



TUKFS26-workshop

Reframing legumes in UK food-system transformation: co-developing a research agenda for net zero, nature and nutrition

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Natural
Environment
Research Council

Environmental Change Institute

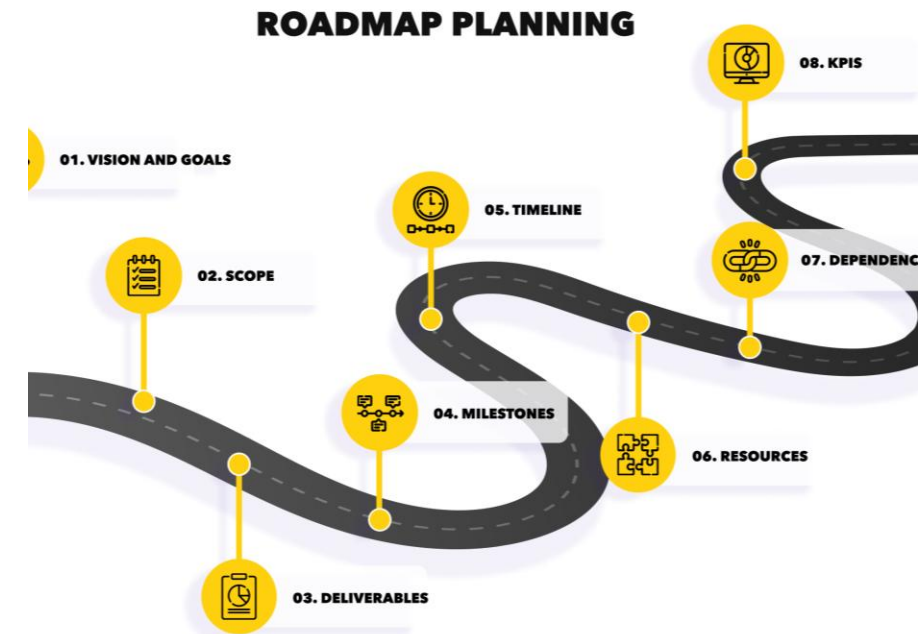


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Objectives of the workshop

- To **use emerging insights from the *UK Beans Roadmap*** (*University of Oxford, Agile Science to Policy fund*), building on *BeanMeals* and the *Legume Initiative (June 2025, Reading)*, to examine the food-system conditions under which legumes would most effectively contribute to UK food-system transformation.
- To **engage the TUKFS community in identifying priority research gaps and system interactions linking land management, nature recovery, food-system coordination and dietary change.**
- To co-develop a **shared, forward-looking legume system research agenda** that can inform the next phase of TUKFS research and collaboration.

dashdevs



Agenda

- **Introduction & framing:** From roadmap to research agenda
- **Context input:** Key insights from the UK Beans Roadmap
- **Thematic breakout discussions:** Identifying research gaps and questions
- **Plenary synthesis:** Sharing key themes and insights
- **Prioritisation & next steps:** Shaping a shared research agenda



Why a UK pulses roadmap?

- UKRI BeanMeals project brought stakeholders together multiple times to discuss systemic innovations for the UK bean system
 - > stakeholders kept on expressing the need for further discussions on **concrete and coordinated** actions across various actors for a better integration of pulses into UK diets
 - ECI's food system group co-organized two follow up workshops to discuss needed changes in the UK pulses system
 - ECI food system group together with AGRIIH obtained a small grant from NERC/Agile to organize a 3rd workshop for developing a **Roadmap for UK pulses**. This includes
 - Interviews with key informants around current bottlenecks/key questions to sort out
- 4 ○ Rapid evidence review



Key questions to be resolved based on interviews & evidence review

- Feed vs Food: What Drives Expansion for UK pulses?
- What makes bean production a viable decision for farmers, processors, retailers?
- What would make investing in UK bean processing viable?
- Ingredient vs Whole-Food: Do different product formats change the scaling potential of UK beans?
- How do we make beans part of everyday diets?



