

Session 1: Sustainable Development of Animal Production

Challenge to Control the Animal Diseases; the Implications for the Sustainable Productivity of Livestock.

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A global eradication program of rinderpest that is a highly contagious viral disease in cloven-hoofed animal is ongoing aiming at complete eradication by 2010 under the collaboration of multiple international organizations. The disease has historically swept an Afro-Eurasian Continent and brought the huge numbers of cattle deaths over the centuries. The disease has interfered to not only livestock productions but also crop productions due to loss of draft animals for cultivation and transportation. As a result, rinderpest has caused a catastrophic damage to the entire agriculture in affected areas. This malignant infectious disease is just about to be eradicated soon after a long period of straggle.

Like the case of the rinderpest eradication, it is not doubtful either true that the advance of science and technologies in the animal health has successfully contributed to the animal diseases control and to the development of the livestock industry. However, can the humanity really surmount all severe animal diseases in the future? According to the statistical data, the livestock production in the world has been rapidly increased to meet growing demand for animal products. The livestock production in the world has expanded substantially from the north to south regions and from moderate to subtropical or tropical regions, where the threat of disease outbreaks still remains due to the lack of sufficient veterinary services. Under these circumstances, international trade of animal and animal products has been intensified owing to the recent development of transportation means. Consequently, transboundary animal diseases (TADs) including emerging and re-emerging animal diseases, e.g. bovine spongiform encephalopathy or highly pathogenic avian influenza as zoonoses and foot-and-mouth disease or hog cholera as animal diseases, have posed the great threat to the livestock industry over the world, and intimidated global food security. Moreover, the climatic change in recent years has accelerated expanding the prevalent regions of the vector-borne diseases, e.g. bluetongue or West Nile fever as arbovirus infections. Therefore, the control of these diseases is definitely of importance to keep the sustainable development of the livestock production to secure stable food supply over generations and geographical regions.

For the struggling against TADs, the promotion of interdisciplinary researches in addition to the further development of veterinary technologies are needed, since the emergence of TADs are related to biodiversity in agro-ecosystem which are easily influenced by the environmental factors, e.g. climate change, urbanization, deforestation and wildlife distribution. In addition, the enhancement of international cooperation is indispensable to prevent the disease spread through early warning of TADs outbreaks. The role of international organizations supported by the further sophistication of disease control strategies becomes increasingly important to strengthen international efforts.



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Academic Degrees

1985 Dr., Veterinary Medicine, Hokkaido University, Japan

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Field of Study

Virology, Animal Hygiene