

Infectious Coryza Longevity Proposal Final Report

Literature searches for *Avibacterium paragallinarum*, the organism responsible for infectious coryza, revealed the survivability in the environment has not been evaluated in recent years. In an effort to better understand the spread of infectious coryza and evaluate the survivability of *A. paragallinarum* in the environment, a series of experiments was conducted using various surfaces and mediums. Several isolates from the infectious coryza outbreak in Pennsylvania from 2019 were used to determine the longevity of the organism on different surfaces. These isolates were identical according to whole genome sequencing analysis.

A. paragallinarum survivability was observed on stainless steel after inoculation in chicken serum, yolk, albumen and saline, on paper in saline, on gauze squares in phosphate-buffered saline, in tap water, in bottled spring water, and in chicken feed. Samples were taken every 30 minutes for all experiments except for the saline solution on paper, which was sampled every 20 minutes. Three water trials were conducted at room temperature (25C) and at refrigerated temperature (8C).

A. paragallinarum was not recovered on stainless steel after 60 minutes in albumen, 30 minutes in yolk, and 120 minutes in saline. In saline on paper, it was not recovered after 120 minutes. From gauze squares soaked in PBS, it was not recovered after 4 hours. In tap water and bottled water, it was recovered for the entire length of the initial experiment which lasted 7 hours. Water recovery trials were conducted in tap water and bottled spring water, however the tap water failed to recover the *A. paragallinarum* after 24 hours. Subsequent water trials used bottled spring water only. Room temperature water yielded a recovery duration of 3-7 days. Refrigerated water recovery duration was 10 days. *Avibacterium paragallinarum* was only recovered from inoculated feed from the initial sample taken at 0 minutes.