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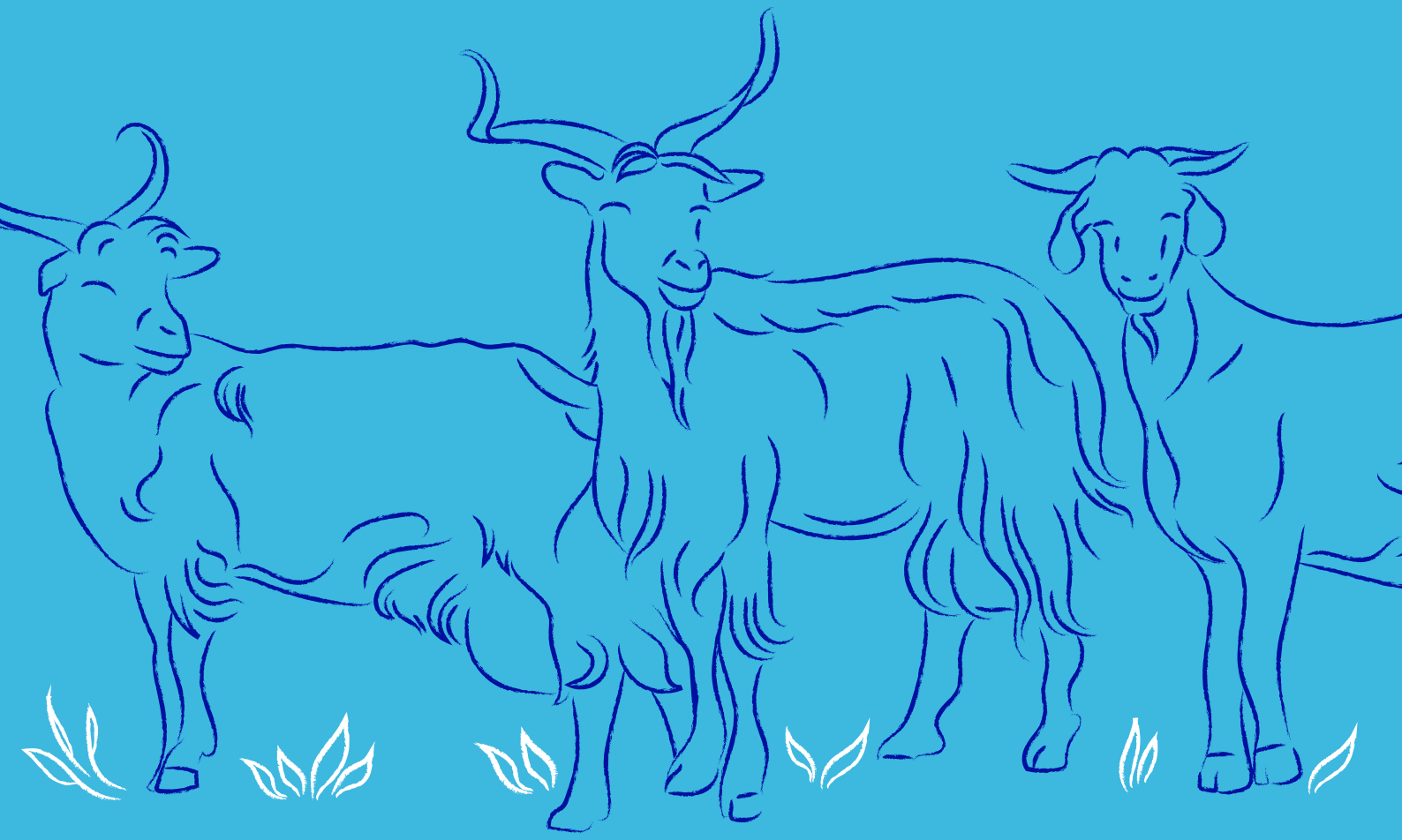

European Regional Conference on Goats 2025

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International Goat Association

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Relationship Between Thermography and Rectal Temperature in Goat Kids

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Key words: Infrared thermography, goat kids, rectal temperature, observer effect, animal welfare.

Infrared thermography (IRT) is a non-invasive method for measuring surface temperature and has potential applications in livestock monitoring. This study evaluates the correlation between rectal temperature, measured with a digital thermometer, and surface temperature obtained via IRT in Majorera goat kids. Temperature data were collected over three days from 11 animals, using a thermographic camera and digital thermometer. Measurements were taken at multiple body regions, including the perineal area, which is anatomically close to rectal measurements. Statistical analyses, including Spearman's correlation and non-parametric tests, were performed using Jamovi software. Results indicate a significant correlation between rectal and perineal temperatures ($p < 0.05$), supporting the validity of IRT as a potential alternative for monitoring body temperature in goat kids. However, no strong correlations were observed between rectal temperature and other body regions. Observer variability significantly influenced results, likely due to inconsistencies in camera distance. Standardization of measurement protocols is recommended to enhance reliability. Future research should include febrile animals to expand the temperature range and validate IRT for health assessments in goat farming.