BOOT SWABS TO COLLECT ENVIRONMENTAL SAMPLES FROM COMMON LOCATIONS IN DAIRY HERDS FOR MYCOBACTERIUM AVIUM SSP. PARATUBERCULOSIS (MAP) DETECTION

Michael Zschöck¹, Wilfried Wolter², Tobias Eisenberg¹, Mirjam Lenz¹

¹Department II (Veterinary Medicine), Landesbetrieb Hessisches Landeslabor, Gießen, ²Regional Council Gießen, Wetzlar, Germany

Nine dairy herds from Hessia, Germany were included in this study. Five of them had a known history of Mycobacterium avium ssp. paratuberculosis (MAP) - infection. Some of the cows in these MAP - positive herds were diagnosed as MAP-infected by repeatedly positive serologic ELISA- results (Pourquier®) and as well by positive fecal culture results in single tested cows. In the other four MAP - negative dairy herds no clinical signs of the disease, like chronic enteritis, occurred. Additionally, all cows of these negative herds were serologically MAP - negative by Pourquier®-ELISA. Also MAP was never isolated in repeated fecal samples of single cows by culture. Environmental samples were taken by the use of overall 72 boots swabs from common locations of these 9 dairy herds. In 28 of 35 swabs from positive dairy herds MAP could be detected by cultural examination. From 37 samples of those MAP - negative herds only one swab was MAP - positive by culture. Thus the sensitivity of this sampling technique was 80%, the specificity was 97%. The usage of boot swabs for environmental sampling was an effective and inexpensive method of identifying herds infected with MAP.