



TRansition paths to sUstainable legume-based systems in EEurope

WP5: Environmental LCA and Nutrient Quality Assessment

Trinity College of Dublin
Bangor University

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Marcela Costa & David Styles
marcela.costa@bangor.ac.uk



What?

More than generic labels

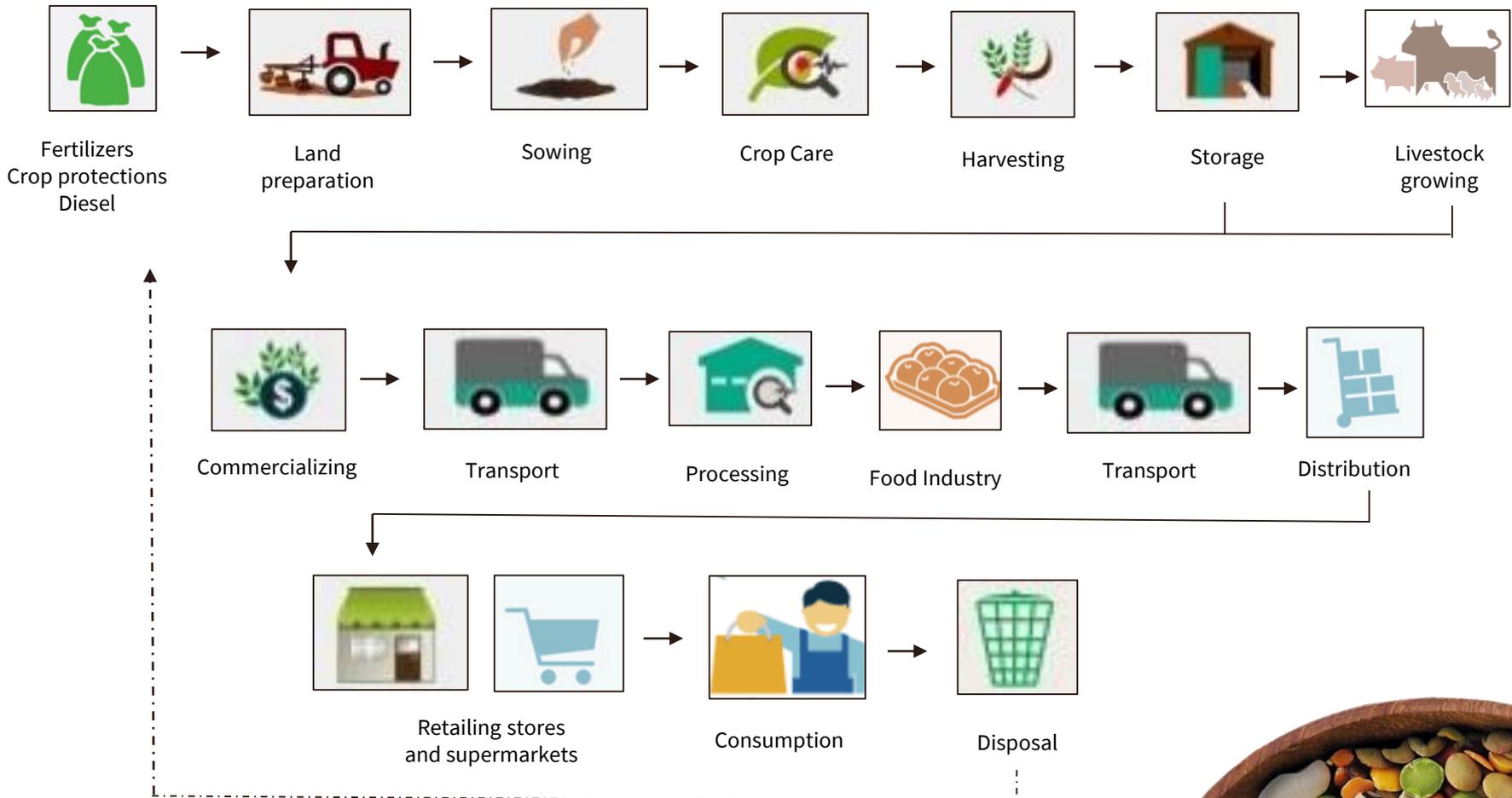


A hand is holding a QR code in the foreground, which is slightly out of focus. In the background, a person in a light blue shirt is visible. In the bottom right corner, there is a wooden bowl filled with a variety of colorful legumes, including green lentils, orange lentils, white beans, and purple beans. The overall scene suggests a focus on food safety and information technology.

