

## **“ORAL”: Using Participatory Epidemiology (PE) approach to prioritize swine diseases at commune level of a red river delta province, North Vietnam**

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### **Abstract**

Swine production in Vietnam is increasingly threatened by a large range of swine infectious diseases (PRRS, FMD, Pneumonia....) with significant economic impacts on the national economy and local producers' livelihood. Under this context early detection of disease through efficient surveillance system is critical. Previous studies have highlighted the limits of animal health surveillance in Vietnam, which might be in part linked to the difference in disease surveillance priority between local and national levels. The objective of our study was to assess the disease surveillance priority for swine producers in Vietnam using participatory epidemiology techniques; and to compare the results with the priorities defined by the national surveillance strategy.

The study area was selected according to the importance of swine production, diversity of swine farming systems, and occurrence of swine diseases such as PRRS, FMD and CSF. A total of four villages from one commune were included in the study. Key informant interviews involving officials, veterinarians, para-veterinarians were done step by step from province level to village level. Farmer focus group discussions were held with each village. A range of PE tools (e.g. proportional piling, matrix scoring, seasonal calendar, pair wise ranking, disease impact matrix scoring, and probing) was applied to characterize and quantify animal production, major diseases and their economic impacts on producers' livelihood.

Swine and chicken were described as the most important livestock species in the study area both in term of number of heads and contribution to farmers' income. Most of the pig farms in the commune (around 96%) were described as small holder production (holding less than 20 sows and 100 fattening pigs) but in both systems, swine production was mainly for income. Swine diseases' pressure was high with a large range of diseases occurring all year round in both small holders and semi-commercial farms (PRRS, FMD, pneumonia, diarrhea....). Blue ear (PRRS) was considered as the most important disease in all pig farming systems (relative score of 69) and has the highest relative incidence and impact on the livelihood of the producers. Diarrhea and Pneumonia were ranked in the 2<sup>nd</sup> and 3<sup>rd</sup> positions (relative scores of 42 and 38 respectively) with FMD classified in the 4<sup>th</sup> position (relative score of 30). According to the national surveillance strategy, the swine disease surveillance priorities in Vietnam are FMD and PRRS. Additional differences in surveillance priorities were also highlighted according to the administrative levels (e.g. at District level the priorities were PRRS, FMD but also Diarrhea).

Further work is ongoing to try to understand the socio-economic factors underlying those discrepancies. These differences might have major impact on the level of reporting of swine disease in Vietnam and therefore on the performances of the surveillance system.