

# INTA & SRUC: transferring knowledge for global challenges in agri-food production

SRUC: Nicola Holden, Bob Rees, Teresa Shutter

Agrecalc: Julian Bell

INTA: Marcelo Beltrán, Patricia Ricci, María Paz Tieri, Claudia Faverín, Sebastián Cambareri, Carolina Álvarez, Francisco Caldentey

# Scotland's Rural College



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## SRUC in numbers

### Research:

7 research platforms & units

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3 challenge centres

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### Education:

6 campuses

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58 courses

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1465 students

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### Consulting:

25 offices

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180 staff

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Veterinary Services

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Crop Trials Services

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## Our vision

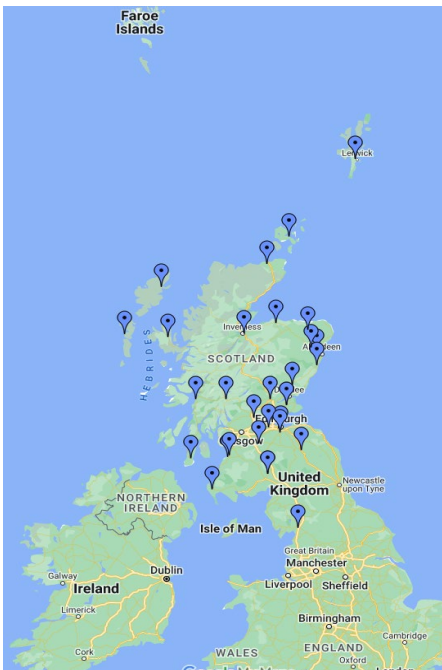
To be Scotland's enterprise university at the heart of our sustainable natural economy.

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## Our mission

Creating and mobilising knowledge and talent. Partnering locally and globally to benefit Scotland's natural economy.

