

Investing in animal health

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A RECURRENT theme of the joint American Veterinary Medical Association (AVMA)/ World Veterinary Association (WVA) congress in Minneapolis last month was that, through its contribution in areas such as research, disease control, biosecurity and veterinary public health, the veterinary profession had a vital role to play in meeting the disease and other challenges of the 21st century. Few diseases have illustrated the relevance of that message more spectacularly of late than the outbreaks of highly pathogenic H5N1 avian influenza in Asia. Setting aside concerns that the virus might mutate and result in a human pandemic, the impact has already been considerable. The latest bulletin on the website of the Food and Agriculture Organization of the United Nations (FAO) (www.fao.org) reports that nearly 140 million domestic poultry have either died or been destroyed because of avian flu. More than 100 people have contracted the infection, of whom 54 had died as of May. The FAO estimates the economic losses to the Asian poultry sector at US \$10 billion, but the combined economic losses to the countries affected will be higher. One FAO study has estimated that, in Vietnam alone, the disease has had an impact on 36,000 people living on the edge of poverty, and on 88,000 who were already poor.

Reports last week that the virus had been confirmed in the Novosibirsk region of Russia show that the avian influenza saga is still unfolding, and have led to renewed speculation about how the virus might be spread. Controlling the disease requires international effort and, as with other diseases, there is a need for improved surveillance, methods of diagnosis and disease reporting, and to apply control methods appropriate to local circumstances. The veterinary profession can contribute in all of these areas.

A paper on the origin and evolution of highly pathogenic H5N1 avian influenza in Asia appears on pp 159-164 of this issue. Produced by FAO personnel, it notes that outbreaks of the disease were reported almost simultaneously in eight neighbouring countries between December 2003 and January 2004, but that the virus had been detected widely in the region in domestic waterfowl and terrestrial poultry for several years before this, in the absence of widespread disease. It suggests that a key event in the genesis of the epizootic was the expansion of the host range of H5N1 viruses from geese to ducks and that the most likely explanation for the apparently simultaneous 'emergence' of acute disease in several countries in 2003 is that the virus spread from well established reservoirs of infection in domestic waterfowl and live bird markets in large parts of the region, combined with increased excretion of the virus by infected waterfowl, perhaps as a result of a change in the virus. When countries in the region started to report the disease in December 2003, others were alerted to the risk, and disease surveillance and reporting improved.

In tracing the origins of the epizootic, the paper serves to illustrate the need for constant surveillance and prompt reporting. It also highlights the complexity of the disease, where the epidemiology differs from country to country according to the ecology and the different poultry production systems and trading practices that apply.

Some of these points were reiterated at the AVMA/WVA conference by Dr Wantanee Kalpravidh, of FAO Thailand, who noted that control of avian influenza was unlikely to be achieved by a 'one size fits all' approach. She nevertheless advocated a coordinated, collaborative approach and emphasised that a multidisciplinary effort was needed; picking up on the congress theme of 'One profession, one vision', she suggested that 'One vision, multiple professions' might be more appropriate. There is certainly a need for interprofessional collaboration in this and other areas. Later this year, simultaneous themed issues of *The Veterinary Record* and the *British Medical Journal* will explore how the veterinary and medical professions can work together to mutual benefit (see VR, April 16, 2005, vol 156, p 493; *BMJ*, April 16, 2005, vol 130, pp 858-859).

Avian influenza was by no means the only internationally important disease considered at the AVMA/WVA congress. Those attending an FAO seminar, organised in collaboration with the World Organisation for Animal Health (OIE) and the World Health Organization, were also provided with updates on the progress or otherwise in controlling diseases such as rinderpest (now confined to the Somali pastoral region of East Africa), contagious bovine pleuropneumonia and trypanosomiasis. The social and economic consequences for regions affected by such diseases are severe, and the point was well made during the seminar that globally, in geospatial terms, investment in livestock protection is skewed, with most of the investment being over a relatively small area, in regions where people are less dependent on livestock for survival. Ultimately, this is unsustainable. There is a need, internationally, to strengthen veterinary services and infrastructures, and to improve systems of disease surveillance and reporting. The avian influenza epizootic has highlighted the importance of investing in animal health; the same lesson applies to other diseases, too.