Longitudinal study of comfort around resting and its correlation with reproductive efficiency in dairy cows in Southern Spain.

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Animal welfare standards should approach numerous aspects related with the routine lifestyle of animals. How cows feel in the environment in which humans have imposed them for living is a common worry. Lying time is more important than eating time and social contact in dairy cattle. The time that cows are lying is about 12-14 hours per day. To this regard, it is very interesting to study how much time the cow is lying, as a prolonged time indicates that the animal is not feeling well. When lying time is disturbed, dairy cows cannot recuperate sufficiently and they may experience discomfort, and so increases the risk of health problems such as lameness. This could affect the oestrus expression and consequently its detection. Neither expression of oestrus nor reproductive performance (such as fertility) have been used as criteria for the assessment of welfare animal, except in some Nordic countries. In order to evaluate the comfort around resting indicators, its relation with reproductive performance (heat detection rate and fertility), and to assess if any of the reproductive indexes can be used as indicators of welfare, six farms were evaluated over three years (2012, 2013 and 2014). To this aim, collision with equipment, how cows are lying, time needed to lie down, cleanliness, heat detection and pregnancy rates were recorded. The descriptive analysis throughout three years showed the following results: less cleanliness of lower legs, lower heat detection in the 66.7% of farm; when the cleanliness of flanks and upper legs was poorer, 50% of farms presented lower heat detection and 66.7% showed lower fertility; when cleanliness of udder was worse, the majority of farms showed lower pregnancy rates. On the other hand, when cleanliness in flanks and upper legs were worse, five out of the six farms showed serious problems in time needed to lie down. Finally, when moderate or serious problems in time needed to lie down were noted, five out of six farms presented a decline in heat detection and fertility. Results demonstrate the link between welfare indicators and reproductive parameters, and further studies should be carried out to consolidate these findings.

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