

24 April 2018

The Lord Teverson  
House of Lords  
London  
SW1A 0PW

Dear Lord Teverson

**Brexit: plant and animal biosecurity**

The Royal Society of Biology welcomes the consultation by the EU Energy and Environment Sub-Committee on plant and animal biosecurity in light of Brexit. I am writing to offer brief comments in response, informed by our members and Member Organisations with expertise in this field. It is not our intention to provide comprehensive comment here but we hope these specific points will be of use and we would be pleased to assist the Committee further if requested.

To protect our environment, agricultural productivity, animal welfare and societal well-being, current biosecurity regulations must be maintained, and where appropriate, improved. The UK's withdrawal from the EU will have complex implications for our nation's biosecurity. Maintaining best practice in biosecurity is of great importance on both a national and global scale, and is too often overlooked. Retaining good standards, policies, practices and monitoring methods that are consistent with those developed through EU processes will be key in facilitating the ongoing exchange of current expertise and information between EU and UK partners, allowing for best practice in efficient, collaborative research and development, which produces shared benefits across a variety of sectors of society and the economy. Crucially, our physical proximity and ecological similarity to the EU and the inevitable frequency of movement of species, vehicles and commodities means that many biosecurity concerns and threats are shared.

Biosecurity breaches at a local or national scale can have profoundly negative effects on the economy and society as a whole; the 2001 Foot and Mouth Disease (FMD) outbreak is a case in point.<sup>1</sup> The positive effects of successful practice in biosecurity are just as far reaching; preventing the transmission of animal diseases through appropriate biosecurity reduces the need for antibiotic use in livestock production systems – a key requirement in tackling the global public health threat of antimicrobial resistance.<sup>2</sup> Biosecurity success can often be overlooked but avoided costs have real economic and societal value.

Following Brexit, it is vital that close cooperation is maintained between the UK and EU Regulatory Agencies, Reference Networks and Laboratories, enabling the most efficient use of resources and shared expertise, in addition to rapid identification and communication of emerging threats. We provide further explanation of the importance of such cooperation in our contribution to the February 2018 '*Brexit: Science and Innovation Summit*' organised by the House of Commons Science and Technology Committee,<sup>3</sup> with the examples of Bluetongue and African Horse Sickness viruses.

Responsive and well-resourced capacity to deliver biosecurity requirements at UK borders will be needed. This will have to accommodate any checks required by new trading agreements, and to respond to developments, innovations, and threats as they emerge or decline. Seed, timber, nursery products and insects for biocontrol or the pollination of soft fruit are examples of products that might (depending upon negotiation outcomes) be subject to altered import/export agreements after Brexit; alongside provision of security, the prospect of delays, tariffs, burdensome procedures or inefficient bureaucracy must be addressed when establishing onward regulations and practically supporting them.

<sup>1</sup> Press release 2002: National Audit Office report to Parliament on the handling of the 2001 foot and mouth outbreak; URL: <https://www.nao.org.uk/report/the-2001-outbreak-of-foot-and-mouth-disease/>

<sup>2</sup> Food and Agriculture Organisation (FAO) publication 2016: Drivers, Dynamics and Epidemiology of Antimicrobial Resistance in Animal Production; URL: <http://www.fao.org/3/a-i6209e.pdf>

<sup>3</sup> Response from the Royal Society of Biology to the Science and Technology Committee of the Commons Brexit: science and innovation Summit inquiry (February 2018); Appendix 3, section 3.2 (page 9); URL: [https://www.rsb.org.uk/images/article/policy/RSB\\_response\\_to\\_HoC\\_STC\\_Brexit\\_science\\_and\\_innovation\\_Summit\\_inquiry\\_for\\_submission.pdf](https://www.rsb.org.uk/images/article/policy/RSB_response_to_HoC_STC_Brexit_science_and_innovation_Summit_inquiry_for_submission.pdf)

Besides trade, the biosecurity threats posed by wild organisms must be considered. For example, wild bird populations can transmit avian influenza (AI) to domestic poultry, often following a seasonal outbreak pattern in line with relevant bird migration routes across continental Europe. AI outbreaks in domestic poultry have direct impacts on health and welfare in agriculture, in addition to potential impacts on human health. Effective monitoring, surveillance and detection of patterns of disease occurrence is required, in combination with associated factors (such as meteorological data), to address biosecurity threats arising from both human activity and natural phenomena. Change is a constant feature of biology and ecology, including the emergence of pathogenic forms of previously benign organisms.

