Smart Diaspora 2023

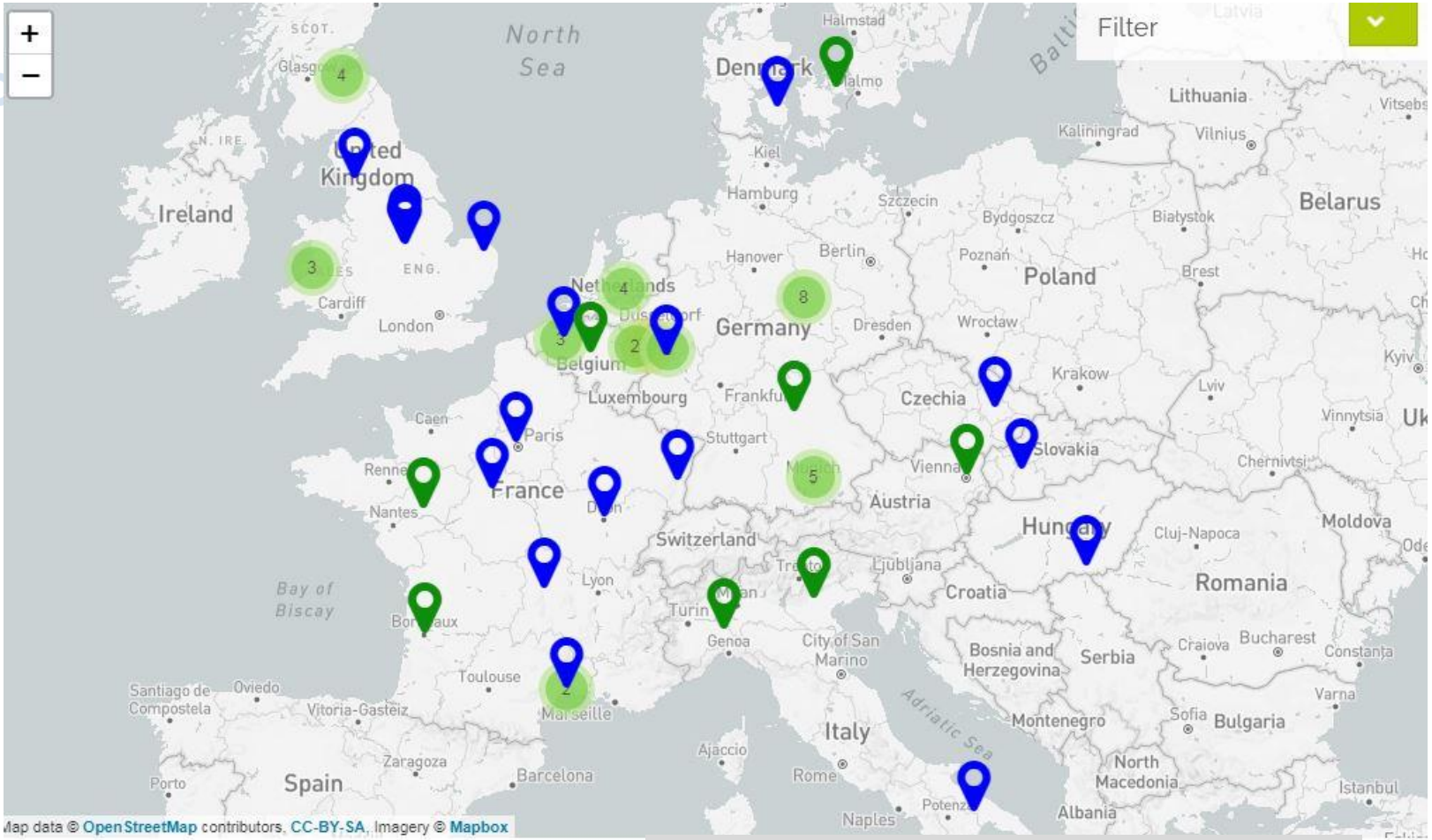
Developing Phenotyping Studies in Romania

10 - 13 Aprilie 2023, Timișoara

www.diaspora-stiintifica.ro

Eveniment aflat sub înaltul patronaj al Președintelui României

Smart
Diaspo
2023



https://www.plant-phenotyping.org/infrastructure_map

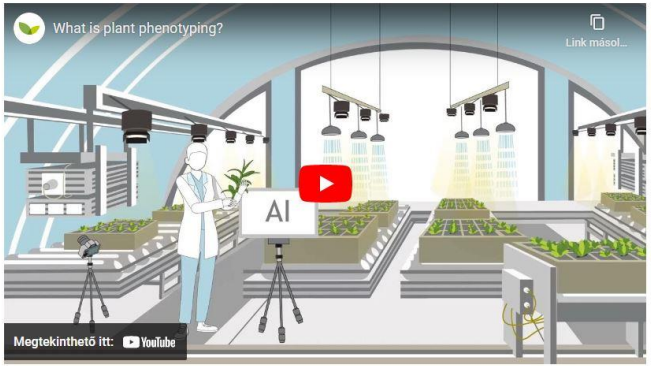
EMPHASIS

About | Services | Outreach | Phenotyping Landscape | European Infrastructures | Contact

