THE EPIDEMIOLOGY OF CLASSICAL SWINE FEVER IN WEST TIMOR, INDONESIA.

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DECLARATION

I declare that this thesis is my own account of my research and contains as its main content work which has not previously been submitted for a degree at any tertiary education institution.

Signed.

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ABSTRACT

Classical swine fever (CSF) is a serious and highly infectious viral disease of domestic pigs and wild boar, which is caused by a single stranded RNA pestivirus. A cross sectional study was carried out on pigs owned by small-holder farmers in West Timor, in the province of East Nusa Tenggara, Indonesia. The study was designed to describe the management, husbandry and trading practices adopted by pig farmers in West Timor, to estimate the seroprevalence of CSF in pigs from selected villages, and to identify factors associated with seropositivity to CSF. Blood samples were collected from 720 pigs originating from eight villages in four sub-districts of two districts in West Timor. A questionnaire survey was administered to the owners of these pigs (n = 240) to gather information from farmers in order to understand management and husbandry practices and to identify important risk factors for CSF in West Timor.

Pigs are reared under a non-intensive traditional system by small-holder farmers. Although pigs are an integral component in the economy and have important social and cultural roles, they receive minimal attention and inputs. These low inputs to pig health and production are an important constraint to the productivity of pigs in this situation.

In the current study 17.8% (95% CI: 15.1-20.8%) of the pigs were seropositive to CSF. Three potential risk factors were identified in a multivariable logistic regression model for the presence of antibodies to CSF. The seroprevalence was higher in herds that had introduced pigs in the 12 month period preceding the survey (OR 4.78, 95% CI: 1.46, 15.71). Farmers who kept goats were 3.42 (95% CI: 1.20, 9.81) times more likely to have seropositive pigs than farmers without these animals. Pigs that had been vaccinated against CSF were also 2.33 (95% CI: 1.10, 5.12) times more likely to be seropositive than were non-vaccinated pigs. The results of the questionnaire highlighted the lack of implementation of biosecurity measures by small-holder farms in West.
Timor, which has the potential to increase the risk of their pigs to CSF, as well as to other diseases.

Although eradication of CSF is the ultimate goal in West Timor, the current management and husbandry practices adopted by the small-holder farmers, including extensive unrestricted animal movements, poor farmer knowledge about CSF, low uptake of vaccination, and poor adoption of biosecurity measures, means that this is currently improbable. It is recommended that material be developed to educate farmers about CSF, ways to control it and cost-effective improvements that can be adopted to improve the management and husbandry of small-holder piggeries.
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