



STUDIES ON SOME COMMON PARASITIC DISEASES IN BACKYARD CHICKENS IN AJANTA HILL RANGES FROM SILLOD TAHSIL OF AURANGABAD DISTRICT IN MARATHWADA REGION (M.S.) INDIA.

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ABSTRACT

The present communication deals with the study of some common parasitic diseases in backyard chickens. The study was conducted to investigate the common parasitic diseases of backyard chickens in Ajanta hill ranges from Sillod tahsil of Aurangabad district in Marathwada region of Maharashtra during the period of June 2016 to May 2017. The work is carried out from the different small scale backyard chicken farming having different range of rearing capacity in Ajanta hill ranges from Sillod tahsil of Aurangabad district in Marathwada region. During the study period it was recorded that the major common parasitic diseases faced by the small scale backyard chicken farming and its effects on the health status of the poultry birds. According to the season it showed that the major common parasitic diseases and health status problems of backyard chickens faced by the small scale backyard chicken farming in rainy season followed by summer and winter season. It is concluded that the common parasitic diseases and health status problems of backyard chickens farming and its management by the farmers in the study area is inadequate, it is due to the less awareness among the farmers about common parasitic diseases and health status problems of backyard chickens. Additional research work is required to manage the common parasitic diseases and health status problems of backyard chickens and necessity of awareness among the farmers. Other related aspects will discuss in the text.

Keywords: Parasitic diseases, health status, backyard chickens, Aurangabad, Marathwada.

INTRODUCTION

In India the poultry production enterprise started as the household type in the rural areas as a subsidiary occupation to obtain some additional income but in the private sector the poultry become management intensive enterprise which gives high income and emerged as an industry in many of the smaller poultry units in the recent years. From rural areas are essentially based upon the local fowls. Such units normally have a very limited number of birds varying from 20 to 100 and are seen as means to supplement the household income. Such smaller units are run by agricultural landless labour, the smaller and marginal dry land farmers etc. The birds are generally reared in the rural areas and are depends essentially upon local material, often the bird essentially scavenging on the feed locally available in the rural areas.

Small-scale poultry farmers are the main producers of the poultry in many developing countries. The poultry farming provides employment at the village level, it is highly labour intensive having high employment potential the industry help to

increase the per capita income and also to minimize the need for migration to overcrowded cities. It provides protein rich food for deadly growing poor population.

The poultry farming can provide an alternate to the farmers in the region reeling under repeated drought spell. Maharashtra is amongst the leading states for commercial layer farming and broiler farming. Sources indicated that government of India has focused on promoting "desi" poultry along with bio-secure environment. It intends to create an opportunity for small farmers specially in the weaken sections of the society. The government has taken decision to promote poultry farming in tribal and backward regions of north Maharashtra and Marathwada. (Shubhangi Khapre, 2015)

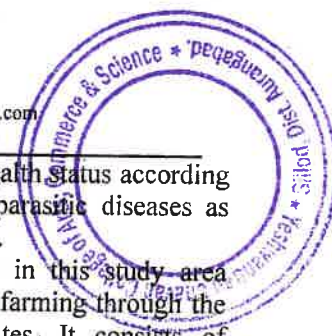
Prior to 1960 when poultry in India were reared by traditional extensive methods, there occurred few diseases namely Ranikhet (New castle) disease, fowl pox, fowl cholera, fowl spirochaetosis, salmonellosis and coccidiosis which used to manifest in a well ordered fashion and posed not much problem in their control since effective

problems in poultry, particularly tropical countries like India. This disease produces a substantial stress on the economy of poultry entrepreneur resulting in huge economic losses. The mortality rate is too high and may collapse the complete poultry industry if proper steps are not taken.

Efforts to control this disease through the use of anticoccidial proved futile due to development of drug resistance in the long run and also it is costly having much limitation on use. Though, several anticoccidial drugs are available (Singh *et al.*, 1982) for the control of caecal coccidiosis in poultry, which is caused by pathogen *Eimeria tenella*, majority of such drugs fail to check completely the disease, especially in case of mixed infection and such as a result there will be emergence of resistant strains of the protozoan parasites. (Gill and Bajwa, 1979). The occurrence of common parasitic diseases and health status problems in backyard chickens and their relative importance have been related to various factors. Therefore, the present research work was conducted to study common parasitic diseases and health status problems in backyard chickens in Ajanta hill ranges from Sillod tahsil of Aurangabad district in Marathwada region of Maharashtra.

