment materials such as straw so that they can engage in their natural environment behavior. Mutilations such as beak trimming are prohibited. Routine tail docking, teeth clipping and castration of pigs without the use of prolonged analgesia or anesthesia are also prohibited. During transportation, it is prohibited to strike or kick the animals; apply pressure to any particularly sensitive part of the body in such a way as to cause them unnecessary pain or suffering; suspend the animals by mechanical means; lift or drag the animals by head, ears, horns, legs, tail or fleece, or handle them in such a way as to cause them unnecessary pain or suffering [4]. The EU law also requires all animals, including poultry, to be stunned (rendered unconscious) before slaughter, although it provides an exception in the case of animals slaughtered to provide food for religious communities. Besides the EU, the Animal Welfare Act (AWA) was also signed in the law in 1966. The AWA requires that minimum standards of care and treatment be given to certain animals bred for commercial purposes, for research, transported or exhibited.

## **Discussion**

### **Animal welfare in Nigeria**

Animal welfare concern is limited in developing countries compared to developed nations. The handling of animals in developing countries has been a subject of discussion for a long time. For instance, a study in Ethiopia indicated that stakeholders handle animals in an aversive way, and this has been shown to increase prevalence of death and injuries. In Nigeria, there is a weak animal welfare framework. The tropical condition favors livestock production; however, there is a very low and unsatisfactory level of understanding and implementation of the obligation to show concern for all aspects of animal well-being in terms of proper housing, management, nutrition, disease prevention and treatment, responsible care, humane handling and, when necessary, humane euthanasia [4]. Dynamic agricultural practices, routine animal husbandry practices and animal research activities tend to cause injury to animals and, in extreme cases, have affected the survival of endangered species. Animals are subjected to common livestock management practices (tattooing, castration and dehorning), unarguably suffer extreme discomfort, and their health is endangered. Although the country is developing and the economic condition is improving, animal welfare is a subject that so far has not gained much attention. At present, there are no legislations that protect animals from cruel actions by humans. The government does not appear to consider animal welfare as an important issue, despite Nigeria being a member of the OIE, which has guiding principles on animal welfare.

There is a relationship between animal welfare and productivity. For instance, moving hens from pens to cages produce a marked short-term reduction in egg production. Also, chronic stress can impair immune function and lead to higher disease and mortality rate, leading to reduced production. Poor animal welfare on the farm, during pig production, may be a significant contributor to sub-optimal output from pig husbandry in Nigeria as high stress level predisposes pigs to myriads of disease conditions. Animals are important for increased food security in Nigeria and so there is need for a change. This article highlights the state of animal welfare in Nigeria, with proposed recommendations on strategies to improve and promote the practice of animal welfare across the livestock value-chain [2].

### **Animal welfare issues in poultry production**

Poultry in Nigeria constitutes a major supply of Nigeria's animal protein, and in fact is the most commercialized and fastest growing of all the animal husbandry segments. Poultry production in Nigeria ranges from subsistence (75%) to commercial (25%) scale. The species of poultry commonly reared in Nigeria are chickens, ducks, guinea fowls, pigeon and ostriches. Chickens are the most dominant poultry in Nigeria. Poultry industry in Nigeria is made up of about 180 million birds. The three major types of poultry management systems common in Nigeria are the extensive (traditional or free range), semi intensive and intensive [5]. About 80 million chickens are raised in extensive or free-range systems, 60 million in semi intensive systems and the remaining 40 million in intensive systems. In almost all rural areas in the country, poultry production is carried out on a small scale under the extensive, and semi intensive systems [6].

