

Intervention case study to improve biosecurity in Spanish cattle farms: design and first results.

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1. Background

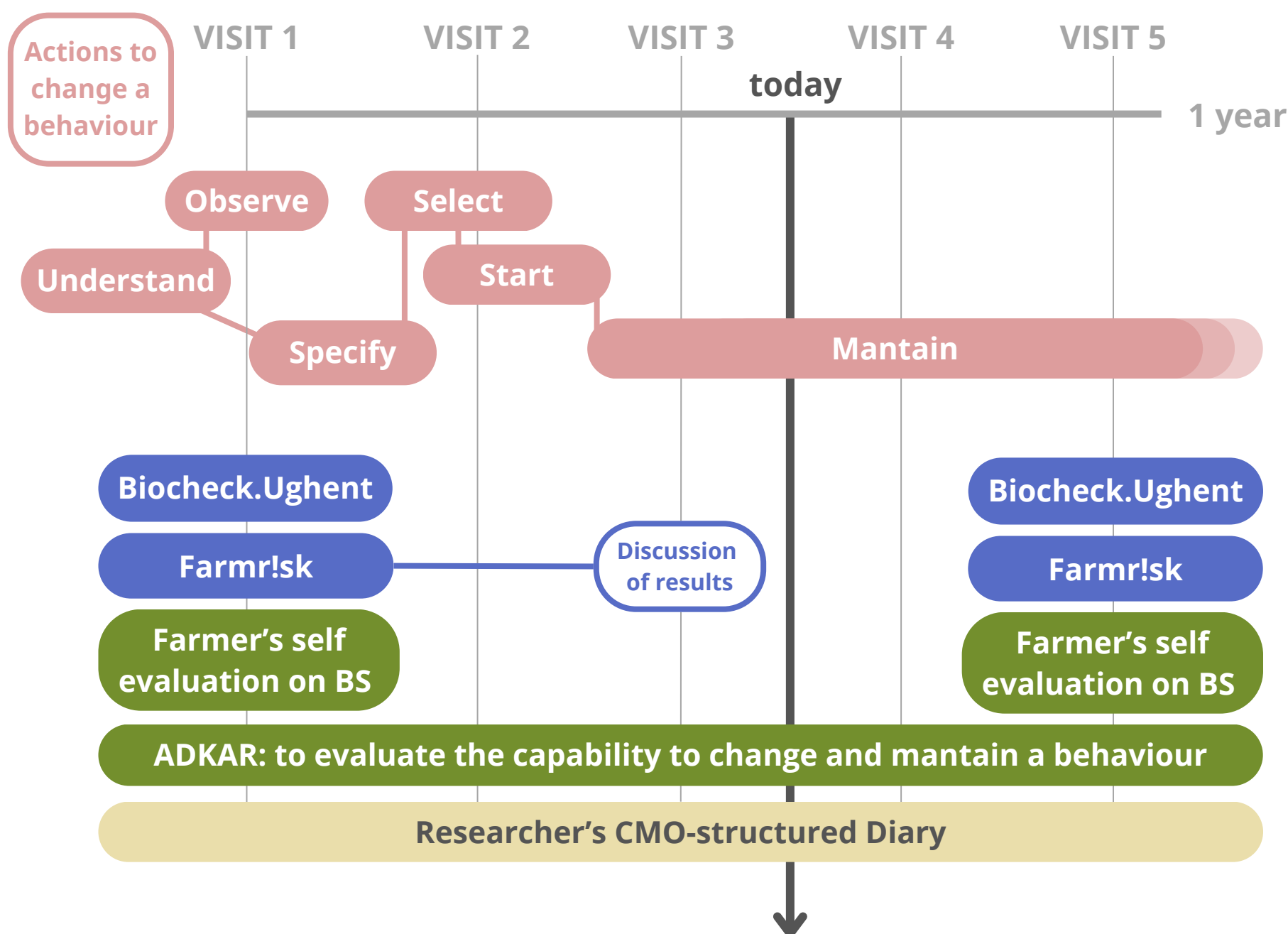
Biosecurity in cattle farming has significant room for improvement, hindered by barriers such as limited knowledge, awareness, feasibility of some biosecurity measures and economic constraints, among others. This study aims to support farmers in overcoming these obstacles by providing guidance and practical solutions.

2. Hypothesis

Our hypothesis is that integrating social science and veterinary epidemiology methodologies will foster positive attitudes toward biosecurity and enhance preventive practices.

3. Methods

Ten cattle farms were visited for this study: five beef farms and five dairy farms in Catalonia, northeastern Spain. This poster presents only the results from the dairy farms.



Theoretical framework

Social science methodologies, such as the **Theory of Planned Behaviour (TPB)**, the **Context-Mechanism-Outcome model (CMO)** and various **Behaviour Change Techniques (BCTs)** were used to design the intervention, provide context, gather information, facilitate on-farm discussions and support behaviour change.

Data collection: mixed methods

A combination of data collection methods is used to assess improvement: **quantitative data** to measure changes in biosecurity measures, **semi-qualitative data** to evaluate farmers' perceptions and attitudes towards biosecurity, and **qualitative data** to capture subtle changes and observational insights.

A one-year plan is co-designed with the farmer to improve one or two biosecurity measures per farm.

4. Results

FARMS 1 and 4

Design and planning for a **complete fencing of the farm.**

FARMS 2 and 5

To-do list:

- Clean and prepare the locker.
- Buy the boots and mark them.
- Communicate the new measure to farm vets.

Providing **farm-specific boots** to visits.

FARMS 3 and 5

Design and planning for **improving the carcass rendering point.**

5. Discussion

Farmers seem increasingly proactive about biosecurity with each visit. However, only one farm partially implemented the measures from visit 2. Additionally, two farms adjusted their selected measures between visits 2 and 3 after discussing pathogen risks or new legislation (e.g., fencing).

6. Further steps

During the final visit, biosecurity will be reassessed to track score changes and evaluate whether they correlate with shifts in farmers' attitudes. Until then, BCTs will be applied to sustain improvements, primarily through prompts and cues. Personalized advisory support on biosecurity and veterinary epidemiology will also be provided.



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