



FAWEC

FARM ANIMAL
WELFARE
EDUCATION CENTER

Udder pain and discomfort at dry-off in dairy cattle (II)

Bach A, De-Prado A, Aris A 2015. Short communication: The effects of cabergoline administration at dry-off of lactating cows on udder engorgement, milk leakages, and lying behaviour. *Journal of Dairy Science* 98, 1-5.

Bertulat S, Fischer-Tenhagen C, Suthar V, Möstl E, Isaka N, Heuwieser W 2013. Measurement of fecal glucocorticoid metabolites and evaluation of udder characteristics to estimate stress after sudden dry-off in dairy cows with different milk yields. *Journal of Dairy Science* 96, 3774-3787.

Chapinal N, Zobel G, Painter K, Leslie KE 2014. Changes in lying behaviour after abrupt cessation of milking and regrouping at dry-off in freestall-housed cows: A case study. *Journal of Veterinary Behavior* 9, 364-369.

Fregonesi JA, Veira DM, von Keyserlingk MAG, Weary DM 2007. Effects of bedding quality on lying behaviour of dairy cows. *Journal of Dairy Science* 90:5468-5472.

Isaka N, Mainau E, Temple D, Lopez A, De-Prado A, Bertulat S, Heuwieser W, Manteca X. Effect of cabergoline on lying behavior and udder pain in dairy cows at dry-off (unpublished data, under revision to the *Journal of Dairy Science*).

Lacasse P, Ollier S, Lollivier V, Boutinaud M 2016. New insights into the importance of prolactin in dairy ruminants. *Journal of Dairy Science* 99:864-874.

Ledgerwood DN, Winckler C, Tucker CB 2010. Evaluation of data loggers, sampling intervals, and editing techniques for measuring the lying behavior of dairy cattle. *Journal of Dairy Science* 93:5129-5139.

Leitner G, Jacoby S, Maltz E, Silanikove N 2007. Casein hydrolyzate intramammary treatment improves the comfort behavior of cows induced into dry-off. *Livestock Science* 110, 292-297.

Metz JHM 1985. The reaction of cows to a short-term deprivation of lying. *Applied Animal Behaviour Science* 13:301-307.

Munksgaard L, Jensen MB, Pedersen LJ, Hansen SW, Matthews L 2005. Quantifying behavioural priorities – effects of time constraints on behavior of dairy cows, *Bos Taurus*. *Applied Animal Behaviour Science* 92:3-14.

O'Driscoll K, Glesson D, O'Brien B, Boyle L 2011. Does omission of a regular milking event affect cow comfort?. *Livestock Science* 138: 132-143.

Tucker CB, Lacy-Hulbert SJ, Webster JR 2009. Effect of milking frequency and feeding level before and after dry off on dairy cattle behavior and udder characteristics. *Journal of Dairy Science* 92:3194-3203.

Zobel G, Leslie K, Weary DM, von Keyserlingk MAG 2013. Gradual cessation of milking reduces leakage and motivation to be milked in dairy cows at dry-off. *Journal of Dairy Science* 96, 5064-5071.

Zobel G, Weary DM, Leslie KE, von Keyserlingk MAG 2015. Invited review: Cessation of lactation: Effects on animal welfare. *Journal of Dairy Science* 98, 1-15.