Periodic Discharge of Eggs of *Ascaridia galli* in Faeces of Experimentally Infected Native Domestic Fowls (*Gallus gallus domesticus*)

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ABSTRACT: While our native poultry may look apparently healthy, they are subjects to infections with helminthes of various classes including intestinal worms, of which ***Ascaridia galli*** is most frequent parasite. Production can be limited by inadequate information on the sources of worm infestation and measure to minimize the disseminations. An investigation was therefore carried out on the daily periodic discharge of eggs of *A. galli* in faeces of host over 72hours. It was observed that the ascarids discharged of eggs in the faeces of host was in numbers that vary with different hours of the day, irrespective of the type of faeces, that is, solid or watery faeces, 70% of the egg production assumed to had occurred during the day time in active feeding period. Measures have been put in place to control worm infestation among poultry birds, but in the poultry birds here it is being advocated by the present findings that the chickens' droppings be promptly removed (9.00am and 6.00am) so as to avoid contamination of poultry feeds with faeces of high concentration of eggs of *A. galli.*
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INTRODUCTION

Studies have shown that while the native domestic chickens (*Gallus gallus domesticus L.)* may apparently look healthy, they are subject to many parasitic diseases. (**Hodasi**, 1973; **Onyirioha**, 1984). It seems that the rural people which constitute bulk of the farmers engaged in the native poultry industry are often insufficiently informed on the methods of poultry management (**Onyirioha¸1989)** including the control of poultry worms. Poultry production is a science which requires proven knowledge. Much research and experimentations are required in order to advance in the industry, make profitable investments and improve in the management skills. Fowl droppings normally constitute a major source of worm infection but may inadvertently be neglected. Central to this piece of work is to provide information on the timely handling and disposal of poultry wastes so as to minimize domestic fowl infections.

MATERIALS AND METHODS

Five 7-day old native chicks raised under laboratory parasite-free conditions were fed with embryonated eggs of *Ascaridia galli* in dosages of 35,50,80,90 and 100, respectively. Five other chicks from the same flock were kept as controls.

Six weeks after, when the young chicks fed with embryonted eggs of *A. galli* started passing out unsegmented eggs of *A. galli* in their faeces, they were transferred into separate chambers and their faeces separately collected and weighed over 72hrs at 3 hrs intervals with the aid of a sensitive electric balance (up0.1mg).

The number of *A. galli* eggs in each case was estimated with the aid of a slide counter. At the end of 72hrs, all the chicks were killed and their intestines examined for *A. galli* infection. The number of worms recovered in each case was also determined to find out the number of female worms that contributed to egg-production in each case and therefore average egg discharge per worm, periodically (Table 1).

Table 1: Percentage Discharge of Eggs of *A. galli* by 5 Chicks with Experimental (*Ascaridiasis*).

Time Intervals	% Total Eggs of *A. galli* Discharged
6.00am – 9.00am	5.00
9.00am – 12.noon	10.00
12noon – 3.00pm	24/00
3.00pm – 6.00pm	31.00
6.00pm – 9.00pm	18.00
9.00pm – 12 midnight	7.00
12 midnight – 3.00am	5.00
3.00am – 6.00am	0.00

RESULTS

The number of eggs of *A. galli* passed in the faeces of infected chicks varied at different hours of the day. About 70% of the total egg discharge occurred during the day (table 1).

Between 3.00am and 6.00am, egg discharge seized altogether and resumed between 6.00am and 9.00am.

The number of egg discharge at the subsequent time intervals increased progressively and reached the peak between 3.00pm and 6.00pm, and then declined steadily to lowest value between 3.00am and 6.00am.

It was observed during the investigation that the number of eggs of *A. galli* discharged in the faeces of the host at any time interval was unaffected by the amount of faeces passed out by the host. During the 72hrs observation, the eggs were discharged in their retrospective proportions irrespective of the type of faeces past out, that is, weather the faeces was course, mucoid, watery or solid. The observations also illustrated that the eggs were discharged in an approximate regular manner each day under controlled conditions in the laboratory.

DISCUSSION AND CONCLUSION

The very low eggs count recorded between 12midnight and 9.00am suggests that cessation of egg production by the parasite might have occurred between the intervals of 12midnight and 3.00am, thus coinciding with the periods when the host was inactive and not feeding. Thus, as a measure of controlling the spread of infections, droppings of the chickens during active periods should not be allowed to contaminate the poultry feeds. The poultry surroundings should be cleared between 9.00am and midnight not around 6.00am as is usually the practice, for profitable poultry production.

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