A NON INVASIVE METHOD TO MEASURE
THE LAMENESS IN DAIRY COWS

INTRODUCTION
Thermography is a non-invasive technique that may be used to remotely assess skin temperature at distance, without interferences with animals and their behaviour.

AIM
Aim of this research was to verify the possibility of using thermography technique as a diagnostic tool to early detect foot pathologies in dairy cows.

MATERIALS and METHODS
Six experimental sessions were conducted on 130 dairy cows of different age and stage of lactation, in five dairy cow farms in the north of Italy. Animals were gathered in the waiting room before milking and subjected to thermographic measures. After that, the veterinarian made the diagnosis, checking if the disease was actually present on each foot, without knowing the opinion of the technician.

RESULTS AND DISCUSSION
Correspondence between the thermographic measurements and the veterinary diagnosis was statistically verified by Proc FREQ (SAS® System). Results were as follows: sensitivity 93% and specificity 38% for back limbs, 50% sensitivity and specificity 93% for the fore ones. Next steps will be to standardize the methodology and to follow some cases positive only at thermography measure, in order to monitor their evolution over time.