

Full Length Research

A case study of Factors affecting Broiler Production in Gumbo Payam, RejafCounty, Jubek State, South Sudan

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Factors affecting broilers production in Jubek State South Sudan were determined. Primary data were collected through a structured questionnaire on demographic data. Forty (40) broiler farmers and some households' poultry keepers were randomly selected. Analytical system was SPSS 20 version software. The factors such as gender, age, marital status, and level education had significant effect on broilers while labour cost had a negative impact. With gender being dominated by male (82.50%), while marital status of breeders were single (57.50%), 60% were the age group of breeders between the 31-40 who reared broilers, most farmers have (2-5yrs) in keeping broilers with 57% and the farmers level of education were mostly university students with 57.5%, this is because breeders who have the education level which is high will impart more experience of farming knowledge or skills. Environmental challenges such as temperature, day old chicks and feeds, capital and diseases were the main problem faced by broiler farmers, leading to limitation of broiler production in the Jubek State. It is recommended that, Research on the prospect of establishing a feed processing plan in the region that will go a long way in addressing the high cost of feeds currently being imported with 88% in the country by the young and vulnerable farmers in Gumbo. Vaccination and preventive measure should be put into consideration to address the issue of common diseases like Newcastle, fowl cholera, Gambaro, and Avian Influenza. Similar study may also be done in other areas particularly the neighboring Payams or Counties on similar factors and increase awareness on broilers production.

Keywords: Broilers, Breeders, Preventive measures, cost of Feeds, Diseases

INTRODUCTION

Poultry production (*Gallus-gallusdomesticus*) is the process of raising domesticated birds such as Chickens, Ducks, Turkeys, Pigeons, and geese for the purpose of farming meat or eggs for food. Poultry are farmed in great numbers with chickens being the most numerous. More than 50 billion chickens are raised annually as source of food for both their meat and their eggs .Chickens raised for eggs are usually called

layers, while chickens raised for meat are often called broilers. In USA, the national organization overseeing Poultry production is the food and drug administration (FDA), and also India during the last few year's poultry farming has taken a U- turn from back yard venture into a fastest growing commercial sector. Regionally in countries like Nigeria, the poultry sector accounts for about 58.2% of total livestock production (Amos, 2006)

.The poultry sub-sector offers the quickest returns to the investment outlays in livestock enterprise by virtue of short gestation period, high feed conversion ratio along being one of the cheapest, commonest and best source of animal protein in the Country (Ojo, 2002).This indicates the crucial role it holds in the livestock industry. Poultry production is the most efficient and cost –effective way of increasing food as meat are known to provide the most perfectly food containing all protein and vitamins (Branckart et al, 2000).The production of poultry meat occupies a prime position for improving animal protein consumption for both rural and urban households .Poultry products (meat and eggs) have assumed the role of providing much needed animal protein to human populace (Aihonsu and Summola,1999).Poultry contributes about 15% of the total annual protein intake with approximately 1.3kg of poultry products consumed per head per annum (Ologbon and Ambali, 2012).In past decades ,there has been a recorded improvement in the poultry production in Nigeria with its share of the Gross Domestic production (GDP) increasing in absolute terms. It was reported that the contribution of poultry meat and eggs to the livestock share of the GDP increased from 26% in 1995 to 27% in 1999 with an increase in meat production alone accounting for about 13% during the period (Ojo, 2003). It contributed approximately 4.45% of the total livestock contribution to the agricultural Gross Domestic Product (GDP) in 2004 (CBN, 2004).According to the researchers and scientist 74% of the world is poultry meat and 68% of eggs are produced in ways that are described as intensive. One alternative to intensive poultry farming is free range farming using lower stocking densities. Poultry producers routinely use nationally approved medications such as antibiotic in feed or drinking water to treat diseases or prevent outbreak. However Broilers is any chicken that is bred and raised specifically for meat production. Many typical broilers have white feathers and yellowish skin, most commercial broilers reach slaughter weight between four and seven weeks of age , although slower growing breeds reach slaughter weight approximately 14 weeks of age. Because of the meat broilers are this young at slaughter (roughly 500g), their behavior and physiology are that of an immature. Due to extensive breeding selection for the rapid early growth and the husbandry used to sustain this, intensive poultry farming is usually divided into specialized operations, although some farmers may be interested in keeping poultry for both meat and eggs. For meat production, the chicken have been selected for rapid growth, breast meat, and usually lean meat (low fat) Nevertheless broilers are like other common poultry birds, but this broiler is made in scientific ways for producing more meat in short time, however, they are susceptible to several

welfare concerns, particularly skeletal malformation and dysfunction, skin and eye lesions, and congestive heart conditions. Management of ventilation, housing, stocking densities and in- house procedures must be evaluated regularly to support good welfare of the stock. The breeding stocks (broiler-breeders) grow to maturity and beyond but also have welfare issues regulated to the frustration of high motivation and beak trimming. Broilers are usually grown as mixed – sex flocks in large under intensive conditions.

