In this CVERA e-zine, we provide a brief overview of some of the recent work conducted by CVERA staff in collaboration with a wide range of national and international institutions. More in-depth information can be found at http://www.ucd.ie/cvera/, noting the role of CVERA to provide high quality independent scientific research and advice to support national evidence-based policy-making in animal health & welfare and public health and related matters.

CVERA Strategic Plan 2024-27

The CVERA Strategic Plan for 2024-27 was recently completed, with a focus on strategic leadership and impact, scientific excellence, communications and engagement, and organisational effectiveness. Our ongoing ambition is as a trusted, independent scientific voice, informing the national discussion on animal health, animal welfare, and One Health issues. Our focus is strategic in nature, and we seek to positively influence policy. Scientific excellence is central to our work, and this strategic plan outlines the steps that we will take over the next 4 years to ensure the quality, scope, independence, and timely delivery of our scientific research. The *UCD CVERA Strategic Plan 2024-27*, which was launched by Minister McConalogue (Minister for Agriculture, Food and the Marine) during December 2023, is available at https://www.ucd.ie/cvera/reports/

The impact of changing the cut-off threshold of the interferon-gamma (IFN-γ) assay for diagnosing bovine tuberculosis in Ireland

In Ireland, the interferon-gamma (IFN-γ) assay is routinely used as an ancillary test interpreted in parallel with the single intradermal comparative tuberculin test (SICTT) to maximize the detection of bovine tuberculosis (bTB) infected animals. Up until 2018, a positive test result was recorded in the IFN-γ ELISA assay following whole blood stimulation with purified protein derivative (PPD)-bovine (B), PPD-avian (A) and nil sample (N), using the interpretation criteria, B-N > 50 optical density units (OD), B > 100 and B-A > 0. Following a review of available data, the threshold of the B-A component changed to B-A > 80. The aims of this study were to follow animals that initially tested negative using the new IFN-γ assay interpretation criteria and investigate their future risk of disclosure with bTB, with a focus on animals that otherwise would have been removed when using the older interpretation criteria ($0 < \text{B-A} \leq 80$). Survival analysis showed that animals that would have been removed

under the old interpretation criteria were at increased risk of a positive diagnosis with bTB during follow-up compared to other test negative animals. This paper, which was led by Jamie Madden in collaboration with staff from the Department of Agriculture, Food and the Marine, the University of Limerick and the UCD School of Veterinary Medicine, is published in *Preventive Veterinary Medicine* 224, 106129.

Inferring bovine tuberculosis transmission between cattle and badgers via the environment and risk mapping

The objective of this study is to better understand bTB transmission between cattle and badgers via the environment in a spatially explicit context and to identify high-risk areas. We developed an environmental transmission model that incorporates both within-herd/territory transmission and between-species transmission, with the latter facilitated by badger territories overlapping with herd areas. Our estimation showed that the environment can play an important role in the transmission of bTB, with a half-life of *M. bovis* in the environment of around 177 days. Based on the estimated transmission rate parameters, we calculate the basic reproduction ratio (R) within a herd, which reveals how relative badger density dictates transmission. In addition, we simulated transmission in each small local area to generate a first between-herd R map that identifies high-risk areas. This paper, which was led by You Chang from the Wageningen University and Research Centre in collaboration with Colleagues from the UCD School of Veterinary Medicine, the Department of Agriculture, Food and the Marine, the UCD School of Veterinary Medicine and UCD CVERA, is published in *Frontiers in Veterinary Science* 10, 1233173.

Ear to the Ground / Today with Claire Byrne appearances

Prof Simon More appeared on the two RTÉ programmes in late 2023 to discuss aspects of bovine tuberculosis control in Ireland. He appeared on the 2/11/2023 edition of "Ear to the Ground", which is a farming and rural affairs programme on RTÉ television. He also appeared on the 6/12/2023 edition of "Today with Claire Byrne", which is a current affairs radio programme on RTÉ radio.

Can a regional approach be applied to achieve eradication of bovine tuberculosis in Ireland?

The TB Forum Scientific Working Group (SWG) received a request from the Department of Agriculture, Food and the Marine (DAFM) to examine the potential effectiveness of using a regional approach to facilitate the eradication of bTB in Ireland. In disease eradication programmes, regionalisation is used to create 'risk boundaries', thereby allowing disease control and surveillance to be differentiated based on risk, to prioritise resource allocation, and to protect lower risk areas. This scientific opinion investigates whether or not a regionalised approach to the eradication of bovine tuberculosis in Ireland would be appropriate. The scientific opinion, led by John Griffin, is published in *Food Risk Assess Europe* 2, 0017E.

New UCD position as Associate Professor in Companion Animal Health & Welfare Surveillance

Candidates are being sought for the new position of Associate Professor in Companion Animal Health & Welfare Surveillance in the UCD School of Veterinary Medicine. The successful candidate will establish a robust system for companion animal health & welfare surveillance in Ireland based on data that are routinely collected by commercial veterinary practices. Utilising

this system and in collaboration with others, the candidate will lead and facilitate a diverse programme of research on the health & welfare of the companion animal population in Ireland. It is expected that research emphasis will be placed on areas of particular importance to national policy-makers, including companion animal demography, health surveillance, animal welfare, and antimicrobial stewardship. Further details about the position (description, salary scale, duration, closing date, application process) can be found at www.ucd.ie/workatucd/jobs/ using the Job Ref: 016944.

Guidance on protocol development for EFSA generic scientific assessments

EFSA Strategy 2027 outlines the need for fit-for-purpose protocols for EFSA generic scientific assessments to aid in delivering trustworthy scientific advice. This EFSA Scientific Committee guidance document helps address this need by providing a harmonised and flexible framework for developing protocols for EFSA generic assessments. The guidance is complemented by a standalone 'template' for EFSA protocols that guides the users step by step through the process of planning an EFSA scientific assessment. This guidance document by the EFSA Scientific Committee (SC) is published in *The EFSA Journal* 21, 8312.

Environmental scenarios for ApisRAM version 3, a honey bee colony model for pesticides risk assessment

The European Food Safety Authority (EFSA) is supporting the development of ApisRAM version 3, which is a honey bee colony computer model that simulates effects on individual bees and the colony from their exposure to multiple stressors. In particular, ApisRAM assesses either single or multiple pesticides in interaction with other stressors and factors. It is intended that ApisRAM will be used in pest risk assessment in the coming years. This technical report considers a range of environmental scenarios that represent the diversity of European environments in terms of risk for honey bees. It was developed by members of the EFSA's working group on MUST-B (multiple stressors on honey bee colony health) is available at *EFSA Supporting Publication* 20, 8535.

This e-zine, and recent news items, can be found at: http://www.ucd.ie/cvera/news/

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