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**How does an infection with *Eimeria* spp. affect the carbon footprint of broiler chickens?**

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**Abstract:**

**Background/Objective:** The performance of broiler chickens has a high impact on the carbon footprint. An infection disease such as coccidiosis could result in a negative influence on chicken performance, leading to deductions in sustainability.

**Methods:** The effects of an infection with coccidia (*Eimeria spp*.) were studied based on a systematic literature research. Performance parameters (live weight, average daily gain, feed conversion ratio, mortality) from 33 studies were used to calculate mean values for the control groups and infected groups Afterward a life cycle assessment (LCA) was conducted to determine the carbon footprint (CO2 eq per kg live weight) of the period within the studies using OpteinicsTM. For the calculations it was assumed that all broiler chickens got the same diet based on wheat, soybean meal and maize.

**Results:** The carbon footprint showed an increase by about 18.4% in broiler chickens challenged with *Eimeria spp.* compared to the unchallenged control groups.

**Conclusion:** It may be concluded from the suitable publications that the carbon footprint increased markedly due to infections with coccidia. Therefore, health monitoring and preventive biosecurity measures are necessary to ensure a broiler production with a high level of sustainability.

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**Keywords:** broiler, *Eimeria*, coccidia, carbon footprint