MATERIALS AND METHODS

To study the common parasitic diseases and health status problems in backyard chickens from the study area. For analysis and collecting the information about some common parasitic diseases among the backyard chickens the survey methods including questionnaire and field spot observations were used in different backyard chicken farming depending on the bird rearing capacity of different range is conducted in Ajanta hill ranges from Sillod tahsil of Aurangabad district in Marathwada region of Maharashtra. The backyard chickens farming were randomly selected as sample for this study. Different category of backyard poultry farm according to the rearing capacity of birds was selected in this study area. These are categorized in small (about 25 birds capacity), medium (about 50 birds capacity), and large (about 100 birds capacity) backyard poultry farming. In this study the farmers were involved from small, medium and large poultry farming. To collect the relevant information, a semi-structured questionnaire was prepared. The information of some common parasitic diseases and health status problems in backyard chickens is also collected from the study



area through personal interview during the annual cycle (June 2016 to May 2017) and by observing at field level at the farming sites during the study period at different intervals. Data was obtained through the available information and field spot observations to evaluate the knowledge level about some common parasitic diseases and health status problems in backyard chickens. The detailed studies were undertaken with a view to find out some common parasitic diseases and health status problems in backyard chickens and awareness among the poultry farmers.

RESULTS AND DISCUSSION

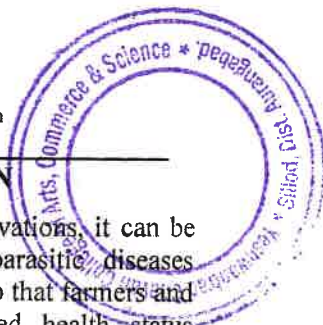
To study of some common parasitic diseases and health status problems the survey of parasitic diseases in backyard chickens /desi birds (*Gavran*) which are not grown up under managed condition, but naturally they are reared and have chance to exposure to the parasitic diseases is carried out for the annual cycle (June 2016 to May 2017), from Ajanta hill ranges in Sillod tahsil of Aurangabad district in Marathwada region of Maharashtra. Different category of backyard poultry farm according to the rearing capacity of birds was selected in this study area. These are categorized in small (about 25 birds capacity), medium (about 50 birds capacity), and large (about 100 birds capacity) of backyard poultry farming. In this study the farmers were involved from small, medium and large poultry farming. The birds of large and medium poultry farming exposed to positive more or less various parasitic diseases and

also show variation in their health status according to the rate of infections of parasitic diseases as compare to small poultry farm.

The parasitic diseases found in this study area include both type of diseases farming through the ectoparasites and endoparasites. It consists of ectoparasites like various species of arthropods as well as endoparasites like various species of helminths and protozoans. So that major parasitic disease and health status problems of backyard chickens faced by the farmers of large poultry farm followed by medium and small poultry farms. Farmers of large and medium poultry farms were faced health status problems related to common parasitic diseases and birds in these farms also suffers from some abnormalities about health like intake of food and loss in their weight and it was observed that the farmer of small poultry farm they never faced any disease problem. (Talukder *et. al.*, 2010) reported that improper environments reduced the chickens' defenses, making them more vulnerable to diseases. (Adesji *et. al.*, 2013) reported that the climatic conditions encouraged the distribution and development of diseases. Farmers of large and medium poultry farms and birds in these farms faced health status problems as compare to small poultry farms. Higher intensity of these problems found in rainy season followed by summer and winter season. (Ali *et. al.*, 2015) reported that hot weather in summer, high humidity and excessive cold with fogging in winter and load shedding were the major constraints for the rural farmers.

Table: Exposure of common parasitic diseases and health status problems in different poultry farms. (Abb: P. D.: Parasitic diseases)

Season	Exposed to parasitic diseases			Health status problems faced		
Farm type	Small	Medium	Large	Small	Medium	Large
Rainy	P. D. _ ve	P. D. ++ ve	P. D. +++ ve	Never faced	Major problem faced	Major problem faced
Winter	P. D. _ ve	P. D. + ve	P. D. + ve	Never faced	Minor problem faced	Minor problem faced
Summer	P. D. _ ve	P. D. ++ ve	P. D. +++ ve	Never faced	Major problem faced	Major problem faced



In this study area large and medium poultry farmers considered that due to the parasitic diseases the health conditions of the backyard chickens become change. They faced some health status problems related to parasitic diseases. The small poultry farmer's convey their message about the parasitic diseases that they never faced any health problems related to the diseases. The large and medium farmer faced several health status problems of backyard chickens. The more health problems and parasitic diseases faced by large poultry farm followed by medium and small poultry farms in the form of different types of parasitic infections. (Maheshwari S., 2013) reported that most of the issues associated with poultry production, as environmental impacts related to backyard or mixed extensive systems. (Naphade S. T. *et. al.*, 2016) reported that due to improper environmental conditions of poultry farms farmers and birds of this farms have faced environmental and health related problems.

