



Protein Challenges for European Sustainable Agri-Food systems – VALPRO Path and its emerging outcomes

Dr. Ewen Mullins, Teagasc, Oak Park

Reviews on the EU plant protein sector ...

European Commission



News
European Parliament

Headlines Press room Agenda FAQ

Press room / Proteins: Robust strategy needed to reduce EU's dependency on imports, say MEPs

Proteins: Robust strategy needed to reduce EU's dependency on imports, say MEPs

Press Releases 20-03-2018 - 10:44

- EU's farming policy to encourage production of protein crops at home
- Imports from abroad to be diversified and focused more on the EU's neighbourhood
- More research into increasing profitability and yields of protein crops

EU must do its utmost to increase and improve protein crops production at home and diversify imports from abroad, the Agriculture Committee said on Tuesday.



EUROPEAN COMMISSION

Brussels, 22.11.2018
COM(2018) 757 final

REPORT FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT

on the development of plant proteins in the European Union



Kudos to MEP @Hlaváček for emphasising the importance of a robust #ProteinStrategy in tackling issues like circularity, emissions, healthy diets, and deforestation at the @RenewEurope event. A strong #ProteinStrategy is critical for promoting sustainable food systems! 🌱🌍



Exciting to hear that @EUAgri is taking steps towards a sustainable future with the upcoming #ProteinStrategy, aiming to integrate #plantproteins into the diets of EU citizens. This move towards more #plantbased diets is key for healthy, resilient, and sustainable food systems 🌱

EIP-AGRI Focus Group Protein Crops: final report

14 APRIL 2018






Market Report

Historical and Forecast

Market Analysis




Independent groups



Science Policy Industry News Support us

Sustainable protein innovation priorities

Explore the results of our market research to uncover commercial white spaces, research gaps, technological needs, and investment priorities at each stage of the plant-based, cultivated meat and fermentation value chain.





15 PAGE: European context | Our research | Investment | R&D | Ingredients | Production | End products | Distribution

Why advance sustainable proteins in Europe?

Sustainable proteins – spanning plant-based, cultivated and fermentation-made meat, eggs, dairy and seafood – are on the rise across Europe and consumers are hungry for more.

In 2019, Europe accounted for 39% of the global market revenue of plant-based meat. In 2020, plant-based retail sales across the continent hit €3.6 billion and European sustainable protein companies raised a record €441 million in investments, making up almost 17% of the total amount invested in the sector worldwide.

Home to much of the world's scientific and commercial talent, Europe has a unique



About us About our industry Priorities Resources

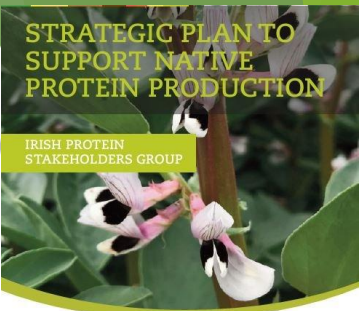
EU Protein Plan

EU protein self-sufficiency has been a long-standing issue on the EU agenda for several decades. Recently political focus on EU dependency on imported proteins has sharpened in the context of the Green Deal objectives & as a consequence of the EU Contingency planning following crises such as the 2020 COVID-19 pandemic & 2022 Russian invasion of Ukraine.

The renewed interest in an EU protein plan was introduced by the former EU Agricultural Commissioner Phil Hogan in 2017 as a reaction to the [EU soy declaration](#) that was signed by 14 farm ministers and which highlighted the need to increase the production of home-grown protein crops in order to tackle the EU protein deficit. The main purpose of the EU Protein Plan is to identify consumer demand for proteins and which range of measures could increase the competitiveness of EU protein crops. Some of the possible policy options were listed in the report [on the development of plant proteins in the EU](#).


STRATEGIC PLAN TO SUPPORT NATIVE PROTEIN PRODUCTION

IRISH PROTEIN STAKEHOLDERS GROUP





CoRISC



INSTITUTE OF AGRICULTURAL AND FOOD ECONOMICS NATIONAL RESEARCH INSTITUTE

PROTEIN CROP MARKET in POLAND

The study prepared by the Institute of Agricultural and Food Economics - National Research Institute



Warsaw, January 2021



Plants for the Future
European Technology Platform



An Implementation Strategy for Increasing European Plant Protein Production and Uptake

by Plants for the Future ETP



What are the protein challenges for EU?



- Variety x Environment x Management
Best Variety x Optimum Environment x Excellent Crop Mgmt. = Yield  Quality 
- Varietal choice low v. cereals
- Grain legume yields below potential
- Limitations in food technology and techniques
- Animal feed v. Human food
- Premium supply chains absent
- Labelling concerns – sustainability front of pack labelling scheme
- Consumer knowledge gap – preferences evolving



Core ambition ?