Home / About / Plant Phenotyping

- Plant Phenotyping
- Mission and Objectives
- e-Infrastructure
- Infrastructure Categories
- Development of projects
- Preparatory Phase
- Implementation Phase

Plant Phenotyping



IPPN

HOME | NEWS AND EVENTS | WEBINARS | WORKING GROUPS | PHENOTYPING | JOBS & TRAINING | CONTACT & NEWSLETTER

Home

International Plant Phenotyping Network

International Plant Phenotyping Network is an association representing the major plant phenotyping centers.

IPPN aims to provide all relevant information about plant phenotyping. The goal is to increase the visibility and impact of plant phenotyping and enable cooperation between stakeholders in academia, industry, government, and the general public. Through workshops and symposia, IPPN seeks to establish different working groups and distribute all relevant information about plant phenotyping in a web-based platform.

→ subscribe to IPPN Newsletter

→ latest news

Smart Diaspora 2023

State of Phenotyping Research in Romania

- Many Romanian research entities are performing a “classical” style of phenotyping!
- Research topics are focused on plant breeding and enhancement of plant beneficial traits!
- The methods used are classical breeding methods and morphological, biochemical and more recently genetically characterization of plants!
- Modern phenotyping techniques are rarely used by a few research groups!

Revoluții și evoluții ale științelor omice în epoca postgenomică
State of Phenotyping Research in Romania

Growth potential of phenotyping research using modern techniques in Romania!

Research entities that have “plant research” on their focus:

Universities: 13 (12 public, 1 private)
National Institutes for Research and Development: 9
Research Centers & Stations: 5
Research Groups within commercial sector: 2

BIOLOGICAL RESEARCH CENTER JIBOU

BIOLOGICAL RESEARCH CENTER JIBOU

Short link: https://eeris.eu/ERIF-2000-000W-2568

65 Visits

Cosmin
Sicora

cosmin.sicora@gmail.com
CSI. Dr.

Collections of Biological Resources (e.g. Microorganisms, Biobanks and Seed Banks)
RI Domain of activity

Genomic, Transcriptomic, Proteomics and Metabolomics Facilities
RI Domain of activity

Cell Culture Facilities
RI Domain of activity

Smart
Diaspor
2023

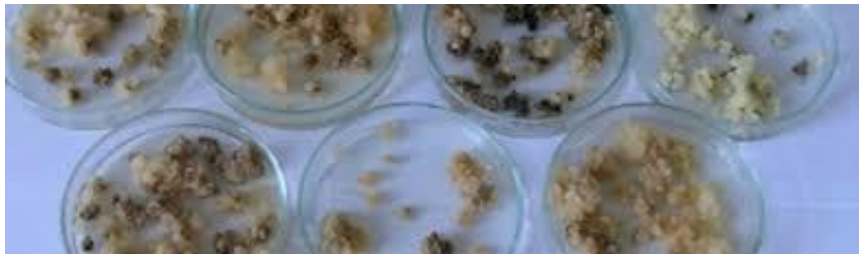
Research Equipment

- Real Time PCR thermocycler- IQ5
- Spectrophotometer Nanodrop 2000
- Spectrophotometer V 630
- Fluorimeter FL3500
- Fluorpen FP100
- Oxygen electrode
- Autoclave DB-150
- CO2 Incubator MCO-5AC
- Drying/Heating oven with forced air
- Bidistilator with pre-deioniser
- Growth chamber RD3-720 l
- XP Thermal Cycler
- Sterile hood
- Chemical hood

Revoluții și evoluții ale științelor omice în epoca postgenomică
State of Phenotyping Research in Romania

Phenotyping research at Babes-Bolyai University Cluj-Napoca

- The research group of Prof. Rackosy Elena is focused on obtaining resistant forms of potatoes using somatic hybridisation



Revoluții și evoluții ale științelor omice în epoca postgenomică
State of Phenotyping Research in Romania

Phenotyping research at Alexandru Ioan Cuza University, Iasi

The research group is focused on ecotoxicologic evaluation, bio monitoring and bioremediation of quality of environmental factors

Revoluții și evoluții ale științelor omice în epoca postgenomică
State of Phenotyping Research in Romania

Phenotyping research at Biological Research Center Jibou

MONI PAM

Revoluții și evoluții ale științelor omice în epoca postgenomică
State of Phenotyping Research in Romania

Phenotyping research at Biological Research Center Jibou

Open Fluor Cam

LI-3000C Portable Leaf Area Meter

Revoluții și evoluții ale științelor omice în epoca postgenomică
State of Phenotyping Research in Romania