CONCLUSION

From the above study and observations, it can be concluded that the common parasitic diseases found in this poultry farms due to that farmers and birds of this farms have faced health status problems. For that to implement the awareness among the farmers about the parasitic diseases occurred in the poultry farms is one of the most important part of caring system of poultry farming. Therefore sustainable ways to minimize the parasitic infection in poultry farming and further detail studies need to design for improvement of farm conditions. It also helpful to improve the health status of poultry farming as well as health status of backyard chickens.

ACKNOWLEDGEMENTS

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Effect of Homoeopathic Medicine *Mercurius Corrosivus* and Allopathic *Amprolium* Against Experimental Caecal Coccidiosis of Broiler Poultry Birds with Reference to Histochemical Changes in Intestinal Tissue

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Abstract

The present communication deals with the study of efficacy of homoeopathic medicine *Mercurius corrosivus* against experimentally induced the dose of 50,000 sporulated oocysts of *Eimeria tenella* infected broiler poultry birds. The studies on histochemical examination of intestinal tissue were undertaken in different group of birds (treated and untreated) and observed that the histochemical examination particularly glycogen content of the intestinal tissue from all group of birds have the glycogen content in their tissue. The concentration of glycogen was variable from different region of the intestinal tissue and found different traces like low, moderate and high traces of glycogen content in the tissue of different group of birds. It was also observed that high traces of glycogen content in the heavily infected intestinal tissue as compare to the other group of birds. From the histochemical observations it is clear that parasitic stages could able to acquire the glycogen from the host tissue whereas the treated groups has also shown the histochemical changes in groups treated with homoeopathic medicine *Mercurius corrosivus* and allopathic *amprolium*, other related aspects are also discussed in the text.

Key Words: Caecal coccidiosis, broiler poultry birds, histochemical changes, intestinal tissue, *Mercurius corrosivus*, *Amprolium*

Introduction

Broiler poultry birds are susceptible to at least nine species of coccidia. The most common species are *Eimeria tenella*, which causes the caecal coccidiosis. Coccidiosis is one of the most important and major disease in broiler poultry birds, Pellerdy L.P. (1974) and most important causes of economic losses within the poultry industry (Williams et al, 1999). This disease is caused by *Eimeria* parasites, which infect epithelial cells of the intestine of the birds. For the effective treatment and control of caecal coccidiosis and to combat the development of drug resistance, new types of anticoccidial drugs are being manufactured and tried from time to time. Madrewar B.P. (1996) has given the use of some homoeopathic drugs to combat different diseases in animals. The importance of homoeopathic drugs and their effective sustainable use other than in humans is explained well by Naveen (2005). Many authors have studied the histopathology and histochemistry of different birds (Hodges R.D., 1974). In this light during the present study, the homoeopathic medicine *Mercurius corrosivus* was tried against experimental caecal coccidiosis of broiler chicks as a treatment of control. Its effect was analyzed on different parameters, eg. the histochemical observation in intestine particularly glycogen content of the intestinal tissue are studied in the present paper.

Materials And Methods:

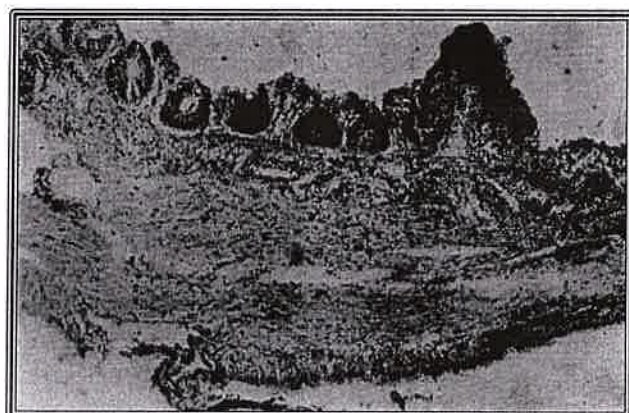
Two hundred and ten day old white leghorn broiler chicks vaccinated against Marek's disease were procured from a commercial hatchery. The birds were maintained in a coccidia free atmosphere with coccidiostat free starter ration up to three weeks of age followed by finisher ration for next three weeks with free access to normal drinking water. The birds were randomly divided into seven groups (30 each) Group A served as healthy control, group B to

G was infected with 50,000 sporulated oocysts of *E. tenella* on 23rd day of age. Group B was infected untreated and group C was infected and allopathic drug *amprolium* treated. Group D to G was infected and homoeopathic medicine *Mercurius corrosivus* 30X, 200X, 1M and 10 M potency treated respectively. The treatment was given from 3rd day of post-infection to 5th day of post-infection. For histochemical studies the intestine of dead and scarified birds were subjected to histochemical observations for glycogen contents suitable pieces of intestine were collected and fixed in Carnoy's fluid (Singh, U.B, and Sulochana, S.C, 1997). The tissues were processed to obtain paraffin sections of about 7 micron thickness (Mukharji, 1990). The sections were stained by Best carmine stain, glycogen stained pink red to red in colour. (Best, 1906).

