COBRA: a new European research project for organic plant breeding

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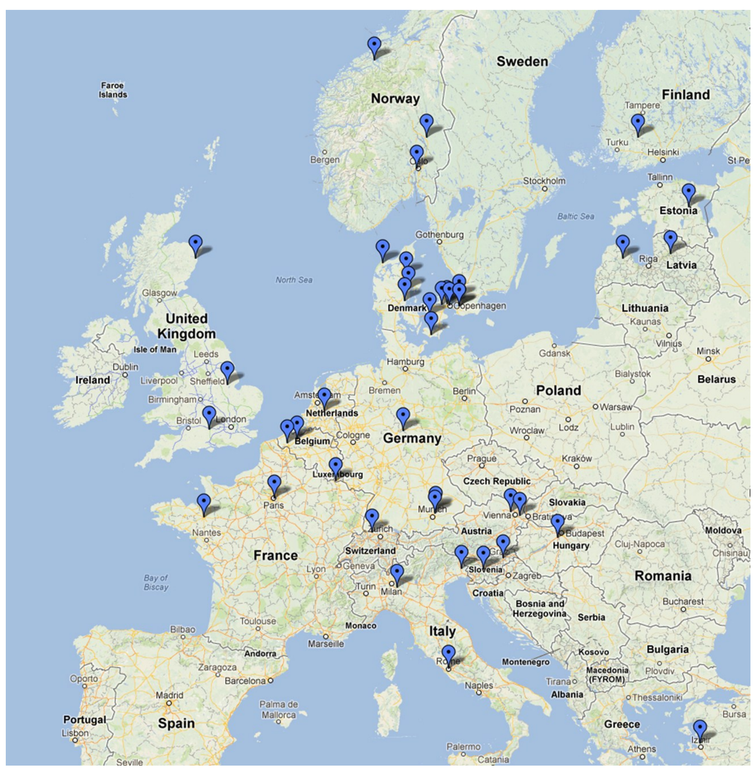
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INTRODUCTION

A central challenge in organic farming results from the lack of suitable plant varieties that are adapted to the conditions of organic agriculture. Crops in organic systems are exposed to a variety of unique pressures and therefore require specific traits which are often deemed not significant by breeders for conventional varieties.

For example, organic crops require the ability to tolerate the highly variable weed and disease pressures they regularly encounter. Additionally, seed borne diseases are often more important, due to a lack of effective organic seed treatments. Soil fertility in organic systems can not be quickly adjusted using mineral fertilisers, meaning organic crops need to be able to successfully function in a wider range of nutrient conditions.

Compounding these issues are the increasingly variable environmental conditions resulting from climate change, which only further exacerbates the requirement for crops that exhibit resilience and flexibility.



CORDINATING ORGANIC BREEDING ACTIVITIES FOR DIVERSITY — COBRA

One of the most efficient and dynamic tools that can be utilised to enable crops to tolerate variable environmental conditions is genetic diversity.

However, plant breeding activities for organic agriculture are currently fragmented across Europe. COBRA is a new project that will bring together expertise and experience from scientists, consultants and breeders across Europe. It represents a unique chance to combine breeding efforts and ideas from many different environments. COBRA is a 3-year project established between 42 partners from 18 European countries, led by the Organic Research Centre (UK) and funded by CORE Organic II funding bodies with 3 mill. €.

OBJECTIVES

COBRA aims to support and develop organic plant breeding and seed production in Europe and to unleash the potential of plant genetic diversity for organic agriculture by linking up efforts in both pure line breeding and High genetic Diversity (*Hi-D*) systems in cereals (wheat and barley) and grain legumes (pea and faba bean). Plant material with higher genetic diversity has great potential, since higher levels of in-field diversity can be used to buffer against higher environmental variability in organic systems.



COMMUNICATION NETWORK

COBRA has a public web page (www.cobra.div.eu) where relevant materials from the project will be published. In addition we will create and circulate a newsletter which highlights upcoming relevant events and reports on new developments both from within COBRA and from other (organic) breeding projects.

We will coordinate knowledge transfer activities through stakeholder workshops on organic plant breeding and a dedicated training programme. An important part of our communication will be via field days organised by partners in each country facilitating exchange of information and networking on organic plant breeding issues.



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Coordinating Organic Plant Breeding Activities for Diversity