Setting the Scene for the EPSO Workshop Plant Phenotyping

Karin Metzlaff, EPSO, Bruxelles, Belgium

EPSO: The European Plant Science Organisation
EPSO Workshop on Plant Phenotyping
November 02-03, 2009
Forschungszentrum Jülich, Germany

Forschungszentrum Jülich, Germany
ICG-3: Phytosphere
Jülich Plant Phenotyping Centre (JPPC)
Website: http://www.jppc.de

http://www.plantphenomics.com/phenotyping2009

EPSO – plant science addressing grand challenges

Karin Metzlaff
European Plant Science Organisation
www.epsoweb.org
Julich, 2 November 2009

EPSO aims to advance plant science in Europe

Independent academic organisation, founded in 2000

Mission:

- Promote plant science and support plant scientists
- Discuss future plant science programmes across Europe
- Provide authoritative source of independent information on plant science
- Promote training of plant scientists to meet the 21st century challenges in breeding, agriculture, horticulture, forestry, plant ecology and sectors related to plant science

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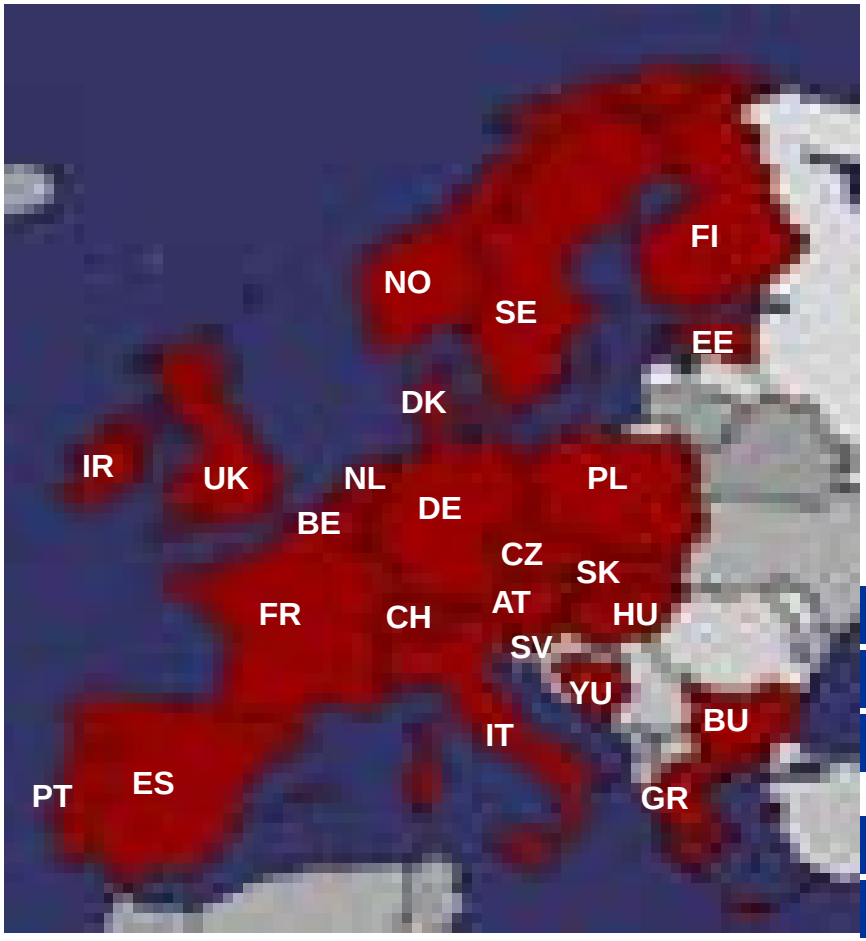
EPSO members: Academia

Academic Institutional members:

209 research institutes, universities, research departments

with over **27 000 researchers and staff** in plant science

from **30 countries – 27 in Europe and 3 beyond**



+ 1 600 Personal members

EPSO partners:
NGOs, industry, science organisations

Observers are from industry and NGOs

- ELO (European Landowners' Organization)
- EuropaBio, Bayer, BASF, BIOGEMMA, DLF Trifolium, Keygene, KWS, SunGene, Syngenta, Strube-Dieckmann, Agritec Plant Research, AgriSera, SES VanDer Have N.V

Links with academic and governmental organisations:

- ISE, ELSF & their members
- Global summit of plant science organisations July'09
- National learned societies can collaborate with EPSO on policy issues
- COST, ERA-PG

EPSO addressing grand challenges

Advice on science policy from national to European levels

Achievements:

- Research opportunities for the plant sector in FP6 & FP7
- Support of and collaboration with ERA-Net on Plant Genomics and Plant KBBE
- Major stakeholder of the Technology Platform “Plants for the Future”
- Foster creation of and encourage proposals to European Research Council (via ELSF and ISE)

