

Agritech - National Research Centre for Agricultural Technologies

Tematica Tecnologie dell'Agricoltura (Agritech)

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Descrizione del progetto di ricerca svolto da Univpm:

WP 6.1. Farm management models to enhance sustainability and resilience in different agricultural scenarios

Objectives

New management models for next generation agriculture are aimed to guarantee food production and security, reduce agriculture environmental impact while turning it into an active compartment for climate change mitigation, and improve socio-economic value preserving most valuable naturalistic and cultural traits of agricultural landscape regions. To reach these goals, this WP is aimed to:

- evaluate and validate smart and multifunctional solutions developed for reducing external inputs and improving productivity, health, quality, safety, and security of crops
- model and guide efficient use of nutritional, biological, soil, water, and energy resources, and valorization of agri-food, no-food, forest, and animal production chains
- design and validate innovative indicators for defining new DSS adapted to different scenarios
- define farm management models to enhance sustainability and resilience in different agricultural scenarios.

WP 6.2 Circular management models for exploitation of waste materials

Objectives

Although many technologies to recycle biowastes have been extensively investigated and many solutions are at hand, few of them are operational and implemented within circular valorization farm models. This WP is aimed to:

- Adapt the most promising new technologies for combining biowaste upcycling at the farm scale;
- design circular systems combining different farm types, food and feed companies with waste transformation plants;
- co-develop, validate and upscale systemic circular solutions powering equitable ecosystem markets of agro-food value chains addressing waste valorisation at the farm scale;

optimise these circular systems for their capacity to reverse climate change, increase bioeconomy and protect air, water, soil and plant quality and health .

WP 6.3 Socio-economic and cultural models to link farm production to consumer expectations

Objectives

Next generation agriculture must guarantee food production and security and improve socio-economic value creating a policy framework and new industrial chain opportunities for innovative models that integrate production, decarbonisation, circular economy and socio-cultural development. Special attention will be devoted to energy-saving agricultural models. To reach these goals, this WP is aimed to:

- enhance the connection of the new agricultural solutions to industry systems;
- define new policies and business models for innovative and sustainable marketing services in the supply chain;
- implement agro-tourism solutions in coastal and mountain areas;
- re-design socio-cultural models for a better valorization of the next generation agriculture.