General objectives

1. To identify the factors affecting broilers production in Jubek State.

Specific objectives

1. To know about poultry and broiler productions.
2. To determine the factors hindering broilers production in Jubek State.
3. To know socio- economic factors of broilers production and ability to produce efficient and healthy broilers.
4. To determine the policy, technical, and environmental factors driving the scaling up of broilers production in Jubek State. To assess the implication of this process for broiler producers.

MATERIALS AND METHODS

1. Study area

The study was carried out in Gumbo Payam, Rejaf County (Jubek State), Its located in the Eastern part of Juba, the capital city of the Republic of South Sudan and it has a population of 15,604 and longitude N 4° 48 41.778 and latitude 31°37, 57. 0224, according to population census conducted in 2008.

2. Sampling Methods

The research was conducted by survey method; researchers took samples from a population and using questionnaires as the main data collection tool. Locations were selected that included Gumbo and RejafPayams intentionally with the consideration that this county has a population of broilers and local chickens. Samples of this research were determined by selection of 40 farmers and some family households.

3. Data Collection

Data was obtained with the aid of well-structured questionnaire that captured socio-economic or demographic characteristics of poultry farmers and farm characteristics. These include age of the broiler farmer, gender, level of education, poultry farming experience, property ownership, and source of credits. It includes information about practice of biosecurity measures, routine vaccination and medication by poultry farmers in this study area.

RESULTS AND DISCUSSIONS

Results

Below are the results of the study carried out in Gumbo Payam in Rejaf County (Jubek state) and the statistic of the respondents were entered and analyze

4. Statistical Analysis

The data collection was analyzed using the statistical package for social science (SPSS) version 20 of software and calculated in term of percentage in pie charts and bar graph. In examining the broiler production system as well as farmers socio-economic characteristics. Data were analyzed with the purpose of achieving the objectives of the study.

using statistical package for social science (SPSS) version 20 .The descriptive statistics analysis that employed using the pie charts and bar graph, percentage, mean, variance and standard deviations in examining the broiler production as well as farmers socio- economic characteristics .The data were analyzed with the purpose of achieving the objectives of the study

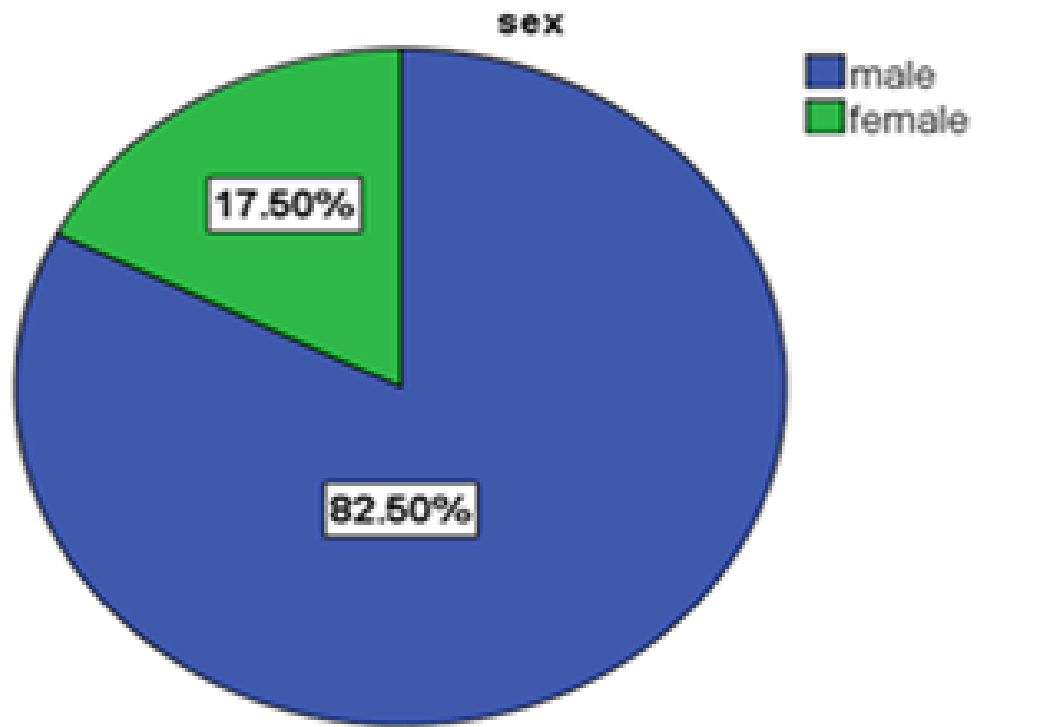


Figure 1: Show the sex of the respondents

According to the study about 82.5% were male while 17.50% were female, meaning that most people who reared broilers are male.

