ASSOCIATION BETWEEN MILK YIELD AND SERIAL LOCOMOTION SCORE ASSESSMENTS IN UK DAIRY COWS

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Objectives: Farm assurance schemes are increasing consumer awareness of dairy cow welfare. Compared to these demands being imposed on dairy farmers, the need for LAMENESS monitoring and control may be more readily accepted as a priority if reliable data on the financial impact of locomotion score (LS) on milk yield were available. Grading the locomotion of all cows in a herd using a standardized format has been recommended to improve the sensitivity of LAMENESS diagnosis. Recently, a 4 point LS scale has been proposed as the UK industry standard [1]. Our objective was to investigate how this impacts on the milk yield of affected cows.

Methods: Herds were selected on the basis of location, willingness to participate, and having at least 120 cows with adequate records; 7 herds comprised of predominantly Holstein-Friesian cows were included. LS assessment of all milking cows was carried out monthly for 12 consecutive months up to August 2009 by the first author [1]. Visits took place within 10 days of a milk recording. Individual test day milk yields (TDY) were obtained electronically. TDY was the outcome variable used in the analysis. A 2 level linear regression model was used to account for the correlation of repeated measures of milk yield (level 1) within cow (level 2). Farm of origin, parity and stage of lactation were included as fixed effects.

Results: Provisional results indicate that LS 3 is associated with a significant decrease in milk yield that commences 4 months later [2]. The greatest reduction in milk yield is associated with LS 3 recorded close to the time of calving, and its persistence. Cows that were ever lame (LS 2 and 3) during this study tended to be higher yielding than those that were never lame.

Conclusions: In these herds, the negative impact of LAMENESS on milk yield was delayed. This was not tangible at the herd level as the highest yielding cows were affected. These results emphasize the importance of prompt detection and treatment of LAMENESS to improve welfare and enable cows to achieve their genetic potential for milk yield.

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References:
