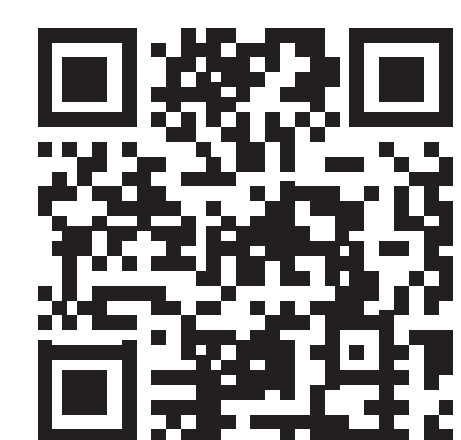


Fork-to-farm agent-based simulation tool augmenting biodiversity in the agri-food value chain

The main aim of the BioValue project is to develop a dynamic and customisable tool that will analyse the link among biodiversity, the agrifood value chain, the environment and consumer's preferences and health. This tool will help to introduce, model, produce, and spread underutilised, genetically diverse crops and final marketable products produced from them. To this aim, a demand driven approach (fork-to-farm) is adopted.

The final outcome of the project includes complete novel food dishes and novel processed food products that successfully incorporate underutilised, genetically diverse crops and pave the way for their introduction to the market and therefore enter agricultural production.



www.biovalue-project.eu
info@biovalue-project.eu



Novel dishes and processed products enhancing biodiversity

In the framework of the BioValue project



The overall goal

To design recipes for novel dishes and innovative processed food products that incorporate biodiversity in a way that is desirable for consumers. The novel culinary products will be evaluated by consumers to assess and improve their attractiveness and acceptability.

The final novel food products will be linked to the farm, following through the agri-food value chain and determining the key steps and agents necessary for their successful market launching.

Objectives

- To design recipes for novel dishes that incorporate biodiversity at the plate
- To create novel processed food products that fully utilize biodiversity
- To evaluate consumers' preferences for novel food dishes and processed food products
- To link consumers' preferences for novel foods to the farm through the value chain
- To propose guidelines and nutritional recommendations for the processing industry to increase biodiversity in processed food products

Key methodologies

The evidence-based platform for selecting and promoting the most nutrient-dense species and varieties to maximize the nutritional adequacy of diets.

Recipe design will be developed guided by: physico-chemical and sensory characteristics of ingredients, organoleptic and nutritional properties, palatability, existing and well-accepted recipes based on similar food items, recipes' potential to contribute to overcoming nutritional criticalities, preparation complexity, geographical and cultural particularities with regards to food availability, culinary traditions and dietary habits.

Novel dishes and new food products

Novel dish recipes will be evaluated via **CAPNUTRA Diet Assess & Plan**, an advanced dietary assessment platform for standardized food consumption data collection, comprehensive dietary intake assessment and nutrition planning.

Prototypes of novel processed foods will be prepared in the experimental kitchen. Each recipe will be blind tasted, evaluated and scored on its intrinsic organoleptic quality. The taste evaluations will be done by independent professional taste experts as well as lay public representatives.

Food crops

- Tomato
- Eggplant
- Red lentils
- Grass peas
- Buckwheat
- Dandelion
- Cucumber

Outcomes

- Compiled recipes and completed nutritional analyses of newly created food dishes
- Creation of novel dishes that improve diet and support health and biodiversity in different local contexts
- Sensory evaluation of the prototypes of novel food dishes and evaluation of consumers' preferences
- Assessed nutritional qualities/characteristics of underutilized genetically diverse crops
- Designed recipes for novel processed food products
- Compiled sensory evaluation and tested the usability of new food products
- Recommendations for processed food products