

兔化豬瘟疫苗的製造

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摘要

豬瘟 (Hog Cholera) 又名古典型豬瘟 (Classical Swine Fever; CSF)，是由豬瘟病毒 (Classical Swine Fever Virus; CSFV) 所引起的高傳染性、高致死性豬病。由於病毒株的差異，症狀由不明顯、慢性到急性都可能發生；急性型豬瘟的感染率與死亡率可達 100%，造成巨大的經濟損失。豬瘟病毒屬於黃病毒科 (Flaviviridae)、瘟疫病屬 (Pestivirus) 的RNA病毒，會造成豬隻發燒、下痢及臟器出血等症狀。2017年本所生產的乾燥兔化豬瘟疫苗為2,151,340劑量；每隻兔子平均可生產467劑量的兔化豬瘟疫苗。本組為提升疫苗產能，2017年12月購置新的冷凍乾燥機，其凍乾容量比原有的冷凍乾燥機增加約38.33%，預估每次疫苗製造量約可增加8萬劑量。現正進行新冷凍乾燥機的凍乾條件測試，以期提升製造效能。

Mass production of a freeze-dried lapinized hog cholera

live vaccine

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Abstract

Hog Cholera also known as Classical Swine Fever (CSF), is a highly contagious and lethal disease caused by the Classical Swine Fever Virus (CSFV), and affecting industrial hog operations. Clinical signs vary dependent on different virus strains, with symptoms presenting as insignificant, chronic or acute (sometimes with 100% mortality) and thereby potentially causing large economic losses. CSFV is a RNA virus belonging to the genus *Pestivirus* in the family *Flaviviridae*, and can induce fever, diarrhea and internal organ hemorrhage. AHRI produced 2,151,340 doses of Lapinized Hog Cholera vaccine in 2017, and an average of 467 doses were obtained per rabbit. In order to increase production capacity, AHRI had bought a new freeze-dryer in December, 2017. The capacity for freeze-dried vials in this machine is ~38% higher than the previously used machine and we estimate that the production yield can be increased up to 80,000 doses. Currently, we are testing various freeze-drying conditions in order to improve manufacturing efficiency.