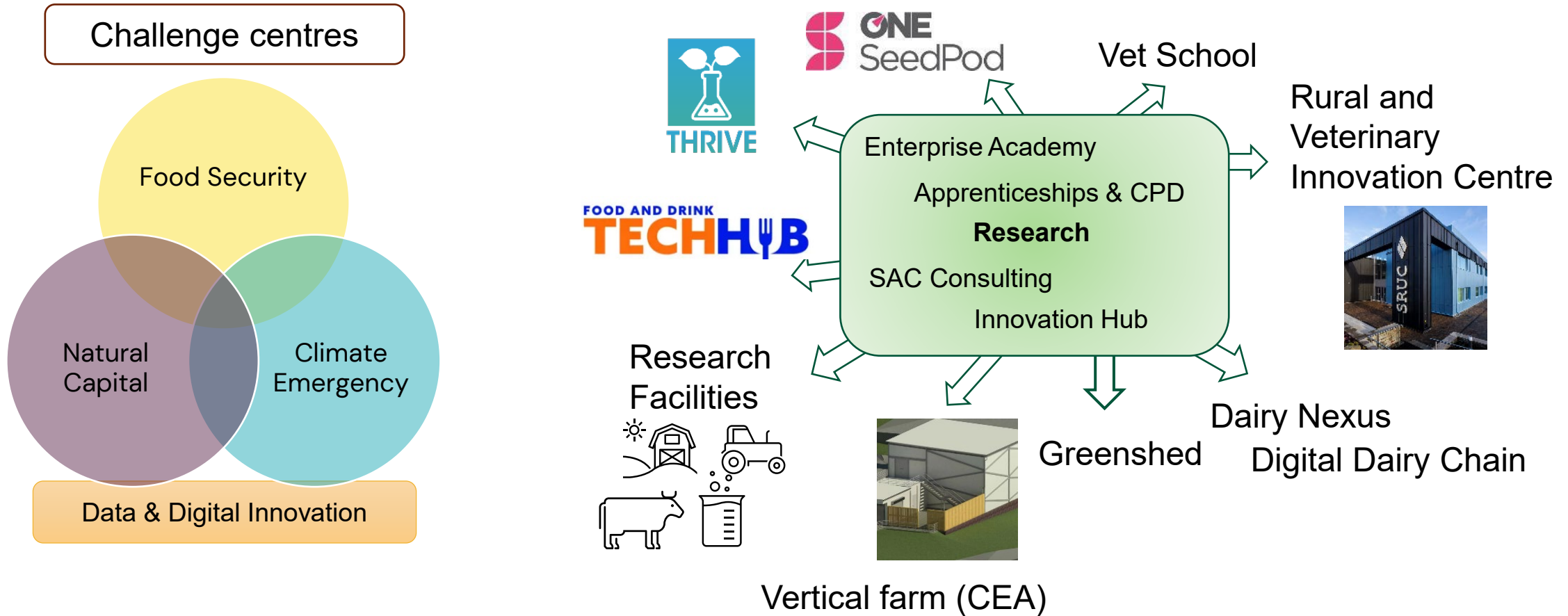
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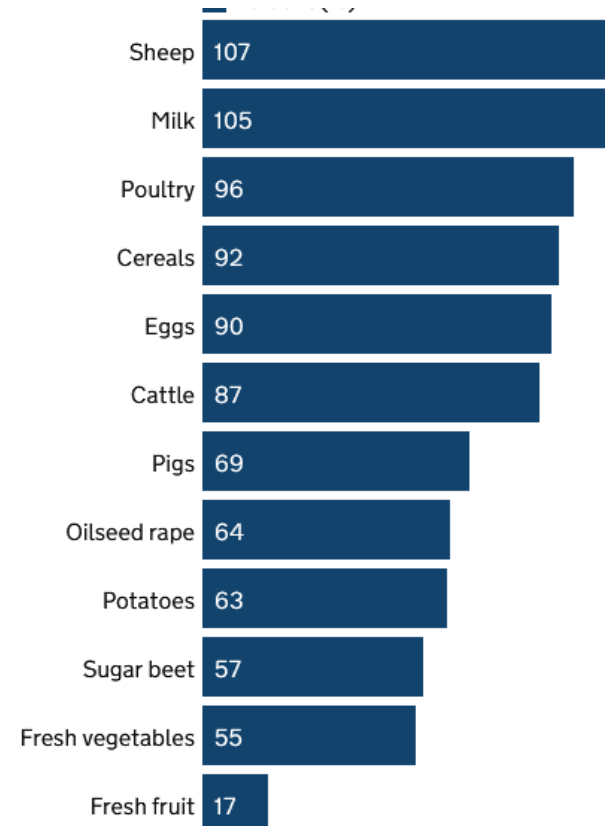
# SRUC: Research within an Entrepreneurial Campus



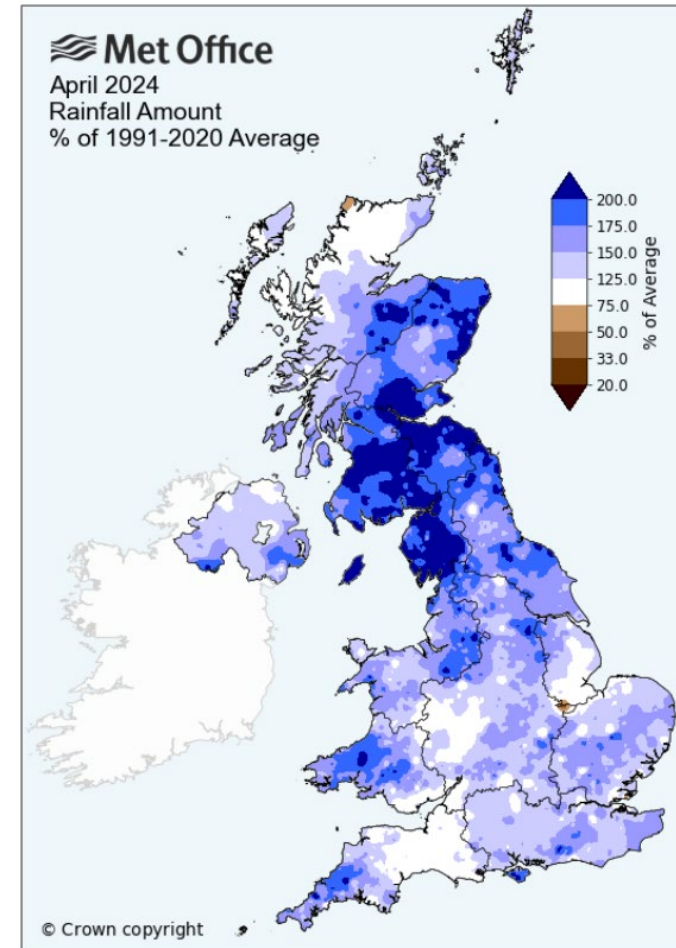
Scottish Government  
Riaghaltas na h-Alba  
gov.scot



