

RESEARCH PAPER

THE CHALLENGES AND PROSPECTS OF THE POULTRY INDUSTRY IN DORMAA DISTRICT.

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ABSTRACT:

The poultry industry is perceived to be a major contributor to Ghana's development through employment creation and the enhancement of nutrition and food security. In spite of these contributions, the poultry industry is entangled with a number of problems that necessitate redress. The purpose of the study was to determine how activities within the poultry industry are operationalised, examine the prospects and challenges that confront the industry and make recommendations to inform policy. For the survey, 45 poultry farms and 10 major dealers of poultry inputs within the Dormaa District were randomly selected. Primary data were obtained through questionnaire administration, semi-structured interviews and observations. Secondary data on poultry farming were also obtained from the District Veterinary Services Division, the District Assembly and the Poultry Farmers' Association. The survey revealed that the major challenges encountered by the poultry farmers included; financing, diseases and absence of electricity for operations in most farms (84.4%). The presence of feed processing mills, poultry input shops and availability of organised markets served as prospects that could be harnessed to boost the growth of the poultry industry in the district.

Keywords: *Poultry industry, Financing, Marketing.*

INTRODUCTION

Ray and Roy (1991) used the term poultry farming to designate the rearing of any or all domesticated fowls including chicken, turkeys, ducks and geese primarily for their meat and eggs or feathers. Poultry farming in general is an activity characterized by a very wide range of operations of livelihood and subsistence farming at one end of the spectrum to highly commercial operations at the other (Department of Animal Husbandry, 2005). The various systems used in keeping birds include battery/

intensive, semi-intensive/yarding and free range (Ray and Roy, 1991; MacLean, 1999; Aryee *et al.*, 1989 and Dalal-Clayton, 1985). For the purpose of this paper, poultry farming means the rearing of birds for their meat, eggs and other by-products that are of economic value.

Sonaiya (1993) revealed that the poultry production systems in Africa are mainly based on the scavenging indigenous chickens found in virtually all villages and households in rural

Africa. These systems are characterized by low output per bird. Nevertheless, over 70% of the poultry products and 20% of animal protein intake in most African countries come from this sector. Therefore, increased poultry production would impact positively on household food security through improved diet and income generation.

According to Benabdeljelil *et al.* (2001) some of the challenges that affect the Poultry industry reflected in production, marketing and consumption of poultry products. The availability of all year-round feed and water resources in appropriate quantity and quality, financing and marketing constitute the major challenges for sustainable poultry production.

The Indian poultry sector for instance, does not attract any direct or indirect subsidies or incentives except for export purposes like freight subsidy. However, for rural development and poverty alleviation, some central and state government schemes provide assistance to poor farmers involved in poultry production, but the amounts are very small in total investment and are declining over time (Department of Animal Husbandry, 2005). The national policy of India provides assistance to marginal poultry farmers and this has helped increase production levels and the number of people who invest in the poultry sector (NABARD, 2007).

In Ghana financial services to the agricultural sector is outside the domain of the Ministry of Food and Agriculture (MOFA) and access to finance is a major constraint to the growth of the sector. The diverse operators in the agriculture sector including input dealers and suppliers, primary producers, processors, transporters, storage operators and distributors all need financial assistance (MOFA, 2007).

Marketing farm products, whether poultry or any other commodity involves assembling, transportation, processing, storage, grading, packaging and merchandising or retailing (Carmen and Mountney, 1988). In most devel-

oping countries of which Ghana is no exception, marketing has been a major constraint. According to a study conducted by the Food and Agriculture Organisation (1985) farmers in Ethiopia and the United Republic of Tanzania used existing trading centres which were predominantly open markets to sell their chicken in both inside and outside the poultry farming communities. In the Gambia, the Women In Development (WID) Programme arranged specific marketing days for farmers to sell their birds. In Zimbabwe, the birds were sold at the household level or along the main roads.

Poultry farming has a long standing history in agricultural development and the quest for increased nutritional value but less emphasis has been put on the sector. According to Flake and Ashitey (2008) the poultry industry in Ghana grew rapidly during the 1980's to 1990's, developing into a vibrant agricultural sector and supplying about 95% of chicken meat and eggs in the country. This was due to the government's initiative in the 1960's to promote commercial poultry production as the greatest potential for addressing the acute shortfall in the supply of animal protein. The growth of the poultry industry was initially slow, due to irregular supply of imported day-old chicks and other inputs and frequent outbreaks of poultry diseases which discouraged potential farmers. However, in the 1970's the government, as part of its support for the development of the poultry industry, removed custom duties on poultry inputs (feed, additives, drugs and vaccines). In addition poultry producers had access to veterinary services provided by both the government agencies and private practitioners.