Results And Discussion:

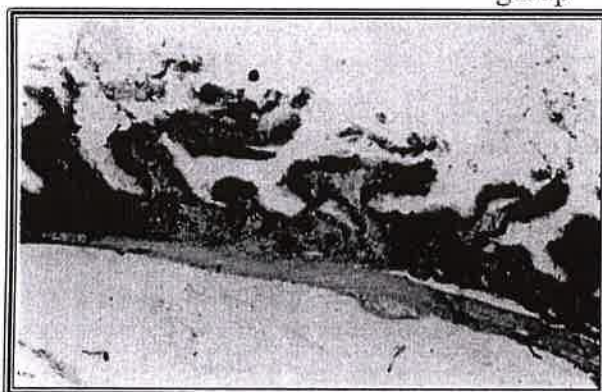
Histochemical examination of normal intestine shows, high concentration of glycogen in the muscular layer. There are high traces of glycogen content; particularly in the epithelial lining of the villous and moderate quantity of glycogen content is seen in the other tissues of the intestine. (Plate: I) On 5th day of post infection intestinal tissue of infected and untreated group B shows the amount of glycogen content is moderate in muscular layer but in the connective tissue and epithelium of villi shows relatively high amount of glycogen content which is stained dark in colour. The intestinal tissue of infected and allopathic *amprolium* treated group C shows the concentration of glycogen content is variable with different region of the tissue. The glycogen content in the different layers of intestine is evenly distributed but having lower glycogen content whereas the epithelial lining also shows even distribution of glycogen content with high traces at some places.

Plate 1: Transverse section of normal intestine uninfected (healthy) showing the distribution of glycogen content (Group A)

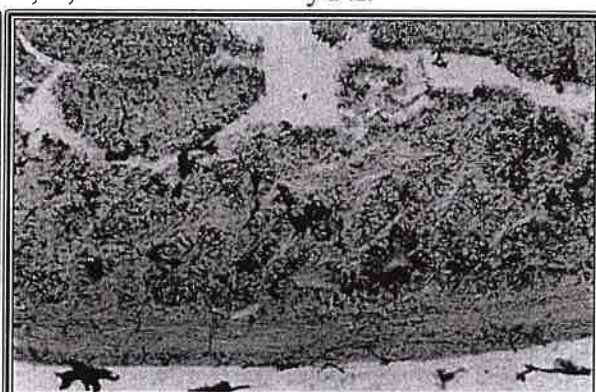


Group A (100x)

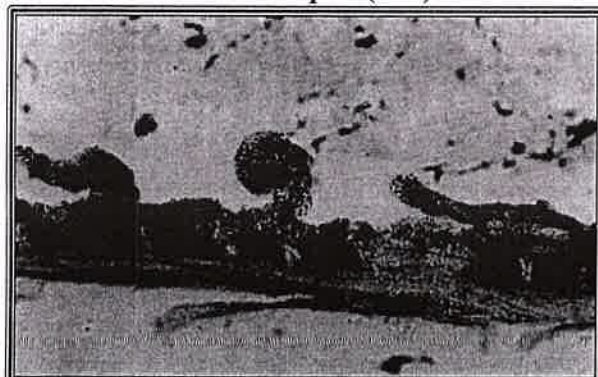
Plate 2: Transverse section of intestine showing glycogen distribution in infected group B and infected treated group C, D, E, F and G on 5th day P.I.



Group B (40x)



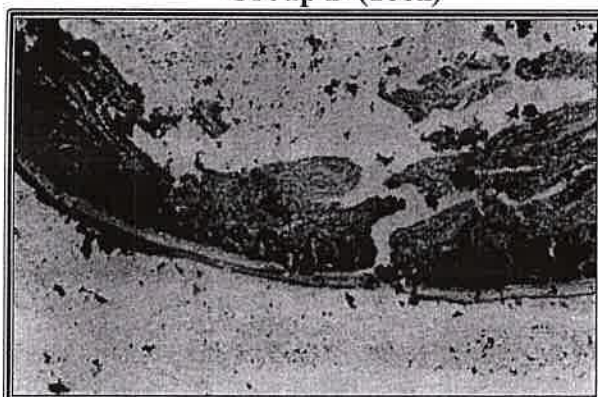
Group C (100x)



Group D (100x)



Group E (100x)



Group F (40x)



Group G (40x)

The intestinal tissue of infected and homoeopathic medicine Mercurius corrosivus 30X potency treated group D shows the concentration of the glycogen content in the villi is relatively high in muscular layer. The villi epithelium stains dark, showing high percentage of glycogen content. The glycogen content is very high which stains deep in colour i.e. parasites stages found in the villous area. The intestinal tissue of infected and homoeopathic medicine Mercurius corrosivus 200X potency treated group E shows particularly in the muscular layer, mucosa shows low amount of glycogen content as it stains light in colour, but the glycogen content is in large quantity at the villi and goblet cells.