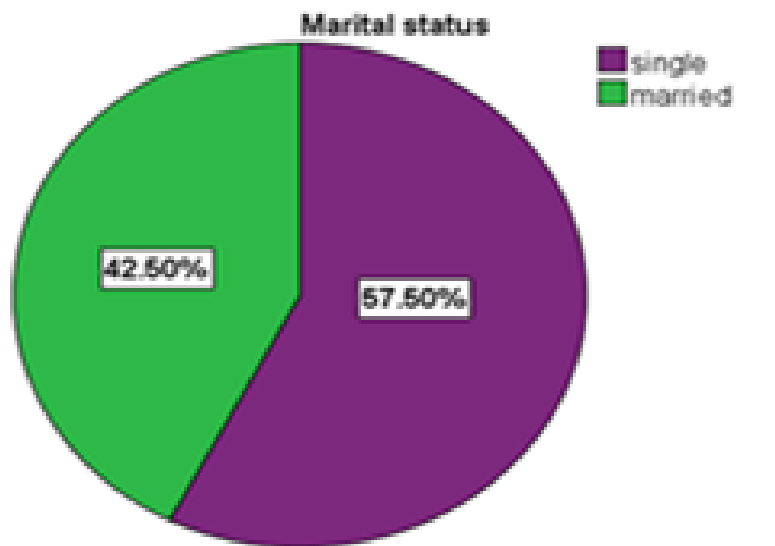


Figure 2: show the marital status of the respondents.

About 57.50% were single and 42.50% were married. Therefore, the most respondents are single compared to married.

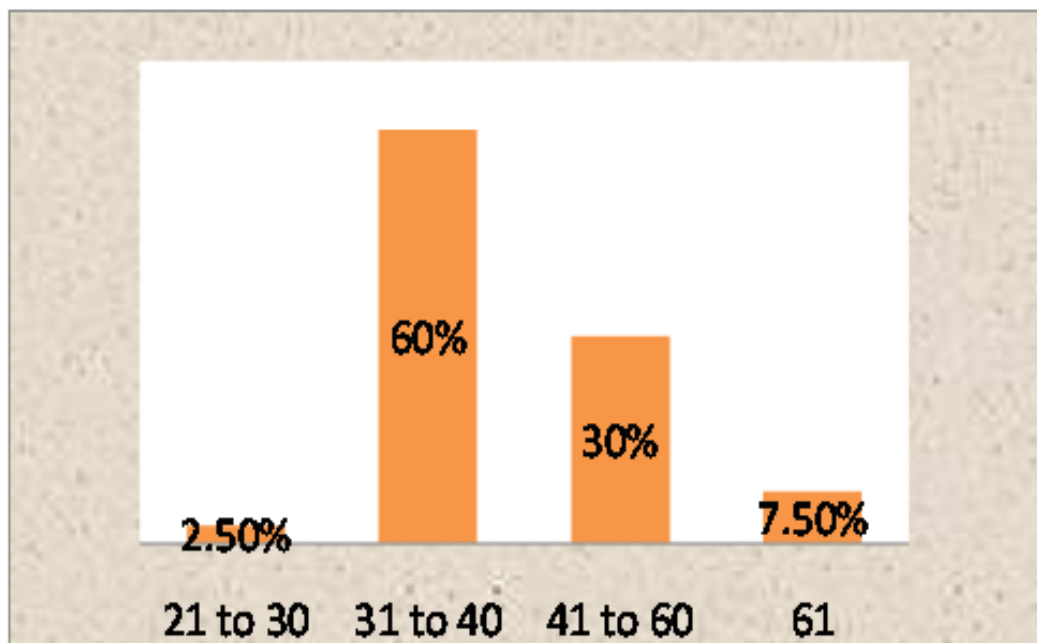


Figure 3:. Show the age of the farmers.

According to the finding 60% were from the age of (31-40), 30% were from the age of (41-60), 7.50% were from the age of (61 above), and 2.50% (21-30). Most respondents were from the age of 31 to 40 compare to rest of the ages (Fig 3).

