Importance of Electronic Facilities For The Better Management of Poultry Farming.

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Abstract

The present paper deals with the study of importance of electronic facilities for the proper management of poultry farming. The study was conducted to analyze the importance and benefit of these electronic facilities in three different poultry farms according to the bird rearing capacity. The work is carried out from the three different poultry farms ranges from small to large size poultry farms situated in Aurangabad district. During the study period it was recorded that major benefit found in large poultry farm followed by medium and small poultry farms. It also showed that the major obstacles faced by the poultry birds in the small poultry farmbecause of improper electronic facilities. It is concluded that the major beneficial aspects regarding the health performance of poultry birds occurred in the large poultry farm due to the automation of electronic facilities as compare to the medium and small poultry farms in the study area.So it is necessary to use the proper electronic facilities within the poultry farms for the overall health performance of poultry birds and it also helpful to increase the productivity as well as economic status of the poultry farmers. Other related aspects will discuss in the text.

Keywords: Importance,Electronic facilities, Poultry birds, Management, Poultry farms

Introduction

Poultry farming is an important agricultural based business industry. Poultry farming is becoming increasingly organized, specialized and shaping in to an industry of national economic importance. In many developing countries small-scale poultry farmers are the main producersof the poultry farming. The growth rate of poultry production in India is nearly higher than other sectors like crop husbandry, livestock production, gross domestic products etc. In this allied agricultural industry annual output of eggs was eight times more in the 1995 than early seventies. Poultry raised for meat production is called broiler. Broiler industry had started before three decades in India. It negligible output of 4 million in 1971 reached to 190 million in 1990 and there is tremendous growth as well as have high potential to develop to higher extent as there is full scope and prospectus to the industry.Poultry farming provides employment to the educated unemployed people at the rural area and additional income source to the farmers.Poultry birds are the domesticated birds reared for the purpose of meat and egg production. It provides protein rich food for deadly growing poor population.Particularly in the Marathwada region which is reeling under repeated drought spell,the poultry farming can provide an alternate source to the farmers.

Electronic facilities required for the automation of poultry farming, automation of poultry farms help to reduce the labour cost, increase farm efficiency, improve the productivity, and production rate of meat and egg (CajethanUcheUgwuoke et. al.2017).Poultry birds are generally reared in the litter system so it requires adequate space and related equipment facilities for the proper management of the flock. Modern poultry houses are fully automated with fans linked to sensors to maintain the required environment (Glatz and Pym, 2006).Availability and access of poultry meat and eggs can be promoted by the management of poultry farms through the application of electronic facilities, computerization of operation in poultry industry ensure higher quantity and quality of poultry products (CajethanUcheUgwuoke et. al.2017). Electronic feeding system is capable of dispending more feed inside the feeder by sensing the food level as the level reduces and this allow for reduced manual labour expended in the poultry farms with corresponding increase in cost benefit and high profit yield (Olaniyi et. al. 2014). Hence it is necessary to study the application of electronic facilities in the management of poultry farming for overall health performance of birds. Therefore, the present study was conducted to analyze theimportance of utilization and application of electronic facilities in the management of poultry farming, benefits of the application of electronic facilitiesin themanagement of poultry farming and obstacles occurred due to the limitations in the application of electronic facilitiesin the management of poultry farming in three different poultry farming in Aurangabad district of Marathwada region.

Materials and Methods

To study the beneficial aspects of poultry birds reared under electronic facilitiesfrom three different selected poultry farms. The poultry farms in district Aurangabad were selected and categorized as small, medium and large poultry farms depending on the bird rearing capacity. The three poultry farms were randomly selected as sample for this study. The present study was conducted during rearing period of the poultry birds.The data of electronic facilities usedin poultry farming and its beneficial effect and obstacles is collected from all the selected farms during the study period by personal visit and by observing the electronic facilities usedat the farm sites during the study period at different intervals. Information and data was obtained about use of electronic facilities, to evaluate the beneficial effect of electronic facilities and obstacles due to limitations in use of electronic facilities among the selected poultry farming. The detailed studies were undertaken with a view to find out the beneficial effect of use of electronic facilities and obstacles in these farms during the rearing period in the study area.

Results and Discussion

Forthestudy of beneficial effect of application and utilization of electronic facilities in three different categories of poultry farms according to the rearing capacity of birds were selected in this study area. Those were small, medium and large poultry farms. The work is carried out from the three different poultry farms ranges from small to large size poultry farms situated in Aurangabad district. During the study period it was recorded that major beneficial effect was found in large poultry farm followed by medium and small poultry farms. It also showed that the major obstacles faced by the poultry birds in the small poultry farm because the birds are reared under improper electronic facilities.The major beneficial aspects regarding the health performance of poultry birds occurred in the large poultry farm due to the automation of electronic facilities as compare to the medium and small poultry farms in the study area.

