



# TRansition paths to sUustainable legume- based systems in Europe

## WP3 Nutrition and Product Development – objectives, ongoing research and communication at UCP

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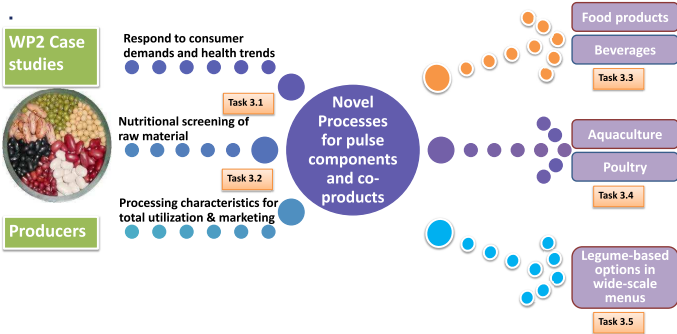
CATÓLICA PORTO  
ESCOLA SUPERIOR DE BIOTECNOLOGIA



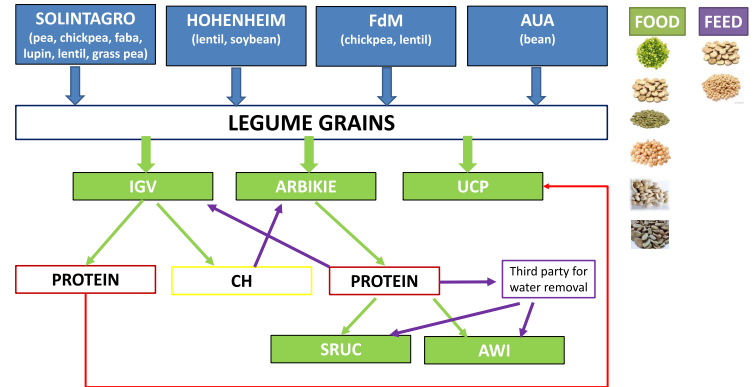
[www.true-project.eu](http://www.true-project.eu)

### Objectives

To develop novel Food and Feed uses for legumes by screening and processing a range of ingredients and formulations.



### WP3 Workflow Plan



- New developed foods and feeds will be tested in feed trials and in sensory trials.
- The legume grain providers (top, blue boxes) will provide whole grains to the University and Industry partners (green boxes) to generate protein (red outlined boxes) and carbohydrates (yellow outlined box) to be used for food and feed product development.
- UCP will provide data on the nutritional composition of the legume grains and new foods to Trinity College (WP5) and provide data on the nutritional value of traditional dishes to Slow Food (WP1)

Principal contributors



Freixo do Meio  
AGRICULTURA BIOLÓGICA



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### WP3 communication activity outputs

#### Original Press release

12/06/2017



#### Technical Manuscript

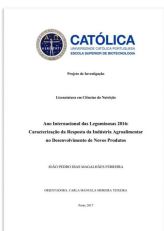
AgroTec 2017



#### General Outreach

- Interviews (e.g. Agência Lusa)
- Short Videos (e.g. Labtech)
- Communications (e.g. Novi Sad, Serbia)
- 6 periodic articles

#### B.Sc Thesis



PortugalFoods – TRUE Stakeholder  
Studied the impact of the International Year of Pulses 2016 (IYP2016) on the number of new product launches in Europe that include legume grains

#### Press Release Research Paper



### Status of WP3 ongoing research at UCP

- First legume samples (18 lentil varieties from Hohenheim; 96 from Solintagro) have been received and nutritional screening is underway – proximate analysis and specific profiles – (UCP with collaboration of IGV)

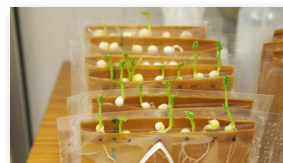


- Studies on how different cultivating systems coupled or not to inoculants affect nutritional value, yield, biomass and digestibility of legumes and cereals (JHI with collaboration of UCP)

MSc Program 1: **Impact of intercropping and inoculants on the nutritional and agronomic quality of legumes**

- Studies on germination potential for further nutritional and biological characterization: sterilization efficacy, soaking optimization and sprouting

PhD Program 1: **Legume grains and derived sprouts for innovative healthy food applications**



- Design of dietary quasi-experimental trial to study impact of legume-based meals on metabolism, health markers and gut microbiota modulation

PhD Program 2: **IMPULSE: Impact of a PULSE-based replacement diet on metabolome and health**

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Transition paths to sustainable legume-based systems in Europe (TRUE) has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 727973.

