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Research article

Characterization of Village Poultry Production in Burkina Faso

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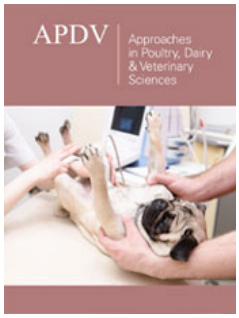

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Abstract

This study aimed to characterize the village poultry production systems and to investigate the opportunities for its improvement in Burkina Faso. The study was carried out in 75 villages located in 8 regions involving 750 households. Data were collected by individual interviews and surveys supported with structured questionnaires.

Data relative to the rural poultry farmers profile indicated that 78.93% were men and 81.87% adults. They also revealed a high illiteracy rate (66.80%) as well as a high number of farmers who received no training (79.20%). Our findings also revealed a predominance of traditional village poultry farming (88.48%). Almost, all farmers have local breeds and the chicken is the commonest species (96.60%), followed by guinea fowl (51.60%). The average flock size was 64.74 (±8.02) birds per household. Birds were raised in a mixed-species flock (67.33%) under an extensive management system based on free-ranging (93.73%) and scavenging with little (98.27) % or no (1.73%) supplementary feeding. This is due to the lack of financial resources (96.22%), human competition for the same food resource (64.57%), and scarcity of feed resources and their rising prices (41.55%). The feed resources used to supply chickens are usually cereal grains and co-products and to a lesser extent homemade or commercial concentrate feed. Other main features of the production system were improper housing, inadequate hygiene, and poor health care. Newcastle disease, predators, and parasites were the main causes of flock losses. Since agriculture is the main source of income of farmers, major reasons for rearing poultry were the generation of secondary income (sale), home consumption, gift, and saving. Therefore, most rural households do not see their birds as a commercial venture and consequently invest very little money and time in the activity. From this study, it is evident that interventions are necessary in the areas of feeding, housing, disease control, training, and credit delivery.

Keywords: Burkina Faso; Village poultry farming; Production system; Local breeds; Feeding; Management practices

Introduction

Burkina Faso is a low-income, landlocked country in West Africa. The economy depends heavily on agriculture, forestry and livestock farming, as well as the exploitation of mineral resources. Livestock contributed to about to 35% of the Gross domestic product (GDP) in 2012, employing over 82% of the workforce. The most important livestock species kept are cattle, sheep, goats, horses, and poultry [1].

Poultry farming, integrated into other agro-pastoral activities, is booming in Burkina Faso. According to the statistics of the Ministry of Animal and Fish Resources, in 2017, the total poultry population accounted for 46 million birds. Two types of poultry production are encountered in Burkina Faso: 1) traditional, extensive backyard/household poultry production, and 2) semi-intensive to intensive, market-oriented, commercial poultry production. Traditional poultry farming is the most widespread, namely in rural and low-income pre-urban areas [2,3]. Furthermore, 98% of the total poultry population is reared under the extensive system of production [1]. The production system is dominated by indigenous/local breeds, which are usually adapted to harsh rearing conditions, consume various non-conventional feedstuffs and do not require much investment [4]. Despite these advantages, the contribution of traditional poultry farming to the rural economy is low [5].

Several factors are likely to constrain optimum village poultry production. In previous studies, it was found that diseases, predators, malnutrition and underfeeding considerably hamper the development of poultry farming [6,7]. These studies were conducted in specific regions of Burkina Faso and did not cover the whole country. Furthermore, other factors such as gender, education, source of income, poultry farming experience, training exposure, flock size and structure, and others were not considered. Thus, still little is known about the current situation of the village poultry farming in Burkina Faso.

This study therefore aimed at characterizing the village poultry production system in Burkina Faso to determine the current status of management, mainly aspects related to feeding practices, identifying the constraints faced by farmers to propose improvement and interventions that benefit rural livelihoods.

