

LivestockSense

Enhancing environmental sustainability of livestock farms
by removing barriers for adopting ICT technologies

Summary

ICT solutions improve the environmental and economic viability of animal husbandry; however, the promotion and adoption of these technologies is a major challenge.

To overcome this:

- The removal of socio-economic and cultural barriers preventing the wider adoption of ICT tools is needed. This is being achieved by:
 - ▶ selecting and supplying farms in Estonia, Hungary, Israel, Poland and Sweden with Precision Livestock Farming (PLF) tools;
 - ▶ using the triangulation of qualitative and quantitative surveying methods to understand farmers' attitudes towards PLF tools and to identify barriers for the limited adoption of ICT based technologies.
- The likely economic and environmental benefits associated with technology adoption will also be incorporated in a learning database and associated website using various ICT tools for decision support.

Main objective/ research question

- ▶ To improve economic and environmental viability of livestock farms through application of advanced Information and Communication Technologies
- ▶ To identify/remove social barriers for technology adoption to achieve a wider use of ICT on farms.

Preliminary results

- Quantitative survey: answers received from 121 pig farms and 145 poultry farms in 6 participating countries (HU, PL, EE, DK, SE, ISR)
- Study farms have been selected, PLF tools have been deployed which ensures:
 - ▶ database and model development to quantify environmental and economic benefits of adopting PLF tools;
 - ▶ carry out qualitative face-to-face interviews to examine livestock farmers' adaptation and learning trajectories.
- Project portal has been developed and is working: <https://livestocksense.eu/>

Preliminary conclusions/ potential impact

A wider use of ICT technologies on livestock farms leads to a sustainable, regenerative, inclusive and climate resilient livestock sector, that can help EU economies and reduce GHG emissions.

LivestockSense's solutions are expected to demonstrate how PLF may reconcile our economies and human activities with the planetary boundaries and respond to farmers' concerns and needs in the wake of systemic crisis such as climate change and the adverse socio-economic and environment impacts of the COVID-19 pandemic.

Future research activities

- ▶ Finalizing qualitative face-to-face interviews, writing case studies
- ▶ Making focus group reports with different stakeholders in the pig and poultry sector
- ▶ Set up a learning database to quantify environmental & economic benefits of PLF tools
- ▶ Develop a data-driven web-based application with an open API to allow end-users the estimation of the benefits of PLF tools.

Project partners:



Topic 2: Identify and address barriers for adoption of ICT technologies in the agri-food systems

