

Technical analysis of poultry farming in the municipality of Thiès Senegal

*Abdou Khadre FALL¹ and Amélie Marième Mbengue²

^{1,2}Département productions animales de l'Institut Supérieur de Formation Agricole et Rurale (ISFAR, ex ENCR), Université Alioune Diop BP: 54 Bambey (Sénégal)

*Corresponding Author's Email: khadre.fall@uadb.edu.sn



*Corresponding Author

*Abdou Khadre Fall¹

Département productions animales
de l'Institut Supérieur de Formation
Agricole et Rurale (ISFAR, ex
ENCR), Université Alioune Diop BP:
54 Bambey (Sénégal)

*Corresponding Author's Email:
khadre.fall@uadb.edu.sn

Abstract

The study on poultry farming at the level of the municipality of Thiès in Senegal is carried out with 162 poultry farmers. Poultry farming is carried out by men (87.5%) and women (12.5%). They are mainly married (61.11%) and single (37.50%) with an average age of 40.44 ± 14.23 years. They are most often traders (29.20%), technicians (20.8%) and breeders (18.1%). It is a secondary activity for 91.7% of breeders. The motivation of poultry farmers is economic (88, 89%) and passionate (11, 11%). They only produce broilers (55.55%), exotic broilers and hens (15.27%), laying hens (12.5%), exotic hens (1.39%), laying and exotic hens (1.39%). Diseases are most present during the rainy season (32.89%) and periods of high heat (30.26%).

Keywords: Poultry farming, profession, characteristic, income, typology, constraint

Introduction

Livestock, which is one of the sub-sectors of agriculture, contributes on average 29.3% of agricultural GDP in Senegal. Over the period 2010-2014, the sector contributed, on average, to the added value of the primary sector for 28.5% and to the GDP for 4.3%. The value of the live herd is estimated at 847.48 billion CFA francs, including nearly 585 billion for the ruminant herd alone (PNDE, 2016).

In Senegal, poultry farming affects more than 50,000 direct and indirect jobs for a turnover of more than 150 billion CFA francs per year. The avian herd was 81,418,550 in 2018, including industrial poultry representing 65.18% of the workforce. The quantity of poultry meat in 2018 is 86 233 T or 35.54% of national production. Table egg production in 2017 is estimated at 719 million units.

There are two poultry farming systems in Senegal. The so-called traditional or family system represents about 34.9% of the country's poultry population, with more than 28,375,784 million subjects. However, commercial or semi-industrial poultry farming is characterized by the use of many inputs (food, drugs), modern equipment (housing, waterers, feeders) of poultry from exotic strains. It has grown considerably over the past decade, mainly on the outskirts of large urban centers and currently totals more than 53 million subjects (2018). Intensive poultry production is mainly concentrated in urban and peri-urban areas of the regions of Dakar, Thiès and Saint-Louis. Dakar is home to more than 80% of the workforce, Thiès around 15%, Saint-Louis 3% (Diagne, 2008) and the remaining 2% are shared between the 11 other regions of Senegal.

This study aims to diagnose urban poultry farming in the municipality of Thiès in Senegal on a socio-technical level.

Material and method

The equipment thus consists of a survey questionnaire and a mobile phone for recording interviews and taking photos.

Study medium and method

There have been 178 poultry farmers identified through professional associations and the commune's livestock service, of which 162 are under investigation. The socioeconomic characteristics of the breeders sought are: sex, age, ethnicity, level of education, profession, reason for breeding, duration in activity. The documented technical data are: type of production, current number of poultry, prophylaxis, pathologies encountered, food, type of henhouse and equipment.

Data processing

The data collected are processed with Excel 2013 software (analysis matrix) before being analyzed by

SPSS software, IBM SPSS Statistic 20 version (descriptive analysis, pivot table, mean, standard deviation, frequency, minima, maxima, X2 test of independence on cross tables).