The intestinal tissue of infected and homoeopathic medicine Mercurius corrosivus 1M potency treated group F shows the concentration of glycogen content is in large quantity at all region in the tissue, which stain deep red in colour. The intestinal tissue of infected and homoeopathic medicine Mercurius corrosivus 10M potency treated group G shows the concentration of glycogen content is variable with different region. The glycogen content in the villous tissue is having relatively high traces of the glycogen content than other part of the tissue. (Plate: 2)

Conclusion:

From the above observation it is concluded that the intestine from all group have the glycogen content in their tissue, low, moderate or high traces but it is high as seen in the heavily infected tissue of intestine it may be due to the effect of parasite and its stages in the host.

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Department of Zoology, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (MS) India; Dr. V. P. Vadlamudi and Dr. N. M. Degloorkar from college of Veterinary and Animal sciences, Marathwada Agricultural University Parbhani (MS) India, for providing laboratory and library facilities, Dr. S. M. Desarda, Principal and Director, Drug proving unit, D. K. M. M. Homoeopathic Medical college, Guruganeshnagar, Aurangabad (MS) India for providing the homoeopathic medicine and also thankful to the Principal, Yeshwantrao Chavan College of Arts, Commerce and Science, Sillod, Dist. Aurangabad (M.S.) India.

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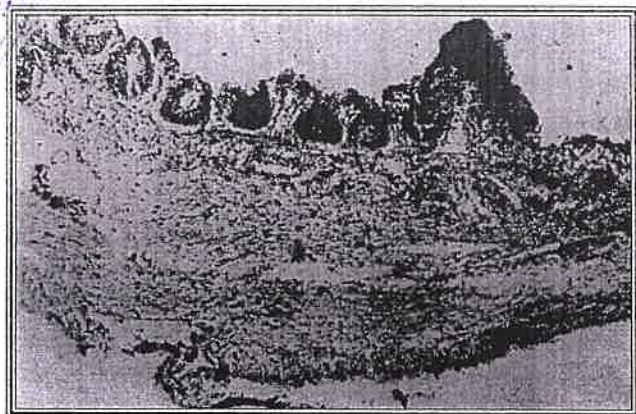
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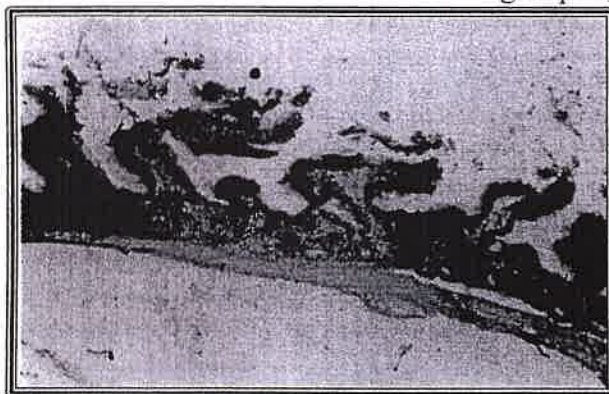
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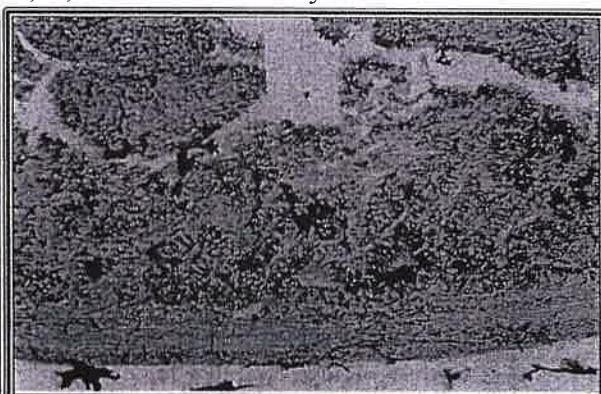


Group A (100x)

Plate 2: Transverse section of intestine showing glycogen distribution in infected group B and infected treated group C, D, E, F and G on 5th day P.I.



