

## Position paper on foot-and-mouth disease

As illustrated by the recent (small) outbreaks in the UK, an outbreak of foot-and-mouth in any country in the world is a major event with wide ranging consequences for the government, the livestock industry and also for many other industries. Early detection of the disease and effective and immediate intervention by the veterinary authorities and the whole of the agricultural industry is essential if the disease is to be controlled or eradicated. The dairy industry would feel the (financial) impact even if the disease is not affecting dairy livestock, for example, if the disease is only in pigs at the start of the outbreak. Even with an outbreak of foot-and-mouth disease in another country, the dairy industry will be affected because of precautionary measures. All parts of the dairy industry will be affected – from production on farms through to the distribution and processing of milk and the manufacture of milk products e.g. cheese, butter, cream etc.

It is essential that all parts of the dairy industry are aware of what will happen if there is an outbreak and fully understand what the impact of the control measures that are proposed by the government will be on their businesses. Each part of the dairy industry needs to make its own contingency plans. These plans need to be co-ordinated and integrated with each other. It is also essential that the contingency plan adopted by the veterinary authorities is fully understood by all parts of the dairy industry. Each part of the dairy industry needs to support the other parts in times of crisis such as an outbreak of foot-and-mouth disease.

This abstract is based upon a preliminary version of a position paper entitled "Issues for the dairy industry to consider in the management of an outbreak of foot-and-mouth disease". This position paper is prepared within the action team Infectious Diseases by a group of experts, lead by D.C.M. Mouat (UK) in cooperation with: X. Fragkiadaki (GR), A. Holmström (SE), K. Plym Forshell (NO), E. Komorowski (GB), Y. Lu (CH), M. Schällibaum (CH), R. Silber (AU), G. Verkerk (NZ) and E. Vindel (FR).

The position paper focuses on the main problem areas, to keep it as practical and comprehensive as possible. The final paper will soon be available.

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## Antimicrobial resistance monitoring

Therapy of bovine mastitis is the most common use of antibiotics in lactating dairy cows. The association between the use of antimicrobial products to treat diseases and enhanced resistance in pathogens causing those diseases has led the NMC (NMC, Inc., Verona, Wisconsin, USA) to conduct a review of literature (NMC, 2004) and hold a scientific symposium (NMC, 2006) to determine if this was the case for bovine mastitis. Included as authors, presenters, reviewers and editors of these NMC projects were many members of the IDF-SCAH. The members of SCAH-AT Mastitis have reviewed these documents and concluded they present a comprehensive review of antimicrobial resistance in mastitis pathogens and offer these documents as supportive evidence to our conclusions.

The specific goal of the SCAH-AT Mastitis was to determine if scientific data exist to demonstrate an emergence of antimicrobial resistance in mastitis pathogens after four decades of antibacterial drug use in dairy cows. Impeding a definitive verdict is the fact relatively few studies have been published that compared resistance patterns of isolates historically observed with those of isolates obtained at a later

date using consistent technology and procedures. Trials that have compared antimicrobial resistance of bacteria isolated during different chronological periods have demonstrated similar patterns of resistance today as those recorded over the last 30 years. Therefore, the use of antimicrobial drugs in treatment of bovine mastitis the last 40 years has not resulted in an apparent emergence or progression of resistance among bacteria causing the disease. However, owing to the progressive evolution of bacteria and the potential spread of any resistance gene, there is a need to monitor the potential emergence of resistant strains within mastitis pathogens.

Currently SCAH-AT mastitis has the task to monitor and report on new research results in order to identify any potential issue of concern to the dairy sector and to react in a coordinated manner as appropriate, for instance by suggesting the appropriate protocols to control the spread of the bacteria, to ensure that the patterns of use are correct and to verify there no new organisms are detected that may cause concern regarding the dairy sector.

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