# Major challenges



UK production : supply (%)  
(2022, DEFRA)



Rainfall anomaly,  
April 2024 / 1991-2020

# SRUC-INTA partnership



PhD project (Patricia Ricci & Bob Rees)

2021: Workshop 1 & MoU (Teresa Shutter & Marcelo Beltran)

2022: BBSRC funding secured for partnering project (Bob Rees & Nicola Holden)

2022: RACIES internship placements (2023)

2024: PhD scholarship applications

# International partnering project SRUC-INTA



Sharing expertise to quantify and mitigate GHG in the agriculture and land use sector in Argentina and the UK

## Aims:

- promote collaboration between the UK and Argentina
- use farm-based modelling approaches to quantify and mitigate GHG, taking microbial functions into account
- support carbon removals from the agriculture and land use sector

## Workplan:

- Workshop 1 (Nov 2022): INTA, Argentina
- Training & data modelling on case study farms, research visit (Apr-July 2023): SRUC, UK
- Workshop 2 (Sept 2024): SRUC, UK
- Project Links:
  - RESAS – Agriculture and Climate Change (C2); Healthy Soils (D3), Animal Health (A3)
  - BBSRC – UK Crop Microbiome Cryobank

**RESAS**  
Rural & Environmental Science  
and Analytical Services



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**Agrecalc:** Julian Bell

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**RACIES internships:** Carolina Alvarez (Jan-May 2023), Francisco Caldentey (Jan-Apr 2023)



# Workshop 1: INTA farms & platforms visit



## Aims:

- Argentinian agricultural systems and carbon cycling
- SRUC tools, resources & expertise
- Carbon footprint comparison between INTA & SRUC farming systems
- Understand role of microbiomes with respect to nutrient cycling