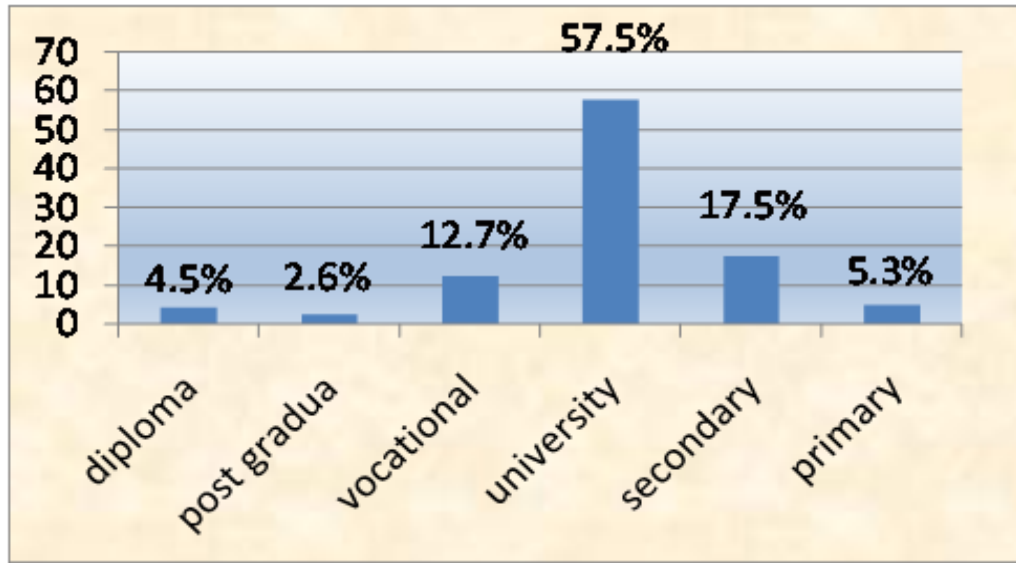


Figure 4: Show the farmers academic levels.

From these findings, 57.5% indicates university, 17.5% indicates secondary, 12.5% indicates vocational training, 5.00% indicates primary, 4.3% indicates diploma, 2.5% indicates post graduate level. Most respondents were university level who kept broilers.



Figure 5: Show the duration of the farmers.

According to finding from respondents 57% were (2-5yrs), 20.00% were (6-10yrs), 17.50% were (11 and above), and 5.00% were (less than a year).

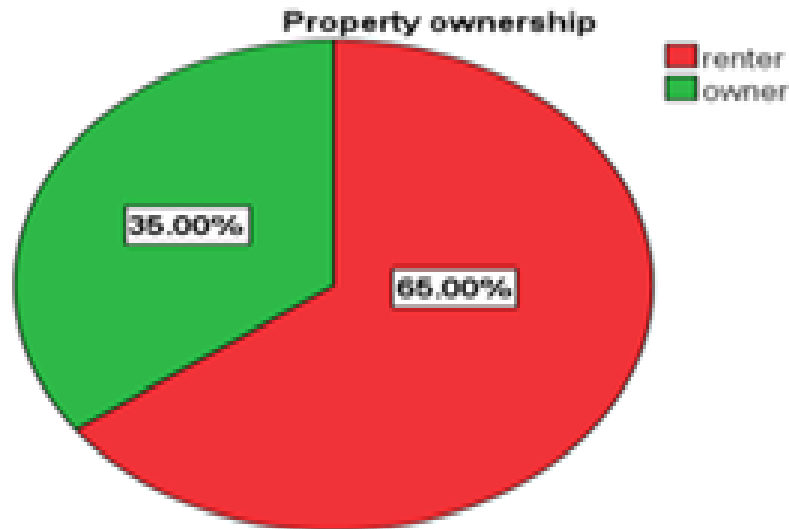


Figure 6 :Show the farmers property ownership of the poultry keeping.

According to the results assessed 65% were renter and 35% were owner of the property, means that most people who are poultry farmers in Jubek state are renters of poultry production.