Group B (40x)



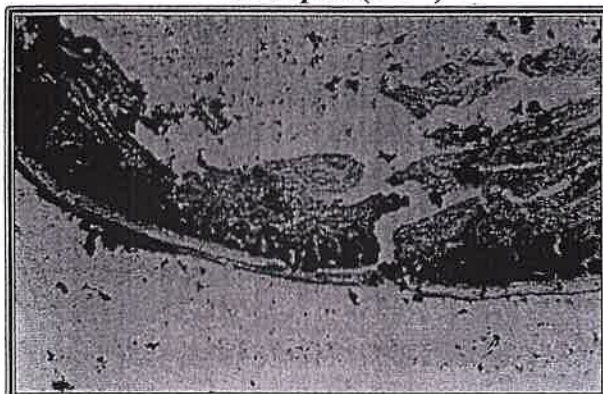
Group C (100x)



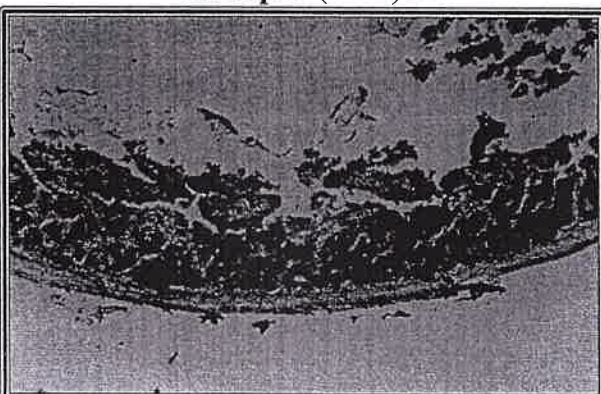
Group D (100x)



Group E (100x)



Group F (40x)



Group G (40x)

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The intestinal tissue of infected and homoeopathic medicine Mercurius corrosivus 30X potency treated group D shows the concentration of the glycogen content in the villi is relatively high in muscular layer. The villi epithelium stains dark, showing high percentage of glycogen content. The glycogen content is very high which stains deep in colour i.e. parasites stages found in the villous area. The intestinal tissue of infected and homoeopathic medicine Mercurius corrosivus 200X potency treated group E shows particularly in the muscular layer, mucosa shows low amount of glycogen content as it stains light in colour, but the glycogen content is in large quantity at the villi and goblet cells.

The intestinal tissue of infected and homoeopathic medicine Mercurius corrosivus 1M potency treated group F shows the concentration of glycogen content is in large quantity at all region in the tissue, which stain deep red in colour. The intestinal tissue of infected and homoeopathic medicine Mercurius corrosivus 10M potency treated group G shows the concentration of glycogen content is variable with different region. The glycogen content in the villous tissue is having relatively high traces of the glycogen content than other part of the tissue. (Plate: 2)

Conclusion:

From the above observation it is concluded that the intestine from all group have the glycogen content in their tissue, low, moderate or high traces but it is high as seen in the heavily infected tissue of intestine it may be due to the effect of parasite and its stages in the host.

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STUDIES ON SOME COMMON PARASITIC DISEASES IN BACKYARD CHICKENS IN AJANTA HILL RANGES FROM SILLOD TAHSIL OF AURANGABAD DISTRICT IN MARATHWADA REGION (M.S.) INDIA.

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ABSTRACT

The present communication deals with the study of some common parasitic diseases in backyard chickens. The study was conducted to investigate the common parasitic diseases of backyard chickens in Ajanta hill ranges from Sillod tahsil of Aurangabad district in Marathwada region of Maharashtra during the period of June 2016 to May 2017. The work is carried out from the different small scale backyard chicken farming having different range of rearing capacity in Ajanta hill ranges from Sillod tahsil of Aurangabad district in Marathwada region. During the study period it was recorded that the major common parasitic diseases faced by the small scale backyard chicken farming and its effects on the health status of the poultry birds. According to the season it showed that the major common parasitic diseases and health status problems of backyard chickens faced by the small scale backyard chicken farming in rainy season followed by summer and winter season. It is concluded that the common parasitic diseases and health status problems of backyard chickens farming and its management by the farmers in the study area is inadequate, it is due to the less awareness among the farmers about common parasitic diseases and health status problems of backyard chickens. Additional research work is required to manage the common parasitic diseases and health status problems of backyard chickens and necessity of awareness among the farmers. Other related aspects will discuss in the text.

Keywords: Parasitic diseases, health status, backyard chickens, Aurangabad, Marathwada.

