# Policies for the transition to legume based food system

Bálint Balázs – Eszter Kelemen Environmental Social Science Research Group (ESSRG)

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## **PROTEIN PARADOX**

- EU's dependency on non-taxable soybean imports
- Legumes became protagonists of food policy debates: meat analogues, #IYP2016, Protein Transition, Protein Challenge 2040, Green Protein Alliance, FOOD2030, Soya Declaration
- Policy Paradox: Policy that supports legume-based food production **failed** to increase legume-based diets
- Which policy innovations could help transition?





# **Report on Co-design of Policy Analysis**

• EU policy and governance perspectives for legume-based systems

- transitions to an **agroecological** paradigm
- **environmental** policies
- **climate** change mitigation policies
- **nutrition**, diet and health policies
- **production** policies
- Prospects for a transition to legume-based system

Balázs, B., Kelemen, E., Debeljak, M., Hamann, K., Kolmans, A., Kelemen, Maaß, H., Vasconcelos, M., Williams, M., Squire, G.R., Iannetta, P.P.M. (2017). **Report on Co-design of Policy Analysis. Deliverable 7.1.** Available online at: <u>www.true-project.eu</u>





#### What are the main lessons so far?



## Which policies would help?

#### Beus et al 2013: integrated approach with

- greening measures,
- investment in research,
- constraints on the use of synthetic N fertilizer
- Legume Futures Reports (Helming et al.
  2014., Topp et al. 2014): international trade and climate-change mitigation are likely to have the most significant effect



# POLICY INNOVATIONS FOR INCREASING THE PLANT-BASED PROTEIN CONSUMPTION WITH CONSUMERS

- Mandatory inclusion of a vegetarian option in every public canteens (PT)
- Addition of a separate section for legume grains in the food plate (PT)







## Britain's Pulse Pioneers: top quality ingredients and delicious foods (fava bean, black badger peas) from British farms



https://hodmedods.co.uk/



 Faba beans craft beer (Edinburgh Science Festival)



Plant Protein Stamp: a nationally recognised stamp in the US, indicating the amount of plant-based protein in consumer packaged goods.

OOD SOU

thefuturescentre.org

## Slow Food Cookbook on European legumes



*Regulatory environment that encourages more plant-based diets* 

- **Co-design** in the elaboration of the research agenda
- **Co-production** as joint knowledge generation in various levels
- **Co-creation** of new governance solutions
- Co-dissemination and synthesis for facilitating the validation, application and reception of the results

a new science-policy interface 'Legume Innovation and Networking'

## **CO-DESIGN FOR POLICY**

Process	Iterative stages of design thinking, oriented towards <b>innovation</b>
Principles	Exploration; experimentation; empathy; diversity; <b>participation</b>
Practical tools	Creative and tangible methods for <b>telling</b> , <b>enacting and making</b> experiences and ideas. ( <u>Blomkamp 2018</u> )



...there is an increasing need for creating an effective science-policy interface to support legume-based cropping systems and food and feed supply chains. In an EU-funded project 'TRansition paths to sUstainable legume-based systems in Europe' (TRUE) we aim to **enable co-innovative environments** to realise policies that will more adequately support current, and future, food and nutritional security challenges via the use of legumes.

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## ESSRG

## www.essrg.hu



THIS YEAR'S SCIENCE FESTIVAL BEER BUILDS ON 2015'S SUCCESSFUL FE-FI-FO BY USING FABA BEANS AS A SOURCE OF FERMENTABLE SUGAR BREWING INNOVATION WHICH COULD ALLOW BEER TO BE PRODUCED MORE SUSTAINABLY. THE BEER USES 50% FABA BEAN STARCH ALONGSIDE SCOTTISH GROWN HOPS.

> INGREDIENTS: WATER, MALTED BARLEY, FABA BEANS, HOPS & YEAST, ALLERGY ADVICE: FOR ALLERGENS, INLCUDING CEREALS CONTAINING GLUTEN, SEE INGREDIENTS IN BOLD

SUMMERHALL BREWERY, EDINBURGH, EH9 1PL INFO@BARNEYSBEER.CO.UK WWW.BARNEYSBEER.CO.UK

PLEASE DRINK RESPONSIBLY: UK CHIEF MEDICAL OFFICERS RECOMMEND MEN DO NOT REGULARLY EXCEED 3-4 UNITS DAILY & WOMEN, 2-3 UNITS DAILY. BEST BEFORE - SEE DATE ON NECK



