

Biorefineries for the valorisation of macroalgal residual biomass and legume processing by-products to obtain new protein value chains for high-value food and feed applications

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Introduction

To meet the current protein demands, EU is 95% dependent on imported soy, cereals, or potatoes. However, these current sources of proteins are becoming unsustainable from an economic as well as an environmental point of view. ALEHOOP will attempt to reduce EU's dependency on protein imports and contribute to the raw material security

Materials and Methods

Materials : Green and Brown residual macroalgae, Legume by-products

1. Identifying and monitoring the compliance of the protocols and products so-formed with legal and ethics requirements
2. Performing toxicity studies of the extracted proteins extracted from seaweed sources by standard *in vitro*-toxicity screening assays, such as AMES mutagenesis assay and cell viability tests using liver cells and gastrointestinal epithelial cells as models

Results

A majority of the National and European regulations affecting the ALEHOOP project have been identified.

1. For nutritional and health claims: European regulation (EC 1924/2006)
2. Applications for authorisation of health claims: Commission Regulation (EC) No 353/2008
3. Additives for use in animal nutrition: Regulation (EC) No 1831/2003
4. Materials and articles intended to come into contact with food and repealing Directives 80/590/EEC and 89/109/EEC: Regulation (EC) No 1935/2004

Bibliography

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Fig 1: EU Feed use per animal type in 2017/2018

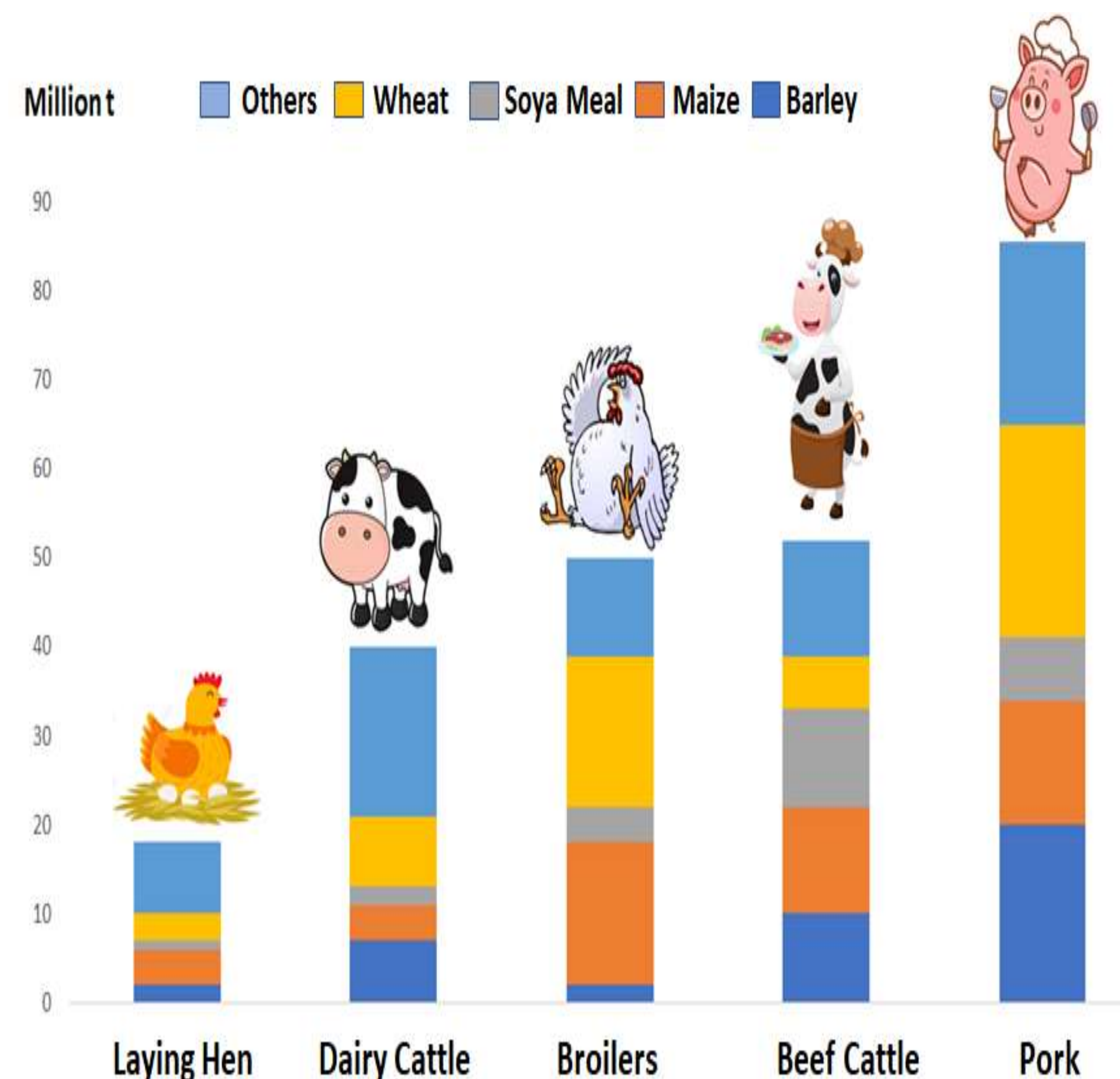


Fig 2: Schematic representation of the ALEHOOP project

