

Effect of essential oils on broiler chickens welfare during loading

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Abbreviated Title: Effect Essential Oils in Broiler load

Summary

This study assesses the use of essential oils spread by air on animal welfare of broiler chickens during loading. The work was held in 2 productive sectors of poultry. A simple random sampling was used, 4 houses of female broilers of a minimum of 37 days old were selected (90,720 animals), 2 houses were used as treatment groups (GT) and 2 as control group (GC). Treatment consisted of a blend of essential oils, scattered by air through a diffusor. The mixture was composed of three essential oils: cajeput (antiseptic, expectorant and stimulant), Litsea cubeba (calming, sedative, anti-inflammatory and anti-fungal) and tea tree (anti-inflammatory, antibacterial, antiviral, immunostimulant). 3 successive applications at 24 hour intervals, at a dose of 0.3g/m³ were performed for 30 minutes at the time of day with the lowest temperature (less than 26°C). Loading was performed 6 hours after the final application. Slaughter plant records: disjointed wing, torn skin (tailbone, breast), bruises (breast, legs, wings), scratches, broken wings, were used to assess animal welfare at loading. The main effect was found in the reduction of torn skin on the breast with decreases of up to 80% in treated animals, which was statistically significant (P=0.002). The use of the oils (Fumagri® Comfort) had the effect of reducing the number of injuries, mainly rips on the breast. Overall, a reduction of 8% of the lesions was found in the treated group. In economic terms, reducing breast lesions is relevant since the breast corresponds to the most commercially valuable meat. The reduction in the number of injuries has implications for animal welfare and the animals were less hit because they were calmer at the time of capture.

Key words: Animal welfare, essential oils, chicken, broilers, behaviour.