Since independence, agriculture has been the major employer of the labour force in Ghana. Currently, the sector employs 55.8% of all employed persons in the country yet interventions to enhance and develop the sector have not been comprehensive (GSS, 2008). The poultry industry has also suffered similar hindrances. Statistics indicate that since 2000, Ghana's poultry industry has experienced a steep decline

due to the very high cost of production (feed, inputs and energy) and lack of credit (Flake and Ashitey, 2008). Ghana imported 26,000 tonnes of chicken in 2002, mostly from the European Union where farmers receive generous subsidies. Two years later, this figure had almost doubled to about 40,000 tonnes (ISODEC, 2004).

The annual poultry import bill in 2005 was about 30 million dollars (Kudzodzi, 2008). In contrast, the domestic poultry sector which supplied 95% of Ghana's poultry requirements in 1992 only provided a dismal 11% by 2002. Unconfirmed estimates currently put the domestic poultry supply at single-digit percentage figures (Kudzodzi, 2008). This indicates the contribution of imported chicken to the collapse of broiler production in Ghana (Aning, 2008) and therefore the need for government to intervene in the poultry market through import duties and quotas in order to promote the growth of domestic poultry farming.

It was therefore not surprising when the Ghana government's 2010 budget and financial statement restored duties on imported poultry, rice, wheat, yellow maize and vegetable oil that were removed during the food crisis of 2008. To reduce imports of poultry and fish into the country, the government plans to levy duties on those imports and to support local production, targeting to meet the domestic demand for fish and poultry by the year 2012 (GOG, 2009).

Profile of Dormaa District

The Dormaa District, now Dormaa Municipality, is located at the Western part of the Brong Ahafo Region. The District Capital is Dormaa Ahenkro, located about 80 kilometres west of the regional capital, Sunyani. The population of the Dormaa District as at 1960, 1970 and 1984 was 51,057, 76,650 and 107,996 respectively. The 2000 Population and Housing Census put the District's population at 150,229. The Dormaa District is basically agrarian and currently ranks third in poultry farming in Ghana. The Agricultural sector employs 56% of the active

labour force in Dormaa district, out of which 15% are engaged in the poultry industry. The service sector employs 19% of the district's active labour force whilst industry and commerce absorbs 15.5% and 9.5% respectively. There also exist a crate manufacturing company which produces to supply the poultry industry in the district and beyond. There are two Commercial Banks (Agricultural Development Bank and Ghana Commercial Bank) and two rural banks (Wamfie Rural Bank and Kaaseman Rural Bank) in the district (Dormaa District Medium Term Development Plan, 2006).

In spite of the contributions of the poultry industry to the Dormaa District economy, the sector is entangled with a number of problems that necessitate redress. Since it is the private sector that owns all the poultry farms in the district there is the need to have a fair idea about their contributions, the challenges encountered and the way forward so as to create more employment avenues especially for the youth.

DATA SOURCES AND METHODS OF COLLECTION.

The research used a cross-sectional approach where variables of interest in a sample of subjects were examined and the relationships between them determined. It specifically used case study design because a contemporary phenomenon (challenges faced by the poultry industry) based on a real life situation was studied. Data from primary sources were collected based on interviews using semi-structured questionnaires. Additional information relevant to the study was also obtained from secondary sources such as the Dormaa District Assembly, Ministry of Food and Agriculture (MOFA), Veterinary Services Division, Poultry Farmers' Associations and other relevant legislative framework and publications. The views of the various stakeholders; veterinary officers, poultry farmers and poultry input dealers were gathered through interviews and questionnaires administration. The mathematical method $n = N/[1+N(\alpha)^2]$ (where n = sample size; N = sam-

ple frame; α = confidence level) was used in determining the size of the sample of poultry farmers to interview. Thus a total of 45 commercial poultry farmers (sample size) were sampled for interview based on the sample frame (i.e. total number of poultry farms registered with the District Assembly) of 136 at a confidence interval (α) of 88% (sample size $n = 136/1+136(0.12)^2 = 45$). The sampling frame (N) was ascertained through consultations with the District Assembly and the Poultry Farmers Association in the district and a confidence interval (α) of 88% was used because of limited financial resources for the study.