Deliver novel value opportunities from plant protein crops, focus on circularity and value chain resilience

More value from what is already produced



Many unanswered ‘?’

Producers



**Can I maximise return
from my protein crop?**

**What is the best crop to
grow in my region?**

**How can I maximise
yield/quality potential?**



Processors



**Do I need to invest in a plant
processing facility?**

**From where can I get a
consistent supply of raw
material?**

**What technologies should I
use?**



Food manufacturers

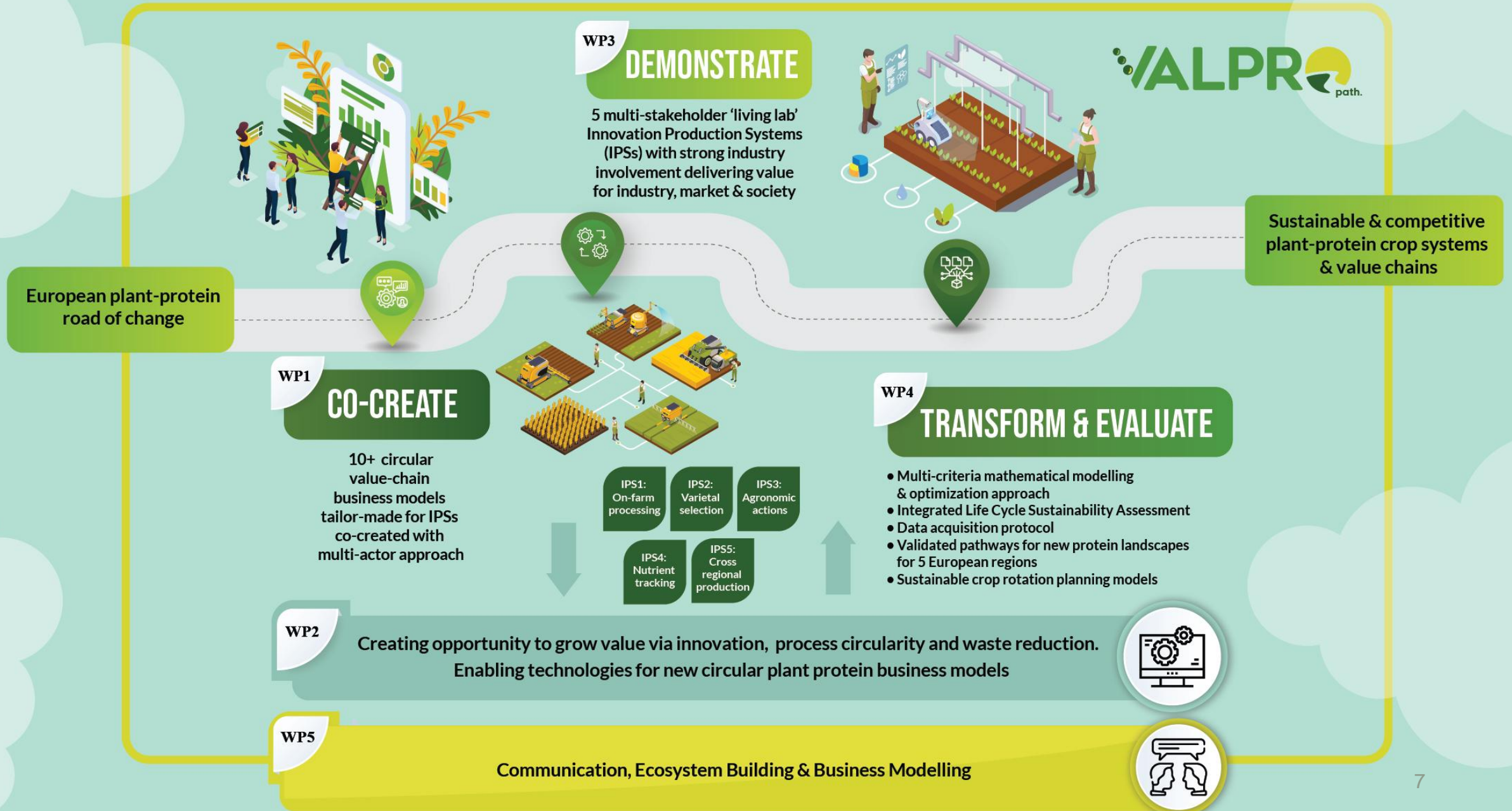


**Is there a market for plant
based products?**

What products can I make?

**Is there a consistent supply of
ingredients available?**

NEW VALUE LANDSCAPES FOR PLANT PROTEIN PATHWAYS



What are we doing?

Innovative production systems

- On farm processing (milling for food/feed)
- Variety testing (database of suitable varieties per region) (e.g. lupins, field pea, faba beans, chickpea, lentil and peanut)
- Intercropping of pea and bean
- Farm to shelf nutrient tracking (dashboard & labelling)
- Cross region synergies (logistics and packaging)



What are we doing?

