APPLICATION OF THE WELFARE QUALITY® PROTOCOL IN DAIRY CATTLE TO DETERMINE THE DEGREE OF ANIMAL WELFARE

APLICAÇÃO DO PROTOCOLO WELFARE QUALITY® EM BOVINOS DE LEITE PARA DETERMINAR O GRAU DE BEM-ESTAR ANIMAL

Ida Rúbia Machado Moulin*[1], Luainni de Souza Charpinel[2], Aparecida de Fátima Madella-Oliveira[3]

[1]Universidade Estadual do Norte Fluminense - UENF, Campos dos Goytacazes-RJ, Brazil.
[2]Faculdade Multivix – campus Cachoeiro, Cachoeiro de Itapemirim – ES, Brazil.
[3]Instituto Federal do Espírito Santo - campus Alegre, Alegre – ES, Brazil.
*Corresponding author: idarubiammoulin@gmail.com

Abstract

The analysis of animal welfare has advanced considerably, based on heightened public concern about the treatment of livestock. Consumers increasingly demand products obtained through good animal treatment and environmental preservation practices. The objective of this work was to evaluate the welfare parameters of dairy cattle according to the Welfare Quality® protocol. The study was carried out in the dairy cattle sector of the Instituto Federal do Espírito Santo, Alegre Campus, during milking in the afternoon, for three consecutive days during the months from December 2020 to March 2021. A total of 70 lactating cows were observed with application of the Welfare Quality welfare protocol, which was adapted for cows during milking. The method consisted of direct and continuous observation of the animals during handling, following the normal routine in the pen. The principles of the Welfare Quality protocol were used to determine the satisfaction of the tenets good food, good health, good accommodation and appropriate behavior. These four principles have detailed criteria for carrying out the analyses, namely: absence of prolonged hunger, absence of prolonged thirst, absence of injuries, absence of diseases, comfort for rest, ease of movement, expression of other behaviors, and good human-animal interaction. Data were first analyzed by computing descriptive statistics using the FREQ and MEANS procedures. The following results were observed: The criterion of absence of prolonged hunger was evaluated by the body score of the cows, resulting in 16.66% fat cows; 47.08% intermediate cows and 36.25% lean cows. The criterion absence of prolonged thirst was determined by the presence of drinking fountains/troughs in all the places where the animals remained. In the criterion absence of injuries, only 11.7% of the cows were lame and 27.5% had skin lesions. The criterion absence of diseases presented 14% of 1840 teats with a positive result for clinical mastitis, and 1372 teats (31.71%) were reactive to the California Mastitis Test (CMT) for subclinical mastitis, with 13.48% suffering the most severe form of subclinical mastitis with the formation of a thick gel. The rest comfort criterion resulted in 15.88 m² of space for each animal from the waiting area to the milking parlor, and the animals' cleanliness score resulted in 2.9% very clean cows, 46.72% clean cows, 24.08% dirty cows and 26.3% very dirty cows. The criterion expression of other behaviors was evaluated as appropriate behavior in milking, with 52.3% of the cows remaining calm, and 51.35% did not require the use of rope to secure the limbs, 57.43% did not react to placement of the teat cups, 2.53% removed the teat cups, and 62% remained calm when leaving the milking parlor. For the criterion good human-animal interaction, 46.94% of the cows were considered angry or very angry; 43.24% allowed human approach, but they were not touched, and thus were considered tame cows; 10.82% were touched and considered very tame cows. We concluded that the welfare parameters of dairy cattle based on the Welfare Quality protocol allowed us to detect some critical points that affect welfare such as the use of oxytocin and the hygiene score. However, it was possible to note some positive aspects with a good animal welfare, related to the parameters of good nutrition and good health.

Keywords

Good practices, cattle breeding, mastitis.