The poultry birds and farmer of the small poultry farms shows majorobstacles due to the limitations in use of electronic facilities in the management of poultry farming, while poultry birds and farmer of medium poultry farms shows moderate obstacles as compare to small poultry farm. The poultry birds and farmer of large poultry farms shows beneficial effect regarding the overall health performance of the birds like uniform health status of birds,minimize the disease occurrence and also shows that minimize the wastage of food material, water, minimize the labour cost etc. and increase the production of meat and eggs.

Table: Application and utilization of electronic facilities in different poultry farms.

Sr. No.	Electronic Facilities	Use of electronic facilities in		
		Small farm	Medium farm	Large farm
1	Feeders	Manual	Manual	Auto
2	Drinker	Manual	Manual	Auto
3	Manure system	Manual	Manual	Auto
4	Weighing machine	Manual	Auto	Auto
5	Egg Collection system	Manual	Manual	Auto
6	Climatic control system	Manual	Auto	Auto
7	Heat Exchanger	--	Auto	Auto
8	Ventilation system	Manual	Manual	Manual
9	Cooling system	--	Auto	Auto
10	Egg counter	Manual	Manual	Auto
11	Egg candlers	--	--	Auto
12	Incubators	Manual	Auto	Auto
13	Circulation fans	--	Auto	Auto
14	Refrigerators	--	Auto	Auto
15	Lighting system	Manual	Auto	Auto

In the small poultry farm did not use any proper electronic facilities and thus the poultry birds and farmershows major obstacles, (Cajethan et. al. 2017) reported that most of the electronic facilities required for the automation of poultry farms were not available in majority of the poultry farms in Enugu State, Nigeria. While in the medium and large poultry farms they prefer proper electronic facilities according to the number of poultry birds reared in the respective farms as compare with small poultry farm, due to that the birds of these farms shows beneficial effects as compare to small poultry farm.

The major obstaclesdue to the limitations in use of electronic facilities in the management of small poultry farm shows poor health performance of the birds, poor disease control and also shows that wastage of food material, water, maximum labour cost etc. and poor production of meat and

eggs.(Uchendu et. al. 2015) reported that backyard, small, and medium scale poultry farms accounted for over 80% of poultry farms in Enugu state, which do not integrate electronic facilities in the management of their farms. (Masuku et. al. 2013) reported that lack of credit to buy capital equipment, poor chicken housing, lack of electronic facilities, poor infrastructure affect the commercialization of indigenous chickens in Swaziland.

For proper beneficial effect to the poultry birds and the farmers of poultry farming management of the poultry farms requires necessary electronic or automated facilities within the poultry farms. It is directly benefited for the overall health of the poultry birds and farmers of the poultry farming. During this study it was observed that the proper necessary electronic facilities is found in the large poultry farms and shows beneficial effect regarding the overall health performance of the birds like uniform health status of birds, minimize the disease occurrence and also shows that minimize the wastage of food material, water, minimize the labour cost etc. and increase the production of meat and eggs, these findings are correlated to the findings of (Cajethan et. al. 2017) who reported that automation of poultry farms increases production of meat and eggs, reduces wastage of feeds, provides feeds and water at appropriate quantity and time of the birds, reduces labour in the farm, accurate operations, reduces eggs breakages, reduces stress from heat, reduces noise in the farm. These findings also agree with the findings of (Sinduja et. al. 2016) who reported that automated system is labour saving for the farmer as it reports environmental changes immediately, thereby enabling the farmer to forestall adverse damage in the farm.

In the medium poultry farm shows moderate obstacles as compare to small poultry farm, According to the report of (Oyeyinka et al2011)poor automation of poultry in Nigeria, found that the Nigerian poultry is less capitalized and it is based on smallholdings owned by many peasant farmers, also reported that birds usually performs at low level due to the application of unimproved facilities where microclimate of the farms was not regulated.

Conclusion

From the above study and observations, it can be concluded that the insufficient electronic facilities found in the small poultry farm due to that birds and farmer of this farm have faced major obstacles as compare to the medium and large poultry farms. While the major beneficial aspects regarding the health performance of poultry birds occurred in the large poultry farm due to the automation of electronic facilities as compare to the medium and small poultry farms in the study area. For the proper beneficial of poultry farming it is necessary to implement the proper and sufficient electronic facilities within the poultry farming. Therefore it is necessary to manage the sufficient electronic facilities and to reduce or to minimize the obstacles in poultry farming. Further detail studies about the beneficial aspects of poultry farmingneed to design for improvement of electronic facilities in the poultry farming in the study area. It is ultimately helpful to improve the health performance of poultry birds and to increase the production rate also increase the economic status of the farmers.

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