Materials and Methods

Study area

The study was conducted from April to June 2018 in 8 regions and covered 14 provinces. In each province, one or two rural communes have been selected. Thus, 15 rural communes/ municipalities were surveyed. In each rural commune, 5 villages were visited. As a result, a total of 75 villages were surveyed as indicated in Table 1.

Table 1: Regions, provinces, municipalities and villages selected for the study.

Region	Province	Municipality	Village
Centre-ouest	Boulkièmdé	Poa	Loaga ; Niangdo ; Poa ; Sogpelcé ; Yargo-Yarcés
	Sanguié	Didyr	Didyr; Goumi; Ladiana; Mousseo; Yamadio
Boucle du Mouhoun	Sourou	Kassoum	Bangasi ; Dialla ; Daré ; Mara-grand ; Sorona
	Toma	Yaba	Pasnam ; Bounou ; Siellé ; Toba ; Sapala
	Mouhoun	Ouarkoye	Bekuy ; Lokindé ; Ouarkoye ; Poundou ; Samakuy
Plateau-central	Kourwéogo	Boussé	Secteur 3 ; Gasma ; Goundrin Kiedpalogo ; Kourian
	Oubritenga	Zitenga	Andem; Boalla; Komnogo; Nioniokodogo peulh; Samtenga
Centre-nord	Bam	Bourzanga	Abra ; Bonde ; Fétorané ; Namsiguia ; Selnoré
	Namentenga	Tougouri	Alfiré ; Daouirba ; Nabelin ; Nioundougou ; Sagouem
Sahel	Séno	Bani	Adoudie ; Bamguel ; Dianalaye ; Kallo ; OuroHoyende
		Seytenga	Bambary; Foufou; Ouroahidjo PetelKarkalle; Tandakoye
Haut-Bassins	Houet	Karangasso-vigué	Diosso ; Klésso ; Ouéré ; Séyé ; Tiébadialofaso
	Tuy	Founzan	Bonzan; Kouloho; Lollio; Sambion; Yerfing
East	Gourma	Diapangou	Balga; Bossongri ; Kolonkogo ; Nahambouga ; Sikideni ;
Centre-East	Koulpélogo	Sangah	Dabodin; Kandore; Sangha-Peuh Lagnore; Wondghinl

Data collection

Data were collected through direct observation and farmers' interviews. Before designing the survey, a documentary analysis helped to structure the questionnaire. A pre-investigation phase made it possible to assess and edit the questionnaire. The survey consists of two main parts. The first one relates to the identification and characteristics of the farmers (name, sex, age, education, marital status, main sources of income). The second one relates to the characteristics of the poultry farming system (species, housing, management, health measures, types of feed distributed and their modes of acquisition, distribution frequencies, equipment, etc.…). Ten breeders per village (n=75) were chosen, for a total of 750 households.

Data processing and analysis

The Statistical Analysis System of SAS version 8 [8] was used to perform data analysis. The PROC FREQ procedure was used to calculate the frequency analysis of qualitative data (level of education, training, organization of poultry farmers, distribution by sex and age, the main source of income, the number of birds, farming practices, species vaccinated birds, types of housing and their location, feed distributed and frequency of distribution and use of equipment (feeders and drinkers) and the PROC MEANS procedure was used for the descriptive statistics of quantitative data (number of poultry consumed, sold, given as a gift or sacrifice and the selling price).

Results

Characteristics of the respondents

The variables taken into account (gender, age, profession, education, technical training and the main source of income) are listed in Table 1. The survey found that most of the respondents are male (78.93%) while females represent only 21.07%. Adults over 35 years old are over-represented (81.87%) in this survey sample. Almost all the survey participants (99.20%) were married. The majority of the respondents (66.80%) are illiterate. More than three-fourths (79.20%) of the respondents said that they had not received any poultry farming training. The remaining 20.80% had benefited from technical training thanks to a certain number of technical structures such as the Village Poultry Promotion

Center (VPPC), the Agricultural Productivity and Food Security Improvement Project (PFSP), the Support Program for Agro-Sylvo-Pastoral Sectors (SPASPS), the Project for the Promotion of Traditional and Improved Poultry Production for the benefit of Youth and Women (PTIPYW), the Support Project for Agricultural Sectors (PROFILE). The large majority of respondents (86.27%) did not belong to any farmer's organization, cooperative or association. Livestock (cattle, goats, sheep, and poultry) is the primary source of income of 32.67% of surveyed households and constituted a secondary source of income for 67.33% of the survey respondents.

