

## 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 <a href="evidence-based">evidence-based</a> 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

### **Project coordinator:**

Angela Sessitsch
Austrian Institute of Technology (AIT)

#### Communication contact:

**Darya Silchenko**European Food Information Council (EUFIC)



info@microbiomes4soy.eu

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## Microbiomes for Sustainable Food Systems:

Paving the Pathway to Transition



# 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**

- Understanding the dynamics and potential of plant microbiomes, focusing on the soya bean model.
- Developing microbiome-informed approaches to improve yield stability, environmental sustainability, and food safety/quality.
- Investigating the impact of soyaderived protein diets on the human gut microbiome and health.
- Creating innovative soya-based aquafeeds and evaluating their effects on fish gut microbiome and health.
- Collaborating with food system stakeholders to establish regional transition pathways towards plantbased protein diets.
- 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).



































