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Welcome

Welcome to the 6th annual meeting of the EVCBMAW at the heart of Paris. It is a unique opportunity to share ideas, discuss current challenges, and strengthen collaborations within our community.

This year's theme *An Interdisciplinary Approach to Behavioural Medicine, Animal Welfare, Ethics, and Law* highlights the importance of integrating various disciplines to enhance deeper knowledge and better practice in behavioural medicine and animal welfare. Presentations will cover a range of topics, including the latest techniques in behavioural medicine, advancements in animal welfare, ethical considerations, and legal frameworks affecting veterinary practice.

The programme includes keynote lectures, oral presentations, poster sessions, as well as a study day for residents. We are honoured to welcome distinguished speakers.

The objectives of this conference are:

1. to promote sharing of knowledge and experiences among veterinary professionals
2. to encourage innovation and research in behavioural medicine and animal welfare
3. to foster interdisciplinary collaborations to improve animal health and well-being
4. to raise awareness on the ethical and legal issues in veterinary practice

We would like to extend our heartfelt thanks to all the speakers, participants, and sponsors who have contributed to the success of this event. Their commitment and support are vital to advancing animal welfare and behavioural medicine.

We hope that this conference will be a source of inspiration and knowledge for all participants, contributing to our shared goal.

Thank you for your participation and enjoy the conference!

Claire Diederich, Caroline Gilbert, Agnès Tiret, and Emmanuelle Titeux
on behalf of the local organizing committee

Verification of key parameters for captive bolt stunning of cattle

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For captive bolt stunning manufacturers have to define "appropriate velocity, exit-length and diameter of the bolt according to animal size and species" to ensure proper stunning (REG (EC) No.1099/2009). Aim of this study was to verify specifications of key parameters, presented by manufacturers.

For 14 different pneumatic and cartridge-driven penetrating captive bolt devices and combinations of cartridge/pressure applied, we verified exit-velocity (velocity testers AST-Stun-Tester, Jarvis® & high-speed camera, Fastcam 20,000 fps, Photron) and exit-length (measuring penetration depth after shooting at floral foam ELES VIDA® & high-speed camera) and measured diameter and bolt weight. Kinetic energy was calculated from velocity and bolt weight ($E_{kin} = ½*m*v^2$).

Bolt exit-lengths were 77 to 135 mm. Exit-velocity varied between 31 and 63 m/s being lower for pneumatic devices, here even underrunning existing recommendations (Daly et al. 1987). Diameter was 12.0-14.5mm. Measurements using different methods produced comparable results. Minor deviations due to different methods could be explained. However values did not always match information by manufacturers. One reason could be, that manufacturers use different methods to determine bolt velocity and exit length. Variations could also be due to insufficient standardization of cartridges (Grist et al. 2019).

Lower bolt velocity but higher bolt weights of pneumatic devices resulted in comparable values for kinetic energy for both types of drive. Kinetic energy should thus be added to the key parameters as it significantly influences the extent of concussion.

To achieve comparability, manufacturers should specify the methodology used for determination of key parameters in the operation instructions.

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The authors declare no conflict of interest.

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Grist A, Lines JA, Bock R, Knowles TG and Wotton SB 2019 'An Examination of the Performance of Blank Cartridges Used in Captive Bolt Devices for the Pre-Slaughter Stunning and Euthanasia of Animals' *Animals*, vol. 9, no. 8, 552, https://doi.org/10.3390/ani9080552