Develop working business opportunities


- ✓ Multiple sustainable business models
- ✓ Demonstrate potential
- ✓ Give confidence to stakeholders and empower their transition

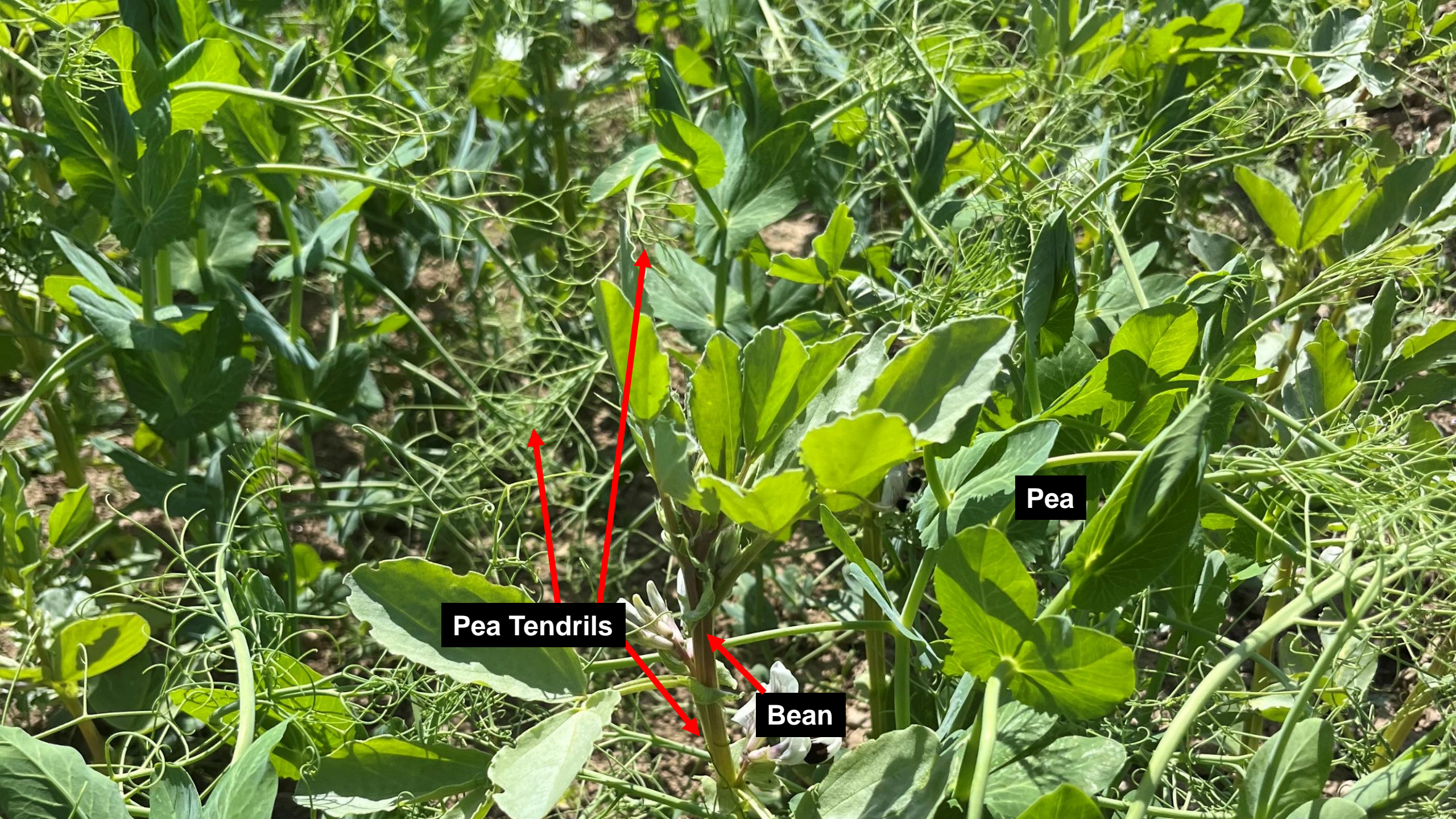
Business Models in Development

- ✓ Legume pasta
- ✓ Smart labels – Nutrient tracking tool
- ✓ Developing the peanut industry in Europe
- ✓ Using pulse flours in confectionery products
- ✓ Hermetic bagging systems to enable cross-regional applications for plant proteins
- ✓ Technologies that allow localised processing of plant proteins

<https://valpropath.eu/business-models/>

IPS 3: Agronomic actions in practise...

