

## Precision agriculture for processing vegetables to improve the management of water, fertilizer and pesticides

### Riferimenti

Tipo di progetto

Gruppo Operativo

Tematica

Agricoltura di precisione

Information

Time frame

2016 - 2019

Durata

36 months

Partners (no.)

6

Regione

Emilia-Romagna

Comparto

Orticoltura

Localizzazione

ITH51 - Piacenza

ITH56 - Ferrara

Costo totale

€399.967,87

Fonte di finanziamento principale

Programma di sviluppo rurale

Programma di sviluppo rurale

2014IT06RDRP003: Italy - Rural Development

Programme (Regional) - Emilia Romagna

Parole chiave

Climate and climate change

Fertilisation and nutrients management

Water management

Farming practice

Project status

completed



### Objectives

Improve the management of growing techniques, in order to bring the crops to make the most of their potential, both in terms of production and quality, with a specific attention to all the aspects linked to environmental performance. Quantify, on the basis of the new growing techniques introduced, the environmental burdens and potential impacts associated with a product / process / activity along the entire life cycle, from acquisition of materials (LCA).

### Activities

- Assessment of the impact of climate change on current growing techniques in order to process medium-term adaptation strategies in terms of management and Genetics (ideotyping).
- Adjustment of forecasting models for the risk of infection by pathogenic fungi and animals, to crop-pathogen couples identified.
- Development of APP for reading the LAI to estimate the critical concentration of nitrogen and the assessment of the necessity of fertilization LCA study.

Partenariato

Role	Azienda	Address	Telephone	E-mail
Leader	Conserve Italia Società cooperativa agricola	Via Poggi 11 40068 San Lazzaro di Savena BO Italy	051 6228311	dpiva@ccci.it
Partner	Azienda Agricola Partitore di Gatti s.s. società agricola	Località Partitore 54 29020 Gossolengo PC Italy	0523 778107	partitoredigatti@pec.coldiretti.it
Partner	C.I.C.A. - Consorzio interprovinciale cooperative agricole	Via delle Lame 118 40122 Bologna BO Italy	051 520330	cica@pec.confcooperative.it
Partner	Società Agricola Oasi s.s. di Garbin Antonio & C.	Località Moraro 2 44021 Codigoro FE Italy	0533 791014	agricolaoasi@pec.it
Partner	Università degli Studi di Milano - Dipartimento di Scienze e Politiche Ambientali	Via G. Celoria, 2 20133 Milano MI Italy	02 50317928	marcella.guarino@unimi.it
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## Pratiche abstract

### Description

### Objective

Definition of " best practices " specific for culture and area, as well as the implementation of IT support to process the factors ( soil quality, temperature, rainfall, soil moisture, level of plant growth, pesticides , etc . ) to be defined with a management choice to provide the producer with precise directions of intervention on the field.

The use of software weighted for crop and soil and climatic environment, will improve the production efficiency of each cultivation, in terms of quality and quantity, and in environmental impact.

### Description of activities

The following outputs are expected with specific reference to tomato crops, sweet corn, peas and "borlotti" beans:

- Identify the characteristics of the crops to focus on for the selection/breeding activities and the potential to increases in yield, especially for aspects already subject of breeding programs;
- Definition of ideotypes in silico for the identified traits, considering the characteristics of the germplasm available and the known genetic variation range. This approach allows the definition and analysis of ideotypes potentially achievable in vivo;
- Guidelines for improved crop management with a focus on a targeted and timely use of inputs (water, fertilizer, pesticides) for a less polluting impact and greater water savings.

- LCA analysis for verification of the effectiveness of the proposed models.
  - Evaluation of the productive performance of ideotypes as defined in the targeted area and climate change scenarios
- The result, in terms of improvement of water resources and management of fertilizers and pesticides management, will be given by the application in field of the guidelines and the introduction of improved ideotypes for the study areas.

## Link utili

Titolo/Descrizione	Url	Tipologia
Video dei risultati del progetto	<a href="https://www.youtube.com/watch?v=ZBiRpTUKF7k&amp;t=567s">https://www.youtube.com/watch?v=ZBiRpTUKF7k&amp;t=567s</a>	Materiali utili
Sito web del progetto	<a href="https://www.conserveitalia.it/it/attivita-agronomiche/programma-di-sviluppo-rur...">https://www.conserveitalia.it/it/attivita-agronomiche/programma-di-sviluppo-rur...</a>	Sito web
Documenti prodotti	<a href="https://www.conserveitalia.it/it/attivita-agronomiche/programma-di-sviluppo-rur...">https://www.conserveitalia.it/it/attivita-agronomiche/programma-di-sviluppo-rur...</a>	Materiali utili
Gli eventi del progetto	<a href="https://www.conserveitalia.it/it/attivita-agronomiche/programma-di-sviluppo-rur...">https://www.conserveitalia.it/it/attivita-agronomiche/programma-di-sviluppo-rur...</a>	Materiali utili