The extensive system of production is usually characterized with rearing majorly local breeds of chickens. Feeds are usually not purchased for birds and so birds are allowed to scavenge for their feed within the immediate environment. Sometimes, birds can receive offers of grains early in the morning or kitchen wastes and scraps. Poultry frequently also lack access to a source of clean and cool water. Water could be provided in broken pots, calabash or in plastic containers. Birds have to locate sources of water on their own as a supplement. Birds therefore do not have a total freedom from hunger and thirst, as provision is not being made for them [7]. Also, appropriate shelter is not made available for birds that are reared under the extensive system [6]. The birds are allowed to roam about freely, sometimes under the scouring sun and under the rain. In hot climates, birds may have difficulty staying cool since water and shelter are not provided. Most of the times, they find places to hide by themselves. Birds under extensive system in Nigeria are usually prone to injuries and diseases, as a result of lack of attention and veterinary care. In a report by FAO, only 4% of households vaccinate their animals among the free-range chicken keepers. Even though vaccines have been developed, not all farmers have access to them and vaccinating free ranging birds can be a challenge. As a result, disease transmission is usually very high, resulting in low productivity and high mortality. As a result of roaming, birds is usually exposed to several injury threats and it is common for birds to return to the nest limping. Free range chickens are also prone to predators, different sounds and noises from moving vehicles, and accidents, which could cause fear and distress to them. Birds reared in the extensive system of production are however able to express their natural behaviour. Birds are able to dust bath, perch on trees and woods and also find places to nest. Even though this is a key animal welfare advantage, birds reared in extensive system cannot be said to be in a totally good welfare state as a result of the issues of health, malnutrition and shelter. Addressing these issues can however cause an improvement in welfare of birds reared in extensive system. The free range system, which is an extensive system, is used by farmers in laying birds production. According to Lay et al, in comparing the cages, non-cages and outdoor production systems, no single housing system can be identified as being ideal for animal welfare as every system has its advantages and disadvantages [3]. Though, the perception is that the free range has a better welfare. It might not be so in some cases, and more research is needed to determine what constitutes good animal welfare, how welfare should be measured, and which production system best meeting these welfare needs.

The semi intensive system is similar to the extensive system in that birds are allowed to scavenge in the backyard after morning feed and taken to their cages in the afternoon. Hence, the birds still have the freedom to express their natural behaviours at the times when they are allowed to scavenge. According to Longtau et al, in the semi intensive system, vaccinations and supplemental feeding is given to the chickens. The semi intensive system should promote a better animal welfare than the extensive system, though no experiment has been carried out to compare the welfare of birds reared in extensive and semi intensive system of production in Nigeria.

The Nigerian commercial poultry production is characterized majorly of two systems, which are the deep litter system and the battery cage system. Laying hens are usually kept in either the deep litter or the battery cage system. A study by Maduka et al showed that in Jos, a location in Central Nigeria, 86% of farmers kept their

hens in deep litter, while 13% kept their hens in battery cages. Another study by Akinyemi et al in Osun State, a location in South West Nigeria, showed that 43% of farmers made use of deep litter system, while 56% of farmers made use of battery cages.

The conventional or battery cage system is a set of wires arranged in rows and tiers. Battery cages are more efficient because large number of birds can be kept in strict confinement, with automatic feed and watering systems. Also, battery cages are known for high sanitary levels. Gerzilov et al reported that cages provide a clean diseased free environment and small group sizes for laying hens, which has a positive effect on welfare. Hulzebolch also said that laying cages still remains the most economical way to produce eggs and prevent disease spread. The study by Akinyemi et al 2019 also showed that battery cage production system was more profitable than deep litter production system. A study by Ajiboye et al concluded that battery cage system is about 20% more efficient than the deep litter system and farmers should therefore be encouraged to adopt the battery cage system [2].

