



Introduction:

Mapping of cattle infrastructures, equipment and sample banks is needed to foster synergies between Research Infrastructures (RIs). Awareness of RIs available in Europe within the SmartCow consortium was achieved by creating an interactive map outlining facilities both within and outside the consortium where research is carried out based within the beef and dairy research sectors in Europe. This is the first interactive map developed within Europe outlining RIs across the beef and dairy sectors and is available at <https://www.smartcow.eu/map/>. There are 9 consortium members (INRAE, SRUC, Teagasc, Aarhus, IRTA, FBN, CRAW, CEDAR, WUR) amounting to 18 RIs in which 14 are dairy focused, 3 beef focused, and 1 beef and dairy focused.

Method:

- Data was gathered on each consortium members research infrastructure
- All the data collected from each RI has been compiled in a number of categories – resources, catalogue of equipment and techniques, catalogue of animal databases and samples,.
- A summary of this information can also be found on the interactive map

Summary

- Each RI on the map has an overview on the following: Site information, animals, research facilities and capabilities, ethics and laboratory equipment. <https://www.smartcow.eu/map/>
- More detailed information on the facilities as well as database management and sample blanks can be accessed through the SmartCow data platform
- Improved research collaboration programs and synergies can be fostered with the use of this data

Results

Consortium Research capability

Individual feed intake facility	- 7
farms	
Metabolism facility	- 9
farms	
Greenhouse gas measurement	- 15
farms	
Digestion facilities	- 9
farms	
Grazing studies equipment	- 7
farms	
Behavioural monitoring	- 13
farms	

Large research capability exists in the consortium – especially in relation to methane measurement.

Conclusion

The use of the interactive map and cloud store allows RIs to become a support network for one another. It allows for better communication, sharing of expertise and aids in troubleshooting for both equipment and techniques used through the RIs. There is considerable expertise within Europe, across RI's which can be shared, and can have synergistic effects on across country collaborative research programs.

Figure 1: Interactive map available on www.SmartCow.eu

