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Volume 17 (1990)
April 1990

No. 2

ISSN 0253-8117

10/1990

PAKISTAN VETERINARY JOURNAL

FACULTY OF VETERINARY SCIENCE
UNIVERSITY OF AGRICULTURE
FISHERIES AND ANIMAL SCIENCES
RAWALPINDI

SHORT COMMUNICATION

EFFECT OF POLYMYCIN SUPPLEMENTATION THROUGH FEED AND WATER ON BROILER PERFORMANCE

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ABSTRACT

Polymycin supplementation through feed and water to one hundred and eight, day old "Hubbard" broiler chicks resulted statistically significant differences in feed consumption and non-significant difference in growth, feed efficiency and dressing percentage in different groups.

INTRODUCTION

A number of antibiotics are available with claims for their prophylactic action and growth promoting capacity. The use of antibiotics in poultry has been reported by adding antibiotic through drinking water (Petersen, 1987). But continuous feeding of antibiotics to chicks for long periods resulted into decreased growth (Wakelin et al, 1954). This study was planned to study the effect of polymycin supplementation through feed and water on the performance of broiler chicks.

MATERIALS AND METHODS

The experiment was conducted at the Poultry Experiment Station, University of Agriculture, Faisalabad. One hundred and eight, day old Hubbard broiler chicks comprising three experimental units viz. A, B and C of 36 chicks in each, were randomly divided into three sub-groups of 12 chicks each. The feed

group C polymycin was added at the rate of 1.1 g per litre of drinking water. All the chicks were wing banded, and weighed individually after every week.

Feed and water were given *ad libitum*. Feed consumption of each group was recorded upto eight weeks of age. At the end of the experimental period two birds from each experimental unit were randomly picked up and slaughtered to determine various feeding characteristics. The data thus collected were subjected to statistical analysis and comparison of mean differences were made by Duncan's Multiple Range Test (Steel & Torrie, 1991).

RESULTS AND DISCUSSION

Weight Gain

The weight gain of chicks in control and treated groups during experimental period of eight weeks is given in Table 1.

TABLE 1. Average values of weight gain, feed consumption, feed efficiency and dressing percentage in respect of one hundred chicks at eight weeks of age.

Parameters	Control (A)	Polymycin in	
		Feed (B)	Water (C)
Weight gain (g/pc/ chick/pt)	1462	1652	1664
Feed consumption (g/pc/ chick/pt)	2704	4757	4687
Feed efficiency (%)	2.81	2.44	2.44
Dressing percentage (%)	67.10	68.72	68.75

ns = no treatment common superscript are not statistically significant

Control group was served as control (group A). Polymycin was supplemented at the rate of 0.5 g per litre of drinking water in A and B while in case of

the chicks in treatments C (0.5 g/l) and B (0.5 g/l) containing polymycin in feed and drinking water gained more weight as compared to A (0.5 g/l).

However, statistically the differences among treatments were found to be non-significant. The results of this study are in line with the findings of Haque *et al.* (1989) who used various antibiotics in their studies.

Feed Consumption:

The chicks in treatments B (4025 g) and C (3980 g) consumed more feed than those of chicks in treatment A (3795 g), (Table I). The difference in feed consumption during the study period of eight weeks among various groups were statistically significant. The comparison of means by Duncan's Multiple Range Test (1955) showed significantly higher consumption in birds on treatments B and C than those of chicks in treatment A. However, the differences between the treatments B and C were non-significant. Similar observations are also reported by Dafwing *et al.* (1984) who observed that supplementation of antibiotics in broiler ration significantly increased feed consumption.

Feed Efficiency:

The chicks showed better feed efficiency on treatments C (2.41) and B (2.44) than those of chicks under treatment A (2.54). However, statistically the influence of treatment on the average feed efficiency was found to be non-significant. Similar results have been reported by Haque *et al.* (1989) in their studies by using various antibiotics.

Dressing Percentage:

The average dressing percentage of chicks in treatments A, B and C was 67.40, 68.72 and 66.75, respectively. The dressing percentage was found maximum in treatment B and C followed by those in treatment A. However, the difference among various treatments were found to be statistically non-significant. The results of this study are in line with those reported by Bukksh *et al.* (1980) and Haque *et al.* (1989) who reported non-significant differences in dressing percentage by using various antibiotics.

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