AGRI-FOOD & BIOSCIENCES INSTITUTE





Leading | Protecting | Enhancing

**UKRI - TUKFS Project Steering Meeting** 

Work Package 2

Trade, production and price impacts

Erin Sherry, Julian Binfield and Paul Caskie

24 June 2024

afbini.gov.uk



Methane and nitrous oxide from agriculture

# FAPRI UK Model

Soil N and P balance

> England Scotland **Regions**

Northern Wales Ireland

Ethanol Biodiesel **Biofuels** 



Milk Butter Dairy **Powders** Cheese

FAPRI UK

Barley Wheat Crops Oats Rapeseed

Fish and shellfish

Cattle Sheep Livestock

**Poultry** Pigs

Beans and peas

Sugar beet

Potatoes

**FAPRI-Gold** EU 27



### Complete

## Complete

# November 2024

## July 2025

# Model development

Fishing and salmon/trout farming

Potatoes
Sugarbeat

#### Baseline

10-year projection

Business-as-usual

#### Scenario

Alternative diet

Counter factual

### **Analysis**

Trade, phosphorus and nitrogen balances (UK-level)

Prices, production, GHG emissions (national-level)



Prices fall due to global productivity

Animal feed demand increases along with crop consumption in the UK

population growth

outpacing

High potato prices decrease per capita consumption Meat and fish

Population growth and falling prices increase total amount of meat consumed in the UK

Difficulties in pork sector see decline in UK production but steady consumption

Fish consumption stable with more farmed production filling gap from caught Dairy

Cheese and butter prices trend upwards from 2023 and SMP down

Consumption of butter holds and cheese trends upwards to 2033

Butter and cheese trade balance steady with SMP production exports down

# Briefing on the outlook to 2033 for agriculture in the United Kingdom

Erin Sherry, Julian Binfield and Paul Caskie

Realigning UK Food Production and Trade for Transition to Healthy and Sustainable Diets





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## Pathway to impact

- Oral presentation accepted at the 188<sup>th</sup> EAAE Seminar "Reorienting agri-food chains to hinder climate change and food security threats", Sept 2024
- Invited to present to the Department of Economics, Maynooth University, October 2024
- Planning to submit to:
  - AES Annual Conference, March 2025 (focus on regional UK impacts)
  - EAAE Congress, August 2025 (focus on environmental impacts)