BioValue

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 agri-food value chain, the environment and consumer's preferences and health. The ultimate outcome of the research are novel food dish recipes and processed food products from seven (7) underutilised, genetically diverse crops resulting from the extensive breeding programme foreseen within the project.

CONCEPT

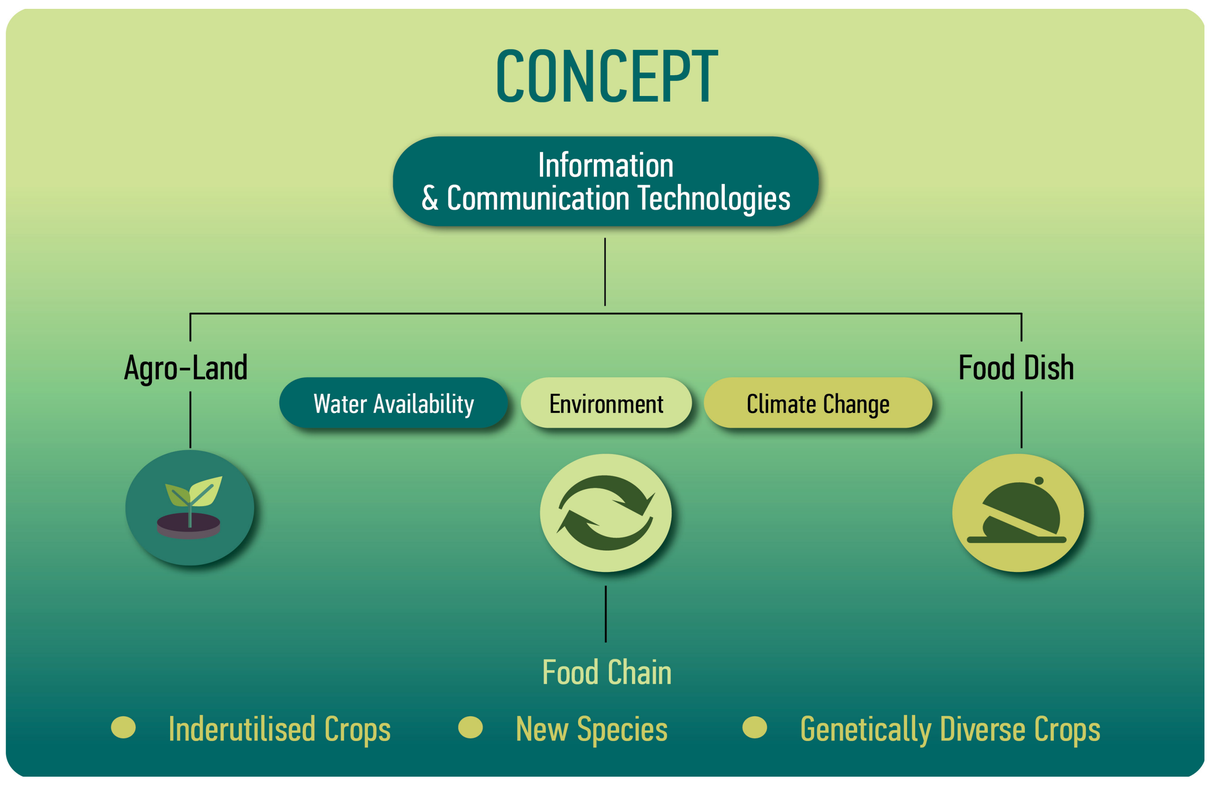

Figure: BioValue's Concept

BioValue's Crops

Fagopyron esculentum L. (Buckwheat)

3 subspecies of Lathyrus (L. sativus, L. clymentum, L. orchus)

3 landraces of Lentil

Sonchus oleraceus

2 tomato genotypes

2 eggplant genotypes

Cucumis melo var. flexuosus

The BIOVALUE tool

The BIOVALUE tool is a simulation tool of the agri-food value chain based on an agent-based modelling approach. The tool will analyse the impact of different scenarios such as increased biodiversity, as well as climate change scenarios and water availability at the farm, regional and EU level, and can be useful to measure policy quality and impact, environmental and biodiversity evolution, and compliance to regulations.

Impacts

- **At the farm level**, the competitiveness will be improved mainly through the reintroduction of underutilized diverse crops which provide opportunities to diversify farm activities and income.
- **At the environmental level**, improved biodiversity is expected at the soil, farm, and ecosystem level, water availability, and climate change dynamics.
- **At the consumer level**, the development of novel dish recipes and processed food products will lead to nutritional, environmentally friendly, and diversified products with a regional identity.

www.biovalue-project.eu
info@biovalue-project.eu
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Contact details
Coordinator: Prof. Konstadinos Mattas, Aristotle University of Thessaloniki Dept. of Agricultural Economics
Tel.: +30 2310 99 88 07

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