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Nasal swab – A new tool for the detection of porcine respiratory disease complex in natural infected pigs

Nguyen Thi Trang[1], Pham Hong Ngan[1] and Takuya Hirai[2]
[1]Vietnam National University of Agriculture, Vietnam
[2]University of Miyazaki, Japan

This study evaluated the suitability of nasal swab for the detection of porcine respiratory disease complex (PRDC) in pigs. Serum, nasal swab, and oral fluid were collected and compared the ability for the detection of PRDC etiologies by PCR. Among 15 pigs, PRRSV was detected in nasal swabs from 12 pigs, oral fluids from 11 pigs, and serum from only 3 pigs. Mycoplasma and PCV2 were detected in 5 and 6 of 13 nasal swab samples, respectively. PRRSV positive signals were found in nasal associated lymphoid tissues (NALT) by ISH. Both viruses and bacteria can be detected in nasal swab samples. Nasal swab could be useful specimen for the detection of PRDC as not only virus but also bacteria could be detected in nasal swab.

phngan@yahoo.com
phngan@vnua.edu.vn

Probiotics in aquaculture

Kim Van Van
Vietnamese National University of Agriculture, Vietnam

The study of aquatic animal microorganism is transforming much of our understanding of microorganism and it's relation to health and disease. Moreover, many of these studies are now making associations between groups of organisms and their impact on aquaculture disease states ranging from fisheries to human (Zoonotic microorganism) as *Vibrio parahaemolyticus, Mycobacterium* sp. Related to this, research on probiotic microorganisms such as many *Lactobacillus* species, *Bacillus* sp., *Nitrosomonas* sp., *Nitrobacter* sp. have demonstrated compelling health benefits associated with their ingestion and therein lies a longstanding conundrum. How could an organism representing such a small fraction of the trillions of bacteria in aquatic animal faeces have such an influence on aquatic animal health? In this talk a rationale for the efficacy of probiotics is given in the context of their complex microbiota niche. Moreover, examples of mechanisms of actions of probiotic cultures will be discussed which range from pathogen inhibition to the reduction of fish diseases. These studies demonstrate the potential for manipulation of the fish gut microbiota including the use of probiotics, antimicrobials and bacteriophage.

kvvan@vnua.edu.vn