Characteristics of the farms

Rearing system and housing: Free-ranging was the predominant system practiced by 93.73% of the respondents. During the daytime, birds roamed freely to scavenge close to the homestead and during the night they were confined in shelters (in 66.80% of the respondents) or shared houses with people or slept in trees (in 33.20% of the respondents). For those who own a shelter, 86.43% of them built it in the homestead and 13.57% outside the homestead. Most chicken coops (88.42%) are of traditional type and frequently built of bricks for the walls and plastic sheets for the roofing. Only 11.58% of them are of an improved type that to say they are built with locally available materials such as wooden materials and bricks for the walls and readily available tree leaves and sand or metal sheets for the roofing.

Almost all farmers (96.60%) raise indigenous or local breeds and the chicken is the commonest species (99.60%). The guinea fowl, the pigeon, the duck, the turkey, and the quail are kept by 51.60%, 4%, 2.67%, 2.13% and 0.13% of respondents, respectively.

32.67% of the farmers owned chickens only, while 67.33% of them kept different poultry species in a mixed flock. Herein, the flock structure was dominated by chickens (80.47%), followed by guinea fowl (17.33%), the least frequent were turkey, duck, and pigeons (2.20%).

The flock size in 84.27% of the respondents is below 100 birds with an average of 64.74 (±8.02). Respondents who have between 100 and 200 birds are 12%, while those who have more than 200 represent 3.73% only.

Health and hygiene management: The survey found that only 67.07% of the farmers reported that they vaccinated their birds. 99.41% of practiced annual vaccines were against Newcastle disease (ND). The results of the survey showed that 40.72% of the farmers who own a chicken shelter clean it regularly, 28.94% do it occasionally, 21.96% do it rarely and 8.38% never cleaned it. All of the respondents of this group do not use hand washing or footbath. 57.29% of the respondents reported that they did not employ quarantine when new birds reach the flock or in case of the presence of sick birds. 42.71% of the respondents employed it but inadequately. Indeed, when sick birds are detected they are immediately removed from the flock and placed in a provided space. Unfortunately, this quarantine space is often simply a space in the coop separated by a grid or cloth. Thus, contacts between healthy and sick birds are possible.

Feed and feeding management: In this study, 98.27 % of the respondents practiced scavenging system with supplementary feeding and the remaining 1.73% practiced scavenging alone

Among those who practice scavenging with complementary feeding, 90.10% of respondents regularly feed their poultry and 9.90% do it occasionally and seasonally. The results of the survey show that respondents mainly supplement their poultry in the morning (95.66%), at noon (20.62%), in the evening (65.13%) and all day (2.85%). However, about 54.41% of the interviewed farmers supplement their poultry twice a day. However, no precise information on the quantity of complementary feed is provided by the interviewees.

Regarding the quality of feed, further scavenging grass, insects, worms, and moderates, the chickens normally were given supplements mainly like cereal grains (88.06%), termites (51.83%) and local bran (42.7%), concentrate feed (24.42%). Within the latter group, 30.56% of the farmers use a homemade concentrate feed, while the remaining 69.44% use a commercial one. The ingredients used in the homemade concentrate feed are mainly corn (96.36%), bran (87.27%), fishmeal (98.18%), meals (83.64 %), salt (90.91%) and bone powder (67.27%). Sorghum (38.18%) and soya beans (10.91%) are also used but by a small proportion of farmers.