Although the cage system is known for its high sanitary levels, there are welfare issues associated with birds kept in cages. There are some disadvantages of the battery cage system, such as the barren environment, lack of a separate nesting area and substrate, restrictions on behavior and production syndromes such as osteoporosis, leading to poor bone strength. According to Appleby et al, conventional (battery) cages do not make it possible for birds to experience all five freedoms, which are the basis of animal welfare, and majorly, they prevent birds from performing their natural behaviour. The lack of free movement, comfort, freedom and ability to display natural behaviours has gendered a lot of discussion. Also, feather pecking can be an issue in cage system. Several authors have shown that the frequency of feather pecking is higher in caged hens housed than in floor hens and that the presence of enrichments can reduce the incidence of feather pecking. Beak trimming is usually used to prevent this. However, beak trimming is also a serious welfare concern. It involves use of red-hot blade to amputate up to a third of the birds' beak. It is quite a cruel act. It can lead to acute and chronic pain due to damage of tissue and nerve injury, loss of normal function of beak. Several alternative systems have been proposed and practiced in the last two decades in several countries. Europe, for example, has banned the use of battery cages since 2012, to switch to the use of these alternative systems. Also, in the US, a bill was passed in California in 2008, to outlaw the use of conventional cages by 2015. Part of these alternative systems is a new system of cage that combines the advantages of the battery cages, as well as addressing some of the welfare issues. These cages are called the enriched or furnished cages. In furnished cages, hens have more space than in conventional cages (750cm<sup>2</sup> vs 550 cm<sup>2</sup>). Furnished cages also have a space for litter, nest boxes and perches. Several experiments have been carried out to investigate the difference in welfare of laying hens reared in conventional, furnished cages and deep litter system. The literature reports that furnished cages improve hen welfare by reducing stress, aggression and feather eating, and by improving bone mineralization. Also, birds in enriched environment expressed reduced aggression, lower body weight and higher corticosterone levels compared to birds in conventional laying cages. Guesdon et al did not show a positive effect of furnished cages on welfare compared to conventional cages. Barnett et al found that group size and living space have little effect on layer welfare, while

cage equipment (perch, sand bath, and nest) has no influence on bird welfare although it has a positive effect on bone strength. Leg deformations were present in layers kept in furnished cages, probably due to excessive perch use, which may be a problem in this type of cages. A study conducted in Nigeria to investigate the difference in welfare of laying hens reared in normal and extended battery cages, showed that the heterophil/lymphocyte ratio was higher in normal battery cages, compared to extended battery cages, indicating a higher level of stress. Extended battery cages are battery cages without partitions and with a reduced stocking density. There has not been any research conducted in Nigeria about the use of furnished cages.

The deep litter system is a system in which birds are confined in a building with floor covered with a deep litter (straw or wood shavings), and birds are allowed to move freely. Some farms use the deep litter system to rear broiler chickens; some farms also use the deep litter system to keep pullets till point of lay, after which they transfer to the battery cages, while some use the deep litter system throughout the life time of the laying hens. There is no legislation for the feeding and watering space as well as the stocking density, hence most farmers do as they deem fit, and according to their personal research or trainings.

Some deep litter systems in Nigeria still lack technology, food is usually given manually, using troughs and buckets and so efficiency is not usually guaranteed. More advanced systems use automated feeding and watering systems. One of the factors that affect birds reared in the deep litter system in Nigeria is the climatic condition. Farmers house their animals in open-sided coops. This design is cheaper than closed, environmentally controlled designs, but it exposes poultry to the problems of climate and weather and this has negative consequences on health and productivity. The daily variations in temperature and relative humidity in parts of Nigeria can be up to 12°C and 25 % respectively. Heat stress is therefore a problem that most farmers have to deal with. These unfavourable conditions have therefore, in some instances, encouraged the incorporation of environmental amelioration systems like industrial or tunnel ventilator fans, foggers and cooling pads along with shade trees planting. In the case of poor management, wet litter and also litter that are not often cleared could lead to increased air pollution due to ammonia build up. This has a detrimental effect on bird welfare. Birds are thus, often exposed to heat stress, inadequate ventilation and poor air quality. In the deep litter system, diseases are easily transmitted. The transmission of diseases is prevented by very high biosecurity measures. Only large-scale commercial farms in Nigeria have very high and strict biosecurity measures. According to Pagani, the poultry sector across the different regions of the country is characterized by a general weak level of biosecurity.

Concerning transportation, the numbers of poultries handled and transported in Nigeria exceed that of other livestock. Each bird is transported at least twice; during purchase and during sales. In extensive system, the local breeds are usually transported in baskets. For the medium to large scale commercial farms, transportation is majorly by road. Day old chicks are transported in cars, buses, sometimes in public buses. In public buses, the time of the day is not under the control of the farmer, and so chicks could end up being transported in the hot weather. Also, several loads and goods are placed on the chick boxes, in public transports. In transit, birds are