Results

Socio-professional characteristics

Poultry farming is carried out by men (87.5%) and women (12.5%). They are mainly married (61.11%), single (37.50%) and widowers (1.39%). Their average age is 40.44 ± 14.23 years. It is between 19 and 77 years old. Gender has an influence on the level of education (X2 = 0.099). However, there is no correlation with the main activity and gender (X2 = 0.806) of poultry farmers. The main activity influences the secondary activity (X2 = 0.003).

Level of education and main activities

The main educational levels of (figure 1) The poultry farmers are: secondary (31.9%), university (22.22%), middle-secondary (16.7%), elementary (15.3%), Koranic (8.3%) studies. However 5.6% of the population have never been to a school.

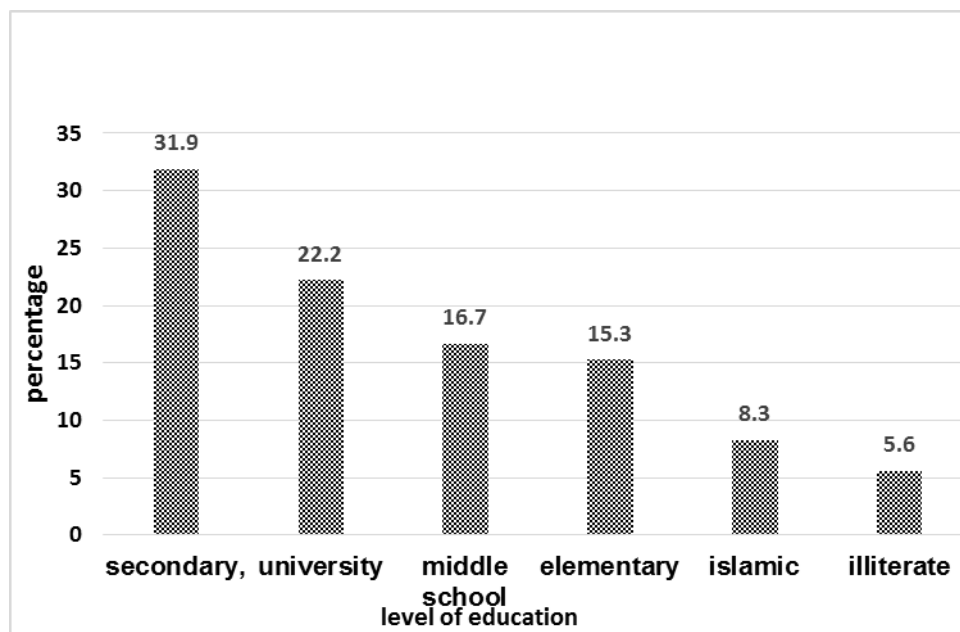


Figure 1: Educational level poultry farmers

Gender is correlated with education level (X2 = 0.09) and marital status (X 2 = 0.017).

Pluriactive (figure 2), they are most often traders (29.20%), technicians (20.8%) and breeders (18.1%).

Those whose main activity is poultry farming is only 8.3%.

