Infectious bronchitis: Effect of viral doses and routes on specific lacrimal and serum antibody responses in chickens

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An enzyme-linked immunosorbent assay was used to measure the effect of various infectious bronchitis virus (IBV) (strain H-120) vaccine doses and routes of immunization on specific lacrimal and serum antibody responses. The results of the first trial showed that the maximum dose, 106 median embryo infective doses (EID50s), delivered by the ocular route elicited both a systemic and a local antibody response in the vaccinated chickens. Lower doses of vaccinal virus, 104 (median dose) and 102 (minimum dose) EID50 delivered by the same route did not induce a detectable systemic antibody response. A significant increase of IBV-specific lacrimal IgA was elicited by both the maximum and the median vaccine doses. The low vaccine dose (102 EID50) did not induce a detectable increase of lacrimal IgA. In a second trial approximately the same vaccine dose was administered to different chicken groups by ocular instillation, drinking water, spray, and cloaca. The results showed that all routes of va