

第二研究会のお知らせ

日時：平成23年5月18日（水）15:00～17:00

場所：財団法人 日本生物科学研究所 管理棟 会議室2および3

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演題：「Overviews of important swine pathology and some factors critical for disease control in Thailand.」

Abstract

The swine producer density in Thailand is located in the western, eastern and middle part of the country. The highest density of small and middle-sized farms is located in the western and eastern areas. Large farms, which belong to companies, locate in the middle part. The number of swine production is 5.1 million slaughter pigs in year 2010. Ninety-seven percent, approximately 270,000 ton of porks is domestic meat consumption. Only 3 percent is for export. Approximately 540 ton of fresh frozen meat were exported to Hong Kong, Malaysia and India and 120,000 ton of cooked-meat products were exported to Japan (98.11%) and other countries (1.89%). About 290,000 weanling pigs was bought by neighbor's countries; Lao, Union of Myanmar and Cambodia.

Important swine diseases are porcine respiratory disease complex (PRDC) and enteric diseases. The PRDC causes more economic loss than the enteric disease, which is characterized by slow growth, decreased feed efficiency and respiratory distress in weaning to finishing pigs. The major diseases are porcine reproductive and respiratory syndrome virus (PRRSV), classical swine fever (CSF), porcine circovirus (PCV-2), streptococcosis, mycoplasmosis, salmonellosis and colibacillosis. The necropsy data of the Chulalongkorn University-Veterinary Diagnostic Laboratory, Nakornpatom field station (CU-VDL-NP) revealed respiratory diseases more than enteric diseases. PRDC indicates the increasing of mix infections between PRRS and other pathogens, and among PRRS strains within the same farms. The pathological and more advance laboratory methods were used for swine disease diagnosis in the country.

The classical pathological lesions of foot and mouth diseases (FMD) and most bacterial diseases were still unchanged lesions from the past. The lesions of some diseases eg. CSF, PCV-2, PRRS is difficult to diagnose. The morphopathology on the macroscopic and histologic lesions are more complicated. The typical turkey egg kidney lesion of CSF is rarely seen in the recent routine necropsy. The botryoid intracytoplasmic inclusion bodies, that is the pathognomonic lesion of PCV-2, are also difficult to see on the microscopic slides. The PRRS now showed similar clinical signs to swine high fever (SHF) syndrome caused by highly pathogenic (HP)-PRRSV.

There are multifactorial factors involved in diagnosis and disease control of Thai swine population. The virus strains, vaccines, pigs and other pathogens are well-recognized factors that influence the problems. The standard vaccination program with emergency programs are used in the Thai fields. Variation of biosecurity levels, animal movements, pig density and herd size in the area and the borders are difficult for disease control. CSF was successfully controlled, but others including PRRS, PCV-2 and FMD were still unsuccessful. Approximately 80% of farms infected by PRRS had introduction of replacement pigs carrying the new strains. The CU-VDL, Bangkok detected both genotypes of PRRS (EU and US) in the same farms that become potentially difficult to control since the cross protection among genotypes doesn't exist. Moreover, PRRS viremia during the weanling period is influenced by CSF vaccination, co-infections of bacteria or swine influenza virus. Re-emerging of CSF and spread of swine influenza will be the new face of the next problem, including the HP-PRRS. Recently, there was an outbreak of HP-PRRS in backyard pigs in November, 2010 in the middle part of Thailand. All 300 fattening pigs in a farm died within 2 days. The department of livestock development (DLD), Thailand has implemented stamping out and active surveillance for control the diseases in other areas. In my opinion, the pathogenesis and the understanding of immunology with the individual herd immunity and field practices are the strategies of the disease control or eradication.

