Statement re agility jump height research for the Dog Health Group (DHG) from the Activities Health and Welfare Sub-Group (AHWSG)

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In recent years, there has been much discussion and debate about the "correct" height of jump for agility dogs to traverse. At present, dogs within their respective height (to the withers) category (small, medium or large), are expected to traverse jumps of set height (350mm, 450mm or 650mm), although as of January 2016, a "lower height option (LHO)" was introduced, allowing dogs to compete in their height category, but jumping 100mm lower.

There has been pressure on governing bodies of dog agility to review existing jump height rules and regulations and to undertake scientific research in an attempt to investigate further the effects of jumping specific heights on the kinetics and kinematics of dogs. To date, there remains limited research and the findings from that research remain largely inconclusive. This is not surprising given the large number of variables involved in examining this area, including breed difference, age, training regime, handler variation, gender differences and conformation to name but a few. At present, there is a desire to utilise research findings either to justify a change in the current height regulations or to maintain the *status quo*. Based on discussions within the most recent AHWSG meeting, it is considered that this remains not only extremely difficult to do, but also extremely unlikely to be fully resolved in the near future. However, having said that, where research has been undertaken, the outcomes continue to add to our growing body of knowledge relating to the performance dog, and the value of that cannot be underestimated as canine sports science remains well behind that of equine sports science in knowledge, understanding and application.

Key findings are available from work undertaken at Nottingham Trent University (NTU) and latterly at The Royal Veterinary College (RVC), with the RVC work being funded by the KC Charitable Trust. A summary of these key findings are*;

- Experienced dogs have more consistent take-off and landing distances and limb angles than novice dogs (NTU)

- Experienced dogs are better able to cope with different jump styles and approaches (NTU)

- Experienced dogs (KC Large) "cope better" with minimum (3.6 m) distance between jumps than novice dogs (NTU)

- Increases in jump height result in altered kinematics with key changes occurring at 75% of height to withers and then again at 125% of height to withers (NTU)

- There is uncertainty at what height welfare becomes a concern and likely differs for different conformations (NTU)

- Higher jumps (650mm vs 550mm) result in increased vertical take-off and landing force in forelimbs, increased hind limb take off decelerative force and increased impulse. However, reported take-off and landing forces remain smaller than those reported for dogs running round a bend (RVC)

- Smaller dogs produce more decelerative force and impulse at take off than larger dogs; this *may* result in earlier fatigue but cannot be directly attributed to injury risk as that was not a key study aim (RVC)

(*RVC findings are reported from a proof copy of a paper awaiting publication in the scientific press and thus remain confidential)

Based on these key findings, the AHWSG cannot make a clear recommendation to either the DHG or the Agility Liaison Council (ALC) based on existing scientific findings to either reduce jump height or maintain the *status quo*. There remains much potential for further exploration of this area. However, the acquisition of definitive data regarding "ideal" jump heights is unlikely to permit definitive recommendations due to the large number of variables involved.

It is suggested that any decision relating to jump height in dog agility also takes into account the competition environment (nationally and internationally), competitor perception and requirement and a judgment based on implementation of any changes, rather than being based solely upon scientific findings, that are at present inconclusive.