Global Challenges in Animal Diseases

Livestock is the economic backbone for many farmers in poor countries. However, nearly 25% of the world's livestock is lost to animal disease. These losses cause hardship for three-quarters of the world's rural poor and one-third of the urban poor, who depend solely on their livestock for survival.

The livestock's loss threatens poor families' food security and their livelihoods. At the same time, since poor smallholders often live in close proximity to their animals, disease threatens these families' health as well.

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Livestock are vulnerable to a number of highly infectious animal and transboundary animal diseases (TADs) such as foot-and-mouth disease (FMD), African swine fever (ASF), contagious bovine pleuropneumonia (CBPP) and peste des petits ruminants (PPR is an acute respiratory ailment affecting goats and sheep). Avian influenza (H5N1), 'Swine Flu' (H1N1) and other "zoonotic" diseases are transmissible between animals and people.

Given the risks that animal diseases, especially transboundary animal diseases, represent, national early disease detection, diagnosis and reporting is essential when coordinating early warning and quarantines in the affected region.

Combating animal diseases requires animal health strategies that can effectively combine local, regional and international action with coordinated research to share comparable diagnosis and surveillance data between countries.

Swift diagnosis is a crucial factor in controlling animal diseases. Yet, in many developing countries, the available veterinary services are not sufficient to adequately track and control animal disease outbreaks.

To eradicate rinderpest, a highly contagious viral disease that caused immense livestock losses and devastating economic damage throughout history, a long-term collaborative partnership between the the African Union, the Food and Agriculture Organization, the IAEA, the World Organisation for Animal Health (OIE), as well as national governments was established. Scientists and researchers developed, evaluated, validated and distributed immunological and nuclear technologies to diagnose and control rinderpest.

The Joint FAO-IAEA Division's veterinary laboratory network enables laboratories in developing countries to undertake animal disease diagnosis with the use of immunological and molecular biological platforms utilizing nuclear and nuclear related technologies. It also provides know-how, guidelines and expert support to help build the diagnostic capacities of veterinary laboratories in its Member States, as well as training, and the coordinated delivery of needed equipment.

In 2011, after several years of coordinated effort, the world was officially declared free from rinderpest.

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