

Activities Health & Welfare Sub-Group report Meeting 16 September 2021

Extract from the minutes of the above meeting:

Working trial research

At its previous meeting, the Sub-Group had noted a preliminary report of the findings of the research into the scale and the long jump carried out at Nottingham Trent University. A more detailed draft of the report, which included recommendations for consideration by The Kennel Club, via the Sub-Group and the Working Trials Liaison Council, was now available and had been circulated to all Sub-Group members prior to the meeting

The Sub-Group noted that the paper had been presented at the Canine Science Forum which took place virtually 6-9 July 2021, and had been acknowledged as useful and important research.

Dr Anne Carter, the lead researcher and corresponding author of the paper, was welcomed to the meeting. Dr Carter would be presenting the report to the Sub-Group, and would address any queries which may arise.

Dr Carter reiterated that the objective had been to study the effects of reducing the height and length of the scale and the long jump respectively. She then provided a brief overview relating to the way in which the research had been carried out. Data had been collected on the forces acting on dogs when landing, and on joint angles.

Following analysis of the data collected, two reports had been written up, one of which was a general overview, the other being more detailed. During the peer review process some minor amendments had been identified as being required to one of the papers, but once the necessary corrections had been made it was hoped that both could be published on an open access basis in the near future. [Afternote: One paper has now been accepted for publication in the journal 'Animals' and the other is still under peer-review.]

The Sub-Group noted the main findings of the research, and its main recommendations, as follows:

Main findings:

- When the scale height was lowered from 6ft to 5.5ft, dogs had reduced landing force and less compressed joint angles on landing.
- When the scale height was lowered to 5ft dogs altered their traversing style from 'scaling' to attempting to 'jump' the obstacle.
- There was no relationship between length of long jump and landing forces or joint angulation on landing.
- There was a large amount of variation between dogs traversing the long jump, particularly in dogs <25kg. The greatest joint compression was observed on landing after traversing 9ft.
- There was no negative impact of shortening the long jump and dogs adjusted to avoid overjumping.

Main recommendations:

- From the findings, it is recommended that consideration be made about the scale being lowered from 6ft to 5.5ft. Whilst lowering to 5ft would further reduce the impact on joints and landing force, this in turn encourages the dogs to 'jump' rather than 'scale', changing the nature of the obstacle.
- There is evidence to suggest that shortening the length of the long jump may be of benefit to the dogs. Whilst not formally measured as part of the study, the capacity of the dogs to avoid overjumping the shorter distances suggests a sudden reduction of the long jump distance does not appear to impact dogs experienced in jumping a 9ft long jump.

A query was raised as to the units used for the landing force on the graph included within the report, as this was unclear. Dr Carter undertook to check this. [Afternote: it was subsequently confirmed that the landing force was measured in Newtons.]

It was highlighted that an arbitrary distinction had been made in the research between dogs of more or less than 25kg in weight, in order to separate lighter/heavier breeds. A suggestion was made that the size and overall construction of a dog, particularly its limb length, may significantly affect the way it performed the long jump more than its weight. It was agreed that limb length may well be a factor, as dogs with longer limbs tended to have a longer stride and that this may be an interesting topic for further study.

A request was made for video footage which could be used to assess the dogs' jumping techniques in relation to their limb length, however it was confirmed that only take-off and landing had been recorded on video and that there was no footage of the bascule stage of the jump.

An interesting observation was that experienced dogs, when asked to attempt a shorter long jump than they were used to, were able to compensate for the shorter distance and did not overjump.

In response to a query, Dr Carter confirmed that it was not possible to define a level of force at which a dog was likely to sustain an injury as the force alone would not indicate the likelihood of injury. It was only possible to conclude from the research that minimising or reducing the height or length of the scale and long jump respectively may be beneficial in reducing the risk of injury.

The Sub-Group was in full agreement that this had been an excellent piece of research

Barry Gilbert