89.60% of those who use the commercial feed buy it and 10.40% of them receive it as a donation from support projects such as the Agricultural Productivity and Food Security Improvement Project (PFSP, 13.51%), the Support Program for Agro-Sylvo-Pastoral Sectors (SPASPS, 10.81%), the Project for the Promotion of Traditional and Improved Poultry Production for the benefit of Youth and Women (PTIPYW, 5.41%), the Support Project for Agricultural Sectors (PROFILE, 4.41%) and other structures (associations, individuals and governmental services, 64.86%).

Among surveyed farmers who supplement their poultry (98.27 %), three-quarters (75.44%) found that the quantity of complementary feed supplied is insufficient. They named financial constraints (96.22%), human competition for the same food resource (64.57%), scarcity of food resources (41.55%) and the high price of ingredients used in making homemade concentrate feed (33.81%) as reasons.

From this study, it also emerges that 98.40% of the farmers surveyed are willing to buy the commercial concentrate feed if it is available in their village.

Almost all the interviewees (99%) provide water to their chicken daily regardless of the season. Feeding and watering take place in the yard. The survey results show that 75.31% of the respondents do not use feeders. Only 24.69% of the interviewed farmers use them. In this case, generally (78.98% of feeders), a bowl, a tray or a simple half plastic tank is used. Specialized feeders only used by 21.02% of the surveyed farmers. Regarding watering, almost all respondents (99.33%) use drinkers, which are mostly (91.46 of drinkers) bowls.

Destination of poultry products: The survey results showed that the main destinations of produced poultry in the study areas

were sale (69.42%), home consumption (15.04%), gifts for relatives (12.64%) and sacrifices for religious ceremonies (2,90%). About 68.24% of the respondents mentioned also loss due to various reasons such as predators, disease and theft.

The average number of poultry sold is 46.70 ± 84.12. The average selling price offered in this study is 2,068.50 ± 349.51 FCFA (i.e. 3.60 ± 0.61 USD). The annual average of poultry auto-consumed is 9.73 ± 8.02 bird, while the annual average of poultry given as a sacrifice is 4.53 ± 4.97 bird. About 71% of the eggs were destined for reproduction while a small percentage is used for consumption (12.8%) and sale (16%).

Problems encountered and recommended solutions by the farmers: The major difficulties identified by the surveyed farmers are:1) the lack of financial resources to purchase high-cost feed ingredients; 2) the unavailability of the commercial feed concentrate in the villages; 3) the lack of knowledge of, awareness and training on best management practices, and 4) the scarcity of feed resource due to shortage of crops and competition with humans for the same food resource. According to the surveyed farmers, these problems can be solved through access to training in poultry farming, inputs supply, and credit facilities.

Discussion

The study covered various aspects of village poultry production in Burkina Faso such as rearing system, housing, feeding practices, health and hygiene issues, and destination of main products.

Characteristics of respondents

The results of the survey showed that 78.93% of the poultry farmers surveyed are men. This observation is consistent with that of Ouandaogo [9] in Burkina Faso and that of Dahouda et al. [10] in Benin and that of Musa et al. [11] and Jibril et al. [12] in Nigeria who reported 65.4% male and 34.6% female ownership of local poultry. However, it is different from that of Fotsa et al. [13] and Keambou et al. [14] who stated that raising local poultry is practiced mainly by women. The net predominance of men in village poultry farming in Burkina could be linked to the socio-cultural barriers in certain localities depriving women of certain activities. Indeed, the status of women in rural areas does not allow them to exercise certain activities freely. They are still under the tutelage of men. Also, in the surveyed area, households with female heads are very few. Our results also showed that the majority of respondents were elders over 32 years old (81.87%) followed by young farmers (18.13%).

