

臺灣豬隻口蹄疫抗體之探討

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摘要

台灣為能逐步成為不使用疫苗的口蹄疫非疫區，防疫單位自 2006 年 3 月至 11 月選定澎湖縣先行試辦口蹄疫階段性停止施打疫苗策略，試辦成果良好，因此自 2006 年 12 月 1 日起，澎湖縣全面停止施打口蹄疫疫苗。為了將本成果應用於台灣本島及金門島，於 2007 年 4 月 1 日起，分五階段施行口蹄疫階段性停打策略。然而不幸於 2009 年 2 月，雲林縣及彰化縣豬場分別爆發一例口蹄疫疫情，使得台灣再度成為口蹄疫的疫區。為預防口蹄疫疫情的發生，政府宣布於 2009 年 8 月再度針對 12 週齡以上豬隻，全面施打口蹄疫疫苗。而疫苗的免疫效果，可反應在抗體的生成狀況上。為了解國內豬隻口蹄疫抗體的分佈狀況，我們針對 2009 年 8 月至 2010 年 6 月送檢之 1,396 個養豬場共 25,322 支豬隻血清樣本的口蹄疫中和抗體力價，依月份進行分析。結果顯示，2009 年 8 月至 10 月有 54% 以上豬場為口蹄疫抗體陰性場，且抗體陰性豬隻的百分率在 75% 以上，從 11 月開始百分率逐漸下降，至 6 月份只有 2% 豬場為口蹄疫抗體陰性場，且抗體陰性豬隻的百分率也降為 26%。另一方面，針對 2010 年 4 月至 7 月擴大血清監測 300 個養豬場，共 4,344 支血清樣本的檢測分析顯示，口蹄疫抗體陰性場及抗體陰性豬隻的百分率均約為 9%，可見疫苗施打的涵蓋率已顯著提高。

Study on the antibodies against foot-and-mouth disease virus of swine in Taiwan

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Abstract

To meet the OIE requirements for an FMD-free country without vaccination, the Bureau of Animal and Plant Health Inspection and Quarantine (BAPHIQ) launched a pre-test program in Peng-Hu County from March to November 2006. This program consisted of staged stopping vaccination with FMD vaccine in pigs. The results to date have been successful; pigs in Peng-Hu County have not received the FMD vaccine since December 1, 2006. The successful pre-test program in Peng-Hu County was implemented in Taiwan and Kinmen Island. Since April 1, 2007, in total five stages have been implemented for the Staged Stopping Vaccinating Policy in pigs. However, in February 2009, outbreaks of FMD were reported from two pig farms located at Yun-Lin County and Chang-Hua County respectively. Taiwan becomes a FMD infected country again. For the prevention of FMD, BAPHIQ addressed that a mandatory vaccination is implemented in pigs which aged greater than 12-week-old since August 2009. The effect of vaccination against FMDV is assessable via the detection of induced antibodies. To understand the distribution of antibodies against FMDV in pigs, a total of 25,322 sera which were collected from 1396 farms between August 2009 and June 2010 is performed the serum neutralization (SN) assay. The results, which are grouped and analyzed basing on month, reveals that more than 54% pig farms and 75% pigs showed antibody negative between August and October in 2009. However, the percentage of antibody negative, both of farms and pigs, decreases since November 2009. In June 2010, there are only 2% pig farms and 26% pigs showed antibody negative. On the other hand, according to the extensive serum surveillance program, total of 4,344 sera which were collected from 300 pig farms from April to July 2010 are conducted the SN assay. This study demonstrates that about 9% pig farms and pigs showed antibody negative. It is obvious that the percentage of vaccination against FMDV does increase.