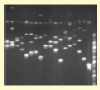
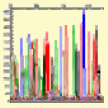
TriticeaeGenome

Genomics for Triticeae improvement

Europe faces the challenge of providing economically and environmentally sustainable crops delivering improved quality in the face of climatic change. To meet this need, the TriticeaeGenome European FP7 project (Genomics for Triticeae improvement) was launched on June 1st 2008. This project mobilises 14 European research institutes and 2 industrial partners from 9 countries. The aim is to achieve significant progress in Triticeae genomics to enable efficient breeding of wheat, barley and rye varieties improved for their composition and characteristics to satisfy the needs of European consumers, processors and producers. TriticeaeGenome will receive 5.3 million Euros in funding over a four-year period from the 7th European Union Framework Programme under the "Food, Agriculture and Fisheries, Biotechnology" priority.

TriticeaeGenome activities :









Construct anchored physical maps of wheat and barley of chromosomes from groups 1 and 3, which carry a large number of important agronomic traits

Develop high-throughput molecular markers

Isolate five genes and QTLs (Quantitative Trait Loci) underlying disease resistance, yield, and quality traits in wheat and barley

Identify and exploit new alleles for the isolated genes through the use of mutant populations and genetic resources

Support the development through molecular breeding of new varieties that meet farmer, processor, and consumer needs

Develop new bioinformatics tools to integrate and display the large scale genomics project data

Coordinate and integrate TriticeaeGenome research through interactions with other projects at national, European, and international levels

Provide training in emerging technologies, disseminate the results and transfer know-how to industry and users

TriticeaeGenome impact :

TriticeaeGenome is the first international-scale, synergistic genomics project for the construction and exploitation of physical maps of the chromosomes of bread wheat and barley. The project will:

i. establish strategies and methods for improving genomics approaches in two of the most challenging crop genomes;

ii. develop new tools to accelerate gene isolation and support the development of molecular breeding in wheat and barley;

iii. contribute to a better understanding of traits underlying yield, quality and disease resistance;

iv. provide the foundation for future sequencing of the wheat and barley chromosomes;

v. strengthen the interactions and coordination with international collaborators and support the Triticeae networks;

vi. contribute to the transfer of know-how between research and industry and to the dissemination of information to the public;

vii. make permanent long-term improvements in social and economic cohesion on a global scale.

TriticeaeGenome partners :

The project mobilises 17 partners from 9 countries.

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www.triticeaegenome.eu

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SEVENTH FRAMEWORK PROGRAMME