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Epidemiological survey of bovine *Eimeria* species in adult cattle in the Republic of KoreaDu-Gyeong Han<sup>1</sup>, Ji-Hyoung Ryu<sup>1</sup>, Jeong-Byoung Chae<sup>2</sup>, J S Chae<sup>2</sup>, D H Yu<sup>3</sup>, J Park<sup>4</sup>, H C Kim<sup>5</sup>, B K Park<sup>6</sup> and K S Choi<sup>1</sup><sup>1</sup>Kyungpook National University, South Korea<sup>2</sup>Seoul National University, South Korea<sup>3</sup>Gyeongsang National University, South Korea<sup>4</sup>Chonbuk National University, South Korea<sup>5</sup>Kangwon National University, South Korea<sup>6</sup>Chonnam National University, South Korea

Bovine coccidiosis is caused by *Eimeria* spp. and is considered a problem of livestock productivity worldwide. The clinical signs of coccidiosis are mainly characterized by growth retardation and water or hemorrhagic diarrhea. It occurs commonly due to poor hygiene and over-crowded conditions. So far, more than 20 *Eimeria* species have been identified and usually infections with one species were found. The present study was performed to report the prevalence of *Eimeria* infections and investigate the correlation between *Eimeria* spp. and diarrhea. A total of 346 stool samples (160 from Korean native cattle and 186 from Holstein cattle) were collected from 10 different regions in the Republic of Korea (ROK). Of the 346 stool samples overall prevalence of *Eimeria* spp. was 46.2% (160/346). The prevalence of *Eimeria* spp. in Korean native cattle and Holstein cattle were 38% (61/160) and 62% (115/186), respectively. A total of 8 *Eimeria* spp. was found with the following prevalence: *E. bovis* 79% (127/160), *E. zuernii* (73%, 117/160), *E. auburnensis* (29%, 46/160), *E. subspherica* (14%, 23/160), *E. bukkidonensis* (5%, 8/160), *E. ellipsoidalis* (2%, 3/160), *E. cylindrica* (1%, 2/160) and *E. alabamensis* (0.5%, 1/160). Mixed infections of 2-4 *Eimeria* species were found in 76% (121/160) of cattle. Diarrhea was not seen in these cattle. These results show that *E. bovis* and *E. zuernii* are prevalent in Korean cattle populations, especially Holstein cattle. Although *E. bovis* and *E. zuernii* are known to be pathogenic, these pathogens did not contribute to the clinical effects in adult cattle. Further studies are needed to identify the association between multiple *Eimeria* spp. infections and diarrhea in calves.

## Biography

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