

**Artificial grass increases dairy cows' walking speed***S. Buijs and D. McConnell**Agri-Food and Biosciences Institute, Large Park, BT26 6DR Hillsborough, United Kingdom; stephanie.buijs@afbini.gov.uk*

Dairy cows often walk long distances between parlour and pasture. A softer, less abrasive walking surface may improve cow comfort, resulting in an increased walking speed. Knowledge on how laneway surface types affect dairy cow locomotion is currently lacking. This cannot be extrapolated from studies on barn floor types, as both the way the cow uses the surface and the available top-surface materials differ. To evaluate how a softer top-surface affects walking speed, a standard laneway (with a stonedust-over-gravel surface) was split into two sides and one side was covered with artificial grass. Dairy cows were each observed twice as they returned from parlour to pasture after their morning milking, once on each surface type. Video recordings were used to determine walking speed on a predefined 20 m long section of the laneway. In addition, the number of times one of the forelimbs was placed down on the 20 m stretch was counted as a rough index of step length. Speed and step length were determined for 31 cows that were observed on each surface type without stopping, trotting, cantering, or being too close to the preceding cow (and thus, likely influenced by her walking speed). Wilcoxon signed-rank tests were used to analyse the data, using each cow as her own control. Cows walked 5% faster on the artificial grass than on the standard surface (grass: 5.3 km/h (IQR: 5.1-5.5), standard: 5.1 km/h (IQR: 4.5-5.3),  $P=0.024$ ). Although there was a numerical indication of longer steps on the artificial grass (8 cows used less front limb placements on the artificial grass than on the standard surface, whilst only 3 cows used more), this difference did not reach significance ( $P=0.12$ ). This may be due to the rough index of step length we used. Alternatively, the greater walking speed may be partially due to quicker (instead of larger) steps. In conclusion, a softer, less abrasive laneway surface can increase dairy cows' walking speed between parlour and pasture. As reduced walking speed is a symptom of lameness, this may mean that the softer surface alleviated lameness. This will be analysed further by studying the cows' mobility score on the different surface types and its association with differences in walking speed.

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**Session 67****Poster 14****The new EAAP across commissions working group on mountain livestock farming***A. Zuliani, G. Arsenos, A. Bernués, G. Cozzi, P. Dovc, M. Gaulty, Ø. Holand, B. Martin, C. Morgan-Davies, M.K. Schneider and W. Zollitsch**EAAP Across Commissions Working Group on Mountain Livestock Farming, EAAP, Via G. Tomassetti 3/A1, 00161 Roma, Italy; zuliani.anna.2@spes.uniud.it*

The new EAAP Mountain Livestock Farming (MLF) across-commissions Working Group was established in late 2018 following the inputs received during the 1<sup>st</sup> Mountain Livestock Conference held in Bolzano, Italy, in June 2018 and the 69<sup>th</sup> Annual Meeting of EAAP held in Dubrovnik, Croatia, in August 2018. This initiative aims at joining research efforts in the field of mountain livestock farming, fostering transdisciplinary collaborations across disciplines, the development of new research ideas and the dissemination of relevant projects and results related but not limited to: animal nutrition, farming systems, land use/management, biodiversity conservation, organic/low input production, food quality, economy/policies and environmental sustainability/climate change in mountain areas. The working group is now in a process of engaging experts in the many fields that are relevant for MLF, identifying emerging areas of research, and encouraging collaboration among researchers from different countries and disciplines. It wants to be a welcoming platform for discussion on livestock production in mountain areas in a broad and transdisciplinary perspective. A further mandate is to disseminate relevant outcomes by organizing conferences (e.g. Mountain Livestock Conference), conference sessions (e.g. within EAAP) and joined events with other related initiatives that will enable researchers and stakeholders to contribute and exchange their new knowledge, experiences and innovations.