Sharing of intelligence, research and resources across borders is essential to underpin these approaches. However, following Brexit, the recruitment of staff with specialist skills to the UK workforce could become more difficult, for example in the fields of toxicology, taxonomy, ecological and landscape management, pathology, epidemiology, animal welfare, and carcass and food hygiene inspection. In some sectors, non-UK nationals comprise a high proportion of the current workforce. For instance, in the meat hygiene sector, some estimates suggest that 85-95% of Official Veterinarians (OVs) working in approved meat establishments are from other EU countries.<sup>4,5</sup> Routes for people with relevant, valuable expertise to enter and work in the UK should be clear and efficient. Support for training in these areas should be enhanced to develop a more resilient skills base for national and international needs.

In order to support the above requirements, continued funding and support are needed for research on biosecurity, plant and animal health after Brexit. Support for interdisciplinary research, for example, is essential in the development of early warning systems for invasive pests and pathogens. Such systems may use a variety of innovative technologies and approaches. EU scientific programmes have provided an important route for effective funding and cross-disciplinary collaborations. An example of the value of involvement in collaborative projects with the EU is shown by a recent analysis conducted by Fera Science Limited; it showed that access to £51 of total funding was leveraged for every £1 that Defra invested in top-up funding to support a range of EU and European Food Safety Authority (EFSA) plant health projects, between 2008 and 2018.<sup>6</sup> It is clear that UK researchers need ongoing clarity about future participation in EU scientific programmes, and alternative funding should be available to make up any short-fall, if current arrangements are not maintained.

Beyond the EU, effective collaboration at a global scale is imperative to enable the most efficient sharing and implementation of current knowledge and resources to mitigate biosecurity risks. Collaboration can promote the preservation and protection of public, animal and plant health across the UK and all nations. Capacity for upstream UK biosecurity engagement with trading partners could be effective in mitigating threats and ultimately reducing burden. Ongoing consultation with the broadest community of advisors will be key to this process, to ensure that decisions are made on the basis of sound scientific evidence and expertise.

Please contact me should you wish to request any further detail on the points raised in this letter, or on aspects revealed by your inquiry.

Yours sincerely,



Dr Mark Downs CSci FRSB

*The Royal Society of Biology (RSB) is a single unified voice, representing a diverse membership of individuals, learned societies and other organisations<sup>7</sup>. We are committed to ensuring that we provide Government and other policymakers, including funders of biological education and research, with a distinct point of access to authoritative, independent, and evidence-based opinion, representative of the widest range of bioscience disciplines.*

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<sup>4</sup> National Farmers Union (NFU) (2017) Vision for the Future of Farming: Access to a Competent and Flexible Workforce; Page 5; URL: <https://www.nfuonline.com/assets/105266>

<sup>5</sup> British Veterinary Association (BVA) (2017); Brexit & the Veterinary Profession; Page 12; URL: [https://www.bva.co.uk/uploadedFiles/Content/News\\_campaigns\\_and\\_policies/Policies/Future\\_of\\_the\\_profession/brexit-and-veterinary-profession-v.1.0.pdf](https://www.bva.co.uk/uploadedFiles/Content/News_campaigns_and_policies/Policies/Future_of_the_profession/brexit-and-veterinary-profession-v.1.0.pdf)

<sup>6</sup> Fera Science Limited (2018); <https://www.fera.co.uk/>; Unpublished analysis.

<sup>7</sup> A full list of the member organisations of the Royal Society of Biology can be found here: <https://www.rsb.org.uk/membership/organisational-membership>