白蝦場生產過程蝦隻及環境檢體監測

生物研究組

陳怡珳 助理研究員

摘要

為避免新興疾病對我國白蝦養殖產業造成危害,本所收集7場田 間白蝦場其生產過程之蝦隻檢體及環境檢體(如生餌、水及土壤等), 監測世界動物衛生組織表列疾病及2種新興蝦類病原,包含白點病、 傳染性皮下及造血組織壞死症、陶拉症病毒、黃頭病毒基因1型、傳 染性肌肉壞死症病毒、壞死性肝胰腺炎、急性肝胰臟壞死症、對蝦肝 胰腺微孢子蟲病、偷死病病毒,確認是否有病原存在,並據以輔導白 蝦場改善其生物安全環境與防治疾病。共完成白蝦檢體652件次及環 境檢體875件次檢測工作,其中檢出率最高為對蝦肝胰腺微孢子蟲病 12.3% (188/1527),其次為急性肝胰臟壞死症2% (30/1527)。統整各場 於輔導過程中所遇到的問題,建議白蝦場需引入未帶病原之蝦隻進行 養殖,養殖前場內環境需徹底清潔消毒,且養殖過程會加入池水的物 質(包含餌料生物、水源、益生菌等), 需確認其未帶病原及弧菌。最 後需確保養殖池不會被人員或動物汙染病原。

The surveillance of important pathogens in shrimp and

environmental samples from hatchery and grow-out farm

I-Wen Chen

Abstract

To prevent new emerging diseases cause damage in the white shrimp aquaculture industry, the surveillance of OIE list diseases and 2 new emerging diseases, including white spot disease virus (WSD), infectious hypodermal and hematopoietic necrosis virus (IHHNV), taura syndrome virus (TSV), yellowhead disease virus (YHDV), infectious myonecrosis virus (IMNV), necrotising hepatopancreatitis (NHP), acute hepatopancreatic necrosis disease (AHPND), Enetrocytozoon hepatopanei (EHP) and covert mortality disease virus (CMDV), of shrimp in hatcheries and grow-out farms, and associated environmental factors(larvae, raw feed, pond water and soil) were executed. After having analyzing the results of the investigation, we next aimed to assist shrimp farmers to improve the biosecurity management and diseases prevention of their farms. Totally, we had tested 652 shrimp and 875 environmental samples. The highest detection rate of above samples was 12.3% (188/1527) for EHP, followed by 2% (30/1527) for AHPND. According to the problems of farms encountered in this project, we suggest that the most important of building biosecurity for shrimp farms is the introduction of specific pathogen free (SPF) shrimp larvae to farms. Next, the shrimp pond should be cleaned and disinfected thoroughly before stocking seed; then, the material (food organisms, water and probiotics) should be free from the vibriosis contamination. Finally, biosecurity should be enforced to prevent irrelative people and animals from entering farms.