

# Sowing the seeds of plant genomics research

“Europe has a long tradition of knowledge-intensive food production. This ERA-NET project gives all of us greater insight into the research going on in other Member States.”

Please note that this project sheet represents an extension to the previous one, included in Series 1 of this publication.

Studies of the genetic make-up of plants are essential for the continued competitiveness of European agriculture and industry. However genomics projects can be labour-intensive and costly. ERA-NET Plant Genomics (ERA-PG) consists of a network of 17 funding organisations, from European countries and Israel. It strives to reduce fragmentation in research, and to actualise scientific excellence through transnational collaboration, integration and synergy of national plant genomics programmes. The network's ultimate long-term goal is to establish a completely integrated European plant genomics programme in which all partners can participate on an equal basis

Controversy surrounded the introduction of genetically modified crops in Europe. Consumer wariness contrasted with general scientific approval. Arguments about environmental dangers and worldwide agricultural benefits still rage. Policymakers, meanwhile, have to make informed, evidence-based decisions. The widespread public debate highlighted the importance of plant genomics as a subject for scientific research. Plants are a source of food worldwide, and they offer renewable sources of energy and materials. From forestry to pharmaceuticals, plants are central to a significant proportion of European industry. The study of their genomes is essential, in order to drive innovation, to stimulate commercial exploitation, and to keep Europe's economy healthy.

## Landscaping a foundation

The existing transnational programmes indicated that the plant genomics field was set for a European network. Therefore ERA-PG has set out to strengthen the foundation of plant genomics research in Europe, through joint strategic actions. A coordination and collaboration framework has been designed through the exchange of information on programme development and management, formulation of best practices and identification of common strategic issues.

In 2005, a report was published under the title “Plant Genomics Research in Europe”. The report offers a vast amount of information on plant genomics programmes, not only in the ERA-PG member countries, but also in several preeminent nations worldwide. It identifies Europe's significant contribution to the plant genomics field, as well as the global agricultural-based economy in general. The network began its coordination activities by exchanging information on national plant genomics programmes, national infrastructures, institutes and administration and evaluation systems in use. Furthermore, information was collected, so as to portray the global plant genomics research landscape, and to explore how Europe fits into this landscape. Also in 2005, the ERA-PG Planning Workshop was formed, with the intention of reaching a shared understanding of both the overlap and the gaps in national programmes, and evaluative and administrative systems. By bringing together 84 participants from science, administration and industry, the aim of the workshop was to arrive at a commonly agreed foundation for the implementation of joint strategic activities. As a result of these efforts, collaboration among partners was strengthened, and an understanding was developed between scientists and administrators.



“ *Enabling collaborations within transnational research projects will help Europe to strengthen its knowledge-based bio-economy and secure its niche in international markets.* ”

**Full title:**

ERA-NET Plant Genomics

**Research field:**

Genomics

**Coordinator:**

Netherlands: Netherlands  
Genomics Initiative

**Partners:**

- Austria: Federal Ministry of Education, Science and Culture (BMBWK)
- Belgium: Ministry of Flanders, Dep. Economy, Science, Innovation (MF-EWI)
- Denmark: Danish Agency for Science, Technology and Innovation (DASTI)
- Finland: Academy of Finland (AKA)
- France: National Institute for Agricultural Research (INRA) and National Research Agency (ANR)
- Germany: German Research Foundation (DFG) and Project management Organisation Juelich (PTJ) on behalf of the Federal Ministry of Education and Research (BMBF)
- Israel: Ministry of Agriculture and Rural Development (MOARD)
- Italy: Ministry of University and Research (MUR)
- Norway: Research Council of Norway (RCN)
- Portugal: Foundation for Science and Technology (FCT)
- Spain: Ministry of Education and Science (MEC)
- Sweden: Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (FORMAS)
- Switzerland: Swiss National Science Foundation (SNSF)
- UK: Biotechnology and Biological Sciences Research Council (BBSRC)

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**Duration:**

5 years

## Reaping the fruits

Initiated through funding organisations from 11 countries with national or regional plant genomics research programmes, the network aimed to support the integration of countries stepping up to national programmes. After two years, this led to an enlargement of four countries, and most recently, the inclusion of the new EU Member State Bulgaria. To further advance coordination activities, a study on best practices was undertaken. The study entitled “In search of best practices for common evaluation and shared transnational administration systems” delivers an overview of existing national practices of programme management. It also highlights the aspirations and stipulations of ERA-PG partners regarding administrative, financial, management and legal aspects of joint programmes. The organisations have common ambitions for generating and aiding transnational collaborative research projects. They also have shared views regarding call procedures and programme monitoring. However, differences in viewpoints still exist concerning the legal aspects of policy, for example.

In order to create more broadly-unified plant genome research in Europe, the

advancement and competitiveness of jointly funded research is being monitored. Also, collaboration among funding organisations is being analysed, while opportunities for new networking partnerships with countries outside ERA-PG are being fostered.

Through building upon national programmes and existing transnational collaborations, ERA-PG launched its first joint call for research projects on 1 February 2006, making it one of the most wide-ranging and fundamental ERA-NET-initiated research programmes. The call entitled “Structuring Plant Genomic Research in Europe” has a total available budget of over 30 million euro, and was specifically addressed to plant genomics researchers in Germany, the UK, Spain, Italy, France, Denmark, the Netherlands, Finland, Norway, Flanders and Portugal. The call is divided into two SubCalls. One is geared towards academic publicly-funded research, and the other is geared towards more applied research in public-private partnerships. Over 100 pre-proposal applications have been received, and after being assessed, 77 consortia have been invited to submit a full proposal, making the final selection phase highly competitive. Eventually, 29 projects totalling 45 M€ of public and private funding will be launched in October 2007.

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€2 900 000

**Project reference:**

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**Directorate-General for Research:**

Coordination of Research Activities

<http://www.cordis.lu/coordination/home.html>