EPSO: What and how can plant science contribute to society today and in future? How can YOU get involved?

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European Plant Science Organisation
www.epsoweb.org
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1. Who represents plant science In Europe?

EPSO aims to advance plant science in Europe

Independent academic organisation

Mission:

- Promote plant science and support plant scientists
- Discuss future plant science programmes across Europe
- Provide authoritative source of independent information on plant science → science advice to policy
- 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

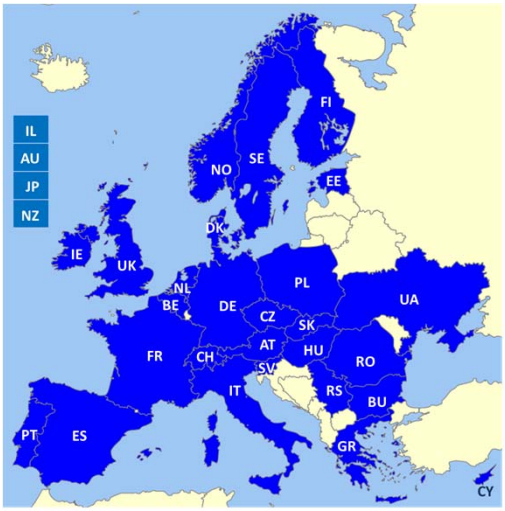
Academic Institutional members:

227 research institutes, universities, research departments

with over **28 000 researchers and staff** in plant science

from **31 countries – 28 in Europe and 3 beyond**

+ over 3.300 Personal members - and you



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EPSO members: Switzerland

Zurich-Basel cluster - representative: **Samuel Zeeman**

- ETH Zurich
- University of Zurich
- University of Basel

Agroscope representative: Lukas Bertschinger → Michael Winzeler

Cluster French speaking region – representative: Theresa Fitzpatrick

- University of Lausanne
- Inst. Plant Sciences - University of Bern
- Dept. Botany and Plant Biology – University of Geneva
- Inst. Botany and Plant Physiology – University of Neuchâtel

www.epsoweb.org/membership/representatives#ch

EPSO partners: NGOs, industry, ministry, science organisations

Observers are from industry, NGOs, linked to ministries

- ELO (European Landowners' Organization)
- EuropaBio, Bayer, BASF, BIOGEMMA, DLF Trifolium, Dow AgroScience, Keygene, KWS, SunGene, Syngenta, Strube-Dieckmann, Agritec Plant Research, AgriSera, SES VanDer Have N.V, FoodDrinkEurope; & collaborate in Plant ETP
- German Society for International Cooperation (GIZ)

Links with academic and governmental organisations:

- ISE, ELSF & their members; EUCARPIA, ISHS, FESPB
- Global Plant Council (Plant science organisations worldwide)
- 13 National learned societies collaborate with EPSO on policy issues (2xDE, 2xUK, CZ, Scand, FR, 2xPL,ES, PT, IT, **CH**)
- COST, ERA-CAPS, Joint Programming FACCE, D&H, W
- FAO (Division plant production and protection)

2. What can plant science contribute to society today and in future?

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1 - Plant science can help to **address societal challenges**

❖ Tackling **food security, climate change, energy security, sustainability**:

1. Improve resource use efficiency and stewardship
2. Enhance yield and yield stability for increased resilience in dynamic environments
3. Improve plant health for resilient production
4. Develop plants with improve composition for animal nutrition and lowering environmental footprint

❖ Addressing **nutritional security and human health**:

5a. Develop plants with improved composition for human nutrition and health

5b. Improving and promoting diverse crops for diverse diets

5c. Outreach activities

Plants for the Future European Technology Platform epso

1 - Plant science can help to address societal challenges

❖ Sustainably use **renewable resources** and mitigate **climate change** and producing high value plant made pharmaceuticals for **human health**:

6. Green bioactive molecules – secondary metabolites & green proteins

→ **Study on the economic, social and environmental value of plant breeding** in the European Union, 15.3.2016, commissioned by Plant ETP

2 - Curiosity driven plant science fosters **knowledge generation** about living organisms and the world we live in

1. FP6 / FP7, national: **collaborative** basic research projects - e.g. on
   - Gene regulation – Transcription factors, Epigenetics ..
   - Tree genomics & gene-mining to identify key genes controlling wood formation, growth and wood properties

Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy

2. H20: **ERC** – e.g. on
   - Developmental biology flowering & annual / perennial plants
   - Landscape genomics
   - Transcriptional regulatory framework
   - Cluster root development; Plant mircrobiome
   - Domestication in crop plants; Plant immune receptor complex…

3 - Plant scientists **support the next generation** of scientists and entrepreneurs

1. FP6 / FP7, H20: - e.g. in
   - Marie-Curie training networks
   - Collaborative research and innovation projects
2. Education Action Plan - foster qualified skilled future workforce:
   - Build a sustainable workforce for the plant sector
   - Foster the future of the plant sector through research, education and training
   - Increase public appreciation of the plant sector

   For you to use at National / regional levels

3. EPSO Conference support grants and poster awards
4. EPSO Young Plant Scientist Award – 1st time 2016
   40 submissions – 2 awards: Plenary talks @ EPSO/FESPB conference

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3. How can plant scientists engage with policy and society to contribute?

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1 – EPSO supports science and scientists

- ❖ **with EPSO Working Groups**

- ❖ **with EPSO events**

- ❖ **with EPSO information tailored to plant scientists**

See: www.epsoweb.org

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2 – EPSO provides science advice to policy

Mainly at European level (to EC, EP, MSs), as well at national and global levels

- o Strategic input towards **Horizon 2020** / H20+
- o **ERA-Networks**, Joint Programming Initiatives
- o **Developing countries** (FAO, EC)
- o **Crop Genetic Improvement Technologies**

- o **Series of workshops with the European Parliament** – Plant ETP 2015-18

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3 – EPSO fosters science with society approaches

Fascination of Plants Day

- o Initiated and coordinated by EPSO
- o 2012, 2013, 2015, 2017
- o Success FoPD 2015:
- ➢ **589 institutions**
  over **965 events – 9 in CH**
  in **56 countries**
- ➢ 126.888 unique visitors online
- ➢ 3.404 tweets
- ➢ 1.213 postings on facebook
- o Thanks to the over 56 national
  & 4 global coordinators
  Sylvia Martinez, Univ Basel, for CH

Poland

More than 200 events were organized from 12 to 22 May in Poland for Fascination of Plants Day. Universities, botanic gardens and research institutes took up the challenge to fascinate people with plants.

In all places, the general public turned up in great numbers. Open days were organized in several research institutions and universities, experimental and field demonstrations, excursions, virtual and real photo exhibitions, film projections among many others were organized. The event was given attention both at the radio and television.

Poland country page

2015 National Coordinator: Malgorzata Garnczarska

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4. How can YOU get involved?

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1 – Join the EPSO Working Groups

- Agricultural Technologies
- Crops, Food and Health
- Horticulture
- Tree biology and biotechnology
- Molecular Farming
- Outreach and Public Dialogue
- Global Plant Research incl. Dev. Countries
- Basic Plant Science
- New: Plant – mircobiome interactions

New: Data – acquisition, exchange, integration between omics ….

2 – Become a Personal Member, some supporting scientists

3 – Discuss future research and education collaborations, find your next job..

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4 – Organise an interactive event for the Fascination of Plants Day

Fascination of Plants Day – 2015 – join in 2017 ☺

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This is our future
we have to engage in it

Scientists can help to build an inclusive collaborating Europe / world

Thank you
for your attention

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