



European research project HealthyMinorCereals to improve the quality, cultivation and use of traditional European cereal varieties

PRESS RELEASE 20 March 2014

The productivity of European and global agriculture has been vastly increased by focussing crop breeding efforts on a relatively small number of crop species - for cereals grown in Europe mainly on common wheat and barley. This approach has achieved high yields. However, this strategy has left agriculture with a reduced genetic variation and diversity in crop varieties which increases vulnerability to crop diseases and drought, while the high inputs of fertilizers and energy required for modern cereal varieties can lead to environmental damage.

HealthyMinorCereals (full title: An integrated approach to diversify the genetic base, improve stress resistance, agronomic management and nutritional/processing quality of minor cereal crops for human nutrition in Europe) is a new project funded by the European Union's FP7 research programme, coordinated by Dr Dagmar Janovská of the Crop Research Institute, Prague, Czech Republic. The successful kick-off meeting took place in Prague, Czech Republic, on 16-18th October 2013.

The project aims to boost cultivation, production and consumption of minor cereals in Europe, and is focused on five 'minor cereal' species - spelt, rye, oat, einkorn and emmer. These traditional or ancient cereals have largely fallen out of use in European agriculture, and have been hardly studied by modern scientific methods. They typically grow well in poor soils or under low input conditions, and have retained far greater concentrations of micronutrients that have been bred out of common wheat.

The project will exploit genetic diversity of minor cereals by analysing seeds obtained from gene banks around Europe. An important first step is to multiply the small amounts of seed available from the gene bank to obtain sufficient material for analysis. It will optimise methods for their cultivation under organic and conventional agricultural systems, considering both ecological and economic aspects, and will develop innovative processing methods and new food products with high nutritional quality for consumers. Advanced analysis of nutritional composition and human nutritional impacts will be performed. Case studies will

identify factors that help the successful development of minor cereals production and marketing. The project has a particular benefit to supporting agriculture in the marginal areas of Europe.

The HealthyMinorCereals is unique in combining within a single project, research on molecular biology, crop breeding, agronomy, human nutrition, food technology and marketing to deliver an integrated solution for the advancement of minor cereal crops utilisation in Europe. The project duration is five years, with a budget of €6.5 million.

The HealthyMinorCereals consortium consists of 16 partners from 10 countries. As well as scientists from European universities and agricultural research institutes, it involves small and medium sized companies involved in crop breeding, farming and food production:

Crop Research Institute (Czech Republic)
PROBIO Trading Company Ltd. (Czech Republic)
Selgen a.s. (Czech Republic)
Newcastle University (UK)
Gilchesters Organics Ltd (UK)
Sabanci University, Faculty of Engineering and Natural Sciences (Turkey)
FiBL - Research Institute of Organic Agriculture (Switzerland)
Getreidezüchtung Peter Kunz (Switzerland)
Nikolaos Volakakis (Greece)
Estonian Crop Research Institute (Estonia)
University of Natural Resources and Life Sciences (Austria)
Institut für Lebensmittel- und Umweltforschung e.V. (Germany)
Stolzenberger's Bakery (Germany)
University of Kassel, Section of Organic Breeding and Agro-Biodiversity (Germany)
Grupa BGK Spółka z o.o. (Poland)
Hungarian Research Institute of Organic Agriculture (Hungary)

For more information see the project website: HealthyMinorCereals.eu. Anyone wishing to follow progress may register for regular updates by email.



This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration.