
The long road to lameness: considering walking distance as a challenge in pasture-based dairy production

Robin Crossley^{1,2*}, Muireann Conneely¹, Natasha Browne^{1,3}, Katie Sugrue¹, Imke J.M. de Boer² and Eddie A.M. Bokkers².

¹Animal and Grassland Research and Innovation Centre, Teagasc Moorepark, Fermoy, Cork, Ireland

²Animal Production Systems Group, Wageningen University & Research, the Netherlands

³University of Nottingham, Nottingham, United Kingdom

* Corresponding author. E-mail: robin.crossley@teagasc.ie

One challenge of pasture-based dairy production systems is that grazing cattle must walk greater distances from the paddock to the parlour to facilitate milking. In Ireland, cows spend an average of 241 days per year at grass, typically brought to the parlour for milking twice per day, resulting in a relatively large portion of their daily time budget spent walking. Longer walking distances, however, may be associated with increased lameness, thus impacting their welfare. To investigate the potential impact of walking distance on lameness and welfare, the first step is establishing a better picture of the typical distances covered by grazing dairy cattle in Ireland. During the grazing season (April-September 2019) 100 farms were visited throughout the primary dairy producing counties of Ireland. Farmers were surveyed regarding their grazing practices and their cows were mobility scored by trained observers using a 4-point scoring system (0 = good, 1 = imperfect, 2 = impaired, 3 = severely impaired mobility). Farms had a mean size of 45.2ha (range= 14-101ha), milking an average of 124 cows (range = 38-253) twice daily. According to farmers' responses, the average walking distance between the parlour and the furthest grazing paddock had a mean of 989m (range = 400-2000m). Cows could be travelling this path 4 times per day, thus cows walk on average up to 4.0km/d. On 51% of farms, cows were collected from paddocks on foot, while 31% of farmers used some type of motorised vehicle. Using vehicles to move cattle has been associated with increased hoof injuries as hurried animals have difficulty avoiding hazards on roadway surfaces, however, this was not reflected in the data from this survey. Mobility scoring indicated that the mean proportion of cows across farms with score 0 was 36% (range = 9-76%), score 1 was 54% (range = 22-76%), score 2 was 9% (range = 1-27%), and score 3 was 1% (range = 0-5%). A relatively low level of cows scored 2/3, however, a high proportion of cows scored 1 which may reflect other underlying issues, such as roadway conditions, another key factor associated with lameness. While this survey illustrates the potential stress imposed on grazing dairy cattle through long walking distances, further study is required to investigate possible associations with lameness and welfare.