

台灣地區牛白血病之血清抗體盛行率調查

生物研究組

蔡洵洵 助理研究員

摘要

牛白血病或稱為地方性牛白血病(Enzootic bovine leukosis; EBL)是由Retrovirus中的牛白血病病毒(Bovine leukemia virus; BLV)所引起而引發牛隻生成淋巴細胞腫瘤的疾病。感染的牛隻會終身帶毒且成為BLV的傳染源，傳播途徑可經由母牛之胎盤、產道及初乳垂直傳播給仔牛；或經由含有淋巴球之媒介物例如血液、乳汁等水平傳播。大多數感染的牛隻呈輕微或無臨床症狀，約有29%的牛隻會有持續性的淋巴球增多症，而0.1-10%的感染牛隻則會形成腫瘤。有研究顯示感染的乳牛可能會有乳量下降或因二次感染引發如乳房炎、下痢、肺炎等疾病而使牛隻的淘汰率上升之情形。

本次研究之2333個血清樣本為2009年自台灣16縣市共77場乳牛場收集而來，分別以酵素結合免疫吸附分析法 (ELISA)和瓊膠免疫擴散法 (AGID)進行調查，ELISA顯示血清抗體陽性率為68.58% (1600/2333)；AGID為63.78% (1488/2333)，場的陽性率為96.10% (74/77)。此調查顯示此病仍普遍存在台灣地區，且其血清抗體盛行率較前人於2001年研究之結果(38.84%)更為提高。

A Survey on the Prevalence of Bovine Leukosis Serum Antibody in Taiwan

Hsun-Hsun Tsai

Abstract

Enzootic bovine leukosis (EBL) is a disease inducing lymphosarcomas in cattle caused by the retrovirus, bovine leukaemia virus (BLV). The EBL-infected cattle become persistent infection and reservoirs. The transmission of BLV may occur vertically through placenta, reproductive tracts and colostrum or horizontally through blood and milk containing lymphocytes. The majority of infected cattle are asymptomatic; approximately 29% develop persistent lymphocytosis, and 0.1-10% develop lymphosarcomas. A study has demonstrated that BLV-infected cows have lower milk production and are susceptible to other diseases, e.g. mastitis, diarrhea and pneumonia, leading to an increase of culling rate. In this study, a total of 2333 cattle sera from 77 dairy herds in 16 prefectures of Taiwan were collected in 2009. Results demonstrated the seropositive rates were 68.58% (1600/2333) for enzyme-linked immunosorbent assay (ELISA) and 63.78% (1488/2333) for agar gel immunodiffusion assay (AGID). The rates of herds with seropositive cattle were 96.10% (74/77). The survey showed that EBL is still distributed over Taiwan and the seropositive rates are higher than previous study (38.84%) in 2001.