



Integrating innovative **TECH**nologies along the value Chain  
to improve small ruminant **welfARE** management

## Newsletter - Issue 1

January 2021



The **TechCare** project has received funding from the European Union's Horizon 2020  
Research and Innovation Programme under grant agreement N°862050.

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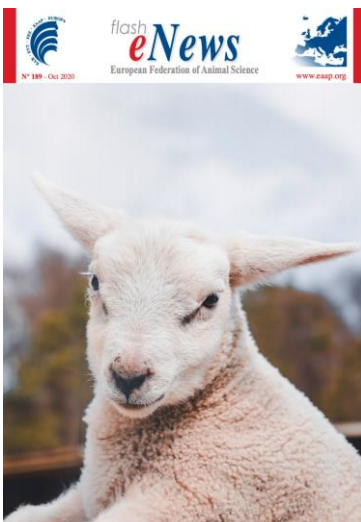
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### The H2020 TechCare project (2020-2024) has started!

A €5.7 million research project involving nine countries – from Scandinavia to the Middle East – is aiming to revolutionise the use of precision technology in sheep and goat farming for welfare management. Led by Scotland’s Rural College (SRUC) in Scotland, it will be the biggest study of its kind for small ruminants and will focus on improving management of welfare as well as performance. The four-year project, which started on 1st September 2020, has received funding from the European Union’s Horizon 2020 research and innovation programme, and will assess the usefulness of different Precision Livestock Farming (PLF) approaches for sheep and goats welfare management by, as a first step, running workshops and discussion groups with members of the industry, including farmers, transporters, abattoirs, as well as consumers and welfare associations. A selection of innovative technologies, which could include wearable sensors and virtual fencing, will be tested on demonstration farms in Scotland, Norway, France, Italy, and Israel, before being deployed on commercial farms in Ireland, Spain, Greece, France and Romania, to ultimately create welfare alerting systems for sheep and goats farmers. Dr Claire Morgan-Davies, who leads the project, said: “Many of the challenges to the welfare of sheep and goats in Europe – including a lack of supervision, provision of feed, risk of predation, and long-distance transport to slaughter – arise from the constraints imposed by the harsh climatic and geographic conditions in which they are often reared. However, a PLF approach could help to improve welfare management and so mitigate the impact of these welfare risks for the benefit of sheep and goat farmers around the world.” In addition to SRUC, 18 other partners from eight other countries – Ireland, Norway, Spain, Italy, France, Romania, Greece and Israel – are involved, covering meat sheep, dairy sheep and dairy goat production. The small ruminant population (sheep and goats) of the EU in 2015 was approximately 98 million animals, of which 87 per cent were sheep, while there are approximately 2.4 million and 670,000 additional animals in Norway and Israel respectively. Small ruminants represent 30% of all livestock reared in Europe. The project team held its first consortium meeting online at the end of September, to comply with the current restrictions. The first stakeholders’ workshops in the project are scheduled to take place this winter in the different partners’ countries, so do not hesitate to contact us if you wish to take part. To find out more, contact the coordinator Dr Claire Morgan-Davies (Claire.morgandavies@sruc.ac.uk) or visit the [cordis website](#).



Cover page of the issue no. 189 of the EAAP e-newsletter where the article appeared on 14th October 2020.

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## News from the Project

### 1<sup>st</sup> TechCare National Workshop

**Why?** In TechCare, the multi-actor approach with stakeholders is intrinsically embedded at every stage of the project, to allow for constant feedback and knowledge exchange with all activities. Two National Workshops/focus groups per year per country are planned. During these events, stakeholders' opinions will be sought out to guide the project, and their attitudes and behaviours will also be explored, to understand the socio-cultural contexts within which decisions are taken.

