

THEME 1 | ANIMAL PRODUCTION SYSTEMS

Pre-slaughtering handling of broilers by assessing different truck conditions

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Broiler catching method at the farm is probably the least mechanized process within the poultry industry and in terms of labor intensive, it is tiring, repetitive and unhygienic. It is usually done in the early morning, to provide continuous supply of birds to a slaughter and processing plant. The conditions of catching, loading and transport of broilers affect the final product and quality. However, these conditions are often overlooked, and lack of care can result in significant processing losses. Therefore, the objective of this research was to evaluate the pre-slaughtering handling of broilers. Data collection was performed from broiler flocks from farms located in the southern region of Brazil. Twenty poultry farms were assessed, with an average of 18,000 broilers per flock (mixed sex) of commercial lineage. Broilers were slaughtered with an average of 48 days of age. All other determining procedures in broiler catching such as transport box type, time, staff, lighting, mode of carrying the box, equipment removal, transportation and others were similar. A total of 41 trucks (mean of four trucks a day, being two at night and two during the day) were evaluated in 20 broiler farms. The assessment was performed during winter (20 trucks) and summer (21 trucks). In each truck 3,744 broilers were transported in 468 boxes, with eight chickens per box. The broilers were distributed in four rows of 13 boxes and height of nine boxes. At the poultry farm, during catching, parameters such as temperature, humidity and air speed were measured using TESTO® 410-2 multifunctional equipment. Ammonia was measured by means of ampoules (0 to 100 ppm) in DRÄGER® hand pump and illuminance by the HOMIS 952® digital luximeter. All measurements were taken at the height of the birds in the center of the broilers' catching area. During broiler transport, temperature was registered by means of TESTO® datalogger fixed to the front, middle and back of the truck, in the center and half height of the boxes. During broiler catching, the average values of air in the internal environment of the poultry farm for temperature, humidity, speed, ammonia and illuminance, during the winter and summer seasons were 19 and 24 °C, 94.6 and 72%, 1.4 and 1.9 m/s, 9.5 and 5.6 ppm and 15.3 and 15.9 lux, respectively. The ambient air conditions in the poultry farm during catching were not stressful for the broilers and catcher. This condition achieved during catching is due to suitable handling adopted at the time of loading, such as fans, exhaust fans and opening of curtains which provided broilers' welfare. At night, temperature in the truck was controlled to provide thermal comfort in winter and summer. In the daytime period, during summer, the temperatures were stressful to the broilers on the truck. In the winter period, the front side of the truck presented lower temperature values than the back; while in summer, this behavior was not well defined.

Keywords: broiler catching, truck, ambience, stress, slaughterhouse