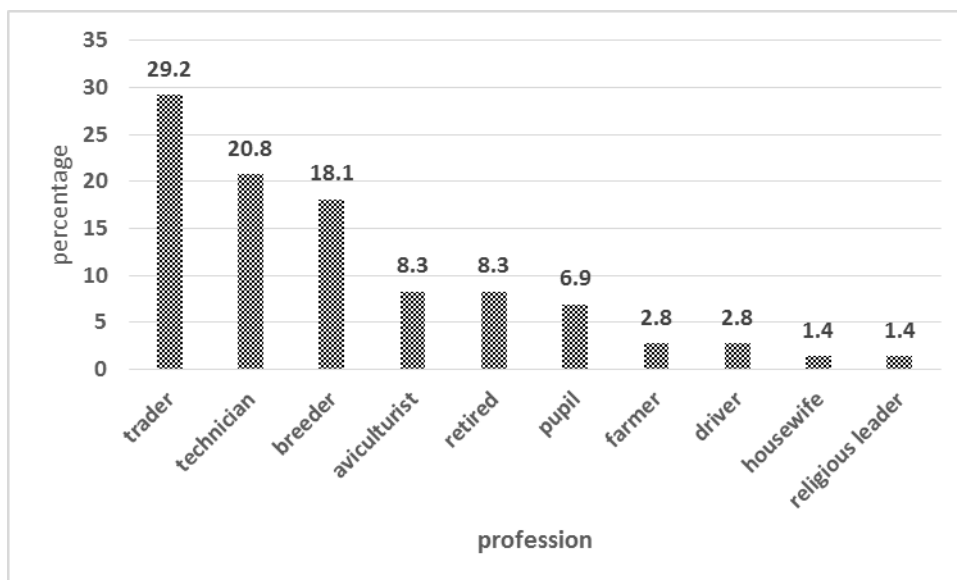


Figure 2: Main activity of poultry farmers

The motivation of poultry farmers is more economical (88.9%) and more passionate (11.1%).

Technical characteristics

Typology of farms

The typology highlights 6 different groups of poultry farmers according to the dominant productions. They only make meat (55.55%), exotic meat and hens (15.27%), eat and laying hens (13.9) laying hens (12.5%), exotic hens and (1.39) %, and laying hens and exotic (1.39%).

They also own pigeons (29.63%), ducks (25.93%), geese (22.22%). However, 14.28% of poultry farmers have turkeys, 3.7% quails and 3.7% parakeets.

Habitat and food

Poultry farmers (68.05%) own solid henhouses. However, 31.95% are raised in caged henhouses. 38.9% of poultry farmers use AVISEN feed while 23.6% distribute NMA feed to their poultry and 9.7% use SEDIMA feed. Of the other respondents, 11.10% use NMA feed and AVISEN feed and 5.6% use AVISEN feed and SEDIMA feed. The combination of NMA feed and SEDIMA feed is used by 2.8% of respondents. Mixing corresponds to the association of several types of poultry feed. Those who mix represent 8.3% of respondents.

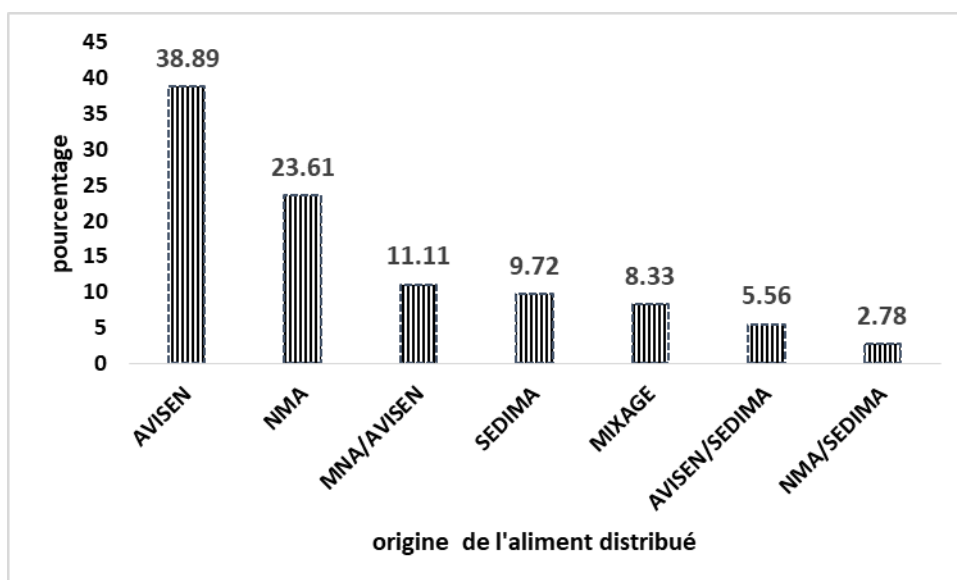


Figure 3: Origin of the food distributed

Technical and health monitoring

The study showed that 48.61% of respondents observed technical monitoring with the recruitment of dedicated people. The rest of the poultry farms (1.39%) do the

technical monitoring themselves. They all clear the crawl space and respect the prophylaxis schedule. Despite the observance of prophylaxis, it is noted the existence of diseases in the herds.

