

## ***Colonization of Zoonotic Bacterial Pathogens in Village Chickens in Sri Lanka***

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In Sri Lanka, village chickens play a significant role in the rural agricultural landscape. The traditional practices of raising these indigenous chickens contribute to the preservation of local poultry genetic diversity and offer sustainable alternatives for resource-poor farmers. Unlike commercial poultry breeds, village chickens exhibit resilience to diseases but the available literature to prove this fact is sparse. The occurrence of zoonotic foodborne bacterial pathogens related to village chickens has not been studied in Sri Lanka. Nevertheless, there is a growing demand for meat and eggs of village chickens. Hence, this study aims to identify the presence of *Campylobacter*, *E. coli* and non-typhoidal *Salmonella* in village chickens. According to Department of Animal Production and Health statistical bulletin 2022, more than 17000 registered family poultry farms are situated in the Western Province. Therefore, Western Province was selected and random sampling was done in thirty family poultry farms; ten from each district (Colombo, Kalutara, and Gampaha). Those farms were visited to collect samples and demographic data. From each farm, randomly picked one village chicken was slaughtered to collect caeca and cloacal swabs for the isolation of *Campylobacter* and *E. coli* respectively. To detect non-typhoidal *Salmonella* environmental faecal samples were collected from the pens. Organisms were isolated and identified using standard protocols. Twenty-four out of thirty (80%) cloacal swabs were positive for *E. coli*. The *Campylobacter* colonization was 13.33% (4/30). Out of those four farms, in one farm both environmental samples and caecal swab were positive for *Campylobacter*, in two farms, only the environmental swab was positive for *Campylobacter* and in one farm, only the caecal swab was positive for *Campylobacter*. Six farms out of thirty (20%) were positive for non-typhoidal *Salmonella*. These findings revealed a notable prevalence of *Campylobacter*, *Salmonella* and *E. coli* in the sampled backyard poultry populations in Western Province.

**Keywords:** Village Chicken, *Campylobacter*, *E. Coli*, Non-Typhoidal *Salmonella*, Food