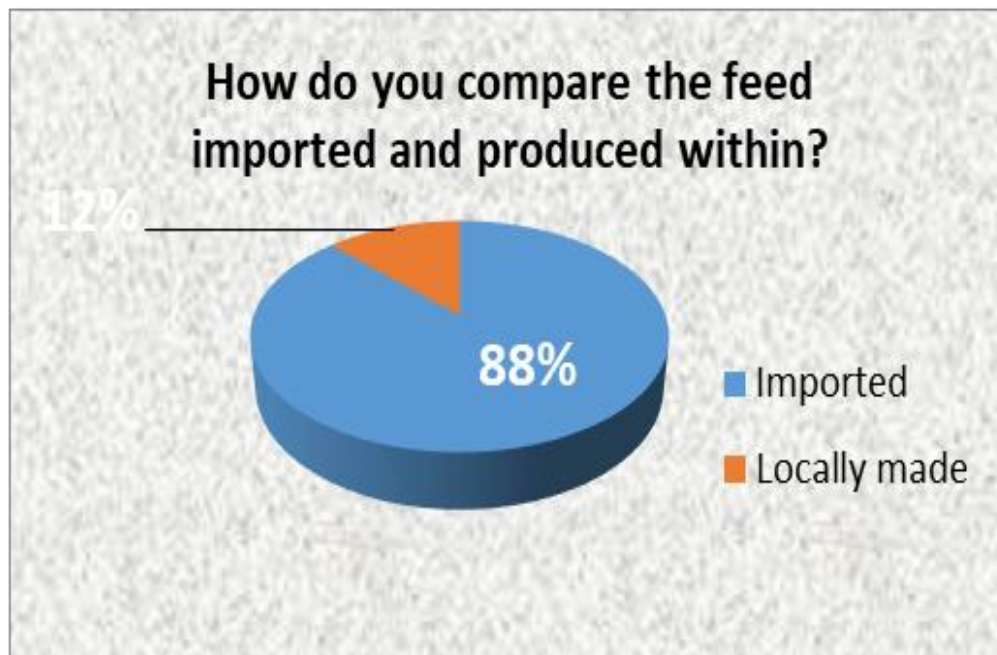


Figure 7: indicate the farmers view about broiler production.

According to results of the respondents,88% are feed imported in the country, and 12. % are feed produced within the country.

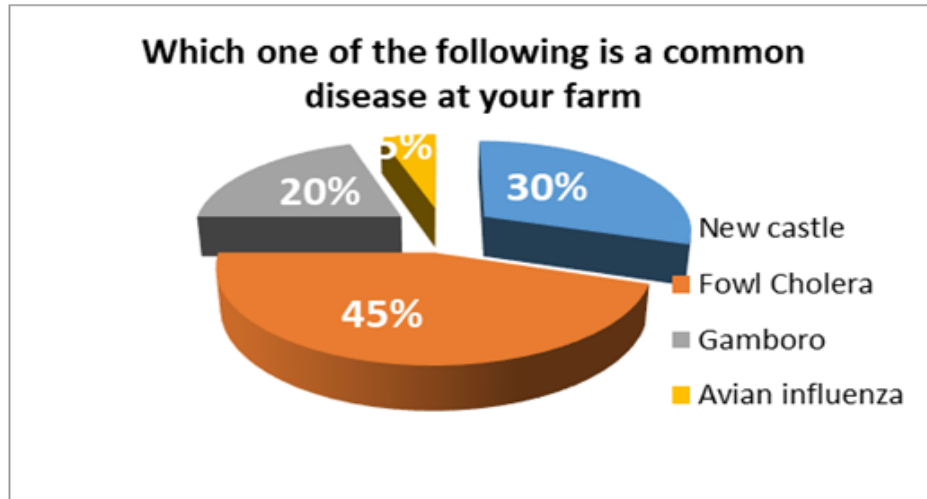


Figure 8: Show the common disease at the farm.

According to the findings 45% Fowl Cholera, while 30% New castle, 20% Gamboro and 5% Avian influenza.

