

Should Australian broilers be vaccinated against immunosuppressive infectious bursal disease viruses?

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Although the pathogenicity of Australian field strains of IBD viruses is believed to be low, some variation in antigenicity has been demonstrated (Sapats and Ignjatovic 2000) associated with clinical disease due to IBD. Therefore, it was thought useful to broaden the IBD control measures available to the industry by evaluating the safety and efficacy of a classical serotype 1 vaccine strain of IBD, strain V877, in Australian broilers against natural field challenge. An experimental live vaccine, Vaxsafe IBD (Strain V877) was evaluated in field trials in accordance with a permit from the APVMA. The vaccine was administered to over 1.36 million broiler chickens on a day when the IBD maternal antibody IDEXX ELISA titre was about 250. The vaccine was administered at three dose levels. Statistical analysis of the mortality, body weight and performance data compared to unvaccinated flocks showed that the lowest dose administered resulted in a significant reduction in total mortality and a significant increase in 21 day broiler weights. No significant differences in FCR or PIF were found although a nine-point improvement in PIF was obtained.

These findings are in accordance with data from field trials conducted in Northern Ireland (McIlroy et al 1992) where it was found that vaccination with a live attenuated IBD vaccine against subclinical IBD can have a significant impact on broiler performance over flocks relying on IBD maternal antibody transfer. Some preliminary data obtained by Groves and Underwood (1995 – unpublished) in broiler flocks in Tamworth also showed performance gains following IBD vaccination. Overall, these findings support the hypothesis that Australian broilers could benefit from IBD vaccination in the face of natural field challenge from immunosuppressive IBD viruses.

References

McIlroy, S G, E A Goodall, D W Bruce, R M McCracken and M S McNulty (1992) The cost benefit of vaccinating broiler flocks against sub-clinical infectious bursal disease. *Avian Pathology* **21**:65-756.

Sapats, S I and J Ignjatovic (2000) Antigenic and sequence heterogeneity of infectious bursal disease virus strains isolated in Australia. *Archives of Virology* **145**:773-785.