Prevalence and severity of tail lesions as a possible welfare indicator for rabbit does

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Abstract

The impact of behavioural disorders on animal welfare in modern animal husbandry has been much debated. While other abnormal behaviours have been explored at length, there are a paucity of studies on tail-biting in rabbits (Oryctolagus cuniculus). In the present study, severe tail lesions were observed in group-reared rabbit does on a commercial rabbit farm. In the subsequent investigations, the occurrence of tail lesions in 219 rabbit does from nine batches was compared between group- or single-housing and a scoring system recording the severity of tail lesions was developed and verified. This five-grade scoring system was applied to evaluate the progression of prevalence and severity of tail lesions in 21 groups during rearing in two batches. The results revealed a significant difference in the score level between housing types with a higher prevalence of injured tails in group-(60.4%) compared to single-reared (4.0%) does. An increase in severity and frequency of tail lesions was observed in groups during the course of a rearing period. Furthermore, the established scoring system was characterised by adequate observer reliability. Overall, tail injuries occurred on a regular basis in the investigated rearing groups, indicating tail-biting to be a prevalent problem. This could be considered relevant in terms of animal welfare, both for the animal doing the biting and the individual being bitten. The findings draw attention to an inadequately described problem in rabbit husbandry. However, the search for preventive measures needs to scrutinise the role of single-housing, without failing to consider the gregarious nature of rabbits.

Keywords: animal welfare, behavioural disorder, group-housing, rabbits, scoring system, tail-biting

Introduction

Abnormal and stereotyped behaviours are frequently examined in farm and/or laboratory animals. Abnormal and stereotyped behaviours are often associated with an inappropriate environment, frustration and stress and are therefore frequently used as indicators of animal welfare (Dantzer 1986; Mason 1991; Stauffacher 1992; Morton et al 1993; Jordan et al 2006; Trocino & Xiccato 2006; Verga et al 2007). In rabbits (Oryctolagus cuniculus), disorders such as trichophagia (Brummer 1975; Gunn & Morton 1995; Lebas et al 1997; Graf 2010), wire gnawing (Hansen & Berthelsen 2000; Verga et al 2004; Prinzez et al 2007; Trocino et al 2014; Bozicovich et al 2016), cage pawing or digging (Podberseck et al 1991; Stauffacher 1992; Gunn & Morton 1995; Lidfors 1997), automutilation (Brummer 1986; Iglauer et al 1995) and ear biting (Maertens & De Groote 1984) have been described. Although tail-biting has been reported in group-housed breeding does (Baumann et al 2003) and broiler rabbits (Kalle 1994), it is yet to be characterised in detail, as regards severity, prevalence or aetiology. This is in direct contrast to pigs where tail-biting has been studied extensively (EFSA 2007). This has a variable prevalence and is influenced by a multitude of individual and environmental factors, such as a high stocking density, health parameters or a lack of enrichment for oral manipulation (Moinard et al 2003). In pigs, tail-biting is a broad term, encompassing gentle oral manipulation of the tail, biting that inflicts skin wounds, amputates portions of the tail and even gouging the rump. Tail-biting has considerable animal welfare implications, not to mention economic consequences, for pig production. Scoring of tail lesions is a widely used evaluation tool for quantifying tail-biting on pig farms (Taylor et al 2010). In order to gain more information about tail-biting and its consequences in rabbits, the aim of the present study was to first collect comparative data about the frequency of tail lesions in group- and single-reared rabbit does. The second step entailed the development and verification of a scoring system, clearly describing the severity of tail lesions and enabling incidence evaluation during the course of a rearing period.