

EMPHASIS

EUROPEAN INFRASTRUCTURE FOR PLANT PHENOTYPING

Vision

We want to enable scientists to better understand plant performance and translate this knowledge into application. We aim to promote future food security and agricultural business in a changing climate.

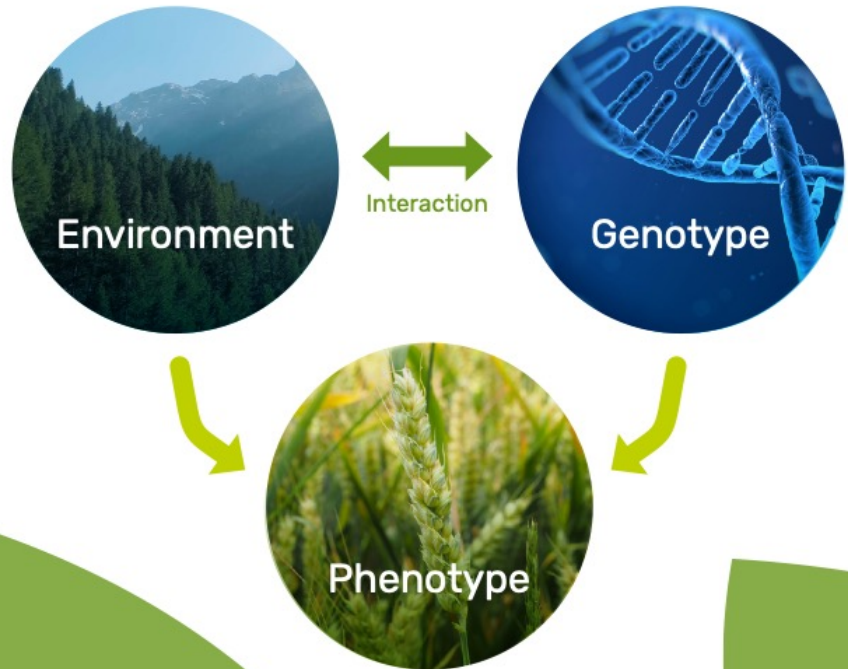
What is plant phenotyping?

SCIENTIFIC TOOL TO STUDY PLANT-ENVIRONMENT INTERACTION

- Study of plant structure and function
- Using non-invasive technology
- Understanding how plant structure and function depend on genetics and the environment

How does a plant cope with its environment?

Phenotyping is used to understand how plants can cope with reduced resources, pathogens and climate change.



Mission

A drone is shown in flight over a vast, golden wheat field. The background features a line of trees under a clear sky. A white network diagram, consisting of interconnected nodes and lines, is superimposed over the scene, with some lines extending towards the drone. In the bottom left corner, a portion of a person wearing a plaid shirt is visible, looking towards the drone.

What?

Facilitating multi-scale plant phenotyping to analyse genotype performance in diverse environments and quantify the diversity of traits

How?

By developing infrastructure and providing access to facilities, services and resources

Objectives

DEVELOPING INFRASTRUCTURE AND PROVIDING ACCESS

Develop an integrated
pan-European
infrastructure of
instrumented facilities

Link data acquisition to
a European-level data
information system and
modelling

Develop, evaluate
and share knowledge
and novel technologies

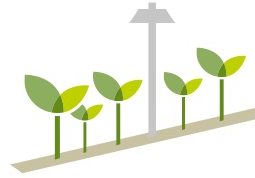
Infrastructure Categories

PLANT PHENOTYPING REQUIRES INTEGRATION OF BOTH FACILITIES AND ACTIVITIES



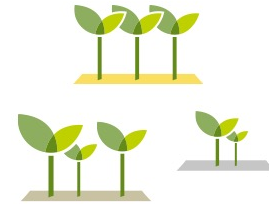
CONTROLLED CONDITIONS

Investigation of diverse plant traits in response to well-defined environmental conditions



INTENSIVE FIELD

Detailed investigation of plants and canopies under well-monitored field conditions



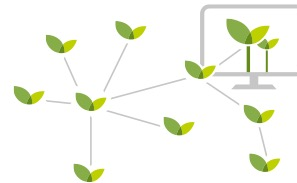
LEAN FIELD

Field sites with basic equipment and environmental monitoring that can be linked to a network of field sites



MODELLING

Models integrated in phenotyping pipelines and predictive models using phenotypic data



DATA & COMPUTATIONAL SERVICES

Integrating compatible information systems to provide access to data

Who benefits?

- **Researchers**
in need of quantitative plant assessment
- **Public sector investors**
in complementary plant phenotyping infrastructure in Europe
- **Scientific institutions**
using synergies in operating plant phenotyping infrastructures in Europe
- **Industry**
harnessing innovation in technology development and its application for breeding
- **Society in general**
due to a sustainable increase of food quality and quantity in conditions of climate change

Contact



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