**When?** The 1st National Workshop will be held in March 2021 in each partner country.

**Where?** Virtual Event online

**Who?** Participants will be the stakeholders of the small ruminant value chain in each country (from farmers, to transporters, abattoirs, industry representative, welfare organisations, etc.). Do not hesitate to contact us if you are interested in joining in. In each country, a national Workshop Facilitator, well trained in communication and technical tools, will coordinate the discussions. If you are interested, contact Eva Sossidou (sossidou@vri.gr) who will relay your enquiries to the relevant Workshop Facilitator.

**What?** The 1st National Workshop will focus on stakeholders' feedback and prioritizing welfare issues in small ruminant systems in each partner country. The basis for the discussions and debates will be the prioritizing list developed during the project and customized to address existing production systems and welfare priorities, specific to each partner country.

### Developing a Welfare Prioritization

The first stage in the activities of TechCare is to determine the priority welfare issues experienced by sheep and goats in the different production systems used across Europe. In the first step, we compiled all the risks to welfare considered in the scientific literature, resulting in lists of more than 80 issues per species. These were reduced to 20-25 key welfare issues per species, allowing for the different production systems in use across the EU (dairy or meat, intensive or extensive, hot and dry or cold and wet).

These 'long-lists' of welfare issues will be used by stakeholders in the planned Stakeholder Engagement meetings to derive a shorter list of the most important risks to welfare for sheep and goats in Europe.



Photo: Yngve Rekdal / © NIBIO



## TechCare Partner Team: Scotland's Rural College (Project Coordination)



*Claire Morgan-Davies*

SRUC (Scotland's Rural College) is the UK's leading Research, Education and Consultancy providing organisation specialising in services for the land-based industries both nationally and internationally. Its 1500 staff provides research, education and consultancy services. SRUC has a number of research farms across Scotland, including the Hill and Mountain Research Centre in the Western Highlands and the Beef and Sheep Research Centre in Midlothian, which provide resources of relevance to TechCare.

SRUC is the TechCare project coordinator and will bring its expertise in animal welfare assessment, precision farming technology, applied animal production research, and qualitative participatory activities with farmers, rural industry actors and policy makers to the project. Dr Claire Morgan-Davies, with expertise in extensive livestock systems and Precision Livestock Farming (PLF) is the project coordinator and leads the project management.



*John Holland, Nicola Lambe, Ann McLaren*



*Cathy Dwyer*

Prof Cathy Dwyer, with great knowledge and expertise in animal behaviour and welfare, is leading the work on sheep and goat welfare. SRUC also have significant input as experts on PLF tools for sheep in grazing environments, and, by providing testbeds for technology in SRUC's well equipped research and demonstration sheep farms, with Dr Ann McLaren, Dr Nicola Lambe and Dr John Holland.



*Andrews Barnes*

Finally, Prof Andrew Barnes and Dr Sam Beechener, with expertise in social science and rural stakeholders' behaviour, will have inputs in stakeholder engagement activities. Sam Beechener and Ann McLaren are the workshop facilitators for the UK. The SRUC team also has significant input into dissemination and exploitation activities, since it has an excellent track record in organizing national and international multi-actors meetings, workshops and conferences, as well as providing excellent capacity for knowledge transfer and exchange towards a range of end-users.



*Sam Beechener*

## New additions to TechCare: Michelle Reeves, Aimee Walker, Estelle Leroux

### Michelle Reeves (PhD student - SRUC)



Michelle received her Bachelor of Science in Wildlife Biology from McGill University in her hometown of Montreal, Canada. Thanks to semesters spent studying in Spain and Panama, she speaks Spanish fluently, along with her native French and English. During her Masters in Applied Animal Behaviour and Animal Welfare at the University of Edinburgh in 2015, she studied maternal behaviour and lamb survival in hill sheep. She has since worked as part of a team investigating hoof diseases in sheep at the University of Warwick and gained experience working with dairy and poultry producers applying on-farm welfare programs across Canada. In her spare time, Michelle can be found hiking around the Pentlands or trying out a new recipe in her kitchen. She joined the TechCare team and started her PhD on the Development and validation of animal-based welfare indicators for a Precision Livestock Farming approach to improving the welfare of small ruminants in October 2020 with Cathy Dwyer. Michelle looks forward to pursuing her interest in animal welfare assessment methods and hill sheep health while contributing to practical PLF solutions for small ruminant producers and their animals.

