

The Versa-Dose Adjuvant system provides new flexibility for veterinarians to build out vaccine protocols meeting the various handling challenges in different types of beef production systems.

Adjuvants

Adjuvants are part of an effective immunization strategy

Supply & Quality

Cambridge adjuvants are produced internally and not dependent on 3rd party suppliers – no supply issues

Experience

More than 50 years of combined adjuvant experience and over 100 million doses delivered through veterinarians to producers.

The goal of any vaccination program is an effective immune response in a client's herd. Immunization is impacted by antigen selection, complimentary adjuvant selection, animal's health and nutritional status.

Adjuvant selection plays a major role in the animal's ability to recognize vaccine antigens and start an immunological response.



- ✓ With over 400+ combined years of precision autogenous vaccine manufacturing experience, the scientists at Cambridge Technologies have developed precision adjuvants to optimize the immune response. This experience in combination with their world class diagnostic approach provides you an exceptional strategy to limit the economic impact of viral and bacterial agents in your client's herds.
- ✓ Adjuvants created by the scientists at Cambridge Technologies consistently exceed expectations with over 100 million autogenous vaccine doses administered nationwide in a broad range of production settings. This lends confidence to our approach of using science to develop reliable solutions.
- ✓ Early in the vaccine manufacturing process, one of our Technical Service Veterinarians will work with you to match the best adjuvant to your specific situation. Once all of your needs have been identified, we will build a precise autogenous vaccine with the appropriate adjuvant for a reasonable price.

VERSA-D^{SE}™

Versatile Adjuvant Technology

SCIENCE IN EVERY BOTTLE



**1 Dose
4cc**

- Flexibility to administer as a 1X/4cc product or as a 2X/2cc product
- Immunological response in both formats



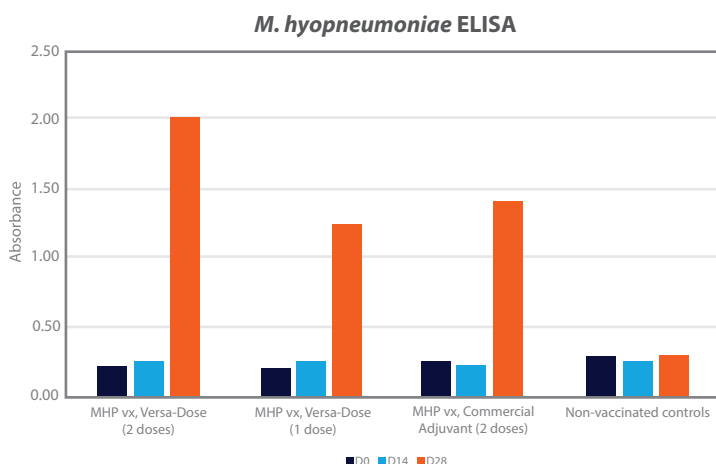
**2 Dose
2cc**

Innovation Backed by Results

Study Outline

- Evaluate level of serological response in cattle
- Swine pathogen (*M. hyopneumoniae*) chosen to avoid maternal antibody interference
- Eight animals per group
- Two-dose group vaccinated on day 0 and day 14; one-dose group vaccinated on day 0
- Cattle were bled on days 0, 14, and 28
- Serum tested with *M. hyop* ELISA (bovine IgG substituted)

Results



IgG bovine antibody substituted in the Idexx swine kit, no pos/neg cutoff established, results may vary based on antigen.

Conclusions

- Versa-Dose has a follow-through result with increasing titer response at D28 post-vaccination
- It would be recommended to use a two-dose vaccine with the adjuvant being Versa-Dose
- If two doses can not be administered by either SoliDose dual-dose implants or traditional liquid, Versa-Dose offers a viable alternative

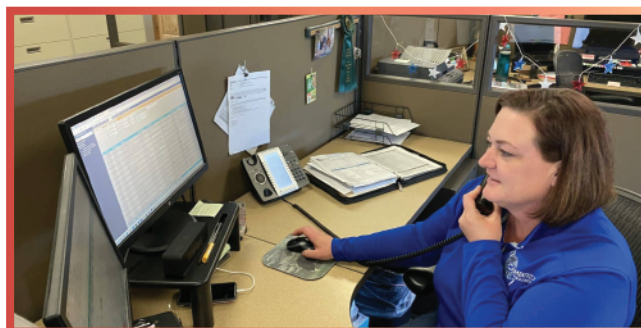
Innovation You Can Depend On

Based on the years of vaccine development and millions of Cambridge Technologies doses applied in the livestock market, Cambridge scientists have mastered the balance of antigen expression and adjuvant combination to maximize your ability to protect your client's animals.

Cambridge Technologies is your go to solution provider, continuing to push scientific advancement in autogenous vaccine design, development, and delivery.

Talk to One of Our Technical Service Veterinarians Today!

For support on how we can aid you in vaccinating your clients' herds with the most advanced science and experience in the livestock production market, **CALL US** to schedule a time to talk to our veterinarians on staff.



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