# INTA – National Institute of Agricultural Technology

Research and consultancy  
350 sites



Francisco  
Caldentey



Carolina Álvarez



María Paz Tieri



Marcelo  
Beltrán



Sebastian  
Cambareri



Patricia Ricci



Claudia  
Faverín



UNIVERSIDAD NACIONAL  
de MAR DEL PLATA  
FACULTAD de CIENCIAS AGRARIAS





SRUC staff visit Argentina

- Crops evaluation
- Beef and Dairy research stations
- Farmers

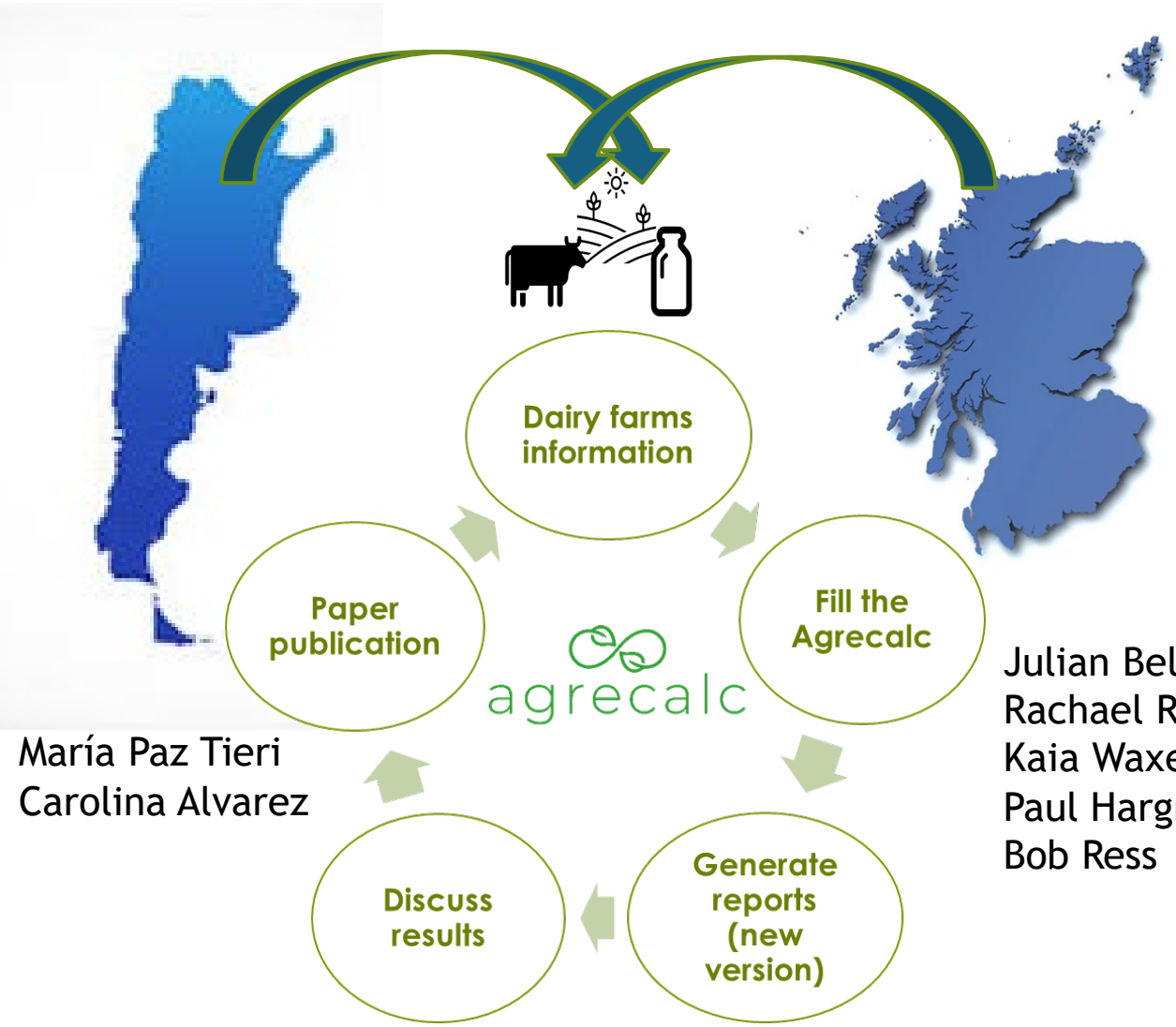




# SRUC-INTA exchange:



1). Compare C footprint of dairy systems from Argentina and Scotland with different intensification



# SRUC-INTA exchange:



2). Microbiome analysis – acquire skills and protocols for analysis of agricultural microbiomes

- **Hosted by:** Nicola Holden, Payton Yau (SRUC)



- **Location:** SRUC, Craibstone Campus, Aberdeen
- **Aim:** learn microbiome analysis applied to farming systems relevant to INTA and Argentinian agri-food sector
- Acquire information databases from the National Centre for Biotechnology to carry out analysis. Use computer tools for data processing (QIIME2, DADA2, FAPROTAX, PICTURSt2, and statistical analysis using the ANCOM and LefSe methods.





Thanks for your attention

