RUSTICA Consortium







Demonstration of circular bio-based fertilisers and implementation of optimized fertiliser strategies and value chains in rural communities

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What is RUSTICA project?

RUSTICA is an innovation action project funded by the European Commission under the Horizon 2020 framework programme.

RUSTICA will:

- Foster the **technical validation**, **demonstration** and **implementation** of bio-based fertiliser and soil improvement production techniques.
- Focus on waste from the fruit and vegetable agro-food system.
- Close nutrient cycles at a regional level.
- Develop economically viable and environmentally sustainable alternatives to mineral fertilisers with the same or improved agronomic value.

RUSTICA Rationale

Most relevant environmental problems identified in crop productions:

- Nutrient pollution in soils due to surplus application of N/ha and P/ha.
- Soil degradation.
- Food waste: 70 million tonnes of dry matter of field crop waste.

We need to:

- Invest in the recovery of nutrients from food waste.
- Replace mineral fertiliser with bio-based alternatives.

RUSTICA work plan

Technological development

- Optimise and demonstrate six technologies for nutrient recovery from fruit and vegetable waste as bio-based fertilisers.
- Demonstrate the integration of technologies to reach a combined nutrient recovery of more than 90%.
- Demonstrate the production of fertiliser blends adapted to local demand.

2) EU level multi-actor approach

- Regional workshops.
- EU and global workshops.

3 Market development

- Market analysis.
- Techno-economic analysis.
- Legal analysis.
- Environmental and social LCA.



Outcomes expected from RUSTICA

- Replace non-renewable mineral fertilisers, thus reducing external dependency and risks related to depletion.
- Balance nutrient concentrations between or within regions, thus increasing resource efficiency.
- Reduce the environmental impacts linked to the dispersion of nutrients present in waste flows, the emissions of greenhouse gases, and the production of fossil-based fertilisers.
- Develop new business models creating value from agri-food, fisheries, aquaculture and forestry by-products.
- Support the implementation of the Sustainable Development Goals.