



## Why Soya?

- **Sustainable Agriculture:**

MICROBIOMES4SOY aims to apply an improved understanding of the microbiomes in soya bean production to develop solutions tailored to enhance crop productivity and seed quality.

- **Health & Nutrition:**

MICROBIOMES4SOY will assess the quality, safety, and nutritional benefits of microbiome-improved soya bean products on the human gut microbiome and develop evidence-based dietary recommendations.

- **Sustainable Protein**

Soyabean is a high-quality protein showcasing an optimal amino acid profile, representing sustainability as both a nutritious and more eco-friendly alternative to animal-derived proteins.

- **Sustainable Aquaculture:**

MICROBIOMES4SOY will assess the potential of soya-based aquafeeds to address sustainability and nutritional challenges in the aquaculture industry.

## Contact

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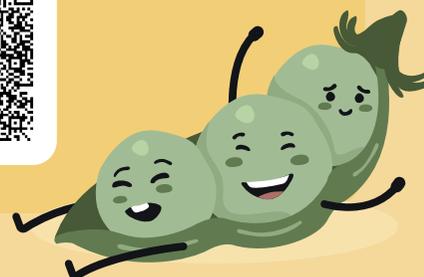
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# Microbiomes for Sustainable Food Systems:

## Paving the Pathway to Transition



Funded by  
the European Union

# What is MICROBIOMES4SOY?

MICROBIOMES4SOY is a European funded project that aims to foster the transition to better planetary health through:

- developing microbiome-based knowledge and awareness
- creating microbiome-based solutions for more sustainable food production and
- facilitating healthy soya-enriched diets.

The soyabean crop serves as a model system for exploring microbiome interactions in production.



## The Challenge:

Despite the soya bean's promise as a sustainable protein source, obstacles such as **climate change** and the **need for reduced chemical inputs** underscore the urgency for innovative solutions. While a microbiome-based approach holds great promise for transforming food systems, fully realising this potential poses a challenge due to a **lack of robust understanding**. MICROBIOMES4SOY aims to address these challenges by **clarifying the microbiome pathways that support sustainable food systems**, with soya serving as a model system for exploring microbiome interactions.

## Key Objectives

- 1 Understanding the dynamics and potential of plant microbiomes, focusing on the soya bean model.
- 2 Developing microbiome-informed approaches to improve yield stability, environmental sustainability, and food safety/quality.
- 3 Investigating the impact of soya-derived protein diets on the human gut microbiome and health.
- 4 Creating innovative soya-based aquafeeds and evaluating their effects on fish gut microbiome and health.
- 5 Collaborating with food system stakeholders to establish regional transition pathways towards plant-based protein diets.
- 6 Equipping the food system actors with knowledge and skills on microbiome interactions, benefits, and industrial applications through a multi-actor approach.



## Our Partners

MICROBIOMES4SOY is a **collaborative effort** involving 17 partners from 10 countries, including top universities, research centers, non-profit organizations, and the private sector. This multidisciplinary approach leverages **expertise in soil, plant, human, and animal microbiomes, bioinformatics, modeling, crop production, aquaculture, food/feed production, and scientific communication**. The project is funded by the European Commission through the Horizon Europe program and coordinated by the AIT Austrian Institute of Technology (AIT).

