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CLAW AND FOOT HEALTH: EARLY DIAGNOSTICS AND PREVENTION OF FOOT LESIONS IN DAIRY CATTLE

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ABSTRACT Lameness is a painful and costly disease. It is estimated to be one of the major animal welfare issues in dairy production. Lameness decreases milk production, increases involuntary culling and affects reproductive performance. Due to these costs it is the third important health trait after mastitis and fertility disorders. We present here a new research program aiming to predict existing lameness cases with technological methods and preventing new cases via breeding. Lameness or claw disorders have found to have genetic variation, which enables the selection for better claw and foot health. Many conformation traits have also been found to be genetically correlated to lameness and claw disorders; hence they can be used as information to increase the accuracy of genetic evaluation of lameness or utilized through correlated response. Due to its high cost and welfare problems lameness has to be included in the breeding goal in dairy cattle. The aim of this three years project is to develop automatic lameness detection in a milking robot and develop a model to predict the lameness from the early observations with automatic device. Another aim is to estimate the genetic parameters of claw disorders and the genetic correlations of claw disorders with conformation traits, calculate the economic value of lameness or foot lesions and construct an overall index to be used in selection for better claw and foot health. The project aims to improve the welfare of dairy cows and the economical efficiency of milk production through earlier observation of claw problems and through better claw and foot health.

Keywords: Lameness, Foot health, Lesion.