Our Strawman: A 2035 vision for UK pulses

2035

Production

- **Increased** UK-grown share for human
- Greater alignment with **agroecological principle**
- Pulses that can be grown **efficiently and sustainably** in the UK
- Increase food AND feed
- Include supply from outside the UK
- Better knowledge base on growing

Be pragmatic
Need for data/monitoring

System Alignment

- Nature-positive
- Net-zero compatible
- Nutrition-led
- Equity
- Physical and financial access to legumes
- Need for better processing facilities
- Supply chain alignment

Consumption

- Could be higher: 100 (80g cooked) per person/day
- Pulses part of the **Eatwell** 5-a-day
- **Complementing and reducing** animal protein sources
- Increase diversity of legumes
- Health by stealth -> think about where
- Strong knowledge base on use of legumes
- Consider different forms of consumption





Radical

High Disturbance
High Risk

Moderate Disturbance
Lowish Risk

Core

Peripheral

Moderate Disturbance
Moderate Risk

Low Disturbance
Low Risk

Incremental



Disturbance to the System
Risk of action being ineffective

Types of change



Backwards planning from the future to today

- Plan backwards from 2035 to today
- Think of what would need to happen to achieve our vision by 2035
- Come up with changes in
 - Practice
 - Policies
 - Research to support these



	2035	2030	Now
Practice	<ul style="list-style-type: none"> • Less and better livestock • Land use shifting in favour of pulses/beans • Pulses mainstream in: <ul style="list-style-type: none"> - public sector (e.g. NHS, schools) - private sector (restaurants, catering, retail, pubs) • Increased diversity of pulse-based products (whole + ingredient) • Pulses widely available, accessible, visible • Farmer education: <ul style="list-style-type: none"> - supply chain integration - support schemes 	<ul style="list-style-type: none"> • Transition from feed → food • Reformulation of food products • More pulse-based products available • Increased visibility of pulses in public/community settings • Engagement campaigns for different audiences • Cooking education / skills (e.g. workshops) 	<ul style="list-style-type: none"> • Driving consumer demand: <ul style="list-style-type: none"> - influencers / chefs - retailers - grassroots • Low consumption of pulses • Limited behavioural change understanding
Policy	<ul style="list-style-type: none"> • Prevent farmers being undercut by imports • Procurement Act (public sector) • Plant-based protein policy (mandatory?) • School meal standards (including pulses) 	<ul style="list-style-type: none"> • Mechanisms in place to deliver: <ul style="list-style-type: none"> - incentives - payments - SFI-type schemes • Pulses integrated into farming policy • Clear pathways for pulses in supply chains • Support for farmers shifting production 	<ul style="list-style-type: none"> • No coherent national strategy • Need for: <ul style="list-style-type: none"> - lobbying government - clearer targets - better alignment with UK food strategy • Fragmented governance
Research	<ul style="list-style-type: none"> • Monitoring and evaluation for continuous improvement • Metrics for impacts across nature, net zero and health • Wider system implications of scaling pulses • Impact measurement scenarios 	<ul style="list-style-type: none"> • Long-term research & demo farms • Baseline data + monitoring systems • Evidence on impacts and outcomes • Case studies of successful applications • Opportunity cost calculations 	<ul style="list-style-type: none"> • Gaps in understanding: <ul style="list-style-type: none"> - how legumes interact with wider systems - production trade-offs • Need for: <ul style="list-style-type: none"> - better data on legume production - mapping of UK legumes system - research on consumer behaviour

Emerging research needs from the roadmap

- Understanding land-use implications of scaling pulses
- Economic viability across the value chain
- Conditions for investment in UK processing
- Drivers of consumer adoption and behaviour change
- Policy effectiveness and system coordination
- Monitoring and evaluation of system impacts



Breakout Discussions: Shaping the Research Agenda

- Building on the roadmap, we have identified a set of **initial research needs**. Please choose the theme you would most like to contribute to:
 1. Land use, production and nature-positive transitions
 2. Markets, value chains and system coordination
 3. Diets, behaviour and healthy low-carbon consumption
- In your group, you will:
 - Identify key research gaps,
 - Develop researchable questions, and
 - Consider relevant disciplines and expertise
- Aim: contribute to a shared UK pulses research agenda



Report Back & Synthesis

- Each group will briefly share:
- 1–2 key **research needs**
- 1–2 priority **research questions**
- Keep inputs short and focused
- We will capture key points across groups
- Look for common themes and differences



Prioritising research directions

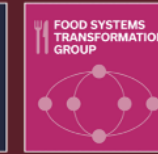
- Which questions matter most?
- Where is further work needed?
- Where is there interest for collaboration?





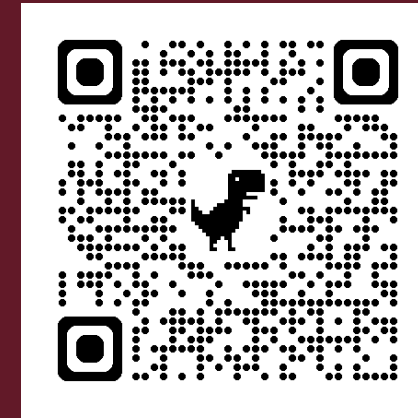
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Thank you!



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<https://www.eci.ox.ac.uk/research/roadmap-uk-beans>

