

## List of Tables

Table	Page
<b>Table 1:</b> Characteristics of farm and farmers' demography .....	9
<b>Table 2:</b> Association between prevalence of <i>Campylobacter spp</i> and selected factors through Fisher's exact test .....	11
<b>Table 3:</b> Mortality status within each broiler farm and the associated diseases (July 2019-2020) (According to farmers' response) .....	12
<b>Table 4:</b> Commonly used antimicrobials in broiler poultry farms in Mirarsarai, Chattogram.....	13

## List of Figures

Figure	Page
<b>Figure 1:</b> Spatial distribution of <i>Campylobacter</i> positive farms in Mirasarai .....	8

## List of Abbreviations and Symbols

Abbreviations/ Symbols	Elaborations
%	Percentage
<	Less than
>	Greater than
No.	Number
°C	Degree Celsius
°F	Degree Fahrenheit
et al.	And his associate
e.g.	Example
etc.	Et cetera
CVASU	Chattogram Veterinary and Animal Sciences University

## Abstract

Campylobacteriosis is one of the major bacterial zoonotic diseases in humans. Poultry intestine provides a favorable condition for the bacteria to colonize, hence is the most important source of Campylobacter infection to human. Campylobacter spp. does not spread from broiler to human only via consumption of meat but also handling of live broilers and during preparation of meat and meat products. Very few studies on Campylobacter spp. Colonization in broilers of Bangladesh was observed. Therefore a baseline survey was conducted during October 2019 to November 2019 to estimate the prevalence of Campylobacter spp. colonization and its associated risk factors in broilers of Mirasarai upazilla. A total of 20 pooled cloacal swab samples were collected from 20 broiler farms from Mirasarai. Data on farm management, biosecurity and hygiene practices, mortality rate and antibiotic usage were collected using a structured questionnaire through a face-to-face interview during sampling. The sample material was comprised of five (5) cloacal swabs from five randomly selected broilers from each flock that were pooled into one for culturing in a selective media followed by incubation in CO<sub>2</sub> atmosphere. Furthermore, the isolates were confirmed using the polymerase chain reaction. The risk factors were analyzed at the farm level entering the data into MS excel 2007 and analyzing the data by STATA-14 software.

The prevalence was estimated to be 45% (95% CI- 23.1- 68.5). In risk factor analysis, the factors found to be significantly associated with Campylobacter colonization were farms with multiple sheds, small to medium flock size , water supplied with deep tube wells, floor built of mud, saw dust litter, experience of farmers and no use of distinct cloth or separate footwear while entering the farms. Most of the findings were in correspondence with many previous national and international studies. Most of the farms had 2.5-5% mortality rate and Coocidiosis and Necrotic Enteritis were the most frequent causes of death. Farmers used a wide range of antibiotics mainly as growth promoter or prevention purpose rather than therapeutic purpose.

The study gathered evidence of presence of Campylobacter spp. colonization in broiler flocks and identified the factors that could help set effective interventions in controlling Campylobacter infection in chickens to reduce Campylobacteriosis in humans through broiler. Further extended study might provide useful information to formulate a national control program.

---

**Keywords:** Campylobacter spp., Cloacal swab, Mortality rate, Prevalence, Risk factors.