

Effect of litter material on foot pad dermatitis and hock burn in broilers

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The effect of the litter material on the presence of hock burn and footpad quality of broiler chickens was evaluated during several experimental setups. In the first experiment, wood shavings and chopped straw were compared. Litter moisture, the incidence and severity of hock burn and footpad dermatitis increased as broilers aged. Although no clear differences in dry matter content of the litter were observed, the chopped straw had a considerable higher tendency toward caking which resulted in more hock burn and foot pad dermatitis. The incidence of foot pad dermatitis was significantly higher on day 28, 35 and 41 with the chopped straw. In the following experiment, the effects of wood shavings, flax and peat moss on the litter quality and broiler welfare were evaluated. Using peat moss, the litter was continuously more friable during the production cycle. This resulted in a significantly lower incidence of hock burn and foot pad dermatitis. Between wood shavings and flax there were no clear differences in litter quality, hock burn and foot pad lesions. The fresh peat moss had a moisture content of 40 to 50 %. During the preheating process prior to each flock this moisture evaporates easily. However, this evaporation can affect the climate and energy needs. To evaluate these effects wood shavings and peat were compared in compartments with their own climate control system (ventilation, heating). Two compartments had wood shavings as litter material; in the other two compartments peat moss was used (6000 birds per compartment, 2 replicates per flock and 6 repetitions in time). At the start of the production cycle there was a higher relative humidity and the energy need was higher in the compartments with the peat moss as litter material. During the production cycle the litter was again more friable with the peat moss. This resulted in a significantly lower incidence of hock burn on days 28 and 35. On day 41 no difference in hock burn was observed. The incidence and severity of foot pad dermatitis on days 28, 35 and 41 was significantly lower with the peat moss.

Keywords: broiler, litter material, hock burn, foot pad dermatitis