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Benefit-cost analysis of FMD vaccination at local level

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This study aimed to analyse the financial impacts of foot-and-mouth disease (FMD) outbreaks at household level and to perform a benefit-cost analysis of FMD vaccination in Long An and Tay Ninh, province located in the South of Vietnam. Production data was collected from 53 small dairy farms, 15 large dairy farms and 116 meat cattle farms using questionnaire survey. Financial data was collected using participatory tools in 37 villages of these provinces. Cost saved and net profit of dairy cow production in large scale were 3 times higher than those of dairy cow production in small scale and 30 times higher than those of meat cattle production. Vaccination was extremely important in dairy cow production in large scale while contributing to save financial losses in case of FMD. The benefit-cost ratio of dairy cow production in large scale, dairy cow production in small scale and meat cattle production was 37.19, 30.04 and 7.34, respectively. The sensitivity analysis showed that dairy cow production in small scale was mostly affected by an increase in vaccination cost of which the benefit decreased from 3.08 to 5.13. The vaccination cost was more important than market value in affecting the benefit-cost ratio. The benefit-cost analysis of biannual vaccination strategy showed that an investment in FMD prevention could be economically effective. Further study focused on benefit-cost analysis of vaccination strategy at national level is necessary to evaluate and modify strategy to achieve final objective of national vaccination program.