All family members, men, women, and children, are involved in poultry farming activities. These results are in agreement with those obtained by Kondombo [15]. Men mainly do construction while women and children do most of the daily routine work such as feeding, watering, and cleaning. The illiteracy rate is very high among interviewed farmers (66.80%). This result is in line with that of the household survey by the National Institute of Statistics and Demography [16]. According to that survey, the global illiteracy rate for people aged 15 and above was 65.40% and was higher in rural areas than in urban ones.

The survey also found that the majority of farmers (78.80%) have never received training in poultry production. They only implement their local knowledge of breeding, feeding and health practices usually inherited from their parents/ancestors. In the light of the results obtained herein regarding the farming practices, this knowledge seems unfortunately insufficient and is not often adapted for improved village poultry farming system.

In addition, the lack of organization of poultry farmers in groups or cooperatives is also an obstacle to improve this activity sustainably. Indeed, since the rural farmers are predominantly illiterate and without training in poultry farming, being involved in a group or cooperative would facilitate their supervision by the technical services which would have a beneficial effect on their productivity. This is evidenced by the large numbers of poultry raised in the central-west region (the region that produces the most poultry) where there is a farmers' cooperative in almost every village. According to the Ministry of Animal and Fish Resources [17], in 2014, the Central West region alone produced more than 7 million birds, i.e. more than 17% of the national production.

Agriculture (65.20%) and livestock (32.67%) are the main sources of income for rural poultry farmers. These results are in agreement with those of the Food and Nutrition Security Policy [18] according to which, agriculture including agro-sylvo-pastoral activities, livestock and fish farming occupies more than 80% of the population and is the main source of food and income.

Characteristics of farms

Rearing system and housing: In the study areas, village poultry includes mainly local genetic stock and is kept under an extensive management system based on free-ranging. Flocks are usually of relatively small size (64.74±8.02) and comprise a mix of birds of different ages and species. Moreover, neighbouring flocks are allowed to mix freely. This result is in agreement with those obtained in Benin and Burkina Faso respectively [3-7]. According to the latter study, very few local poultry farmers practice semi-confinement or confinement in sub-Saharan Africa. However, the results of previous trials conducted using the semi-confinement or semi-confinement mode in Burkina Faso and Congo Brazzaville indicate an improvement in growth and reproductive performance [7-19]. With the risks (loss, diseases transmission) associated with the free-range system and mixing flocks, semi-confinement or confinement rearing systems should prevail.

Our research has also shown that chicken and guinea fowl are the two widespread species raised by rural poultry farmers, respectively 99.60% and 51.60%. These results are in agreement with those of the national livestock Statistics [20] . The predominance of these species is linked to their adaptability to diverse climatic conditions and suitability for back-yard rearing. They consume various non-conventional feedstuffs and do not require much investment. Moreover, chicken and guinea fowl are the most important poultry species in Burkina Faso in terms of acceptability by consumers [7].

The results of the survey showed that 88.42% of the chicken's houses in rural households are of the traditional village type. The traditional village chicken shelters are makeshift constructions that can not be considered as proper housing. Livestock including poultry farming is not the primary source of income for the large proportion of respondents and as such, no one would think of investing in specialized housing. Unfortunately, the lack of proper housing limited the ability of poultry farmers to carefully monitor birds' health, guard against theft and attack by predators and protect from adverse weather. The lack of proper housing was not different from the usual practice in Africa. Kondombo et al. [21] reported that a large proportion of village poultry mortality was accounted for nocturnal predators because of a lack of proper housing. Furthermore, research works indicated that the mortality of scavenging birds was reduced and their productivity was improved by improving housing. Indeed, besides providing protection from predators and bad weather, keeping chicken in houses also allows farmers to feed them supplementary feed, to separate young chicks from mother hens, which results in hens laying more eggs and gaining weight faster, and to clean and collect manure more easily [22,23]. As such, an improved coop is a essential complement to health care and complementary feeding and increases their effect. The farmers who own an improved coop said that they were sensitized and advised on the best housing and supported by technical and financial partners to build them.