Purposive sampling, proportional stratification and simple random sampling were adopted in selecting the interviewees. The poultry farms were stratified into small, medium and large scale based on the number of birds, the physical sizes of farms and equipments used within farms. Proportional stratification was used in selecting a sample from each stratum. Simple random sampling was used in selecting specific interviewees in each group for the questionnaire administration. In addition, 10 major dealers of poultry inputs in the district were purposively selected and interviewed. The research was carried out from September 2007 to June 2008.

RESULTS AND DISCUSSION

Background Information about Poultry Farmers in the Dormaa District.

The poultry farmers (45) were predominantly males (about 89%), and a large proportion of them (42.2%) were between the ages of 40 and 49 years while those who fell within the ages of 30 and 39 years were about 38%. The poultry farmers had generally attained senior high school education (55.6%) which could offer a comparatively easy platform for the adoption of modern approaches to poultry farming.

Systems of Keeping Poultry

The system of keeping commercial poultry in the district is mainly battery/intensive system which is a modern poultry farming practice.

About 40% of the poultry farmers also reared livestock such as pigs, sheep and goat.

Types of Poultry Reared

The survey revealed that the farmers generally rear Layers, Broilers, Parent stock and Cockerels. Layers are purposely reared for eggs while the broilers are kept for their meat. About 13.3% of the farmers kept more than one type of poultry (Table 1). The reason for the emphasis on the rearing of layers at the expense of broilers which are relatively cheaper to rear is attributed to the absence of processing plants in the district to process the broilers for the market coupled with the seasonal (Christmas and Easter) nature of demand for live chicken by most consumers in Ghana.

This is evident in the relatively high percentage (88.9%) of poultry farmers engaged in the rearing of only layers as indicated in Table 1. From the survey, none of the farmers engaged in broiler rearing do process the birds before they are sold in the market. Thus, selling of live birds is a common practice in Ghana as in other developing countries (Food and Agriculture Organisation, 1985). Broilers under normal environmental conditions do take seven to eight weeks to mature for the market as compared to layers which take sixteen to twenty weeks to begin laying eggs.

Table 1: Types of poultry kept by farmers

Type of poultry	Number of Farmers	Percentage of Farmers
Broilers only	1	2.22
Layers only	40	88.89
Broilers and Layers	2	4.44
Layers and parent stock	1	2.22
Layers and cockerels	1	2.22
Total	45	100

Farmers who continue to rear broilers after the said optimum period do so at a loss depending on the length of time that the birds are kept in the farm without buyers. The loss is predominantly attributed to inadequate market for the sale of live birds especially after festive occasions. This situation is compounded by the importation of cheap frozen chicken into the Ghanaian market as argued by Coomson (2007), thus making it more difficult for locally produced chicken to have a formidable share of the market. This is consistent with the findings of Aning (2008). According to ISODEC (2004) most consumers of imported poultry are urban dwellers whose work schedules may not allow them the time to purchase live poultry for consumption so they prefer to purchase poultry processed into convenient parts, which saves time during meal preparation. However, local poultry producers mostly sell live birds and if processed for sale, birds are sold whole due to lack of facilities to further process and store them.

Farmers who do not find market for the broilers are compelled to sell at cheaper prices in order to retrieve some marginal proportion of the capital invested. For instance as at the time of the survey the market price of a broiler was GH¢7.50, and the farmers were selling a broiler for GH¢6.00. In the case of layers, irrespective of the period they are kept in the farm, they still produce eggs of economic value to the farmers before they are finally disposed off in the market at an average price of GH¢ 6.00. This situation serves as a major deterrent to farmers to venture into the rearing of broilers and other types of poultry in the district. Comparatively, there are no such heavy competitions in the egg market due to the fact that eggs are rarely imported into the district.

