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lant genomics – fertile for collaboration



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

Studies of the genetic make-up of plants are essential for the continued competitiveness of European agriculture and industry. But genomics projects are labour-intensive and costly. Transnational cooperation at programme level will help to maximise the return on the €80 million invested in plant genomics across Europe each year. ERA-PG is coordinating the integration of national programmes by spreading best practice, developing common programme management procedures, and joint activities such as the pooling of resources and joint calls for proposals. In the longer term, joint research programmes promise to boost Europe into a position of worldwide leadership in plant genomics, enabling it to address more effectively some of the most pressing scientific and societal issues of the day.

Controversy has surrounded the introduction of genetically modified crops in Europe. Consumer wariness contrasts 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 has highlighted the importance of plant genomics as a subject for scientific research. Directly or indirectly, plants produce all the world's food as well as offering renewable sources of energy and materials. From forestry to pharmaceuticals, plants are central to a significant proportion of European industry. Studying their genomes is essential to drive innovation, to stimulate commercial exploitation, and to keep Europe's economy healthy.

Fragmentation

Europe invests around €80 million every year in plant genomics research – an amount comparable with the USA. However, this sum is split between numerous national research programmes. Coordination of national research programmes would help Europe to deploy its budgets more coherently, optimise its investment in expensive resources, and ensure that European plant genomics

secures a leading position in international business and political arenas.

ERA-PG brings European plant genomics under one flag and provides it with the critical mass needed if research is to be truly effective. It integrates national and regional programmes to develop the common knowledge necessary for coherent policy development, and a structure that will allow limited resources to be used as efficiently as possible. This ERA-NET scheme has a long-term perspective – by progressively aligning genomics programmes across Europe it aims to plan strategically, and ultimately to fund, research at a transnational level. This is the only way, the partners believe, to meet the European demand for plant genomics in medicine, agriculture and industrial innovation.

Progressive coordination

ERA-PG is built on a strong foundation of existing collaborations. There are already joint projects between the national programmes of France and Germany which, with Spain, have also launched a tri-national plant genomics programme with joint funding.

So far, 12 partners have joined ERA-PG, including national funding organisations, ministries and scientific academies. However, the network is committed to expanding its membership, especially to candidate countries that are themselves launching plant genomics initiatives.

ERA-PG has already begun a simple exchange of information between the participants to determine the current state of



Coordination Action

**Full title:**

European Research Area plant genomics

Research field:

Genomics

Coordinator:

Netherlands: Netherlands Genomics Initiative

Partners:

- Austria: Federal Ministry of Education, Science and Culture
- Belgium: Ministry of Flanders, Science and Innovation Division
- Denmark: Danish Agriculture and Veterinary Research Council
- Finland: Academy of Finland
- France: INRA
- Germany: Federal Ministry of Education and Research; Deutsches Forschungsgemeinschaft
- Italy: Ministry of Education, University and Research
- Norway: Research Council of Norway
- Spain: Ministry of Science and Technology
- UK: Biotechnological and Biological Sciences Research Council

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“ *Realising synergies between different national research programmes will help Europe to secure its niche in international markets.* ”

genomics research, its management, administration and the research priorities of each country. From the information collected, the network is identifying and encouraging best practice among the participants. This benchmarking exercise will help the partners to formulate strategic activities. Through short-term exchanges of programme managers and discussions between programme makers and managers, ERA-PG will identify the barriers that hinder greater co-operation and look at initial areas for joint activities. An important task at this stage is the development of a common legal framework to ensure durable collaboration between national and industrial partners.

With these foundations in place, ERA-PG will turn to the implementation of joint strategic activities. Programme managers will work together to ensure that all the national programmes are directed towards common objectives – in particular, by issuing joint calls for proposals and following common procedures for proposal evaluation. The network will also develop mechanisms to open up national laboratories and share investment in expensive equipment and personnel. Joint training programmes and scientist exchanges will feature prominently. These activities will simplify the

quick distribution and implementation of novel technologies, and stimulate the creation of joint technological ‘hot spots’ at shared facilities.

Once significant coordination has begun, ERA-PG will shift its attention to the future long-term structuring of plant genomics research in Europe and the creation of joint strategies, programmes and funding. In addition, the network will formulate long-term goals and research priorities for plant genomics in Europe. It will identify new research avenues in which Europe should contribute to international programmes or attempt to secure worldwide leadership.

Improving the yield

Europe has an important role to play in the future production of safe and healthy food for the world’s growing population. Tight co-operation and coordination of national plant research programmes will create the critical mass that Europe needs to sustain its competitiveness in this area. By intensifying the contacts between programme makers, programme managers and scientists, ERA-PG will help to ensure that plant genomics research addresses the most pressing scientific and societal issues that Europe faces in this field today.