Health and hygiene management: In terms of health management, our survey shows that a large proportion (67.33%) of the respondents vaccinated their birds. This increasing sense of awareness about the importance of vaccination resulted from the sensitization activities launched by the Center of Village Poultry Promotion. However, 99.41 % of practiced vaccines were against Newcastle disease (ND). Other vaccines against Marek's Disease, Fowl Cholera, and Infectious Bronchitis are not implemented since on one hand, ND is the most frequent disease and on the other hand, these vaccines are expensive and often unavailable in rural areas.

Deworming against internal (roundworm, syngamosis, crop capillary disease, cestodosis, spirurosis, etc.) and external (mites and insects: fleas, bedbugs, lice, etc.) parasites is only carried out by 38% of respondents. Additional efforts to raise awareness of the deworming of poultry must, therefore, be made by veterinary services. Indeed, farmers included parasites among the major causes of losses in local chicken flocks, following ND and predators. Regarding hygiene issues, very few farmers took care of the cleaning and disinfection of the chicken house and yard. The chicken houses, if they exist, were in poor hygienic conditions. More than half of the respondents were not aware of the need to prevent disease through regular cleaning and disinfection of housing.

Therefore, due to the infectious diseases, poor hygiene and housing conditions and predators, mortality rates were as high as 60-80 % mainly among young chickens. Previous results from field surveys have also shown that the most striking problem to village poultry production is the high mortality caused by infectious diseases and predators, malnutrition and underfeeding, parasitic infestation, and poor housing conditions [6,7].

Feed and feeding management: The results of this survey show that the vast majority of respondents raise their chicken in a free-range scavenging system, where the birds scavenge around for almost all of their nutritional requirements with little supplementary feeding according to the own subjective judgment of farmers. Indeed, during the survey, farmers were unable to indicate the precise quantity of complementary feed provided by their poultry. Thus, there is a need to investigate further the quantity of supplementary feed in the study area.

The feed resources used to supply chickens are usually cereal grains (corn, millet, sorghum), co-products (local bran, dolo grains), and termites. These practices are similar to those observed by other authors in Cameroon, Gambia, Senegal, and Benin [10-23,24-26]. In those studies, it has been pointed out that in the event where supplementary feeding is given, it is usually made up of household leftovers or farm waste of very low nutritional value, which cannot satisfy adequately the needs of the bird. Consequently, even young chicks are left to wonder into the fields in search of feed and often fall victim to predators. Thus, very few hatched chicks survive up to maturity.

Almost a quarter of respondents occasionally provide their chicken a homemade (30.56%) or a commercial (62.22%) concentrate feed depending on their financial capacity to buy ingredients or commercial concentrate feed in the event where they are available. They are aware and convinced of the advantages associated with the use of the industrial feed to improve the reproductive and growth performance of their flocks. A minority of farms (7.23%) obtained the concentrate feed through donations from the government and technical and financial partners. Most of these farmers are attending to practice improved village poultry farming. Thus, there is increasing awareness by some rural farmers of the need to improve feeding practices to improve the productivity of their chicken as previously highlighted by [15].

However, most ingredients of the poultry feeds (homemade or commercial concentrate), namely cereals, are also used for human nutrition that led to competition. Moreover, during recent years there is a consistent reduction/shortage of cereal crop productivity and high market prices [27]. The feed problem (quantity and quality) for village poultry production in Burkina Faso is not only the lack of financial and material resources, high prices and availability but also the lack of awareness and training on feeding practices and feed formulation. Some interviewed farmers consider that providing complementary feed is above all an act intended to make the animals docile by getting them used to come back home after scavenging during the daytime [10]. Birds are therefore fed according to what the farmer has; the satisfaction of the nutritional needs of birds is not a priority.