Additionally, the seasonal nature of demand for broilers during Christmas and Easter festivities also gives backing to the concentration of farmers in the rearing of layers. This is because after such popular festivities, the demand for locally produced chicken in the district drastically goes

down. During the course of the interview, a particular farmer who had specific location for the sale of birds especially broilers had this to say. "I could sell 50 to 60 broilers a day some few days to the Christmas celebrations but just after Christmas, the maximum I could sell was four birds a day. I therefore see no reason why I should invest my money in the rearing of broilers after Christmas festivities when I cannot even retrieve the capital I invested." Farmers who may want to meet such periodic demands for chicken strategically go in for the birds at the time that they can coincidentally meet the high demand for special occasions as mentioned.

Mode of Operation

It is generally perceived that the mode of operation within an economic setting directly influences the level of production of that economic venture. The mode of feeding generally used by farmers is manual (84.4%), while 48.9% of the farmers use generators to supply water to their birds. This can partially be attributed to the absence of electricity in most of the farms (84.4%) and inadequate funds. The automated water supply system eases the provision of water and drugs to the birds. Drugs to be given to birds are mostly delivered through the water in reservoirs and subsequently supplied to the farm. Poultry farmers whose financial standings are not able to meet the requirements of using the automatic means of feeding and water supply resort to the use of manual means as an alternative. The presence of a number of feed mills in Dormaa Ahenkro (the district capital) also supports the poultry industry in meeting its feeding requirements.

Brooding of Day Old Chicks

The absence of electricity in most farms in the district has led to the use of charcoal in the brooding of day old chicks by 93.3% of poultry farmers. In addition, polythene materials are used to retain heat in the brooding house to the required temperature needed by the chicks and also to protect them from predator animals.

Financing Poultry Activities

The Dormaa District Assembly indirectly contributes its quota to financing poultry activities in the District by giving tax holidays of five years to new entrants into the poultry industry.

From the survey, about 69% of poultry farmers in the district do finance their activities from their personal savings, 9% rely on funds from relatives and 19% also finance their activities through bank loans of which their timely releases are rarely predictable. Farmers who are not able to meet the financial needs of their farms from their personal savings are compelled to fold up. This stems from the fact that the government has not been able to assist most of the farmers financially as compared to other sub-sectors of the agricultural sector. The situation has been compounded by farmers' inability to access bank loans due to the demand for collateral and high interest rates of about 40% charged by financial institutions in the district. However, the few who are able to have access to these bank loans at times find it extremely difficult repaying especially when the loans are not delivered to the farmers on time to embark on intended activities. The delay in processing of loans is also a factor that cannot go without mention within the sphere of the financial constraints in the poultry industry. Fig. 1 shows the sources of funds for financing poultry activities in the Dormaa District as divulged by the survey.

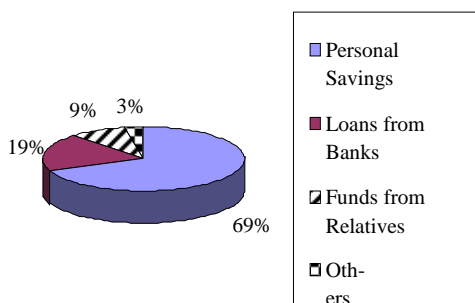


Fig 1: Available markets for the sale of egg

Output Levels of the Poultry Industry

Due to the concentration of farmers in the rearing of layers at the expense of other types of chicken in the district, the major output is consequently eggs produced purposely for human consumption and as raw materials for a few biscuit manufacturing companies outside the district. The average output of the sampled poultry farms is about 12,933 crates of eggs per day. It is also worth mentioning that the expected output per day in a poultry farm is positively correlated with the type and quantity of feed given to the birds and the rate of occurrence of diseases in the farm (Department of Animal Husbandry, 2005). For example, farmers who intend to generate quick results and higher outputs do increase the quantity of protein in the feed given to the birds. However, the adverse effect of increasing protein in feed is that birds prematurely become weak before their normal maturity date. From the study, it was also realised that farmers persistently vaccinated birds against diseases such as Gamboro and Chronic respiratory disease in order to increase the level of output for the market.

Marketing of Poultry Products

Eggs and chicken produced from the poultry industry in the district are normally sold outside the district due to the low level of demand by local consumers in the district. About 98% of the eggs produced are sold outside the district. Out of the total eggs (approximately 87,962 crates) sold outside the district in a week, about 73% and 21% go to Accra-Tema and Kumasi respectively while 2.0% and 4.0% respectively also go to Tamale and other places including neighbouring countries like La Cote D'Ivoire. It is also worth mentioning that some farmers do sell their eggs in two or more of such markets. This is as a result of the presence of organized markets for the sale of eggs at Dormaa Ahenkro where middle men purchase eggs from the farmers, package them into boxes before they are sent to the marketing centers. These markets are usually organised by the poultry farmers and the middlemen in the district capital.

