



Innovax[®]-ND-IBD: Demonstrated 60 weeks of protection against virulent Newcastle Disease challenge in combination with Rismavac[®]

INTRODUCTION

Innovax[®]-ND-IBD is an HVT construct vaccine that stimulates immunity against Marek's disease, Newcastle disease (ND) and infectious bursal disease (IBD). Early studies have demonstrated the efficacy and onset of immunity of this vaccine against virulent and variant strains of both ND and IBD.

Lifelong-immunity, however, depends upon the genetic stability of the HVT construct in the bird. HVT is a herpesvirus that is not completely eliminated from the bird after vaccination.

The virus remains in the bird, continuously stimulating immunity against ND and IBD as long as the original HVT construct is genetically stable.

While the susceptibility to IBD declines with sexual maturity, the flock will remain susceptible to ND throughout production.

It was important to explore the extended protection against ND in birds vaccinated with Innovax[®]-ND-IBD and to demonstrate this



KEY POINTS



Extended protection following vaccination with an HVT construct vaccine depends upon genetic stability of the construct in the bird. A long extended protection is critical to long-lived birds such as commercial layers or broiler breeders.



Many long-lived birds are also vaccinated with a Marek's disease Serotype 1 vaccine (CVI-988 Rispens strain) to ensure protection against very virulent Marek's disease challenge.



Innovax[®]-ND-IBD demonstrated 60 weeks' extended protection against virulent ND (Texas GB) challenge when administered by subcutaneous injection in combination with Rismavac[®].

extended protection in combination with Rispens (Marek's serotype 1), which is often essential for very virulent Marek's disease protection in long-lived flocks.

STUDY DESIGN

SPF leghorn chickens were vaccinated subcutaneously at one day of age with a combination of Innovax®-ND-IBD (approximately 2000 PFU) and Rismovac® (Serotype 1 Marek's disease, SVI-988 Rispens strain at approximately 1000 PFU). A placebo group served as unvaccinated controls.

At nine weeks, 50 weeks and 60 weeks of age, 32 to 35 chickens in each vaccinated group, and 12 to 15 chickens in the placebo group, were inoculated with 0.2 mL of the NDV Texas GB challenge virus (10^4 EID₅₀) by intramuscular (IM) injection in the breast muscle.

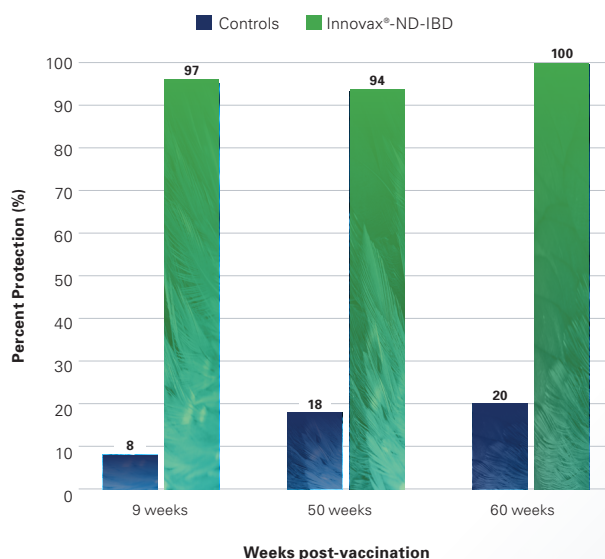
The challenged chickens were observed daily through 14 days post-challenge for clinical signs of Newcastle disease including incoordination, paralysis, and/or death. In this study protocol, the Newcastle disease Texas GB challenge is considered valid if at least 70% of the placebo

inoculated, challenged chickens develop clinical signs of Newcastle disease, while vaccine efficacy is considered satisfactory if at least 75% of the chickens in the vaccinated groups remain free of clinical signs of Newcastle disease.

RESULTS

Results are summarized in Figure 1.

Figure 1. Percent protection against virulent Newcastle disease challenge (Texas GB strain)



CONCLUSION

Innovax®-ND-IBD demonstrated protection against virulent ND challenge through 60 weeks post-vaccination when used in combination with Rismovac®.