usually exposed to different kinds of hazards, such as vibration, noise, behaviour restriction, withdrawal of food and water [4]. Sometimes, when broiler chickens have reached market weight, they are caught and placed into cages or crates for transport to the abattoir or to the buyers. Birds are usually caught by the legs, inverted and carried in groups of 3–4 birds per hand to transport crates. During this process, fear and stress, leg and wing fractures are likely to happen. In most cases, broilers and old layers are slaughtered on the farms and processed into frozen chicken. Many commercial frozen chicken producers use the humane method of stunning prior to bleeding to eliminate painful death chickens. Chickens are also sold in the open markets, where they are slaughtered, or slaughtered at home by consumers. Most consumers do not consider humane slaughtering methods and there is no legislation guiding the slaughter of chickens in Nigeria.

### Animal welfare issues in cattle production

In Nigeria, beef cattle are the most common form of cattle reared (87%). Dairy cattle are also reared in small amounts (13%). There are three cattle production systems in Nigeria: the extensive or pastoral system, the semi intensive or agro pastoral system and the intensive or commercial system. About 82% of cattle are raised in extensive systems while 17% in semi intensive systems and 1% in intensive system. The extensive or pastoral system is the system in which cattle are moved about in search of pasture and water. Though, the extensive system of production offers many advantages because they are the system that is closest to an animal's natural environment, yet they have their own welfare issues. Animals are usually made to trek long distances in the scorching sun. Animals are fed and watered as the opportunity arises, without any form of supplementation. Nutrition could pose a serious welfare concern, especially in periods of dry season as short term exposure to climatic extremes may prevent access to nutrition that meets their daily physiological needs. Diseases are usually rampant in this system of production. Animals raised on pastures tend to carry heavy tick and internal parasites. Also, predators have the opportunity to prey on calves and younger animals and cause distress in older animals. Also, animals are not able to lie down and rest freely, and animals suffer lameness and foot diseases as a result of trekking [1-5]. Also, mixing of animals that are not compatible, such as bulls can lead to regular fights. Heat stress is another welfare problem of cattle due to the high ambient temperature and high relative humidity of the Nigerian tropical climate. Affected cattle show a reduced feed and water intake; a decline in milk production and a rise in respiration rate. Mortalities may also occur in cases of exposure to prolonged high temperatures. In the agro-pastoral system, farmers grow both crops and rear the animals and depending on the season, animals are taken to grazing areas and water sources. The intensive or commercial system can be small, medium or large in scale. Animals are usually of exotic or cross breeds. Animals are fed with high quality forage and feed supplement, though they depend entirely on humans for feed and there is usually a little opportunity for them to select their diet. Biosecurity measures are in place and there is usually proper housing for the animals. Poor facility and equipment design and maintenance are one of the causes of poor welfare on cattle farms in Nigeria. Furthermore, as a result of limited space, animals are unable to display some of their natural behaviours, as mobility and exercise are restricted. Other animal welfare concerns in Nigerian cattle



production system, include painful husbandry procedures such as dehorning, castration, animal identification and hot iron branding that are most times carried out without analgesia.

Cattle are usually transported over long distances in Lorries, in unpleasant situations, where animals are overcrowded and mishandled during loading and offloading, without access to feed and water. Fraser described most methods used for transporting ruminants from the northern to the southern part of Nigeria as being against standard animal welfare procedures. Minka and Ayo also said that animals sustain undue stress and injuries during transportation that affect their health and productivity.

In a study by Fasae, it was observed that there were poor welfare attitudes by cattle handlers in an abattoir in Ogun State, Nigeria. This could be as a result of lack of education, as literacy level was very low and a general lack of knowledge on proper animal handling. In that study, there was no humane practice in the rearing, handling, transporting and slaughtering of cattle. Handling of cattle from lairage to slaughter slabs is usually unethical, with animals being dragged on the floor, and even made to see the carcasses of already slaughtered animals. Animals are usually slaughtered using the Muhammedian method, with no stunning of animals before bleeding. Animals are thus exposed to cruelty, before being slaughtered.