Diseases such as Gumboro, coccidiosis and avian influenza are present in herds with respective percentages of 28.75%, 25% and 18.75%. Salmonellosis (12.50%) and Newcastle disease (7.5%) are also identified

Other diseases such as Marek (2.5%), typhosis (2.5%), coryza (1.25%) and Colibacillosis (1.25%) are not widespread in the Thiès area. These diseases appear at different times as shown in Table 1.

Table 1: Periods of more marked mortality

| Mortality period | Percentage |
|---------------------|------------|
| Rainy season | 32,89 |
| Period of high heat | 30,26 |
| Wind period | 17,11 |
| Start of laying | 6,58 |
| Cold period | 5,26 |
| Mango season | 3,95 |
| Chick stage | 2,63 |
| Growth period | 1,32 |
| Total | 100 |

Pathologies are more present during the rainy season (32.89%) and periods of high heat (30.26%).

Discussion

Socio-professional characteristics

Poultry farming is a real socio-economic practice at the level of the municipality of Thiès. It is more an activity where men are the majority unlike traditional poultry farming in rural areas (Diallo, 2018). In rural Senegalese, women have almost the monopoly (Fall et al 2016). There is a diversity of ages and professions and the poultry farmers are almost all multi-active. The professions found there range from the civil servant to the worker and the shopkeeper. In addition, it appears that the owners of henhouses are in most cases working people or retired civil servants who have been able to save in order to find capital allowing them to start their activities. These results in relation to the appropriation of poultry by men are different from those reported (Gueye 2002; Ndayisenga 2010) in rural areas in the region of Saint-Louis in Senegal and also different from those reported by Missohou et al, (2002) and Traoré (2006), but are consistent with those found in Chad (Issa et al 2012). The massive presence of young people is explained by the fact that this sector clearly contributes to the reduction of the unemployment rate in cities by providing poultry farmers with satisfactory incomes, while the low representation of women is explained by the fact that in cities these The latter tend to be interested in other activities such as trade (Diallo 2013).

Technical characteristics

All breeders own henhouses (hard or caged) for their poultry because they are in a commercial logic (Ayssiwede et al 2013). Processed feed is distributed from the start-up stage to the growth stage, these results do not correspond to those of family poultry farming at the level of the municipality of Thiès (Fall et al 2016). Food is distributed to most of the poultry farmers

surveyed in the morning and evening. The speculations encountered are mainly broilers, laying hens and sometimes mixed farming between laying hens and broilers. There are also hens of exotic breeds. Poultry farmers market their poultry at all times of the year and particularly during religious holidays (Savane 1996)

The main constraint for pastoralists remains diseases (Traoré 2014; Savane 1996). Thus the most common diseases in the town are Gumboro, coccidiosis, avian influenza and Newcastle disease, ahead of salmonellosis, Marek disease, typhus, coryza and colibacillosis, contrary to the results of Diallo (2013). The factors that favor the appearance of Newcastle disease in Chad are linked to the season, the concentration of chickens, the management of traditional breeding and the socio-economic activity of man (BAN-BO et al 2013).

Conclusion and recommendations

Poultry farming is carried out by men and women. It is a secondary activity whose main motivation for poultry farmers is economic. The typology highlights 6 different groups of poultry farmers. They only make flesh, flesh and exotic hens, laying hens, exotic hens, laying and exotic hens. Food is most often distributed twice (morning and evening) per day. Despite the observance of prophylaxis, it is noted the existence of diseases in the herds.

The strengths and constraints in urban poultry farming in Thiès have made it possible to make the following recommendations:

- strengthen the technical capacities of poultry farmers to enable them to face production challenges;
- develop a technical and management advice program so that poultry farmers observe the rules of conduct but also to record all data related to breeding;

- set up a research and development program.

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