

非洲豬瘟病毒檢測於邊境防疫之應用

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摘要

非洲豬瘟為高傳染性之疾病，一旦感染家豬或野豬將引起極高的致死率，若不幸嚴重疫情爆發將造成非常巨大的經濟損失。非洲豬瘟是由非洲豬瘟病毒所引起，其症狀包括高熱、發紺、食慾不振，甚至突然死亡等。中國大陸地區於民國 107 年 8 月 3 日通報非洲豬瘟首例，隨後於非常短的時間內擴散到各地。為預防非洲豬瘟入侵，我國政府開始強化邊境管制及檢查等防疫措施，並藉由提高違規者罰款來達到嚇阻的目的。從 107 年 8 月 27 日起，所有邊境查獲之違規攜入肉製品將送到本所進行非洲豬瘟的檢驗。我們基於世界動物衛生組織 (OIE) 陸生動物診斷試驗及疫苗手冊中有關非洲豬瘟定量聚合酵素鏈鎖反應 (qPCR) 進行初篩，陽性反應樣品再進行巢式聚合酵素鏈鎖反應 (Nested PCR) 進行確認。首件肉製品陽性案例於 107 年 10 月 31 日被檢驗出來，而至今於 1483 件送檢肉製品中共發現 54 件陽性案例。其中 52 例來自中國，2 例來自越南。分析這 54 件陽性肉製品中，香腸類占 44%，肉乾類占 28%，其餘則為燕皮、餛飩、臘肉、培根等等。由上述試驗得知，結合定量聚合酵素鏈鎖反應與巢式聚合酵素鏈鎖反應可有效地應用於邊境查獲肉製品之非洲豬瘟核酸檢測。

Application of the detection of African swine fever virus for border inspection

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Abstract

African swine fever (ASF) is a contagious and high mortality disease in domestic pigs and wild pigs. A huge economic loss would be caused by devastating outbreaks of ASF. Some of ASF syndrome including fever, cyanosis, anorexia, and sudden death would be observed. ASFV is the only member of the *Asfarviridae* family. The first ASF case in Mainland China was reported on 3rd Aug. 2018, and the disease quickly spread to most provinces in a short time. In order to prevent the ASF incursion, the Taiwan government reinforces the quarantine inspection and raises the penalty for who does not comply with border inspection rules or regulations. The illegal pork products seized at the airports or harbors have been sent to Animal Health Research Institute (AHRI) for detecting ASFV since 27 Aug, 2018. The qPCR method based on OIE recommendation was applied to screen ASFV and followingly they were confirmed by nest PCR for qPCR positive samples. The first product containing ASFV gene was detected on 31 Oct 2018, and a total of 54 positive samples were detected among 1,483 pork products until now. According to the source of the positive sample, 52 samples came from Mainland China and 2 samples from Vietnam. Among 54 positive samples, 44% were sausages, 28% were pork jerky, other products include pork chop, bacon, braised pork belly, yanpi, and wonton. The preliminary data show that a combination of the qPCR and nest PCR could be used to detect ASFV in seized pork products on border control.