The survey also revealed that eggs sent to the market are sold in their raw state (shelf-life of about 30 days) without adding any value to them through efficient preservative methods. When whole eggs are powdered by drying and pasteurizing they could be stored for up to 10 years in cool, dry, dark places. Once opened, refrigerated powdered eggs could be used, up to 6 months. (Johnson, 2011). According to the Dormaa District Assembly planning unit, the construction of a processing plant by the Assembly in collaboration with MOFA had halted due to the poor flow of funds from the government. Fig. 2 shows the location of markets for eggs produced in the district and the quantum of eggs that goes into each of these markets.

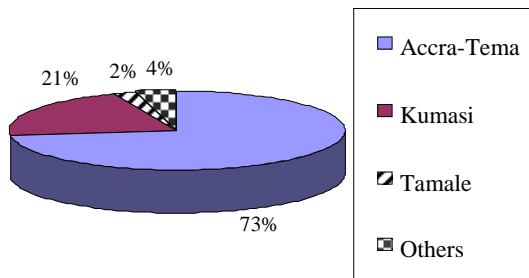


Fig 2: Available markets for the sale of eggs

The situation of marketing poultry products in Ghana is not so different from Ethiopia where live birds are sold for household consumption along major routes of the Debre Zeit market. Birds are sold at the household level especially with small scale poultry farming in most rural communities. For the past few years, the Ghanaian market has been flooded with cheap imported chicken from the European Union and the United States. Demand for local poultry has declined threatening the livelihoods of over thousand poultry farmers in both small and large scale poultry farming in Ghana. Already, big and small poultry farms in Ghana including Darko Farms and Afariwa Farms among others have cut down output and staff considerably because they cannot compete with the cheap

imports from EU and United States (Coomson, 2007).

The non-availability of processing plants and industries that use poultry products as raw materials coupled with the perishable nature of products such as eggs compel farmers (especially in June and July each year when demand for poultry products goes down) to sell products below their cost of production. This paves the way for customers who buy within these periods to determine how much they pay for the poultry products. Farmers who do not want to run at a loss but may want to retrieve the capital invested are compelled to sell their products at such low prices. In most cases, the poultry products have to be sold on credit basis. The delay (after one week) in payment for products sold on credit is a common phenomenon in the poultry market and this affects the activities of poultry farmers in the district.

The proximity of the district to La Cote D'Ivoire where poultry products are known to be relatively cheaper also pose a major threat to the poultry market in the Dormaa District. Customers in certain instances cross over the border to purchase these cheap products in La Cote D'Ivoire at the expense of those produced in the district. The implementation of government plans to increase duties on poultry imports and also support local production of poultry will therefore serve as a major relief to the poultry farmers.

Poultry Farmers Access to Veterinary Services

Special mention must be made of poultry farmers' access to veterinary services in reducing the incidence of diseases in the industry. One major canker that calls for immediate intervention in the quest to promote poultry farming in the Dormaa District and the nation in a wider context is the provision of logistics to government institutions such as the Veterinary Service Division which is in charge of animal husbandry.

The Veterinary Service Division in the Dormaa District has not been in the position to carry out its mandate to organise periodic visits to farms due to the absence of logistics such as vehicles. The lack of a database on poultry diseases in the district may be attributed to the difficulties in collecting and collating data because of inadequate number of computers and vehicles (Table 2).

Farmers who have problems with respect to diseases have to go to the Veterinary Service Division, provide the officers with means of transport before any visit can be made to their farms. Available statistics on the existing and required logistics of the Veterinary Service Division as shown in Table 2 is also a true reflection of the cause of the irregular visits to farms.

Approximately 8.9% and 13.3% of the farmers had access to veterinary services monthly and quarterly respectively. Table 3 shows that more than 50% of the farmers had access to veterinary services as and when they invite the veterinary officers at their own cost. Out of the total number of seven motor bikes required by the Veterinary Service Division to embark on periodic visits to poultry farms, there exists only one which is woefully inadequate for the full delivery of the services of the department to poultry farms located at the outskirts of the district capital and some other distant communities like Nkrankwanta and Yaakrom.

