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## Relation between soiling of broilers and *Campylobacter* levels during the slaughtering process

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The Dutch poultry production sector is actively looking for ways to reduce *Campylobacter* levels on their products. Minimizing external fecal soiling of live birds could be a possible option to reduce *Campylobacter* contamination of chicken meat. Soiled flocks may be associated with higher levels of contamination from skin and feathers. Additionally, soiling may reflect intestinal disorders, leading to less uniformity and resulting in increased risk of contamination e.g. during evisceration. The aim of this study was to determine the association - at flock level - between external fecal soiling of broilers upon arrival at the slaughterhouse and the number of *Campylobacter* colony forming units (CFU) on carcasses at three different stages of the slaughtering process. To examine whether the extent of soiling is of influence on *Campylobacter* levels during the slaughtering process (and ultimately on the end product), we tested two extreme categories; very clean birds against heavily soiled birds.

The categories were identified based on the footpad lesion score (0-200). This score is routinely recorded by Dutch slaughterhouses for broiler farms with animal densities over 39 kg/m<sup>2</sup>. Foot pad lesions are associated with soiling of broilers as both are affected by litter quality. Flocks scoring <20 were considered 'clean' and flocks scoring >120 were considered 'soiled'.

A total of 22 *Campylobacter* positive flocks from a single slaughterhouse were included, 12 'clean' and 10 'soiled' flocks. From each flock, neck skin samples were taken after defeathering, pre and post chilling (5 birds per flock per location).

The median number of *Campylobacter* per gram neck skin varied between 3.0 and 3.6 log CFU for any of the three sample locations, with only small non-significant differences between clean and soiled broilers. It was concluded that soiling does not seem to increase the risk for *Campylobacter* contamination during the slaughtering process.