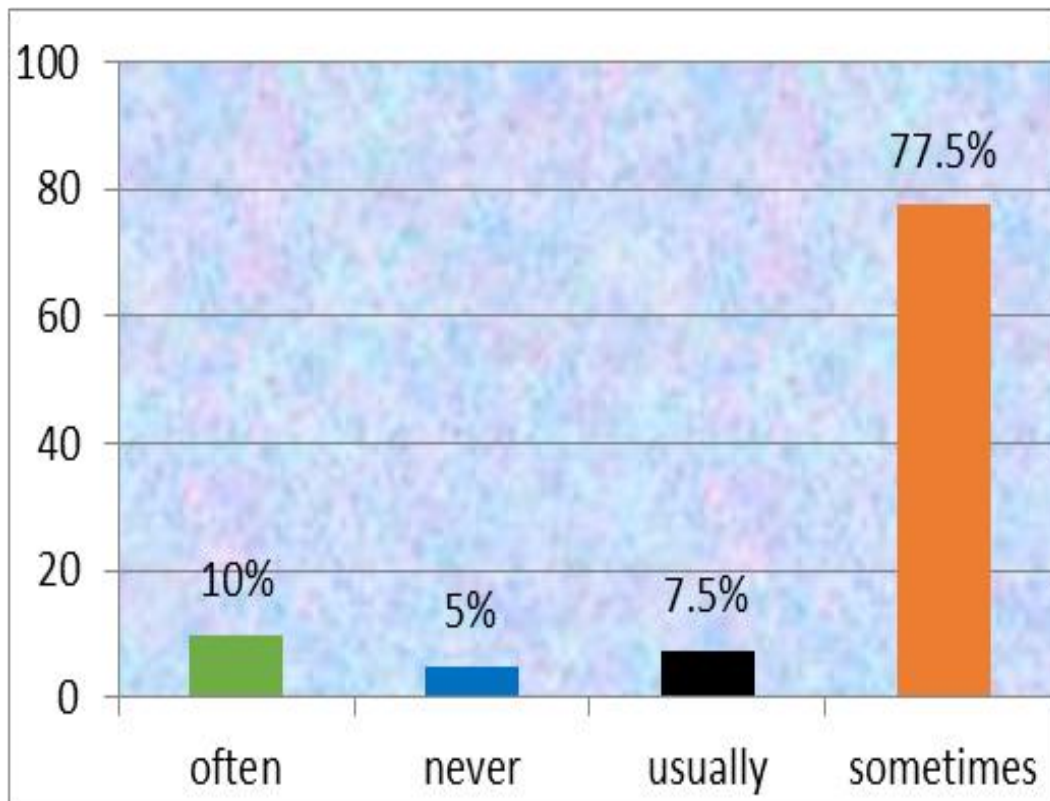


Figure 9: Show the farmers' consumption frequency of poultry meat.

According to the findings, 77.5% indicates sometimes, 7.5% indicates usually, 10% indicates often, 5.00% indicate never.

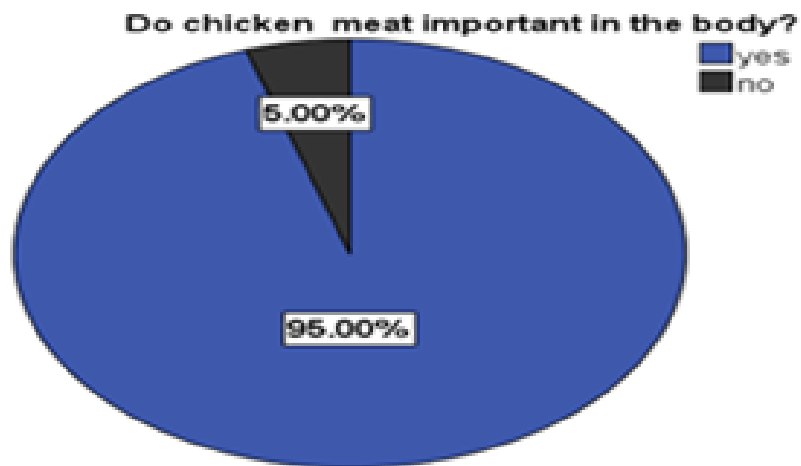


Figure 10: Shows the farmers view on important of chicken meat in the body.

According to the results 95.00% said its essential while 5.00% said it's not essential