INTRODUCTION

In India the poultry production enterprise started as the household type in the rural areas as a subsidiary occupation to obtain some additional income but in the private sector the poultry become management intensive enterprise which gives high income and emerged as an industry in many of the smaller poultry units in the recent years. From rural areas are essentially based upon the local fowls. Such units normally have a very limited number of birds varying from 20 to 100 and are seen as means to supplement the household income. Such smaller units are run by agricultural landless labour, the smaller and marginal dry land farmers etc. The birds are generally reared in the rural areas and are depends essentially upon local material, often the bird essentially scavenging on the feed locally available in the rural areas.

Small-scale poultry farmers are the main producers of the poultry in many developing countries. The poultry farming provides employment at the village level, it is highly labour intensive having high employment potential the industry help to

increase the per capita income and also to minimize the need for migration to overcrowded cities. It provides protein rich food for deadly growing poor population.

The poultry farming can provide an alternate to the farmers in the region reeling under repeated drought spell. Maharashtra is amongst the leading states for commercial layer farming and broiler farming. Sources indicated that government of India has focused on promoting "desi" poultry along with bio-secure environment. It intends to create an opportunity for small farmers specially in the weaken sections of the society. The government has taken decision to promote poultry farming in tribal and backward regions of north Maharashtra and Marathwada. (Shubhangi Khapre, 2015)

Prior to 1960 when poultry in India were reared by traditional extensive methods, there occurred few diseases namely Ranikhet (New castle) disease, fowl pox, fowl cholera, fowl spirochaetosis, salmonellosis and coccidiosis which used to manifest in a well ordered fashion and posed not much problem in their control since effective



prophylactic measures were available and the birds were have the disease resistant health.

During 1960 to 1980 many small to fairly large poultry units under varying degrees of intensive system of management, sprang up. With this intensification several diseases viz., infectious bronchitis, mild infectious laryngotracheitis, Marek's disease, avian encephalomyelitis, mild infectious bursal disease and adeno virus infection, posed problems and became well established in the poultry production in addition to prevailing diseases. The methods of control have been the preventive vaccination for infectious bronchitis and Marek's disease. Some organisations are avian encephalomyelitis vaccine to immunise parent flocks. Mild IBD was controlled by use of mild live vaccine in chicks and inactivated in breeder flocks. Subsequently some more higher-to-unknown diseases emerged and some of the existing disease, Gumboro and Ranikhet appeared in poultry, causing considerable economic losses by increasing mortality rate on farms. Vaccination remains the best answer for the prevention and control of poultry diseases. The majority of the vaccines are either live attenuated or are inactivated forms of infectious agents.

In India, a huge loss of birds due to diseases is being faced by farmers due to management related problems. Poultry carry heavy infection of varied types of parasitic infections, i.e. Helminths, Protozoans, Viruses, Arthropods etc. Parasitic infection has a serious impact on poultry health, productivity, quality and quantity of meat. The varied types of parasitic infection are found in backyard chickens locally known as gavran, which reduces the food value and increase the mortality. Which inturn affects on total production causing high economic loss to farmers as well as Nation too.

The most important parasitic protozoan disease of poultry is coccidiosis which is most significant and dangerous and is related to managerial practices. It is one of the major diseases of poultry, mostly affecting the early aged birds. There are several species of genus *Eimeria*, a sporozoan parasite which have many fold effects on poultry production. The *E. tenella*, which causes caecal coccidiosis in poultry and found in almost all the area of country among all the chickens; causing significant financial losses which are mainly due to high rate of morbidity and mortality, poor weight gain and feed conversion. This is one of the most prevalent consistant

problems in poultry, particularly tropical countries like India. This disease produces a substantial stress on the economy of poultry entrepreneur resulting in huge economic losses. The mortality rate is too high and may collaps the complete poultry industry if proper steps are not taken.

Efforts to control this disease through the use of anticoccidial proved futile due to development of drug resistance in the long run and also it is costly having much limitation on use. Though, several anticoccidial drugs are avialable (Singh *et al.*, 1982) for the control of caecal coccidiosis in poultry, which is caused by pathogen *Eimeria tenella*, majority of such drugs fail to check completely the disease, especially in case of mixed infection and such as a result there will be emergence of resistant strains of the protozoan parasites. (Gill and Bajwa, 1979). The occurrence of common parasitic diseases and health status problems in backyard chickens and their relative importance have been related to various factors. Therefore, the present research work was conducted to study common parasitic diseases and health status problems in backyard chickens in Ajanta hill ranges from Sillod tahsil of Aurangabad district in Marathwada region of Maharashtra.

