TECHCARE project: an Italian pilot study on dairy sheep to test innovative technologies for welfare monitoring

M. Decandia[1], V. Giovanetti[1], M. Acciaro[1], C. Manca[1], G. Molle[1], C. Spanu[2], F. Martini[3], A. Solinas[3], C. Morgan-Davies[4].

[1]AGRIS Sardegna, Sassari (Italy); [2]University of Sassari, Department of Veterinary Medicine, Sassari (Italy); [3]Abinsula, Sassari (Italy); [4]Scotland's Rural College, Scotland, (UK).
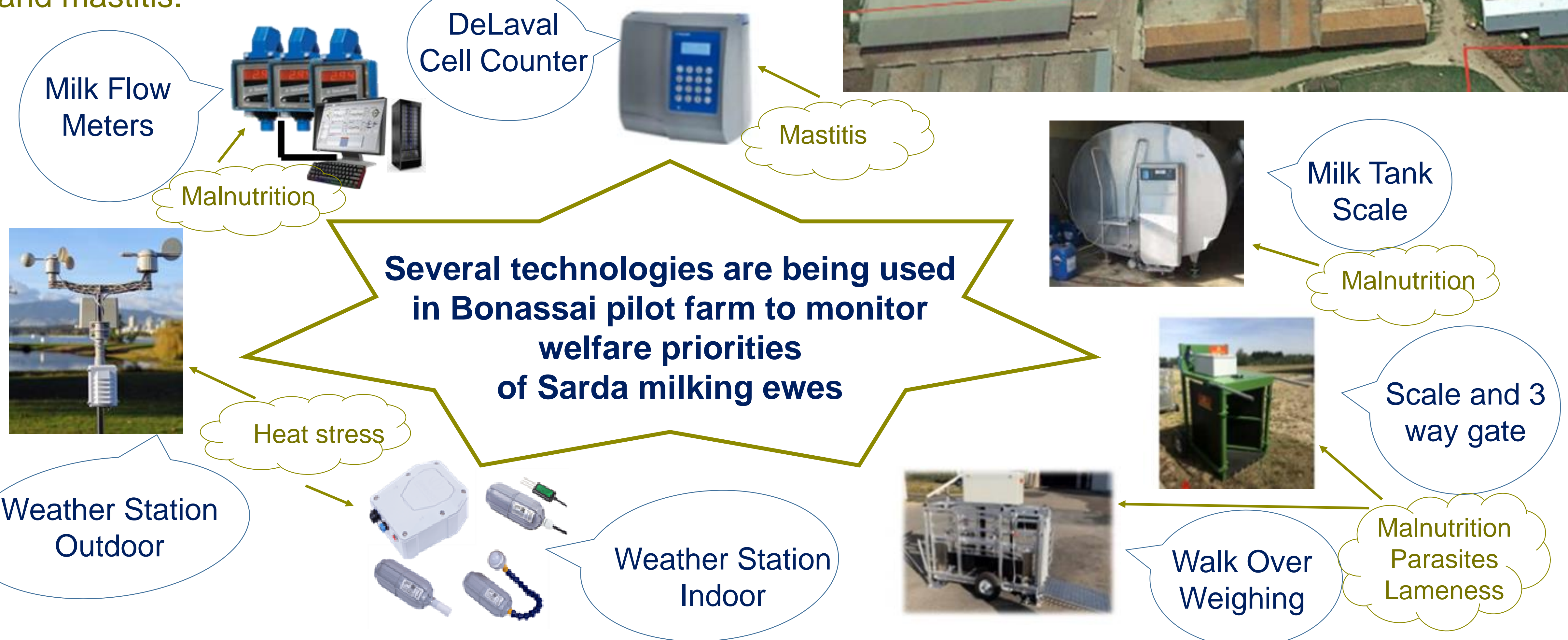
TechCare is a multi-actor approach project (EU H2020 programme, grant agreement n. 862050) to demonstrate innovative approaches and appropriate business models to monitor animal-based welfare indicators and improve welfare management in small ruminants systems, using precision livestock farming (PLF) technologies along the whole production chain (Morgan-Davies et al. 2021).

During 2022-2023, AGRIS Sardegna (agriculture research agency of Sardinia Region), together with Abinsula (a North Sardinia ICT Company), in the frame of TechCare project, is conducting trials in one pilot farm (Bonassai) to monitor dairy sheep welfare.

Bonassai Pilot Farm

Experimental sheepfold with various technologies

Welfare priorities identified in TechCare project through a series of national workshops with relevant stakeholders are:
under/malnutrition, lameness, gastrointestinal parasites and mastitis.

Milk Flow Meters

DeLaval Cell Counter

Mastitis

Malnutrition

Milk Tank Scale

Malnutrition

Several technologies are being used in Bonassai pilot farm to monitor welfare priorities of Sarda milking ewes

Scale and 3 way gate

Heat stress

Malnutrition Parasites Lameness

Weather Station Outdoor

Weather Station Indoor

Walk Over Weighing

Weather station Indoor

Weather station outdoor

Creates reports

Milking parlour

Live weight & scores

EWS

Status Gateway

Status Devices

TechCare AGRIS   Powered by Abinsula.

Sassari   16°C

Data collection, transfer and analysis issues are verified, as well as connectivity and infrastructure requirements thanks to an IoT platform realized by Abinsula.

Early warning systems will be developed from the data collected, together with those from the other pilot farms in the project.

TECH CARE
Integrating innovative TECHnologies along the value Chain to improve small ruminant welfARE management

@TechCareproject   @TechCareproject   @TechCareproject