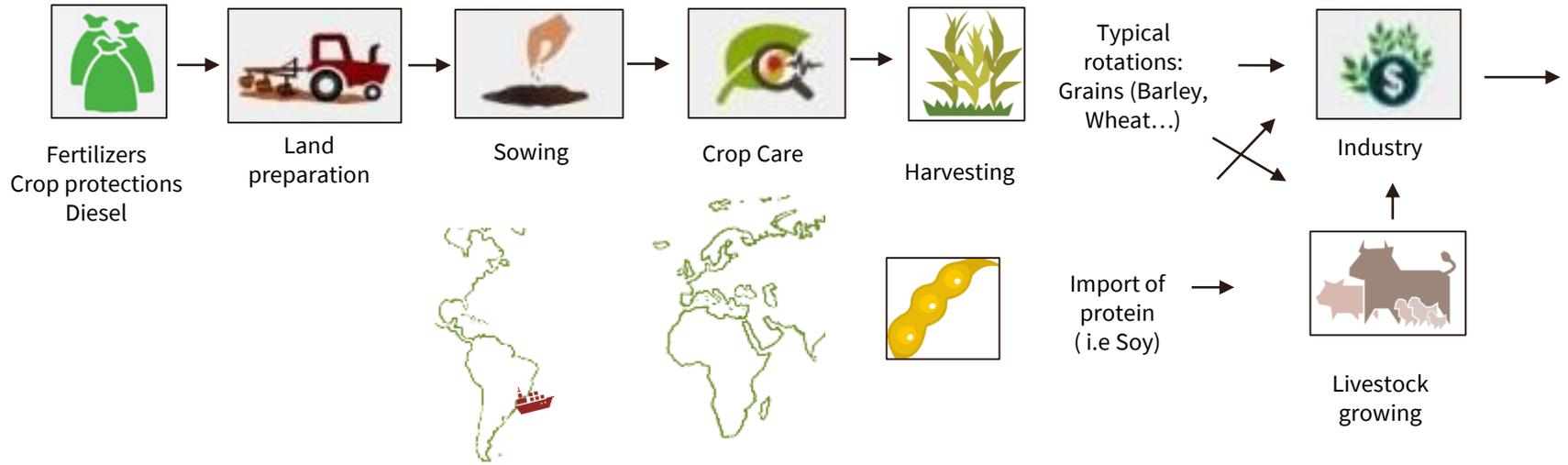
We want to provide accurate information for:

- 1. consumers on legume footprints, with robustness and transparency;**
- 2. policy makers on potential for legumes to address agri-environmental challenges.**

