



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.

African swine fever in the EU

EFSA has published its latest annual update on the presence of African swine fever (ASF) in the European Union. In 2019, there was progressive expansion of the area of the EU affected by ASF, and all phases of the epidemic are now represented in the EU. The situation varies substantially between Member States, due to multiple influences including the structure of domestic pig production (in particular, the proportion of backyard holdings), geographical conditions, and the characteristics of the wild boar population. Backyard (non-commercial) farms present particular challenges for an ASF eradication programme, such as uncontrolled movements of pigs and people, poor biosecurity and the identification of holdings. Simon More is a member of EFSA's ASF working group. Further information is available at <https://www.efsa.europa.eu/en/news/african-swine-fever-disease-spreading-slowly-eu>.

European perspectives on efforts to reduce antimicrobial usage in food animal production

A review was recently published of efforts within the EU to reduce antimicrobial usage in food animal production. This is particularly pertinent noting that new regulations on veterinary medicines and medicated feed, in force from 28 January 2022, will substantially influence antimicrobial prescribing and usage throughout Europe into the future. The review outlines the considerable progress that is being made in a number of member states, and is published in the Irish Veterinary Journal (2020) 73, 2. The open access paper is available at <https://doi.org/10.1186/s13620-019-0154-4>

Reviewing age-structured epidemiological models of cattle diseases tailored to support management decisions: Guidance for the future

Mechanistic simulation models are being increasingly used as tools to assist with animal health decision-making in the cattle sector. In this paper, which was co-authored by colleagues from the Helmholtz Centre for Environmental Research GmbH - UFZ in Leipzig, Germany, Animal Health Ireland and CVERA, Jonas Brock et al. provide an overview of studies reporting the use of age-structured cattle management models for infectious diseases, including their theoretical foundations, design paradigms and incorporated processes. They propose a structure incorporating three main features: [1]

biological processes, [2] farming-related processes and [3] pathogen-related processes, and recommend that this structure be followed in future cattle disease models to facilitate science communication and to allow increased model transparency. The paper is published in Preventive Veterinary Medicine 174, 104814 and is available at <https://doi.org/10.1016/j.prevetmed.2019.104814>

NexusMAP - developing an expert system model to support national decision-making

An existing spatio-temporal transmission model for Johnne's disease is available, accounting for population and infection dynamics, and simulating transmission of infection within and between dairy farms in Brittany. The model was developed by colleagues at BIOEPAR, Nantes, France. In a collaboration between BIOEPAR, CVERA and Animal Health Ireland, Floor Biemans from INRAE is currently adapting the French model to Irish conditions, including the incorporation of Irish cattle movement data. Several intervention strategies are being investigated with the aim to support decision-making for the national voluntary Johnne's control programme.

The Seventh International Conference on *Mycobacterium bovis* (*M. bovis* 2020)

The Scientific Committee received in excess of 270 abstracts for either oral or poster presentations from authors based in more than 35 countries. This reflects the extent to which *M. bovis* is a global health issue which was highlighted by the WHO, the OIE, the FAO and The Union in their 2017 publication "*Roadmap for Zoonotic Tuberculosis*". The Conference will take place in Galway from 8-11 June. Early registration for *M. bovis* 2020 closes on 1st March. For more information, please visit <https://www.mbovis2020.com/>.

The Roadmap is available at https://www.who.int/tb/publications/2017/zoonotic_TB/en/

Recently published papers which CVERA staff contributed to

Munita, M.P., Rea, R., Martinez-Ibeas, A.M., Byrne, N., McGrath, G., Munita-Corbalan, L.E., Sekiya, M., Mulcahy, G., Sayers, R.G., 2019. Liver fluke in Irish sheep: prevalence and associations with management practices and co-infection with rumen fluke. *Parasites & Vectors* 12, 525. <https://doi.org/10.1186/s13071-019-3779-y>

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

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