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ABSTRACT **BOOK**

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SIGNS OF REDUCED STUNNING EFFECTIVENESS IN CATTE AND PRESENTATION OF OPEN ACCESS ANIMATIONS

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Body movements in captive bolt stunned cattle are often misinterpreted especially in the context of video surveillance (von Holleben and von Wenzlawowicz 2019). In this presentation we discuss recorded visual signs of reduced stunning effectiveness and show videos, which help to distinguish the important signs of brainstem activity from impressive but irrelevant body movements.

Stunning effectiveness was assessed in 4550 cattle, mostly Black Holstein, Flecked and crossbreeds in 5 plants all except one using close head restraint (line speed 50-72/h, av. stun-to-stick time: 45s, 38–51s). Signs for "doubtful-stunning" included rotated eyeball or eyelids pressed together >30s after shot, nystagmus or up to 3 breathing-movements. Signs for "insufficient-stunning" and increased probability of reawakening are >3 breathing movements or repeated corneal reflex, spontaneous blinking or no collapse/righting (von Holleben et al 2012, EFSA 2020). Simultaneously movements were recorded by action cams (Apeman®A100) up to at least 4 min. after sticking and videos analysed for kicking, twitching, body arching, leg moves during the process intervals "landing", "hoisting", "sticking", "1st" to "4th min. of bleeding".

In total 10 cattle were judged "doubtful" and 11 "insufficiently-stunned", of which 3 might have kept or regained consciousness for few seconds. No relations between movement categories and reduced stunning effectiveness were found. All movements occurred as well in perfectly stunned cattle (no movements: 6.6% of cattle) and are only indicative if shown together with brainstem-signs. To help identifying signs of reduced stunning effectiveness we created open access animations including examples from footage collected over the last 30 years.

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REFERENCES

EFSA AHAW Panel. Scientific Opinion on the welfare of cattle at slaughter. EFSA Journal 2020;18(11):6275, 107pp. https://doi.org/10.2903/j.efsa.2020.6275

Von Holleben K and Von Wenzlawowicz M 2019. Are movements after captive bolt stunning of cattle a sign of regaining consciousness ? 65th ICOMST, Postdam, Germany, Poster P-01-36, book of abstracts, 105; http://icomst-proceedings.helsinki.fi/papers/2019_08_36.pdf

Von Wenzlawowicz M, von Holleben K and Eser E, 2012. Identifying reasons for stun failures in slaughterhouses for cattle and pigs: a field study. Animal Welfare, 21, 51–60