Phenotyping research at Biological Research Center Jibou

PAM 2500

Revoluții și evoluții ale științelor omice în epoca postgenomică
State of Phenotyping Research in Romania

Phenotyping research at Biological Research Center Jibou

Plant Canopy Analizer LAI-2200C

- Leaf area (LA) is an important index for monitoring of distribution and changes in leaf area
- These measurements can be used in: Ecology, Agronomy, Entomology

Revoluții și evoluții ale științelor omice în epoca postgenomică
State of Phenotyping Research in Romania

Phenotyping research at Biological Research Center Jibou

Interactive effects of drought and salt stress on plant development in potentially salt resistant landraces of tomatoes
Experiment carried out on the Phenotyping Platform from BRC Szeged

Smart Diaspora 2023

Conclusions

- Modern phenotyping is only rarely used in Romania and most of the studies are performed on the frame of international collaborations!

- There is a real potential for future growth as many research entities are interested in plant research topics!

- Lack of predictability and amount of financial support, from government or private interests, for research in general and plant research in particular hinders the development of the field in Romania

Future perspectives for development of plant phenotyping

- Raising awareness of the importance of the field among interested ministries (research, education, agriculture and environment)
- Establishment of research clusters around existing poles of knowledge!
- Introduction of these techniques on student curriculum !
- Facilitation of Romanian researchers access to existing infrastructure abroad!

Smart Diaspor 2023

PERSPECTIVE

Plant Phenotyping: Past, Present, and Future

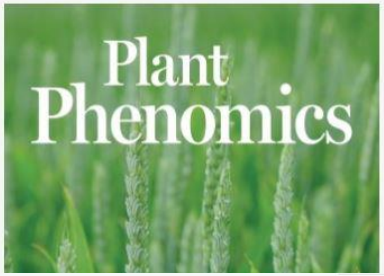
ROLAND PIERUSCHKA AND ULI SCHURR Authors Info & Affiliations

PLANT PHENOMICS · 26 Mar 2019 · Vol 2019 · Article ID: 7507131 · DOI: 10.34133/2019/7507131

672

Abstract

Latest Articles



Journal of Experimental Botany

Volume 73, Issue 15
3 September 2022

Comments (0)

< Previous Next >

JOURNAL ARTICLE

Crop breeding for a changing climate in the Pannonian region: towards integration of modern phenotyping tools

Get access >

Ankica Kondić-Špika ✉, Sanja Mikić, Milan Mirosavljević, Dragana Trkulja, Ana Marjanović Jeromela, Dragana Rajković, Aleksandra Radanović, Sandra Cvejić, Svetlana Glogovac, Dejan Dodig ... Show more

Journal of Experimental Botany, Volume 73, Issue 15, 3 September 2022, Pages 5089–5110, https://doi.org/10.1093/jxb/erac181
Published: 10 May 2022 **Article history** ▾

Opportunities and Limitations of Crop Phenotyping in Southern European Countries

Joaquim Miguel Costa[1*], Jorge Marques da Silva[2], Carla Pinheiro[3,4], Matilde Barón[5], Photini Mylona[6], Mauro Centritto[7], Matthew Haworth[8], Francesco Loreto[9], Baris Uzilday[10], Ismail Turkan[10] and Maria Margarida Oliveira[4]

[1] LEAF, Instituto Superior de Agronomia, Universidade de Lisboa, Lisbon, Portugal
[2] Biosystems and Integrative Sciences Institute (BioISI), Faculty of Sciences, Universidade de Lisboa, Lisbon, Portugal
[3] FCT NOVA, Universidade Nova de Lisboa, Monte da Caparica, Portugal
[4] ITQB NOVA, Universidade Nova de Lisboa, Oeiras, Portugal
[5] Estación Experimental del Zaidín, Consejo Superior de Investigaciones Científicas (CSIC), Granada, Spain
[6] HAO-DEMETER, Institute of Plant Breeding and Genetic Resources, Thermi, Greece
[7] Institute for Sustainable Plant Protection, Italian National Research Council (IPSP-CNR), Sesto Fiorentino, Italy
[8] Trees and Timber Institute, CNR, Sesto Fiorentino, Italy
[9] Department of Biology, Agriculture and Food Sciences, CNR, Rome, Italy
[10] Department of Biology, Faculty of Science, Ege University, İzmir, Turkey

The Mediterranean climate is characterized by hot dry summers and frequent droughts. Mediterranean crops are frequently subjected to high evapotranspiration demands, soil water deficits, high temperatures, and photo-oxidative stress. These conditions will become more severe due to

13,059
total views

View Article Impact

Edited by

Thomas Miedaner
University of Hohenheim, Germany

Reviewed by

Martina Pollastrini
University of Florence, Italy

Susan M. Medina
Scientific University of the South, Peru

TABLE OF CONTENTS

Thank you !
We invite you to Biological Research Center Jibou!