



**PINKEYE**  
*(Moraxella bovis / Moraxella bovoculi)*  
**NEW SOLUTIONS TO ONGOING PROBLEMS**

Infectious bovine keratoconjunctivitis continues to be a serious economic threat to cattlemen. As the most common condition affecting beef heifers, and the second most common ailment of nursing calves greater than three weeks old<sup>3</sup>, Pinkeye associated with *Moraxella bovis* and *Moraxella bovoculi* is estimated to cost producers over \$150 million annually due to decreased performance, market discounts, and treatment costs. Yearlings showing evidence of Pinkeye at weaning have demonstrated reduced twelfth rib fat depth, smaller ribeye, and lower body weight than unaffected calves<sup>2</sup>.

While *M. bovis* is considered to be the primary infectious agent, *Moraxella bovoculi*, *Mycoplasma* spp., and viruses such as IBR have also been indicated as initiating similar clinical signs and/or adding to the severity of the disease<sup>1</sup>. This variety leads to autogenous vaccines being the logical choice for veterinarians and producers looking for a proactive approach.

**VACCINES OBTAIN THE BEST RESULTS WHEN THEY ARE SPECIFIC TO THE CAUSATIVE AGENT IN THE HERD AND ADMINISTERED PRIOR TO INFECTIONS<sup>1</sup>.**

### **THE CAMBRIDGE SOLUTION**

Autogenous vaccines from Cambridge Technologies employ the latest in diagnostic and production technology to create a product targeting the disease-causing agents in the affected herd(s). Our industry-leading molecular diagnostics, including metagenomics and next-generation sequencing, identify the specific threats and antigens that need to be included in the product. Our scientists have developed a multiplex PCR for Pinkeye to detect *Moraxella bovis*, *Moraxella bovoculi*, *Mycoplasma bovoculi* and *Mycoplasma bovis* to provide critical information to the veterinarian about the disease effecting the herd. Then, the experienced production team can formulate and manufacture a vaccine customized to the needs of each individual customer, including antigen concentration, multiple adjuvant choices, dose sizes, and the option of SoliDose<sup>®</sup> implants.



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### WHY AUTOGENOUS?

**SPECIFIC:** Autogenous vaccines from Cambridge Technologies are the most targeted, science-driven solution available. The vaccines will be built around the disease strains that are identified as potential threats to the herd in question.

**SPEED AND FLEXIBILITY:** The nature of autogenous products means a speedy turnaround, so that emerging threats can be dealt with in a timely fashion. Should a new strain or agent emerge, future manufacturing runs of the autogenous product can be altered to include the new threat.

**ANTIBIOTIC STEWARDSHIP:** In the past, the majority of BRD cases were treated with antibiotics<sup>4</sup>. However, the recent implementation of FDA guidance 209 and 213 along with the expansion of the Veterinary Feed Directive has created a need for an alternative to managing animal health. Autogenous vaccines offer veterinarians and their clients a flexible management tool to counter emerging and evolving diseases.

**SERVICE AND SOLUTIONS:** The customer and technical service at Cambridge Technologies extends beyond the vaccine bottle. Our experienced team partners with veterinarians and cattlemen through every step of the process, from initial diagnostics through product testing and shipment, and continued monitoring moving forward.

#### SOURCES:

1. Boileau, M, Giedt, E, Lalman, D, Whitworth, B. Pinkeye. <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-2689/VTMD-9128web.pdf>. June, 2015. Accessed July 23, 2017.
2. Funk, L, Reecy, J, Wang, C, Tait Jr, R, O'Connor, A. Associations between infections bovine keratoconjunctivitis at weaning and ultrasonographically measured body composition traits in yearling cattle. J AVMA, 1 Jan 2014. V 244 N 1, 100-106.
3. Kasimanickam, R, Parish, S. Infectious Keratoconjunctivitis (Pink Eye in Cattle). [http://vetextension.wsu.edu/wp-content/uploads/sites/8/2015/03/PinkEye\\_Feb2011.pdf](http://vetextension.wsu.edu/wp-content/uploads/sites/8/2015/03/PinkEye_Feb2011.pdf). February, 2011. Accessed July 23, 2017.



#### FOR ORDER PLACEMENT AND ORDER STATUS:

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