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Dairy calves welfare indicators

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Animal welfare, nowadays, is a meaningful worldwide topic in animal production, regarding ethical, legal and commercial concerns. Despite many advances in this area, recent literature suggests that there is still much work to be done. The morbidity and mortality numbers in dairy calves before weaning reveals either a lack of scientific knowledge and/or a deficiency in the communication between academic research and dairy farms. The morbidity and mortality in dairy calves is also a societal issue that translates into an ethical concern related to animal production. Therefore, reducing those problems in dairy calves allow better welfare, higher efficiency in productivity and ethical standards. A better comprehension of welfare indicators in dairy calves is essential to implement management strategies that all in all are efficient, allow proper growth and reduce discomfort and illness. From a protocol between UTAD and UE, a project has the main objective to improve the scientific knowledge of dairy calves welfare, using physiological, behavior, health and morphometric measures as welfare indicators. The specific objectives are: (1) To evaluate the impact of the farm infrastructures and physical features on the animal welfare; (2) To assess behaviors mechanisms associated with discomfort, pain, disease and fear; (3) To identify factors that affect the calf's passive and active immunity and how it is related to health and performance; (4) To identify and validate specific calf welfare indicators, using recent and non-invasive methodologies, such as infrared thermography to detect infectious diseases and saliva to measure stress. The data will be collected from female calves of Holstein-Friesian breed from dairy farms in the north and south of Portugal. The dairy farm hazards are going to be analyzed according to the European Commission indications regarding calves welfare. From 72 welfare indicators revised in the literature, the ones with more validity and feasibility are going to be analyzed. The results are going to be divulged in scientific journals, symposium and national farm meetings during the next four years.