

BRON-NEWCAVAC™-SE:

Performance Level Equal to Non-salmonella Vaccinated Flock

INTRODUCTION

Salmonella vaccination with inactivated vaccine has often been associated with egg production loss¹. Producers have complained that inactivated salmonella vaccination can cost “two to ten eggs per hen housed”¹. The losses can be attributed to harsh adjuvants that produce strong tissue reactions. Tissue reactions can result in transient reduction of feed intake and, ultimately, poor flock uniformity².

Bron-Newcavac-SE uses a mild-reacting water-in-oil adjuvant that reduces tissue reaction, enabling flocks to perform on a par with flocks that did not receive a Salmonella vaccine at all.

STUDY DESIGN

Sister Bovan pullet flocks from the same parent flock were divided into the top and bottom floor of a 2-story pullet facility. From placement until 13 weeks age, the vaccination program was identical for birds on the top and bottom floor. At 13 weeks of age, the top floor was vaccinated with Bron-Newcavac-SE while the bottom floor was vaccinated with a competitor inactivated Newcastle-Infectious Bronchitis (ND-IB) vaccine that did not include a Salmonella fraction. The pullets were housed at 125 days in a laying facility. Production data was collected from 18 weeks through 38 weeks of age (Table 1). Serology was collected at 20 weeks of age for comparison of Newcastle and Infectious Bronchitis titers.

Table 1: Production Performance
Bron-Newcavac-SE vs. Competitor ND-IB without Salmonella (140 day summary: 18 to 38 weeks of age).

Vaccine	Eggs/Hen Housed	Livability (%)	Rate of lay Per Hen Housed (%)	Average Egg Weight (grams)
Bron-Newcavac SE	127.36	99.03	90.97	56.07
Competitor ND-IB	125.10	99.01	89.03	55.83

SUMMARY

- Performance of the Bron-Newcavac-SE was equal to the performance of the competitor ND-IB inactivated vaccine without a Salmonella fraction. Bron-Newcavac-SE did not harm performance of the flock.
- There was no significant difference between the two-way (IB/ND) and three-way (IB/ND/SE) vaccination groups with respect to their IBV titers (Mann-Whitney, P = 0.622) or ND titers (Mann-Whitney, P = 0.922).
- Producers can safely add protection against Salmonella enteritidis to their flocks with Bron-Newcavac-SE without production loss due to excessive tissue reaction to vaccination.



REFERENCES

¹ Myers, E. Inactivated SE vaccination: missing eggs or missing opportunity? Paper presented at: Ontario Salmonella Meeting, 2013 November 25; Guelph, ON, Canada.

² R. Droual, A.A. Bickford, B.R. Charlton and D.R. Kuney. 1990. Investigation of Problems Associated with Intramuscular Breast Injection of Oil-Adjuvanted Killed Vaccines in Chickens. Avian Diseases, Vol. 34, No. 2 (Apr. - Jun., 1990), pp. 473-478

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