### Aimee Walker (PhD student - SRUC)

Aimee received her Bachelor of Science in Zoology from the University of Glasgow in 2014. During her studies Aimee undertook several internships including both at a local farm near Glasgow, as well as a large operation in Montana, USA. This led Aimee to then complete a Masters in Wildlife and Livestock Management at the University of Glasgow, where she investigated the impact of the reintroduction of wolves on livestock producers in the Greater Yellowstone Area. In her spare time Aimee enjoys hill-walking and horse riding, but loves nothing more than being curled up with a good book. Aimee started her PhD on Adopting Precision Livestock Farming technologies to improve small ruminant management and welfare in grazing systems in January 2021, with Claire Morgan-Davies. Aimee is excited to pursue the potential for PLF tools, and looks forward to investigating how this can be implemented by small ruminant producers.



### Estelle Leroux (MSc student - INRAE)



Estelle Leroux is currently studying animal sciences and productions in the Institut Agro - Agrocampus Ouest in Rennes (France). She will do her Master thesis internship on the TechCare project from February to August (2021) by conducting an experiment for the evaluation and validation of an automatic walk-over weighing (WoW) system for monitoring the individual growth rate, behavior and welfare of Merinos d'Arles ewe lambs, reared on grazing pastures in the Mediterranean France. Estelle is looking forward to be part of this project!

## Social media accounts

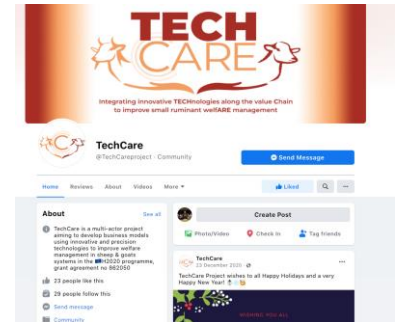
TechCare Social media accounts will play a crucial role in the capacity of the project to reach a wide and different audience. For this reason, social media accounts have been activated promptly in the first phase of the project. [Twitter](#) and [Facebook](#) pages were opened in October 2020, followed by [LinkedIn](#) in November. Don't forget to follow our pages to be always updated on our activities!



LinkedIn page







Twitter page



Facebook page

## TechCare in the news

List of past and upcoming events with TechCare partners attendance.

| Event    | Date  | Location  | Partner  |
|---|--|--|---|
| ←   |  |  |   |
| Steering Committee – Cmoubien   | 28.09.2020   | Toulouse   | IDELE   |
| <a href="#">BSAS Global - webinar: Precision Livestock Farming and Sensing Technology in Extensive Grassland Systems</a>  | 17.11.2020   | On-line  | SRUC  |
| <a href="#">71<sup>st</sup> EAAP Annual Meeting – invited talk: TechCare: Integrating innovative TECHNOLOGIES along the value Chain to improve small ruminant welfare</a> | 1-4.12.2020  | On-line  | SRUC  |
| PLF Meet Sheep Technical group – CIIRPO   | 17.12.2020   | On-line  | IDELE   |
| PLF Dairy Sheep Technical Group – CNBL  | 22-01.2021   | On-line  | IDELE   |



| →  |            |         |           |
|--|------------|---------|-----------|
| <a href="#"><u>Séminaire Dat' Agricole - Data, IA, Blockchain: quelles applications pour l'agriculture ?</u></a> | 11.02.2021 | On-line | Agdatahub |
| <a href="#"><u>Innovation and SME Forum: Data-Driven Innovation in the Agritech Sector</u></a>                   | 10.03.2021 | On-line | Agdatahub |



Photo ©: Marilia Gallus, AGRIS

For more information visit our website:

**[www.techcare-project.eu](http://www.techcare-project.eu) (available soon)**



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