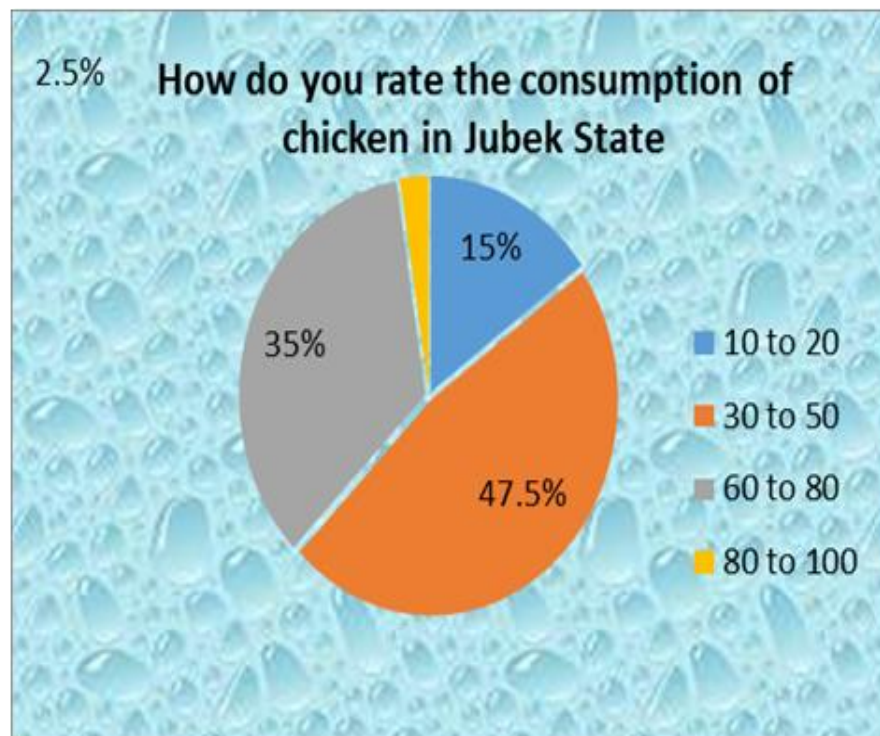


Figure 11:.Shows the consumption rate of chicken in Jubek State.

According to the finding 47.5% said (30-50%), 35% said (60-80%), 15% said (10-20%), and 2.5% said (80-100%).

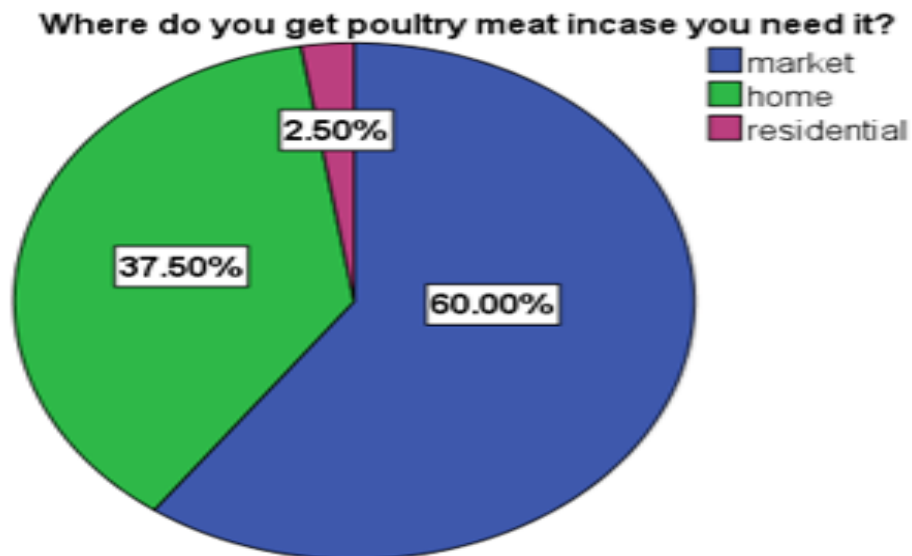


Figure 12: shows the farmers sources of poultry meat.

According to finding from the respondents, 60.00% gets their meat from the market, 37.50% gets their meat from home kept poultry and 2.50% gets their poultry meat from the residential areas.

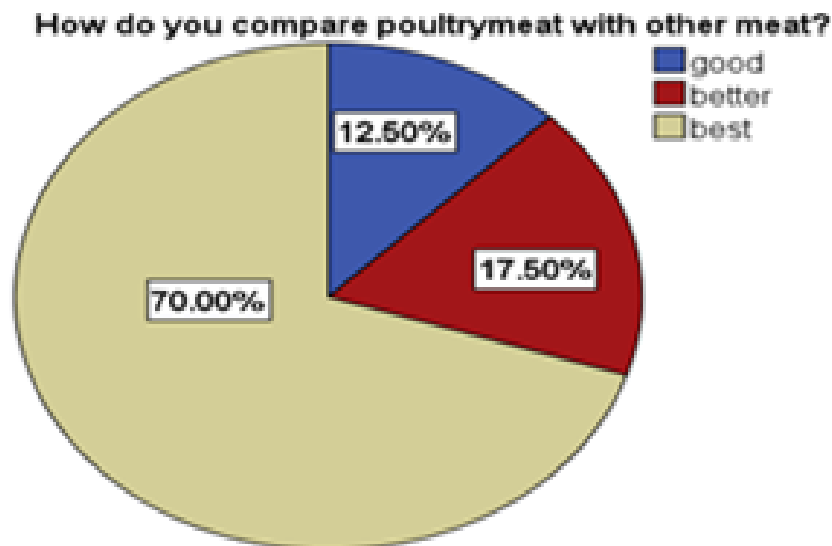


Figure 13. Indicates the comparison of respondents in poultry meat with other meats.

According to the finding by the respondents, 70.00% were best, 17.50% were better and 12.50% were good meat. Means poultry meat are the best meat in Jubek state compare with others.