### MADE WITH FABA BEANS

PROPER BEER

JACK IPA

Alc. 4.2% Vol. 330ml <sup>e</sup>

# **CAP Greening**

- Climate and nature friendly ag prcatices: maintenance of soil and avoidance of below the ground water contamination
- CAP reform 2015
- Part of the area based support (SAPS)
- 80 euros per ha yearly
- Three different practices
  - Maintaining grasslands
  - Crop Diversification, introducing diversity onto cultivation
  - Ecological focus areas (EFA): land above 15 ha need to have 5% EFA



# TRansition paths to sUstainable legume-based systems in Europe

- Science-policy incubation through stakeholder engagement workshops
- Continental, Mediterranean and Atlantic Cluster meetings in 2017-2020
- Co-innovation process with 24 Innovation
  Case Studies

#### LEGUME INNOVATION and NETWORKING

- What is the problem that needs an urgent solution? What supports locally grown legumes?
- Who are the decision-makers? What policies are promoted? What drives policy change and innovation?
- **How** to create actionable, reliable policy-relevant knowledge? What are the policy scenarios (circa. 50 years) and solutions to achieve them from current circumstances?



ANALISES POLICY INCENTIVE • TRADE accept a short decline in yields for long term improvement / zero tar-iffs on soy imports / too cheap meat and animal products / inaction in implementation / consumption of legumes / legumes are not fashion / lack of policy to include legumes to public food procurement / too stand the importance of touling systems for stand the importance of legume based systems / CAP does not foster / make attractive to famres and consumers / soy bean import / import of GM crops / inconsistency of policy / short termism / local production of legumes / direct consumption of legumes (rather than feeding animals) / lack of incentives for growers / lack of infrastructure / appropriate scale of policy / no support from goverment / lack of specific legume policies / how to substitute meat and dairy products with legumes / awareness / policy disintegration across sectors / no support relative to the real importance in consumption / lack of subsidies to encourage growing / too much import / human health / encourage production and consumption CONSERVA / how to include legumes into EU support / many policies touch on particular aspects / pesticides / efficient resource use / environmental policies / improve diets / healthy eating policy / effective supply chains / need to align policies / not sufficient demand for local legumes / policy to i allo support farming of legumes / not second and for feed and to other crops / static - market driven - demand for feed and food / nitrogen pollution (planetary boundaries) / climate change / industrial level production of soybeans vs local nutritional level / lack of proper labeling that promote legume consumption HLTVAH • NOILdWNSN03 support farming of legumes / not sufficiently profitable compared

EFSA 4 HEALTH / agencies for agri business development / arri business development / agri and health sectors / agri departments / CAP / civil servants / consumer associations / consumers / Defra / dietary associations / EC / EC / EC / EP / EU and national / EU and national / EU Council / EU level / EU parlament interest groups / farmers associations / food safety authorities / goverments at all levels / growers / health and environment / health departments / health policy / industrial farmers / industry / local and national / marketing / MEPs / national and EU level / national goverments / national goverments / Natural England / nutritionist associations / policy planners, who integrate policies for environment, healh, etc. / politicians / producers / sup-NIVHS . associations / trade JONAL pliers, supermarkets / trade

change consumption behaviour without hard instruments (levies on meat consumption) / how to change behaviour without losing voters / holistic understanding of added benefits or detriments along whole chains / account for externative effective production / nutritionally bet sumer awareness and perception / what are the sustainability benefits / what are the real health impacts / health benefits (also of reducing animal protein) / landscape of national policies promoting legumes production and consumption / environmental benefits (GHG, ground water) linked to CAP / diet impacts / improve public health of population / drivers of innovation to introduce legume products to market - link to industrial policies / development of an EU legume action plan (connected to national action plans, strategies) / effects on biodiversity, soil, water, etc. / cost benefit analysis / historical examples of increasing production through policy / data on growers profitability / evidence on benefits / technologies to increase financial viability / data on market viability o / knowledge from stakeholder counsultation / promote legumes vs meat/fish eating / accurate data on production and consumption / health benefits (also of reducing animal protein and dairy) / economic profit and nutritional value / sci-Z CEN; ence based evidence on health aspects / previous legume projects data / health benefits / systems knowledge / environmental benefits / high quality food / existing data is not integrated, meta analysed / new data to fill gaps / drivers of supply and demand / diversity of legumes in EU / how to realise more profitable legume supported cropping systems / potential of local legume production with environmantal and health impacts / bottlenecks in extending local productin and processing / data on legumes extending local productin and processing / data on legumes vs nutrition and health / complete nutritional and com-positional features of all targeted cultivars

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