Benefits of the Herpesvirus of Turkey vector vaccine of Infectious Bursal Disease in control of immuno-depression in broilers and decrease of use of antibiotic medication

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A large-scale follow-up study was performed using compiled monitoring data from the Latin America chicken industry during the same period from two consecutive years. Parameters studied included the mortality rate, daily weight gain (g), feed conversion index, final weight (kg), condemnation rate, age at slaughter (days), efficiency index and medication costs (US cents/kg).

Material & methods

The vaccination program was switched from classical vaccination in the field combining different IBD vaccines to the herpesvirus of turkey-infectious bursal disease HVT-IBD vector vaccine, VAXXITEK HVT+IBD. High IBD challenge farms were identified as farms within areas where clinical signs of very virulent (vv) IBD virus infections were reported the first year and confirmed by Reverse Transcriptase-Polymerase Chain Reaction (RT-PCR) characterization of vvIBD virus strains, and severe bursal inflammation or atrophy at necropsy examination (typical lesions of IBD). Production performance parameters were established using the European Performance Index (EPI), in high IBD field challenge farms with a total of 35,655,852 chickens from 2,377 flocks in the former year and 38,306,065 chickens from 2,553 flocks the year after. Percentages of reported clinical IBD cases and cases of vvIBD were compared between years.

Results / Discussion

Mortality rate was found to decrease from 6.76% to 6.23%; daily weight gain increased from 55 g to 57 g; the feed conversion index decreased from 1.88 to 1.83; the final weight increased from 2.340 kg to 2.374 kg; the condemnation rate decreased from 0.58% to 0.39%; age at slaughter decreased from 43 days to 42 days; the EPI increased from 268 to 287 and medication costs decreased by 33% (Figure 1). Between years the percentage of reported clinical cases of IBD dropped from 4.33% to 0.19%. Control of immuno-depression induced by IBD was demonstrated by monitoring the decrease of antibiotic medication costs when using the HVT-IBD vector vaccine, as compared to classical IBD vaccines (Figures 2). Similar results have been subsequently reported in Egypt and China in the context of strong challenges of IBD virus infections associated with other diseases, such as avian
influenza in both areas, and in Egypt at the time of the study, variant strains of infectious bronchitis.

**Key words**

HVT-IBD vaccine, immune-depression, antibiotic use.

**Figure 1:** Antibiotic cost in $US per kilogram of chicken meat – Latin America.

![Antibiotic cost graph](image)

**Figures 2:** Immune foundation – Protection of bursas of Fabricius by day-old application of the HVT-IBD vector vaccine as compared to live IBD modified vaccine, and as demonstrated by difference in weights of the organs.

![Immune foundation images](image)