

An Investigation on Antibiotic Resistance of *E. coli* in the Red Jungle Fowl from a Farm in Sepang

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Abstract

This study was carried out to isolate and identify the normal bacterial flora in the cloaca of the Red Jungle fowl and to determine the level of antibiotic resistance in the *E. coli* obtained from the cloacal swabs of these birds. This study was done in a farm in Sepang, which produces Red Jungle fowl high crosses. Fifteen cloacal swabs were taken from individual birds of a one-year old female flock. The most prevalent normal flora bacteria in the cloaca of these birds were *Escherichia coli* and *Staphylococcus aureus* spp., both were present in 73% of the samples. Other bacteria isolated include *Klebsiella* spp., *Chromobacterium* spp., *Achromobacter* spp., *Staphylococcus pseudintermedius*, *Staphylococcus intermedius*, *Staphylococcus hyicus*, *Corynebacterium urealyticum*, *Corynebacterium phocae*, and *Enterococcus faecalis*, which were present in 7 to 33% of the samples. The *E. coli* isolates from the Red Jungle fowl exhibit complete (100%) multiple resistance to antibiotics used in the farm, which were erythromycin, norfloxacin, and tetracycline; and penicillin G, which was never used in the farm. Although 15% of the isolates were sensitive to cephalixine, 23% were resistant. The occurrence of antibiotics resistance towards drugs that was never used in the Red Jungle fowl suggests that the antibiotic resistance may be acquired through other means other than exposure to the drug.

Keywords: Red Jungle fowl, normal flora, *E. coli*, antibiotics resistance