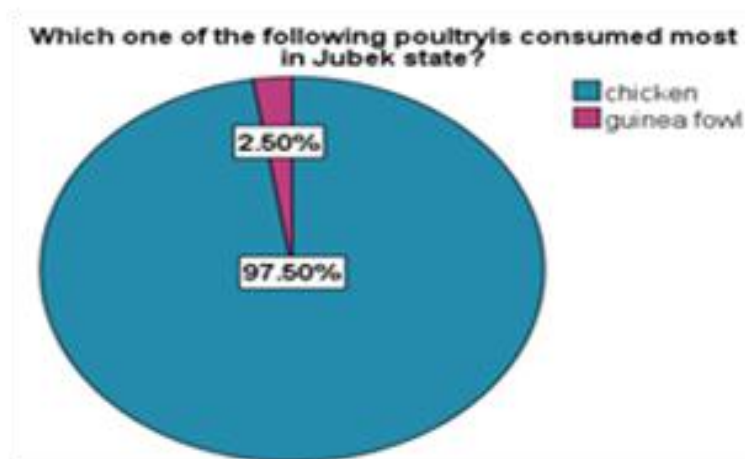


Figure 14. Show the most consumed poultry in Jubek State, according to study carried out in that area, 97.50% were chicken and 2.50% were guinea fowl, this means chicken were the most consumed poultry in Jubek state.

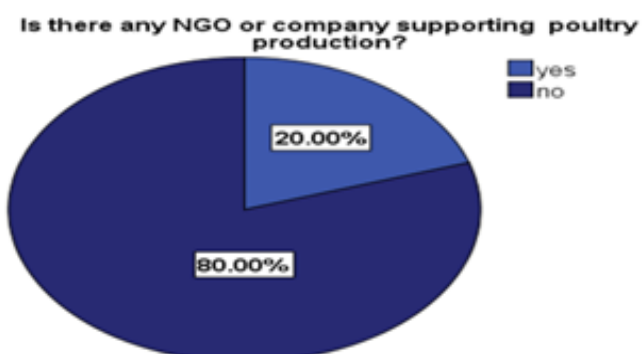


Figure 15: Shows the NGOs or companies supporting the poultry production.

According to the respondents, 20.00% were the NGOs or companies supporting the production of poultry and 80.00% were not NGOs or companies supporting the production of the poultry.

DISCUSSIONS

In this study the Farmers characteristic includes gender, marital status, age, level of education, experience in farming and poultry business status. Most of broiler breeders are male with 82.50 percent, while female only 17.50 percent. This shows that male are still dominant in the Broiler business; this is because women are not much involved in the role of rearing broilers and due to the un available poultry production training centers. In comparison with (Ali and Hossain, 2008) who found that most broilers producers were males with 57.7%.

The results of the marital status showed that 57.50% of those keeping broilers were not married and 42.50% were married. This may be due to economic hardship and raise of dowry within the country, so the breeders need to establish farm for sustainability. These findings, are in contrast with the work of (Ali and Hossain, 2008) which shows that most broiler producers are married with (78.4%) at which husbands were responsible for management of funds accruing from the farm enterprise and most women of all the age group were rarely involved in broiler production

activities.

In regards to age, the results showed that 60% of those rearing broilers were between the ages of (31-40), while 30% were above 40 years of age. It may be due to the age of broiler farmers who expected to be able to absorb new technologies, especially concerning the management of broiler chickens. This result is similar with the work of (Ali and Hossain 2008) at which the age group of (19–35) years was mostly responsible for daily farm tasks such as cleaning, treatment, purchasing, selling and feeding.

The result of level of education for University students is 57.50%, while 17.50% were secondary students; this is because breeders who have the education level which is high will impart more experience of farming knowledge or skills. These findings are in line with the work of (Nhemachama and Hassan, 2007) and (Ondersteijnet, al., 2003) who observed that education level was one of the main factors that improved the performance of farm production which improve the technical efficiency of the farmers.

CONCLUSION AND RECOMMENDATIONS

Conclusion

Based on the results of this study, Production factors simultaneously have effects on broiler production; individually significant factors are gender, marital status, age and level education. Environmental challenges such as temperature, day old chicks and feeds, capital and diseases were the main problem faced by broiler farmers, leading to limitation of broiler production in Jubek State

Recommendations

Based on this study, the following are recommended:

- Need for hatcheries so as to produce day old chicks.
- Vaccination and preventive measure should be put into consideration.
- Research on the prospect of establishing a feed processing plan in the State that will go a long way in addressing the high cost of feeds currently being imported to the country by the young and vulnerable farmers in Gumbo.
- Need for some NGOs and companies to support farmers in production of broilers.
- Similar study may also be done in other areas particularly the neighboring Payams or Counties on similar factors to have a comprehensive view.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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