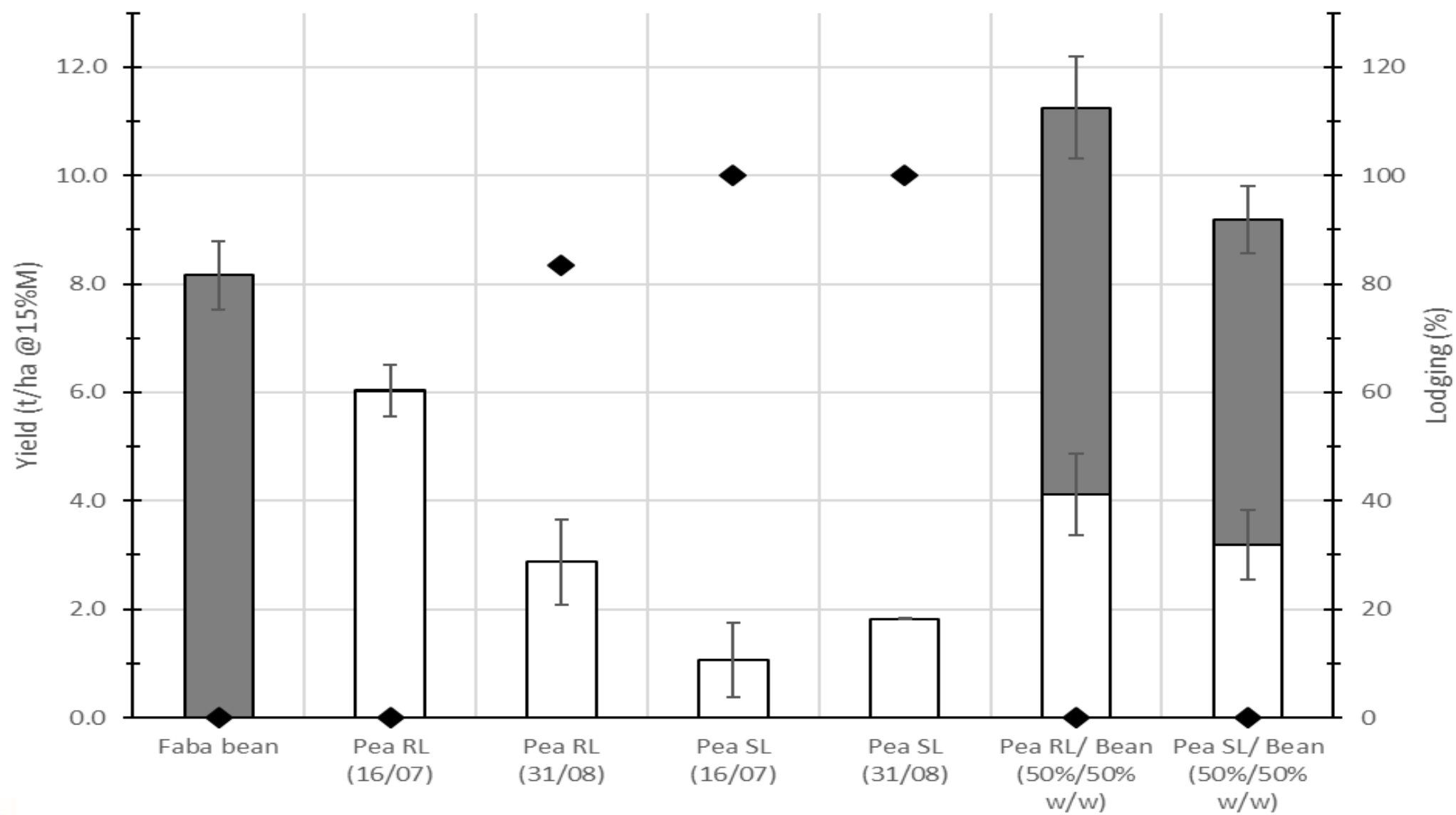
Sole crop (field pea)				
				
Mixed crop (field pea/faba bean)				
Date	22April2020	08May2020	16July2020	08Aug2020



Pea

Pea Tendrils

Bean



What are we doing ?

Evaluate innovative processing approaches

- De-hulling, milling and extrusion
- Wet v. dry fractionation → isolating protein
- Microwave processing → cooking
- IR spectroscopy → nutrient analysis



What are we doing ?

End product formulation

- Baked products using pea/bean flour
- Plant based beverages
- Hybrid based products
- Pastas and veggie burgers





Leibniz-Zentrum für
Agrarlandschaftsforschung
(ZALF) e.V.



Co-funded by
the European Union



BEOTANICS
healthy plant-based ingredients



WAGENINGEN
UNIVERSITY & RESEARCH



agri benchmark



FOODSCALE HUB



Food Process Analysis & Design
Consultancy Services



Confagricoltura



PEPSICO



farmB
digitizing agriculture



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AGRICOLUS



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DI TORINO**



**moorepark
technology**
new frontiers in food innovation



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