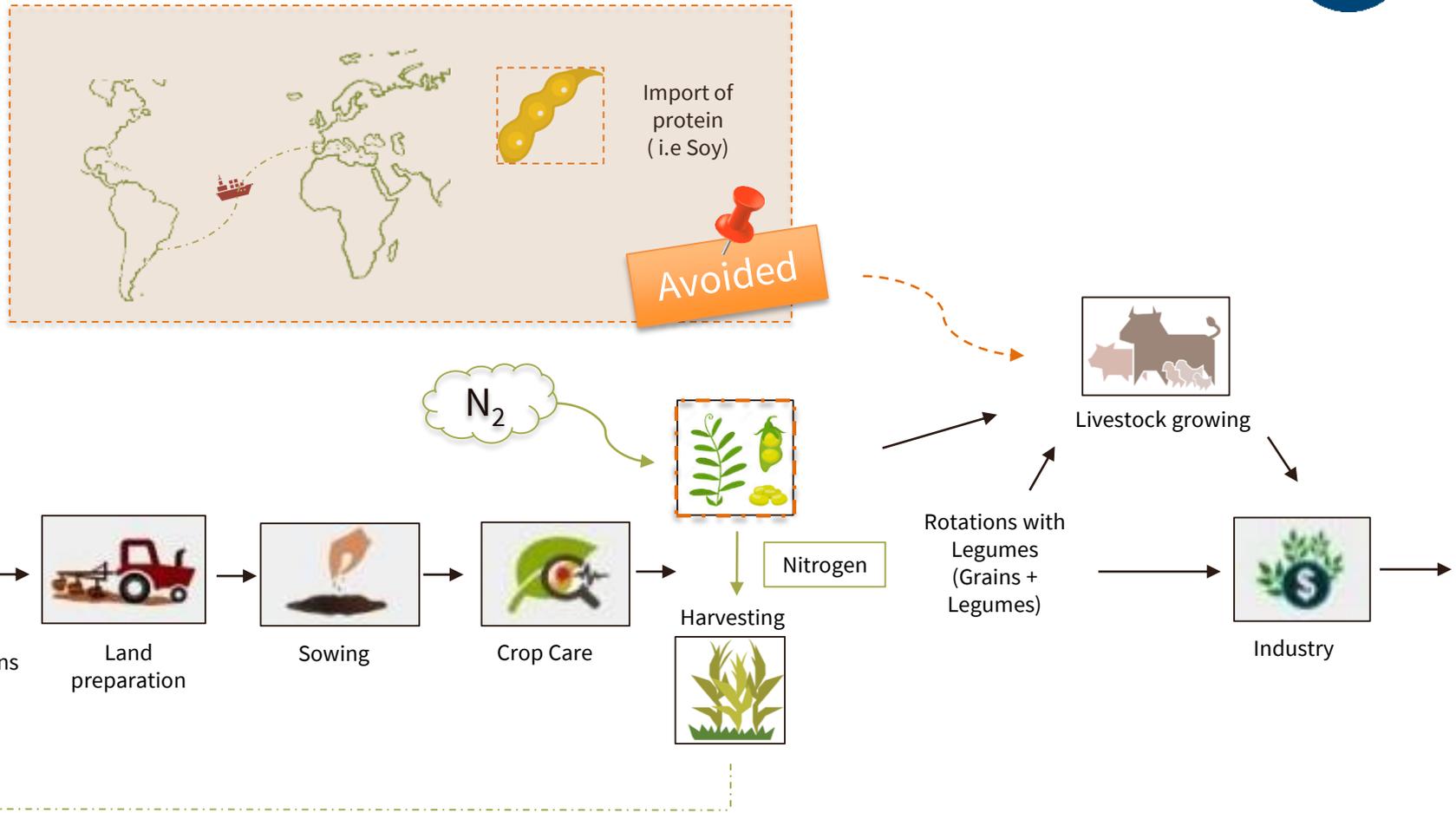
Agriculture LCA



Up to Farm Level LCA: grain rotations



Up to Farm Level LCA: legumes-grain rotations





Nutrition and Environmental Impact

Human diets

Alcohol and fish Industry

1st; 2nd

Alcohol: Gin from Pea and Beer from Lentil

Fish Feed from legumes



Pasta of legumes

3rd

Pasta production

2nd use: Protein Flakes



4th

Breakfast Cereal



Replacing Meat

5th

Protein Intake by the population

Milk and meat fed by legumes

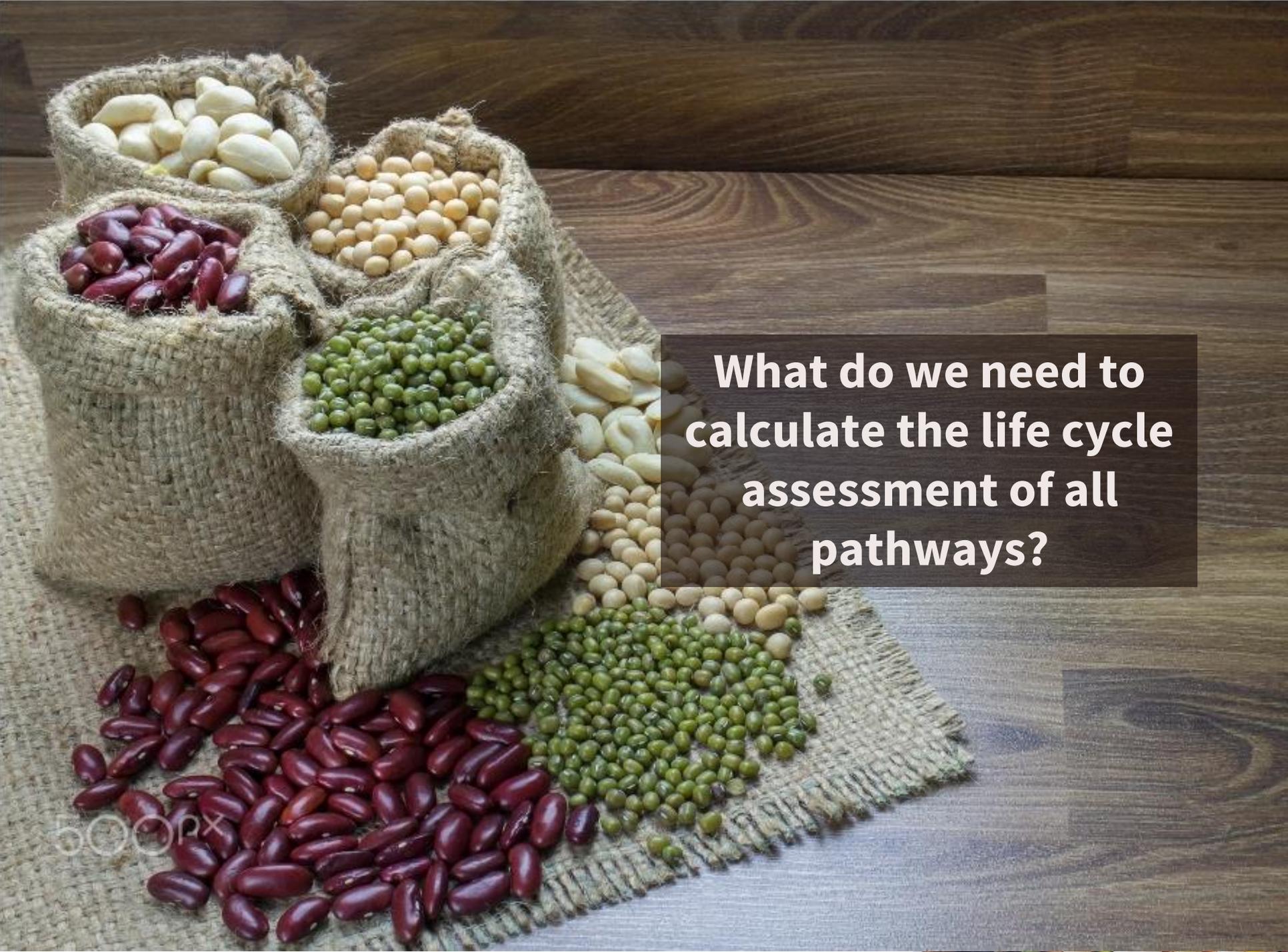
6st ; 7th

White clover pastures

Alfalfa, Red clover silage

Replace imported Soya, Palm oil kernals



The image shows four burlap sacks filled with different types of beans, arranged on a wooden surface. The sacks contain white beans, red beans, yellow beans, and green beans. Some beans are spilled out of the sacks onto the wooden surface. The background is a dark wooden wall.

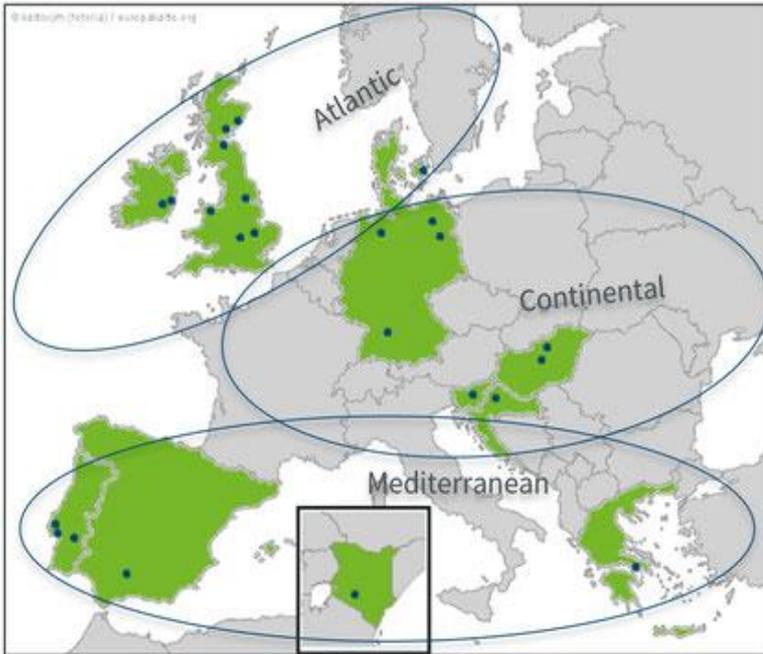
What do we need to calculate the life cycle assessment of all pathways?

What , Where and How grain-legumes are planted?



What are the potentials?

- Typical farm typologies
- Main rotations/ intercropping systems



Representativeness farm level info:

- Inputs
- Management practices
- Yields
- Nutrient balance



Next Steps & partnerships



- Define farm typologies: December 2018
- Data Collection: April 2019
- Farm level LCAs (grain and Grain-Legumes rotations):
October 2019
- Pathway Simulations
- Diets simulation



A wide-angle photograph of a vast field of yellow flowers, likely sunflowers, stretching to the horizon. The sky is a clear, vibrant blue, dotted with numerous white, fluffy clouds of varying sizes. The overall scene is bright and cheerful, suggesting a sunny day in a rural or agricultural setting.

THANK YOU

marcela.costa@bangor.ac.uk



General contact information

Website: www.true-project.eu

Email: info@true-project.eu

Facebook/Twitter: [@TrueLegumes](https://www.facebook.com/TrueLegumes)



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