Concluding Remarks

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Ladies and gentlemen, distinguished guests and participants,

At the end of the Symposium on Infectious Diseases of Livestock, I have the honor to convey my thanks to all the participants. We were extremely happy to hold an international symposium at the National Institute of Animal Health. On this occasion, I am deeply grateful to all the participants for their significant and interesting reports and also for the animated discussions which took place during the symposium. Especially, to you Dr. Snowdon, I would like to express my hearty thanks for acting as chairman at the session of the general discussion. The problems to which priority should be given were discussed.

Brucellosis is a very important disease from the view-point of both animal and public health. In addition to the classical type of *Brucella*, isolation of *Brucella canis* was reported. Also, the results of serological tests and bacteriological examination of samples collected from dairy cattle, beef cattle, buffaloes, pigs, and dogs were reported in this symposium. As brucellosis is a chronic and systemic disease, it has been thought that the various kinds of antibodies appear according to the process of the disease, and preparation of the antigen is one of the important factors in serum tests. Continuous efforts are requested to control and eradicate the disease.

Hemorrhagic septicemia of cattle has been known as one of the most serious bacterial diseases in the tropical region. In the present symposium, precise epizootiological information was reported by the speakers of India and Sri Lanka. The incidence and the status of the carrier animals are believed to be very much informative for the countries where similar problems are very common. In addition to the epizootiological problems, the major interest in this disease lies in the development of effective vaccine.

We are expecting that continued effort will be made to develop more effective control measures including new vaccines such as the streptomycin-dependent vaccine. With regard to the disease affecting myna birds, much concern must be paid to some pet birds, because of the severity and wide-spread nature of the disease.

For the control of some avian diseases, vaccination program plays an important role. Efforts have been made in various countries to seek and select a program effective for each country. In the present symposium, we have learned about many important problems concerning the prophylactic measures of avian diseases, especially Newcastle disease and Marek's disease. Decisive factors for the programming are remarkably different in our countries owing to the difference in type of poultry industry, namely, rearing systems, labor supply, environment surrounding chicken raising, and maternal immunity, health condition, kind of chicken, and kind of vaccine. Therefore, in taking into account these factors the most profitable vaccination program should be designed in each field trial.

The knowledge obtained in this session on ecological aspects of Akabane disease and bluetongue disease including the problem of the vectors is very important but still insufficient. Further investigations are required to be coupled with adequate laboratory studies. Moreover, the mechanism underlying the transmission of these viruses under various climatic, environmental conditions as well as that of the survival of these viruses under natural conditions should be elucidated.

Incidence of hog cholera in the tropics appears to be a serious problem in some countries. Studies and experiments on the diagnosis and vaccine production have been reported. The results

of field application of crystal-violet, lapinized live virus and tissue culture vaccines which were presented in the session were most interesting. After the development and application of GP vaccine in 1969, no outbreak has been recorded in Japan since 1975. We are expecting that the control of the disease in the tropics will also be successful.

Pseudorabies is one of the serious diseases difficult to eradicate once endemic. The report by Dr. Koh suggests that inactivated vaccine in piglets should be used carefully because the vaccinated pigs might suffer from atypical severe disease when infected later. Special efforts should be made for the development of effective control measures for this disease.

In future, more attention should be given not only to these diseases but also to some chronic diseases, namely, avian and bovine leukosis; gastrointestinal and respiratory diseases in cattle, pig, poultry and others. Consumption of products of animal origin has been markedly increased worldwide. Recently, in addition to the infectious diseases of livestock, new problems are arising in the field of animal health research. Some environmental pollution in human and animals is being recorded currently all over the world. Under such conditions research pertaining to the safety of food for human consumption and animal feeds is entering a new stage. Particularly with regard to the problems of the residues of animal drugs, feed additives, agricultural chemicals and some other chemical substances in animal products, serious concern has been voiced about the safeguard of human health.

With regard to the situation of animal health in the tropics, we are not able to comment readily, because there are various types of animal industry due to the differences in historical background and environmental conditions namely, and, customs, climate, food, culture and national administration system peculiar to each country. However, it will be necessary for veterinary scientists in the region to cooperate for the achievement of the same objectives. In this respect, hope is being placed on the activities to be pursued by the Tropical Agriculture Research Center.

It is natural to consider that international cooperation is indispensable for the prevention and control of epizootics. It is our firm belief that we can establish efficient methods for the prevention and the control of the diseases. the latest knowledge and newly developed techniques should be shared mutually. In this sense, the present symposium has played an important role.

I am convinced that this symposium will be the starting point to further enable a smooth exchange of research information on the diseases and of researchers in the tropical countries. I would like to take this opportunity to express my sincere thanks to the Tropical Agriculture Research Center as well as to all the participants in this symposium.