

DairyCare COST ACTION

April 12th, 2017

COST ACTION: FA1308

STSM first title: Feeding behaviour change after feeding system change: comparing heifers with older cows.

STSM new title: How is the behaviour of dairy cows affected by moving to a new group?

Reference number: COST-STSM-FA1308-35012

Period: 06.02.2017 – 31.03.2017

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Host: Dr Marie Haskell, Scotland's Rural College (SRUC), Edinburgh, UK

Background

On-farm cows are moved between management groups a number of times each reproductive cycle. As herd animals they have fixed hierarchical positions; that is one factor that makes it challenging from a welfare aspect. Each time a new cow is added to the herd, the hierarchy in that group is disturbed and social relationships are re-established using non-physical and physical interactions (Arave and Albright, 1976; Kondo and Hurnik, 1990). This leads to higher frequency of aggressive behaviour. Moving more than one cow to a new group might minimize the problem. Heifers are more at risk because of their smaller size, and because they have less experience than older cows. Submissive cows are also at particular risk for whom changing group will be a stressor and therefore a welfare risk.

We hypothesize that heifers (because of their smaller size) and submissive cows' activity scores will be more affected by group changes, more than that of more dominant cows, but that re-grouping does not affect cows' dominance behaviour.

The aim of the STSM was to study how heifers and cows change their feeding and dominance behaviour after group change.

Description of the work carried out during the STSM:

The study was conducted on Langhill dairy farm. Seventeen heifers and fourteen dry cows, a total of 31, were selected. Each animal had IceTag (n = 16) or IceQube (n = 15) activity monitor attached around her right hind leg. Heifers and cows were mixed in each group. Observations were made in a far-off dry group, in a close up group and in the main herd. In far dry and close up group we observed cows' social behaviour by measuring the distance between focal cow and her two nearest neighbours. Together with visual observations, video recordings were made to assess antagonistic behaviour after fresh feed delivery. In the main herd, cows were observed on the first day or second day, if the time between feed delivery and when cow returned from milking was longer than 30 minutes. Each time animals moved to a new group their behaviour were recorded in three consecutive days.

Description of the main results obtained

Results are not yet available. Right now video analyse is in progress.

Foreseen publications/articles resulting from the STSM

Results from this study will be published in scientific journal and presented as a poster in EAAP 2017 meeting in Tallinn, Estonia, if accepted.

Acknowledgement

I would like to thank DairyCare COST for the possibility to go to Scotland's Rural College.

References

Arave, C. W., Albright, J. L. 1976. Social rank and physiological traits of dairy cows as influenced by changing group membership. *Journal of Dairy Science*. 59:974 – 981

Kondo, S., Hurnik, J. F. 1990. Stabilization of social hierarchy in dairy cows. *Applied Animal behaviour Science*. 27:287 - 297