### **Animal welfare issues in pig production**

Pig (*Sus scrofa*), is one of the sources of animal protein in Nigeria. They are monogastric animals and are highly prolific. They utilize a host of agro-industrial by-products and crop residues, with little or no processing and at minimal cost. Pigs are mostly reared in the intensive system of production, and as such they are not able to exhibit important natural behavior, such as rooting, wallowing, nest-building, and foraging, and are unable to segregate into natural social groups. Pigs are naturally active and inquisitive animals with a well-developed exploratory drive. They thrive better in enriched surroundings. There has not been any experiment about the use of enrichments on pig farms in Nigeria. Due to barren housing conditions, including hard, often wet and slippery slatted floors, pigs usually have no opportunity to comfortably lie down or nest. Also, high levels of ammonia, results in poor air quality, and causes ocular, olfactory and respiratory discomfort.

Tail biting is one of the serious welfare problems associated with intensive pig production systems. It can be caused by lack of enrichment in pig houses. Other risk factors include high stocking density, compact floors with no bedding and high levels of ammonia. Pigs bite each other's tails causing damage which can result in infection. Tail docking is used to reduce tail biting. Tail docking is a very painful procedure and also poses a serious welfare concern.

Castration is a procedure commonly practiced in Nigeria because farmers believe that it increases the weight gain of pigs. Castration is usually a very painful procedure and is often done without anesthesia, and hence it also poses a serious welfare concern in pig production.

Most developed countries have laws that govern the humane slaughtering of animals, it ensures that animals are killed quickly, painless and without suffering. There are no laws like this in Nigeria, leading to excessive pre slaughter stress, poor hygienic conditions of slaughter areas and inhumane slaughter practices.

In an observational experiment conducted in Oyo and Lagos State by Omotosho et al, it was observed that pigs were transported to the abattoir from different areas of the state and other neighboring states. Butchers usually go in search of pigs; only few farmers take their pigs to the abattoir. Pigs are usually transported in trucks, buses, cars and sometimes bikes. They are restrained with ropes ties to snout and hind limbs. In some instances, like in Ogun State, pigs were transported by foot. Identification system of butchers is by scrapping off the bristles with sharp blades, and this instills so much pain. In the same observational study, poor lairage facilities were noticed, also, stunning methods were inhumane and often ineffective as animals are still usually conscious even after stunning.

### **Animal welfare issues in small ruminants in Nigeria**

According to FAOSTAT, Nigeria is one of the main countries in the world that raised goat, with a population of 72,466,698 goats. Small ruminants contribute over 30% to total meat consumption in Nigeria. The production systems could be free roaming, tethering, and confinement. For the free roaming, animals are allowed to roam about, with little or no additional inputs. They could be tethered in order to avoid the destruction of crops during the growing season. Animals are fed with household scraps and crop residues. About 70% of the sheep and goat population are concentrated in the Northern region of Nigeria. This is due to the ecological condition of the area that is most favorable to the ruminants (low rainfall duration, lighter sandy soils and longer dry season). In the Northern part of Nigeria, sheep and goats are usually confined or tethered during the growing season and fed through cut and carry. During the dry season, the sheep could be grazed with the cattle by the nomads and also could be allowed to scavenge on crop residues after the harvesting season. These systems of production are generally characterized with no special feed or housing. In the semi intensive system, the animals could be provided shelter at night for security purpose. Under nutrition is one of the challenges of the small ruminants in Nigeria, especially during the dry season [3,7].

### **Animal welfare and international trade in Nigeria**

Paying attention to animal welfare in Nigeria will go a long way to improve international trade. A study by Bowles et al 2005 shows that at present there is minimal trade in welfare assured products from developing countries into markets like the EU. The study also showed that added-value products, including those with high standards of animal welfare, have an important role to play in allowing access to markets such as the EU. For example, Namibia is a developing country, whose beef industry has gained a lot of product quality recognition due to guaranteed traceability and animal welfare. This has led to increased market leverage and a trade advantage over its competitors. The European Union is willing to develop trade opportunities for developing countries to market high-welfare products to Europe. It is therefore important as a developing country, to prioritize issues of animal welfare in order to gain market access into these countries.

### **Animal welfare legislation in Nigeria**

Nigeria does not have a stand-alone legislation, regarding animal welfare. There is however a reference in the Nigerian criminal code

1990, that shows some recognition of elements of animal sentience, though it is unclear which animal species are recognised as sentient. This recognition, though is an important step in improving animal welfare, it has not been included in an enacted legislation. The Animal Disease (Control) Act provides some additional protection to farm animals including limiting stocking density during transportation. This is a positive development, though the protections are limited and are without detailed provisions, concerning rearing and slaughter of farm animals. In 2016, Nigeria produced the Nigeria Animal Welfare Strategy document, which is forming the basis of revisions to legislation, but it is yet to be implemented and carried out. There is no evidence of allocation of financial resources to the development of animal welfare in Nigeria. Also, public awareness on the existing laws and the need for animal welfare is very low.

### The role of NGOs and government agencies in promoting animal welfare legislation and practice in Nigeria

Non-governmental organizations (NGOs) all over the world have contributed immensely to the establishment of policies and procedures aimed at protecting the welfare of farm animals as well as pets globally. For instance, the Compassion in World Farming is an NGO working internationally to advance farm animal welfare. In Nigeria, at present time, very few non-governmental organizations are working for the wellbeing and welfare of animals. Some of them include Nigeria SPCA, a national animal welfare and protection organization founded in 1947, a member society of the World Animal Protection (WAP); the Humane Global Network, a humane organization aimed at promoting animal welfare in schools; Nigerian Animal welfare and rights forum, focused on creating awareness on animal welfare issues in Nigeria. My observation is that there are very few animal welfare NGOs compared to other NGOs in Nigeria.

The Department of Veterinary and Pest control services that has the OIE mandate on animal welfare in Nigeria has been taking the issue of Animal Welfare very serious. Inclusion of animal welfare in the training curriculum for veterinary schools has been made mandatory. The curriculum is reviewed from time to time by the veterinary council of Nigeria, though the animal welfare module is yet to be fully developed. There is a national consultative committee on animal welfare which is being coordinated by the Department of Veterinary and Pest control services. This committee has organized sensitisation workshops for stakeholders on good farm animal welfare practises, but they have not met since 2016. In 2017, the Department presented the Nigeria animal welfare strategy to stakeholders at the maiden university of Ibadan animal care and use research ethics committee.

## Conclusion

Animal welfare should also be taught in schools, starting from the primary education level so that at such a young age, children are always aware of the sentient nature of animals and they know how to treat animals. This will also reflect on their ability to make choices for animal welfare products, as a consumer. Animal welfare can also be introduced in the curriculum of animal science and veterinary medicine fields of study. Ifenkwe, in his article also suggested the formation of animal-friendly clubs and associations that will help to

propagate the message of animal welfare in the communities. Such animal friendly clubs and societies can be created in primary and secondary schools, as well as in tertiary institutions.

Non-governmental organizations have a great role to play in animal welfare issues in the country. They should be provided adequate legal support so as to engage in animal welfare works. Furthermore, farm animal welfare research to identify welfare problems in the country should be adequately funded. Farm facilities should also be regularly inspected, to ensure that farmers are complying with animal welfare legislations. Local governments and governors need to customize rules and regulation to endorse animal welfare in areas like abattoir, marketing places, transportation and handling of animals.

## Recommendations

Animal welfare legislation is very important in regulating animal practise standards in Nigeria. According to FAO 2011, it will be very important to change public opinion about the importance of good animal welfare and to apply legislative actions in animal production systems especially in developing countries where there is very poor animal welfare. Government is therefore encouraged to introduce an independent animal welfare act that will include an animal welfare definition in line with the OIE and clearly promote the five freedoms. Government is also encouraged to define specifically, the animals that are sentient and to include appropriate provisions in the revised legislation to protect animals as sentient beings.

In developing countries, poor handling and poor welfare status of farm animals is common, because of misconception and resource scarcity. Most livestock owners are not aware that animals are very sensitive to beatings and mistreatment. Most of them even pierce their animals with knives for easy identification. To solve the above problem, Government can train farmers through extension agencies on the implication of understanding animal welfare. The mass media can also be used to pass information about animal welfare across to farmers. The mass media has been known globally to promote issues of public interests. Philips had observed a growing interest in animal welfare globally with increasing attention being paid to it by the media, government and non-governmental organizations.

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