MATERIALS AND METHODS

To study the common parasitic diseases and health status problems in backyard chickens from the study area. For analysis and collecting the information about some common parasitic diseases among the backyard chickens the survey methods including questionnaire and field spot observations were used in different backyard chicken farming depending on the bird rearing capacity of different range is conducted in Ajanta hill ranges from Sillod tahsil of Aurangabad district in Marathwada region of Maharashtra. The backyard chickens farming were randomly selected as sample for this study. Different category of backyard poultry farm according to the rearing capacity of birds was selected in this study area. These are categorized in small (about 25 birds capacity), medium (about 50 birds capacity), and large (about 100 birds capacity) backyard poultry farming. In this study the farmers were involved from small, medium and large poultry farming. To collect the relevant information, a semi-structured questionnaire was prepared. The information of some common parasitic diseases and health status problems in backyard chickens is also collected from the study



area through personal interview during the annual cycle (June 2016 to May 2017) and by observing at field level at the farming sites during the study period at different intervals. Data was obtained through the available information and field spot observations to evaluate the knowledge level about some common parasitic diseases and health status problems in backyard chickens. The detailed studies were undertaken with a view to find out some common parasitic diseases and health status problems in backyard chickens and awareness among the poultry farmers.

RESULTS AND DISCUSSION

To study of some common parasitic diseases and health status problems the survey of parasitic diseases in backyard chickens /desi birds (*Gavran*) which are not grown up under managed condition, but naturally they are reared and have chance to exposure to the parasitic diseases is carried out for the annual cycle (June 2016 to May 2017), from Ajanta hill ranges in Sillod tahsil of Aurangabad district in Marathwada region of Maharashtra. Different category of backyard poultry farm according to the rearing capacity of birds was selected in this study area. These are categorized in small (about 25 birds capacity), medium (about 50 birds capacity), and large (about 100 birds capacity) of backyard poultry farming. In this study the farmers were involved from small, medium and large poultry farming. The birds of large and medium poultry farming exposed to positive more or less various parasitic diseases and

also show variation in their health status according to the rate of infections of parasitic diseases as compare to small poultry farm.

The parasitic diseases found in this study area include both type of diseases farming through the ectoparasites and endoparasites. It consists of ectoparasites like various species of arthropods as well as endoparasites like various species of helminths and protozoans. So that major parasitic disease and health status problems of backyard chickens faced by the farmers of large poultry farm followed by medium and small poultry farms. Farmers of large and medium poultry farms were faced health status problems related to common parasitic diseases and birds in these farms also suffers from some abnormalities about health like intake of food and loss in their weight and it was observed that the farmer of small poultry farm they never faced any disease problem. (Talukder *et. al.*, 2010) reported that improper environments reduced the chickens' defenses, making them more vulnerable to diseases. (Adesji *et. al.*, 2013) reported that the climatic conditions encouraged the distribution and development of diseases. Farmers of large and medium poultry farms and birds in these farms faced health status problems as compare to small poultry farms. Higher intensity of these problems found in rainy season followed by summer and winter season. (Ali *et. al.*, 2015) reported that hot weather in summer, high humidity and excessive cold with fogging in winter and load shedding were the major constraints for the rural farmers.

Table: Exposure of common parasitic diseases and health status problems in different poultry farms. (Abb: P. D.: Parasitic diseases)

Season	Exposed to parasitic diseases			Health status problems faced		
Farm type	Small	Medium	Large	Small	Medium	Large
Rainy	P. D. _ ve	P. D. ++ ve	P. D. +++ ve	Never faced	Major problem faced	Major problem faced
Winter	P. D. _ ve	P. D. + ve	P. D. + ve	Never faced	Minor problem faced	Minor problem faced
Summer	P. D. _ ve	P. D. ++ ve	P. D. +++ ve	Never faced	Major problem faced	Major problem faced



In this study area large and medium poultry farmers considered that due to the parasitic diseases the health conditions of the backyard chickens become change. They faced some health status problems related to parasitic diseases. The small poultry farmer's convey their message about the parasitic diseases that they never faced any health problems related to the diseases. The large and medium farmer faced several health status problems of backyard chickens. The more health problems and parasitic diseases faced by large poultry farm followed by medium and small poultry farms in the form of different types of parasitic infections. (Maheshwari S., 2013) reported that most of the issues associated with poultry production, as environmental impacts related to backyard or mixed extensive systems. (Naphade S. T. *et al.*, 2016) reported that due to improper environmental conditions of poultry farms farmers and birds of this farms have faced environmental and health related problems.

CONCLUSION


From the above study and observations, it can be concluded that the common parasitic diseases found in this poultry farms due to that farmers and birds of this farms have faced health status problems. For that to implement the awareness among the farmers about the parasitic diseases occurred in the poultry farms is one of the most important part of caring system of poultry farming. Therefore sustainable ways to minimize the parasitic infection in poultry farming and further detail studies need to design for improvement of farm conditions. It also helpful to improve the health status of poultry farming as well as health status of backyard chickens.

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