European Plant Science Organisation Activities' Report - Year 2018

Aldo Ceriotti

1. Introduction

The European Plant Science Organisation (EPSO http://www.epsoweb.org) is an association based in Brussels (Belgium) which gathers more than 200 research centers, departments and universities with the goal of fostering plant science in Europe.

2. Main activities carried on by EPSO during 2018 relevant for Italy and for CNR

In 2018 EPSO developed a set of actions to support research in the area of plant science, agriculture and food and nutritional security in Europe.

As its main activity, EPSO provides science advice to policy, in areas related to plant science e.g. FP9, Food 2030 Mission Action Plan; New Breeding Technologies; H2020 Societal Challenge 2. Within this framework, in 2018 EPSO published a series of statements and position papers concerning issues with strategic relevance for plant research including New Plant Breeding Techniques (see "EPSO first reaction to the Court of Justice of the EU ruling regarding mutagenesis and the GMO Directive"), Nagoya Protocol and its implications for the use of genetic information derived from plants (see "Access to digital sequence information must remain open)" and Synthetic Biology (see "Comment on the report of the ad hoc technical expert group on synthetic biology"). With these documents, EPSO has highlighted the importance of a scientific approach to policies concerning plant science and related issues, and the need to adapt EU legislation to recent progresses in crop genetic improvement.

EPSO has continuously monitored EU research programs and contributed to EC consultations on the next Framework Program

- EPSO input to the EC consultation on missions towards FP9, based on the Mazzucato report (30.03.2018)
- EPSO input to the EC consultation on EU funds in the area of investment, research and innovation, SMEs and single market (22.02.2018)

In the response to EC consultation on missions towards FP9, based on the Mazzucato report, EPSO has identified three Missions of high relevance for plant science, agriculture, human health and industry:

- 1. 1001 crops diverse crops for diverse diets and human health and sustainable production;
- 2. Plant food sustainable agriculture and sustainable food;
- 3. Green bio-factories New bioactives for pharma, cosmetics, food and fine chemicals

EPSO participates in research programs financed by the European Commission, and is currently partner in the TOMRES, CHIC and Cropbooster projects. EPSO is also official observer in the ERA-CAPS and SusCROP ERA-NETs.

EPSO also represents the academic sector within the European Technology Plantform "Plants for the Future" (Plant ETP, http://www.plantetd.org/), which brings together stakeholders from industry, academy and farming communities to promote Innovation, Research and Education in the plant sector. Plant ETP also organizes a series of events at the European Parliament named "Sustainable Growth: Unlocking the potential of plants", with the goal of discussing with policy makers Global and European Challenges and how these can be addressed by manifold practices and technologies.

To promote the participation of the plant science community to EU research initiatives, EPSO publishes a series of guides illustrating the opportunities offered by the different programs, which are available in the members-only section of the EPSO website. In 2018 EPSO has also published an analysis of the Horizon 2020 Calls (2014-16) with the aim of highlighting the participation of plant scientists to EU research programs.

EPSO develops different outreach activities, and promotes the "Fascination of Plants Day", an international initiative which, in the 2017 edition, involved 52 nations and more than 1000 events, many of which were interactive and directed to families.

Every second year, EPSO organizes jointly with the Federation of European Societies of Plant Biology (FESPB) the "Plant Biology Europe" Conference, which is the main scientific conference devoted to plant science in Europe. The next conference will be held in Turin in 2020, and will bring to Italy a large number of researchers coming from Europe and the rest of the world, to discuss more recent advances in plant biology and the impact of plant research on agriculture and the environment.

Being CNR a member of EPSO, all CNR researches can join the EPSO Working Groups. The following working groups have been particularly active in 2018:

- Agricultural Technologies (meeting in Zurich 8.5.2018 and Berlin 15.10.2018)
- Plants and microbiomes (meeting in Cologne 5.10.2018)
- Horticulture (meeting in Grossbeeren 16-17.10.2018)
- Nutritional Security (meeting in Berlin, 27.11.2018)

Participation in EPSO Working Groups allows CNR researchers to play an active role within the association, contributing to define the position of EPSO on issues of great relevance both at the National and European level, and also favors the generation of research networks within specific areas of plant science.

