Riona Sayers, J Vaccines Vaccin 2014, 5:5
http://dx.doi.org/10.4172/2157-7560.S1.020

OMICS Group Conferences
Accelerating Scientific Discovery

4th International Conference on
Vaccines & Vaccination
September 24-26, 2014 Valencia Convention Centre, Spain

Impact of three inactivated bovine viral diarrhoea (BVD) vaccines on bulk milk p80 (NS3) ELISA readings in commercial Irish dairy herds

Riona Sayers
Animal & Grassland Research and Innovation Center, Ireland

Vaccination is an integral component of Bovine Viral Diarrhoea virus (BVDv) control and eradication programmes. Surveillance programmes for detection of exposure to BVDv often incorporate bulk milk (BM) testing for the presence of anti-P80 (NS3) antibodies. Vaccination, however, can interfere with interpretation of results. The aim of this research was to complete a field-based study investigating interference from administration of three commercially available BVDv vaccines on p80 ELISA readings in a nationally representative group of commercial dairy farmers in the Republic of Ireland. A total of 305 commercial dairy herds, of which 256 were suitable for statistical analysis, were investigated using bulk milk ELISA (p80 and total antibody) analysis and spot testing of youngstock. Bulk milk samples were collected on four occasions over 2009 to allow investigation of seasonal trends. Herds were classified on the basis of bulk milk seropositivity, BVDv vaccination status, and whether evidence of recent BVDv circulation existed i.e., a positive spot test. Comparisons across varying herd classifications and vaccine types were completed using Wilcoxon rank-sum test and ROC analysis. Of the three vaccines investigated, only a single vaccine did not materially interfere with BVDv bulk milk antibody readings. Administration of this particular vaccine therefore has to potential to allow more accurate interpretation of bulk milk results in seropositive herds, relative to the other vaccines studied. Biologically significantseasonal differences in vaccinated herds were not detected. The results of this study are likely to prove useful in countries allowing vaccination during or post-BVDv eradication where bulk milk antibody surveillance strategies are required.

Biography

Riona Sayers holds a degree in Veterinary Medicine (MVB) and a Master's degree (in prion biology) from University College Dublin, and a BSc (Hons) in Biochemistry from University College Cork. She has just completed a PhD from the University of Limerick titled "Biosecurity, Bovine Viral Diarrhoea Virus (BVDv), and Bovine Herpesvirus-1 (BoHV-1): Epidemiological investigations in Irish Dairy Herds". She is a member of Animal Health Ireland's BVD, IBR, and Johne's disease expert technical working groups and has a growing publication record. She previously worked for commercial companies for 13 years in the area of veterinary diagnostics.

riona.sayers@teagasc.ie