Faiza Qadeer

KEY-WORDS:
. SYSTEMS BIOLOGY · HEAT STRESS
· GENOMICS & PROTEOMICS

PROFILE

Plant Pathologist and Molecular biologist with a Master of Science in Plant Pathology. Currently, I am first year PhD researcher specializing in a systems biology approach to understand the mechanisms underlying heat stress resilience in dairy cows.

AFFILIATION

Department of Animal science,
Food and Nutrition (DIANA)
Università Cattolica del Sacro Cuore

LANGUAGES

Mother language

Level C1

HOW TO REACH ME

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PROJECT TITLE

A systems biology approach to understand the mechanisms underlying heat stress resilience in dairy cows.

Steps of the research

- Investigating heat stress resilience in Italian Holstein dairy cows.
- Analyzing genetic, epigenetic, and microbiome influences on thermo-tolerance.
- Collecting biological samples and monitoring key parameters.
- Using 16S rRNA sequencing to assess bacterial communities.
- Integrating metabolomics and bioinformatics to identify heat resilience biomarkers.

Research Contribution

This research explores the genetic, epigenetic, and microbiome factors behind heat stress resilience in dairy cows. By developing sustainable strategies, it aims to reduce medication use, improve milk quality, and support antibiotic-free production. The findings will help farmers boost profitability while lowering methane emissions, paving the way for climate-smart, sustainable dairy farming.

Collaborations

- Università Cattolica del Sacro Cuore (UCSC)
- CERZOO Experimental Farm
- International university and industry collaborations in dairy science and microbiology

Why should you care?

This research tackles heat stress in dairy cows using a systems biology approach to uncover resilience mechanisms.
By developing sustainable solutions, it aims to reduce costs, minimize environmental impact, and support food security amid climate change.