



The European Triticeae Genomics Initiative - ETGI

April, 2008

In the context of its international development, Céréales Vallée strongly supports the ETGI which is chaired by Catherine Feuillet (INRA), Céréales Vallée scientific council member.

■ The context

Cereals constitute over 50% of total crop production worldwide (FAO).

Cereal seeds are one of the most important renewable resources for food, feed and industrial raw materials (70%).

Crop species of the Triticeae tribe (wheat, barley and rye) play a major role in human and domestic animal nutrition and are the most important crops for European agriculture. The EU 25 planted 36.7 million hectares and harvested 198 million metric tons from these three crops in 2004. In 2002, this represented 40% of all arable lands in the EU.

Today, Europe faces the challenge of delivering safe, high-quality, and health-promoting food and feed in an economical, environmentally sensitive, and sustainable manner while maintaining yield and its stability across environments that face climatic change. Furthermore, Europe could benefit from increasing the use of cereals for non-food products and cereal straw for bioenergy to supplement or replace fossil fuels. To achieve this, significant advances in the understanding of the molecular mechanisms underlying quantitative and qualitative agronomic traits are required. Plant genomics is the foundation for addressing these challenges.

■ The creation

Internationally, the Triticeae research community has coordinated its activities since 1989 through the International Triticeae Mapping Initiative (ITMI, <http://wheat.pw.usda.gov/ITMI/>).

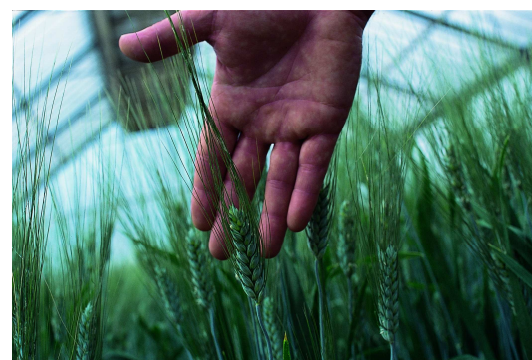
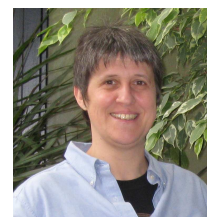
Recently, large structural and functional genomic programs have been initiated within the ITMI framework through the establishment of the

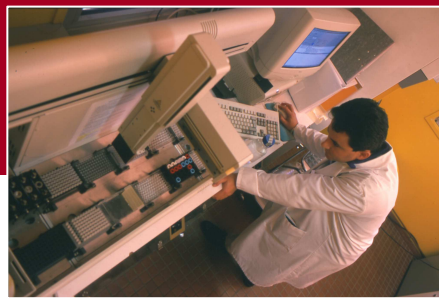
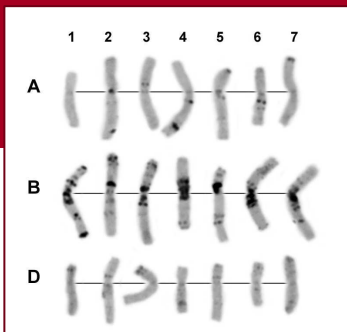
International Wheat Genome Sequencing Consortium

(IWGSC, <http://www.wheatgenome.org>) the goal of which is to sequence the bread wheat genome.

To support these efforts and reinforce European leadership, a European Triticeae Genomics Initiative (ETGI, <http://www.etgi.org>) was launched and a first workshop was held at the 4th Plant Genome European Meeting on September 21st in Amsterdam.

Catherine Feuillet,
INRA Clermont-Ferrand / Theix / Lyon research
director, scientific council member, is one of the
co-ordinators of the Wheat Genome Sequencing
Consortium of the ITMI and the European
Triticeae Genomics Initiative





The missions



ETGI consists of European scientists from public and private research institutes who are interested in developing complementary and coordinated research projects on Triticeae genomics to pave the way for a better understanding of crop plant systems biology and, thereby, to facilitate substantial improvements of these crop species.

This network of excellence will enable a platform to be established that supports the development of wheat, barley and rye genomics and provides strong leverage for an increase in the funding available for Triticeae genomics in Europe.

Human and animal nutrition rely primarily on agricultural products derived from crop species of the Triticeae tribe (wheat, barley and rye) and these are the most important crops for European agriculture. To meet human needs by year 2050 in an environmentally sensitive and sustainable manner, significant advances in the understanding of the molecular mechanisms underlying quantitative and qualitative agronomic traits **must be achieved in the near future to increase absolute yield while delivering safe and high quality food and feed products.** Plant genomics is the foundation for addressing these challenges

The organization

The European Triticeae Genomics Initiative is organized as a platform for the coordination and communication of Triticeae Research between interested Research Groups, Research Institutions and Industry at the European level. Each country is / can be represented by one or more delegates to the coordination committee, which serve as the communication link to colleagues at Research Institutions and Universities, National Funding Bodies and Industry in their respective home countries.

Current members of the coordinating committee are :

Country	Name of representatives	
Austria	Herman Burstmayr	Institut für Pflanzenbau und Pflanzenzüchtung
Cyprus	Dionysia Fasoula	Agricultural Research Institute
Czech Republik	Jaroslav Dolezel	Institute of Experimental Botany
Denmark	Sören Rasmussen	National Institute of Public Health
Finland	Alan Schulman	Plant Genomics Laboratory, University of Helsinki
France	Catherine Feuillet	National Institute for Agricultural Research
Germany	Nils Stein	Leibniz Institute of Plant Genetics and Crop Plant Research Gatersleben
Greece	Anastasios Tsaftaris	Computer Engineering Department, Aristotle University of Thessaloniki
Hungary	Janos Györgyey	Institute of Plant Biology, Biological Research Center
Israel	Tzion Fahima	Rivka Hadas Agriculture Research Organization
Italy	Roberto Tuberosa	Dept. of Agroenvironmental Sciences and Technology, University of Bologna
Latvia	Nils Rostoks	Scottish Crop Research Institute
Netherlands	Rients Niks	Wageningen University
Norway	Hilde-Gunn Opsahl Sorteberg	Universitetet for miljø- og biovitenskap
Spain	Pilar Hernandez	Instituto de Agricultura Sostenible
Sweden	Christer Jansson	Dept of Plant Biology & Forest Genetics Uppsala BioCenter
Switzerland	Beat Keller	University of Zurich
Turkey	Hikmet Budak	Sabancı University
UK/Scotland	Tina Barsby	University of Cambridge