



Centre for Veterinary Epidemiology  
and Risk Analysis (CVERA)

In this CVERA e-zine, we provide a brief overview of some of the recent and ongoing 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.

### Dr Tracy Clegg

After almost 17 years in CVERA, Dr Tracy Clegg has moved to a new role as statistician in the Census of Population Unit within the Central Statistics Office. Tracy has authored and co-authored over 60 peer review papers and has made an enormous contribution to the work of CVERA. She will be greatly missed, both professionally and personally, and we wish her well in her new role.

<https://www.cso.ie/en/index.html>

### Further improvement in the control of bTB recurrence in Ireland

Following earlier work by Gallagher et al. (2013), Houtsma et al. (2018) present objective evidence of further improvement in the control of bTB recurrence in Ireland: herds derestricted in 2008 were 0.75 (95 per cent CI: 0.68 to 0.82) times as likely to develop a further restriction compared with 1998 herds, and herds derestricted in 2012 were 0.85 (95 per cent CI 0.76 to 0.95) times as likely as 2008 herds. However, this paper also strikes a note of caution. Despite significant improvements, bTB recurrence remains a concern, with 30.2 per cent (95 per cent CI: 28.0 to 32.4 per cent) of herds derestricted in 2012 being re-restricted over the subsequent three years.

Gallagher et al. (2013)

<http://dx.doi.org/10.1016/j.prevetmed.2013.05.004>

Houtsma et al. (2018)

<http://dx.doi.org/10.1136/vr.104642>

### *Culicoides* dispersion model

Last year, Met Éireann and CVERA created an operational model for forecasting potential incursion of windborne *Culicoides* (midges). There is strong evidence to suggest that the introduction of Schmallenberg virus into Ireland in the summer of 2012, was due to the arrival of infected midges carried on the wind from southwest England. By forecasting midge dispersion, we can assess the risk of future potential incursion events which can then assist in active surveillance, particularly for Bluetongue virus, which is active on mainland Europe but has yet to reach Ireland. The model is built on the HYSPLIT atmospheric dispersion model driven by the European Centre for Medium-Range Weather Forecasts (ECMWF). The model is run daily with the 3-day forecast results emailed to a list of relevant associates. In September 2018, the model was enhanced to improve emission estimates and to simplify the output. By summer 2019, the model will be further enhanced to include biological parameters, thereby making prediction estimates more realistic.

### Mitigating the risk posed by Trojan dams in the Irish BVD eradication programme

Risks posed by Trojan dams are of ongoing concern in the national BVD eradication programme. As part of her Masters studies and building on an earlier publication, Fiona Reardon and colleagues

found that 10.6% of BVD+ birth events to non-BVD+ dams in Ireland during 2015 could be attributable to Trojan dams. In a second paper, Reardon et al. (2018) investigated a range of risk mitigation strategies, to limit the risks posed by Trojan dams whilst also minimising the impact of trade in non-infected herds. Results from her work have shown that measures to control the movement of Trojan dams should be targeted in a way that fits the Irish context and reduces the spread of BVD virus, without unduly impacting other trade. This study was conducted collaboratively between CVERA and Animal Health Ireland. Fiona successfully defended her Masters thesis earlier this year.

Reardon et al. (2018) paper 1

<https://doi.org/10.1016/j.prevetmed.2018.02.002>

Reardon et al. (2018) paper 2

<https://doi.org/10.1016/j.prevetmed.2018.06.001>

### **Challenges and solutions to supporting farm animal welfare in Ireland: responding to the human element**

The Minister of Agriculture, Food and the Marine recently launch a report by Catherine Devitt and UCD, DAFM and CVERA colleagues on the *Challenges and solutions to supporting farm animal welfare in Ireland: responding to the human element*. The report seeks to increase national and international awareness of the centrality of the relationship between human welfare and farm animal welfare, and of the challenges experienced by veterinary professionals who encounter complex farm animal welfare situations. It also introduces the concept of One Welfare, and provides practical guidance to assist stakeholders, policy makers and legislators in the formation and delivery of farm animal welfare support interventions that are farmer and animal-centred—including approaches aimed at building on-farm capacity and compliance with animal welfare legislation. The report can be downloaded at:

[http://www.ucd.ie/t4cms/ChallengesSolutionsSupportingFarmAnimalWelfareIreland\\_201806.pdf](http://www.ucd.ie/t4cms/ChallengesSolutionsSupportingFarmAnimalWelfareIreland_201806.pdf)

### **A visual representation of cattle movement in Ireland during 2016**

In our previous e-zine, we included a link to a video which visualised cattle movements in Ireland during 2016. The peer review paper behind the video has now been published in the Irish Veterinary Journal and is available here. The animation was created to be a communication tool to enable stakeholders to appreciate the extent of high risk cattle movements (farm to farm, farm to market to farm) in the Republic of Ireland and to highlight the potential role that these movements may play in the spread of infectious diseases of cattle in Ireland from one farm to another.

Video <https://youtu.be/PTCdPMnenBw>

Paper <https://doi.org/10.1186/s13620-018-0129-x>

### ***M. bovis* 2020**

Preparations for the Seventh International Conference on *Mycobacterium bovis* continue. The previous conferences in the series took place in Dublin 1991, Dunedin 1995, Cambridge 2000, Dublin 2005, Wellington 2009 and Cardiff 2014. Plenary papers from several of the conferences were collected in special issues of *Veterinary Microbiology* and *Tuberculosis* including: 1991, 2000, 2005 & 2009. For more information please visit <http://www.mbovis2020.com/> or follow us on Twitter [@mbovis2020](https://twitter.com/mbovis2020)

1991 <https://www.sciencedirect.com/journal/veterinary-microbiology/vol/40/issue/1>

2000 <https://www.sciencedirect.com/journal/tuberculosis/vol/81/issue/1>

2005 <https://www.sciencedirect.com/journal/veterinary-microbiology/vol/112/issue/2>

2009 <https://www.sciencedirect.com/journal/veterinary-microbiology/vol/151/issue/1>

### **African Swine Fever**

EFSA recently released its latest report on African Swine Fever, including strategies for managing wild boar at different stages of an ASF epidemic (what should be done before, during and after). Passive surveillance – reporting of dead wild boar – remains the most effective way to detect new

ASF cases at an early stage in previously disease-free areas. Simon More contributes to this work, as part of EFSA's ASF working group. The report can be accessed at:

<http://www.efsa.europa.eu/en/press/news/180711>

### **European Food Safety Authority**

After completing a 9-year term on EFSA's Animal Health and Welfare Panel, including 6 years at chair, Simon More was recently elected chair of the EFSA's Scientific Committee. The SC includes scientists with expertise across all areas of EFSA's remit, with responsibilities for risk assessment practice, cross-cutting scientific issues and strategic scientific advice to EFSA's management.

<http://www.ucd.ie/newsandopinion/news/2018/september/19/ucdprofessorelectedtoleadeuropeanfoodsafetyauthorityscientificcommittee/>

<http://www.efsa.europa.eu/en/panels/scientific-committee>

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

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