INTRODUCTION

Development and implementation of disease control strategies depend upon a good understanding of FMD epidemiology which in turn requires accurate laboratory testing for both virus typing and serosurveillance. The establishment of an integrated National laboratory network is vital, with National Biosecurity being an important issue for the Viet Namese Government.

The aims of the project were to determine why FMD vaccination of livestock does not give the expected protection against disease and to fully determine which serotypes of FMDV are circulating in Viet Nam. This will enable better vaccination strategies to be employed. Regional diagnostic laboratories will be established with the capacity to carry out rapid and accurate FMDV serology, virus isolation and detection of antigen and viral genome.

MATERIALS AND METHODS

Pilot zones were established in provinces near Viet Nam’s borders to gain insight into FMD serotypes circulating in these areas. Molecular sequencing of the FMD isolates from these provinces provided information on the effectiveness of border control and the origin of FMDV circulating in Viet Nam each year. FMD serology was carried out on 15,000 sera using the AAHL 3ABC NS ELISA & LP-ELISA (O, A & Asia 1).

RESULTS

Nucleotide sequence analysis of 100 FMDV isolates revealed 3 topotypes for serotype O [Cathay, ME-SA (PanAsia) and SEA (Myanmar 98)], only Thailand/Malaysia 97 for serotype A and both Jiangsu-China-2005 and Myanmar 98 for serotype Asia 1. Serosurveillance data showed vaccination efficacy and prevalence of infection.

CONCLUSION

This project has established an improved diagnostic capacity for FMD in Viet Nam through the development of an integrated network of laboratories. The improved capacity has allowed the early detection and identification of FMD thus enabling better control of disease and helping reduce livestock losses and so improve productivity. Nucleotide sequencing has provided vital new information on circulating viruses. The project is aligned with the National FMD plan and the information generated is aiding the control of FMD in Viet Nam.