The absence of a deep freezer has rendered the Veterinary Service Division in the Dormaa District incapable of storing vaccines to meet the needs of poultry farmers. This has paved the way for private individuals to sell these vaccines which may not be properly stored and thereby compound the problem of poultry diseases in the district.

Diseases and Control Measures

It is generally asserted that diseases constitute one of the major hindrances that draw back the pace of growth within the poultry and livestock sub-sectors in Ghana. The picture portrayed by the study in the poultry industry in the Dormaa District is not far from this assertion. The survey revealed that out of the number of concerns raised on prevailing challenges, about 16% of poultry farmers interviewed in the district complained of diseases as the major challenge that impede their activities aside finance and marketing of products. Common diseases found in the poultry sub-sector in the district are listed in Table 4.

The diseases prevalent in the Dormaa District do not deviate from the common diseases found within the poultry industry in other parts of the world (McPherson, 1956; Adene, 1990; Wilson, 2007; and Orsi *et al.*, 2010).

There is therefore the possibility of replicating control and preventive measures from elsewhere to help minimize or eradicate the poultry diseases in the district. This encompasses the

Table 2: Logistics and staff of veterinary service division

Type	Logistics		Category of Staff	Personnel	
	Existing	Required		Existing	Required
Vehicle	nil	1	Veterinary Doctor	1	1
Motorbike	1	7	Chief Animal Health Officer	1	3
Computer and accessories	nil	2	Senior Technical Officer (STO)	1	5
Sterilizer	nil	1	Lower Level Staff		
Deep freezer	nil	1	(Driver, Cleaner, Security etc)	nil	4

Table 3: Frequency of visit by veterinary service officials

Frequency of visit	Number of Farmers	Percentage of Farmers
Monthly	4	8.9
Quarterly	6	13.3
Bi-annually	4	8.9
Annually	2	4.4
As and when farmers invite Veterinary officers	23	51.1

Table 4: Common diseases of the poultry industry in the district

Diseases	Number of Farms	Percentage of Farms
Chronic Respiratory Diseases (CRD)	28	62.2
Newcastle	11	24.4
Equalizer	4	8.9
Coccidiosis	4	8.9
Gamboro	4	8.9
Diarrhoea	3	6.7

adoption of biosecurity measures such as the use of disinfectants in the farms. An interview conducted with officials of the Veterinary Service Division revealed that the relatively high (62.2%) record of chronic respiratory diseases in the district is partly attributed to the cages in which birds are kept which exceeds the normal temperature (30°C) of which most farmers are not aware of. This buttresses the need to provide the needed logistics to the Veterinary Service Division in order to reduce the number of cases of diseases through preventive measures that can be propagated during field visits. The emergence of avian influenza in some parts of the country and the continent however, did not find its way to the district as indicated by the records of the Veterinary Service Division and interviews with the poultry farmers.

Control of the afore-mentioned diseases is generally through vaccination which is periodically done among stock by farmers operating especially on small and medium scales. The services of veterinary officers are employed by 35.6% of farmers during vaccination exercises.

However, the adoption of bio-security measures such as the provision of disinfectant at vantage points in the farms has partially been adopted by 37.8% of the poultry farmers in the district.

The District Assembly in collaboration with the Poultry Farmers' Association and the Veterinary Services Division has been able to bring the vision of the Food and Agriculture Organisation (FAO) of curbing the deadly avian influenza into a reality. The District Assembly and other stakeholders of the poultry industry formed a task force that was in charge of seizing and destroying imported poultry products from La Cote D'Ivoire where the prevalence of the avian influenza was said to be at an alarming rate. This contributed immensely to reducing the exposure of the district to the avian influenza.

Insurance

Insurance packages are deemed expedient in every economic venture liable to risks and other unforeseen epidemics both from within and outside the activity. None of the sampled

poultry farmers interviewed had insured their farms to serve as safety nets for any eventualities. This was attributed to the high premium charged by the insurance companies due to the risky nature of rearing birds.

