Paratuberculosis control – Danish challenges in an international perspective

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*Mycobacterium avium* subsp. *paratuberculosis* (MAP) is the primary cause of a chronic infection, paratuberculosis, of cattle and other ruminants. Dairy producing countries focus on this for several reasons: animal health is affected particularly in the end-stage of disease, milk yield and slaughter value are reduced significantly in a proportion of infected animals, humans’ possible exposure to MAP and the uncertainty about a zoonotic role of MAP is a concern, and international trade of livestock and other commodities may be affected.

In March 2016, the European Parliament adopted the “Regulation on transmissible animal diseases”, the so-called new Animal Health Law to streamline the efforts against transmissible diseases in the European Union. The law is a product of the EU Animal Health Strategy “Prevention is better than cure”. Following this law, the European Commission (EC) must review the list of infections that should be “listed for Union intervention”. Five diseases (FMD, CSF, ASF, HPAI & AHS) are already deemed to be “significant” and thus already listed. But the EC must identify other diseases that could cause significant negative effects on animal or public health, have a significant negative economic impact or have other specific negative impacts in the Union. To do so, the EC has asked the European Food Safety Authority (EFSA) for scientific advice related to this listing of 20 of the 39 specific diseases in question. BVD, bTB and paratuberculosis are among the first diseases to be addressed, but while BVD has a clear impact on health and economy, and bTB is a known zoonosis, then paratuberculosis may only under some circumstances have a significant impact on economy, and the zoonotic character of MAP has been disputed for almost a century.

BVD and bTB have both been eradicated from Denmark, and are consequently under surveillance, whereas MAP is endemic in the dairy cattle population. A voluntary control programme on MAP was implemented in Denmark in 2006, and after a significant decline in the within- and between-herd prevalences until 2013, the prevalences appear to increase again, while farmers leave the programme. The primary reasons may be a successful prevalence reduction, where farmers no longer experience an impact of the disease on health and profitability, combined with the financial crisis among dairy farmers, who are urged to cut expenses. The individual producer and the industry as a whole are challenged with the same uncertainty as described above, and these challenges need to be addressed in a re-construct of the paratuberculosis programme.

The presentation introduces potential new features of the Danish paratuberculosis programme, where test-strategies can be tailored to serve both surveillance and control purposes. The strategies are constructed to reduce test-cost while mostly retaining the fitness for the different purposes, thereby hopefully encouraging new stakeholders’ entry to the programmes, and still enabling the original control purpose and other purposes that may appear in an international perspective. Any test-strategy considered must still be fit-for-purpose, while keeping in mind that lack of testing may lead to spread of the causative pathogen.