The study found that only 24.69% of poultry farmers who feed their poultry use feeders, usually makeshift ones. This would be due to a lack of knowledge of this material by rural poultry farmers. Similar observations were reported by Fotsa [28] and Ouédraogo et al. [7], respectively in Cameroon and Burkina Faso. According to these authors, the non-use of feeders is mostly (91.7% and 79%

of the surveyed farmers, respectively) explained by the lack of knowledge of this equipment by rural poultry farmers. Modern or specialized equipment (feeders and drinkers) is mainly used by trained poultry farmers, who have often benefited from support from certain projects of development. Moreover, we should not forget that the chicken production system identified herein is a low-input one. Thus, farmers do not see the need to invest in specialized feeders.

Almost all the interviewees (99%) provide water to their chicken daily regardless of the season. Indeed, the temperatures in Burkina Faso are high throughout the year. Moreover, poultry needs water for survival, growth, activity and egg production [29].

The lack of adequate feeders and drinkers leads to a substantial feed loss, water spilling as well as contamination by animals walking and defecating in the feed.

Destination of Poultry Products

Since agriculture is the primary source of income of the majority of respondents, poultry production is geared essentially toward sale, home consumption and savings (a living bank) for small expenses such as school fees and medicines. The average annual income generated by sales is about 96.598 FCFA (168.29 USD). According to Keambou et al. [14], the annual financial contribution of the local chicken to household income ranges from less than 50.000 to more than 100.000 FCFA in Cameroon.

The average annual home consumption is 9.73 chicken per rural household composed of 6 persons on average. Thus the average annual home consumption is about 1.62 kg per person, which is very low compared to that of other countries. According to Huart [22], the consumption of poultry meat is 24 kg /year/inhabitant in Europe, 45 kg/year/ inhabitant in the United States, 7.1 kg / year/ inhabitant in Senegal and 3.6 kg /year/ inhabitant in Ivory Coast. The low consumption of poultry meat in Burkina Faso can be explained by the fact the most rural poultry farmers consume it when they receive guests or when there is a customary or religious ceremony and rarely to supplement the family's diet with animal protein. They prefer to sell their birds to buy fish or red meat which they believe are less expensive as previously reported [6]. About 71% of the eggs were destined for reproduction while a small percentage is used for consumption (12.8%) and sale (16%). These traditions may gradually change as production starts to improve. The 2025 projections estimated the total consumption of poultry meat of 2.9 kg /inhabitant/ year [17]. Extension staff can also assist by promoting the consumption of chicken meat and eggs. The nutritional value of chicken meat should be promoted, as well as the value of eating chickens and eggs for young children. According to a study carried out by the Ministry of Health in 2016, 27.30% of children under the age of 5 suffer from stunted growth, 7.40% of them are in severe status. This rate reaches 34.60% in rural regions exceeding the WHO critical threshold (30%) [30].

Beyond its nutritional and financial contributions, local poultry is mean of consolidation of family and friendships through gifts. The mean number of donated poultry is 8.40 birds per year. Some farmers even offer more birds than they consume. This observation was also reported in the Central African Republic [31].

Another important role of village poultry is the provision of manure. It is non-cash output since manure from livestock including that from chicken is not sold in rural areas. It is applied as fertilizer in fields and is considered to be of high value in comparison to ruminants' manure [4-26,29-32].

Conclusion

The results of this study revealed that village poultry farming is practiced mainly by men aged over 32 years mostly illiterates and have never received training in poultry production. Local stock breeds were reared in a free-range scavenging system with feed supplementation. Poultry was raised mainly for sale, home consumption, gift, and savings. The village poultry production is mainly hampered by feed scarcity, poor health, hygiene, and housing management. Major constraints include the lack of financial resources, training, and poor governmental support. Thus, there is need for strengthening the technical and financial capacities of poultry farmers to acquire management skills (namely in health care and feeding) through access to training, inputs supply (namely feed and vaccines) and credit delivery in a sustainable way to benefit fully from the activity in light of the current economic challenges in Burkina Faso.

Other constraints like markets and marketing management were not discussed herein. However, better understanding of these constraints can also contribute to improving the activity and raise standards of living of the rural poultry farmers.

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