Effects of Poultry Farming on the Environment

Though poultry farming contributes to job creation and improvement in nutritional levels, it also contributes to the deterioration of the environment in which it operates. The mode of disposing off solid waste generated in the poultry farms contributes substantially to the environmental threats in the district. The survey revealed that 37.8% and 48.9% of the poultry farmers dispose off solid waste products by dumping on the ground and by burning respectively. Burning waste poultry products does cause air pollution in the environment thus, causing the displeasure of some residents who happen to stay close to the poultry farms in the district.

Complementary Activities of Poultry Farming

For the purpose of this study complementary activities are defined as those allied activities that serve as partners in propelling the growth of the poultry industry in terms of the production and/or sale of inputs/products that are used/produced by poultry farmers. Poultry inputs comprising of Day-old chicks, feed, water, drugs, energy for lighting and brooding and equipment shops are located at vantage points at Dormaa Ahenkro and some other larger communities like Accra, Tema, Kumasi and Takoradi where farmers can easily access them. For most of the services needed by these poultry farmers, access to them is mainly within the District. About 82.2%, 86% and 88.9% of farmers obtain feed, drugs and equipment respectively for their poultry from the District. This presents a great potential for the poultry industry in the District.

The shortage of feed especially wheat bran and the persistent hiking of prices of poultry inputs

such as drugs and premixed feed in the international market also pose a major threat to those who sell feed and other poultry inputs in the district, resulting in the inability of poultry input dealers to meet the demand of poultry farmers. The situation is worsened by lack of financial support from the government and other financial institutions.

There is a crate manufacturing firm in the district capital that supply an average of 1,600 crates per day to poultry farmers in the district and beyond. These crates are used for the storage of eggs before they are finally sent to the market. However, the importation of relatively cheaper crates from neighbouring La Cote D'Ivoire coupled with frequent power outages in the district are the major challenges that threaten the market of the crate firm in the district.

Other factors that prevail in the district and can be harnessed for the growth of the poultry industry include; availability of organised markets for eggs, land for future expansion and the provision of tax holidays by the Dormaa District Assembly to new entrants. Access to farms located along the trunk road leading to the district capital may also ease the transportation of products from the poultry farms to the market.

CONCLUSION

Poultry farmers in the Dormaa District concentrate on the production of layers at the expense of broilers. The eggs produced are sold both within and outside the district with the major marketing centres being Accra-Tema and Kumasi. The prevalence of diseases in the poultry industry coupled with the persistent increase in prices of inputs and absence of poultry processing machines are some of the challenges that need to be mitigated in order to meet the emerging demand for poultry products in the market. This however, cannot be achieved in isolation without improving poultry farmers' access to credit and further building the logistical and human capacities of key institutions that directly influence the activities of poultry

farmers in the district. The availability of land for future expansion, presence of complementary activities encompassing feed processing mills and poultry input shops and availability of organised markets also served as prospects that can be harnessed to boost the growth of the poultry industry in the district. It is hoped that the government will assist poultry farmers to acquire equipment, poultry feed, chemicals, and other inputs to enable them undertake large scale poultry production in the country as indicated in the 2010 budget statement.

RECOMMENDATIONS

The findings of the survey give credence to the need for policy interventions to be made. The required interventions include the following;

- Adequate number of logistics should be provided to the Veterinary Service Division and its parent organisation; ie. MOFA by the government and donor agencies. This will make these institutions more efficient in the delivery of services to promote poultry farming in the district and hence increase poultry farmers' access to their services.
- Loans and other credit facilities should be made accessible by the financial institutions to poultry farmers especially new entrants and on time to enable farmers use the loans for the purpose for which they sought for the credit. This will help such poultry farmers to purchase feed, drugs, equipment, day old chicks and construct facilities for the birds.
- The government should provide incentives to encourage the private sector to establish eggs and poultry processing plant. This will help add value to poultry products to make them more competitive in the market (both within and outside the country).
- Poultry farmers especially those clustered around the same area such as Dormaa-Kyeremasu and Dormaa-Aboabo roads

should come together to request from the District Assembly and the Volta River Authority to assist in extending electricity to the farms. Extension of electricity to poultry farms will encourage the use of modern machinery.

- The Poultry Farmers' Association in collaboration with the District Assembly should liaise with hotels, supermarkets, fast food companies, and hospitality industry operators that make use of poultry products to place medium to long term orders of eggs and chicken at mutually agreed prices. This will help trim down the glut that usually occurs during the periods of June and July each year.

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