Now:

- Input to FP7/8 discussion, joint programming, international collaboration beyond Europe, research infrastructure, education
- addressing grand challenges like food – water – energy security, sustainable agriculture
- Developing policy papers

EPSO addressing grand challenges

EPSO Conference, Lapland, 18 – 22.4.2010

Science policy

Science and society — Food security and safety – challenges ahead

Achieve sustainability — Crop genomes, breeding tools and strategies

Achieve quality — Architecture→ traits; photosynthesis → solar fuels; tree biology; metabolites → pharma & nutrients

Strengthen ecosystem functioning — Plant health, climate change and plant production, landscape genomics and biodiversity

Programme & registration
www.epsoweb.org
deadline early registration
15.12.2009

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EPSO addressing grand challenges

EPSO Workshop on Plant Phenotyping

organised by Uli Schurr and colleagues

- Bring together plant biologists and other experts across disciplines
  Academia (incl. students and lecturers from ETNA school), industry (providers and users), European Commission
- Foster key / emerging / promising research areas
  Screening of model and agricultural important plants to understand gene function, environment response and develop new agricultural traits
- → White paper on current state and recommend research priorities and if appropriate needs in education, legal issues etc.
  to the European Commission, ERA-Nets, national bodies

→ New ideas
Science collaborations
Input to research & research infrastructure programmes

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EPSO workshop plant productivity, Ghent Sep'09

Recommendations relevant to our discussion today:

'A road map to improve European Crop productivity'

- Yield (always combine with quality)
- Sustainability
- Phenotyping
  - Characterisation and evaluation (efficient and reproducible phenotyping is bottleneck)
  - Precision, high-throughput, incl. imaging
  - Towards natural conditions
    - E.g. temperature, soils, CO2 (lab → greenhouse → field) – challenge is field trials with GM lines
    - Shoots AND roots
- Data integration, free access and smart strategies to use

EPSO workshop plant phenotyping

Programme

- Concept of plant phenotyping (pp)
- Novel technologies for pp
- High-throughput infrastructures
- Integration of pp with (bio-)informatics
- Requirements of phenotyping from basic and applied sciences
- Discussion on the white paper ‘A road map to strengthen plant phenotyping’

Many thanks to Thomas Gollan, Susanne Lambrecht, Hendrik Poorter, Ulrich Schurr, Francois Tardieu, Achim Walter

Speakers & participants

Guests (Sebastian Crepieux)

Sponsors

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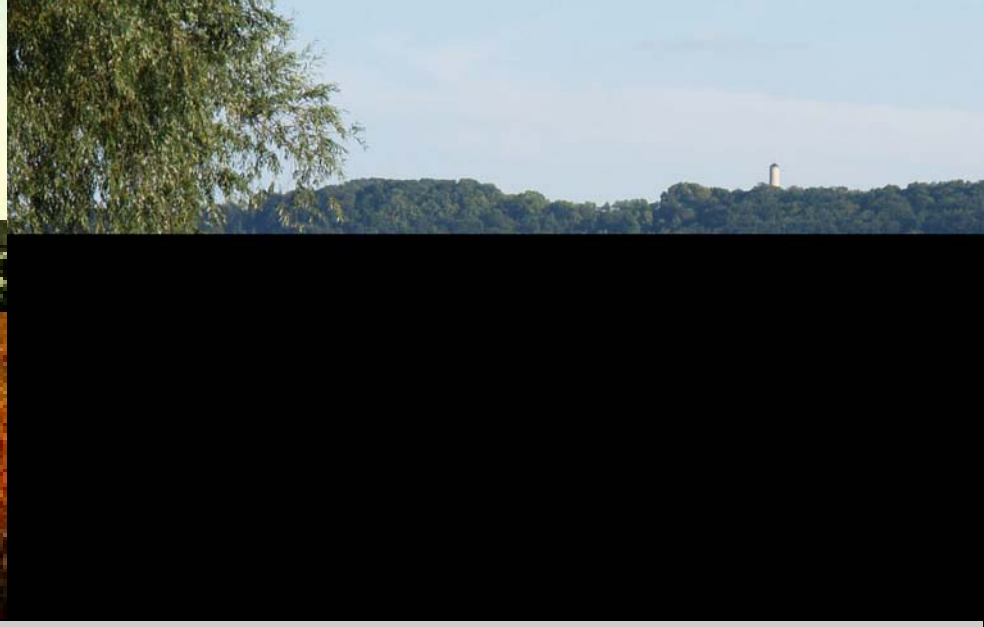

Thank you and have an interesting workshop !

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