3. Activities carried on by Aldo Ceriotti within EPSO during 2018 and impact on the Italian scientific community

The CNR delegate and the substitute (Angelo Santino) participated in the General Meeting of the associations which was held in Copenhagen (DK) on 16-17 June 2018. The delegate Aldo Ceriotti also participated in the two meetings of the EPSO Board of Directors, which were held in Brussels on 23 April and 21 November.

The delegate is also a member of the Working Group "Agricultural Technologies" and participated in the two meetings which were held in Zurich on 8 May and in Berlin on 15 October. The main issues addressed by the Working Group were:

Genome Editing (see document "On EC ruling regarding mutagenesis and the genetically modified organisms directive" published on 26.07.2018)

Synthetic Biology (see document "EPSO comment on the report of the Ad Hoc Technical Expert Group on Synthetic Biology" published on 09.03.2018)

Nagoya Protocol (see document "Implementing the Nagoya Protocol by national legislation in the countries of Europe" (03.07.2017).

The delegate participated in the internal workshop "Contributions of Plant Science to the UN Sustainable Development Goals" which has been organized by EPSO and which was held in Barcelona (Spain) on 24-25 April 2018, and to a Meeting with representative of UK research institutions to analyze the impact of Brexit on European plant science (Norwich, 13.09.2018).

Participation in these and other EPSO initiatives has provided a constant update on a series of issues of high relevance for the National research community, and has promoted the visibility of Italian plant science in the European landscape.

4. Evaluation of the participation in terms of benefits and membership cost

The EPSO membership allows European research institutions and the community of European researchers to speak their voice and contribute defining research priorities and global research strategies in the area of plant science and agriculture. EPSO regularly informs the delegates about upcoming events, initiatives and activities of relevance for plant science in Europe, and publishes a Newsletter which is distributed through the members-only section of the EPSO website. The Annual General Meeting is also an important opportunity to collect information about EPSO activities, to discuss general strategies, and plan future initiatives. Overall EPSO provides a useful discussion forum for European institution active in the area of plant science, promoting the participation in international networks which can further develop into research partnerships and lead to the drafting of proposal to be submitted in response to European calls.

Through EPSO, the National plant science community, participates in the activities of the European Technology Platform Plant ETP, and contributes to the organization of the biannual conference "Plant Biology

Europe", (next edition to be held in Turin in 2020), with a wide participation of National and International plant scientists.

5. Evaluation of Italians' attendance and how to improve interest and involvement

Four other Italian institutions, in addition to CNR, are current members of EPSO: University of Milan, University of Bologna, University of Turin and University of Udine. CNR scientists participated in EPSO activities by contributing to the group of "EPSO Supporting Scientists", and/or with the participation in EPSO working groups such as the ones on "Agricultural Technologies", "Nutritional security" and "Horticulture". It will be important to further promote the participation of CNR Scientists in EPSO activities, by expanding the group of "Supporting Scientists" to include junior researchers and by efficiently broadcasting within the CNR community the vast range of initiatives promoted by EPSO. Internal communication channels such as the Annual Conference of CNR Departments, the meetings of the Board of Institute Directors, Department websites, Newsletters, will be used to bring to the attention of CNR plant scientists the EPSO initiatives and to highlight the opportunities offered by the EPSO membership to develop a comprehensive view of the area of plant science in Europe. EPSO also offer to CNR personnel the possibility of an internship at the Brussels office, to participate in specific projects and work in close contact with the EPSO staff.

6. Italian experts with important roles within EPSO or within related Commissions and Programs

The CNR Delegate was elected as member of the Board of Directors in 2013, and the appointment was renewed for three further years by the General Meeting in 2015. In the Board Meeting held in Brussels on 29 March 2017 the CNR Delegate Aldo Ceriotti was elected President of the association till the end of his second term, which expired on 30 November 2018. At the General Meeting in Copenhagen (June 2018) the CNR substitute Angelo Santino was elected as member of the EPSO Board of Directors. His three-year term started on 1 December 2018.

7. Conclusions

EPSO is the main European organization with a specific focus on plant science, monitors European research activities, and plays an important role as scientific adviser for European institutions. The EPSO membership contributes to the internationalization of CNR research activities, improves the visibility and impact of CNR in Europe, and provides the CNR scientific communities with further opportunities to participate in European research initiatives.

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