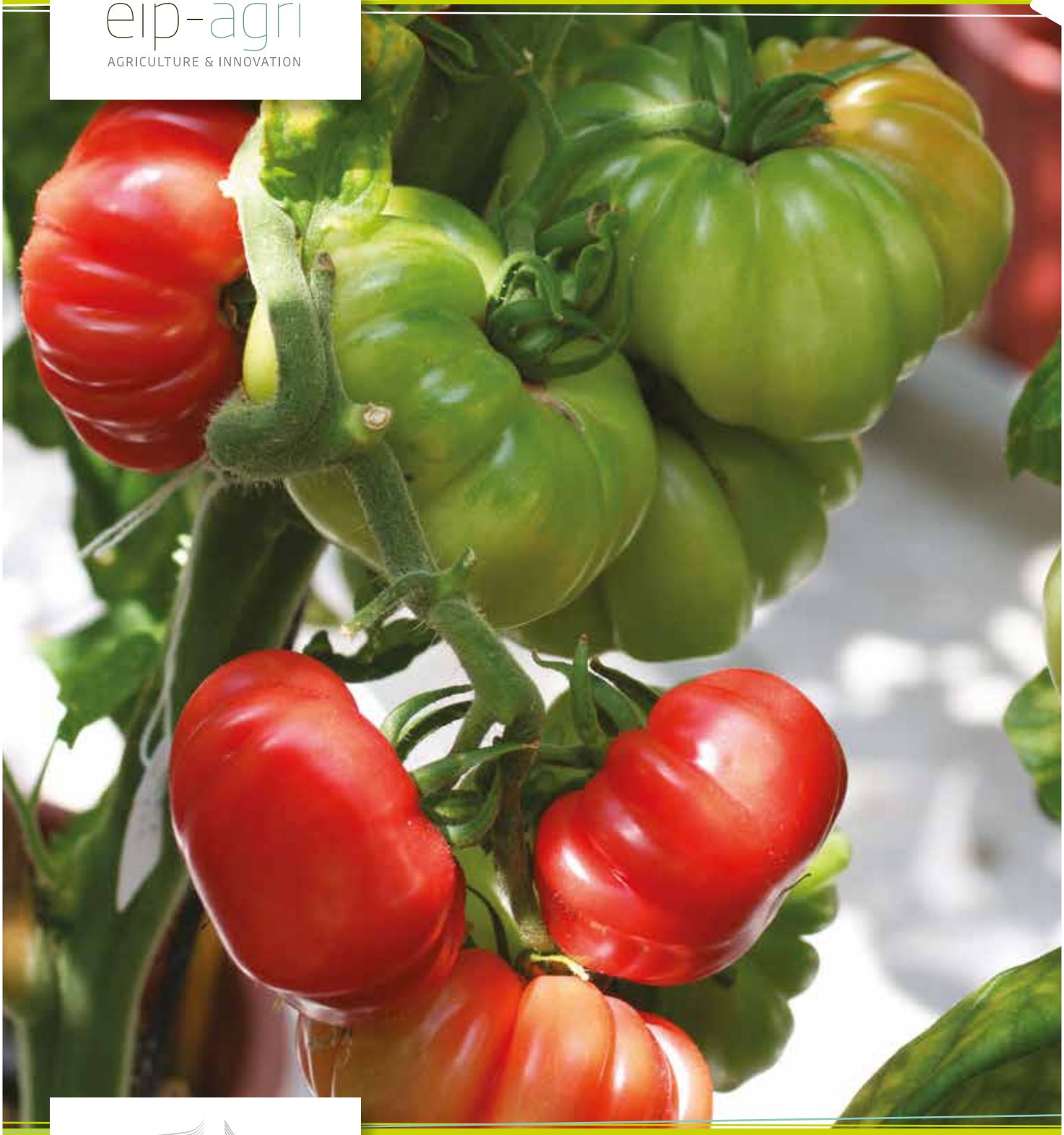
eip-agri
AGRICULTURE & INNOVATION

Cooperating for genetic resources

Stimulating their conservation and sustainable use in agriculture and food



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This document has been produced within the framework of the European Innovation Partnership 'Agricultural Productivity and Sustainability' (EIP-AGRI) which was launched by the European Commission to promote innovation in the agricultural and forestry sectors and to better connect research and practice.

The EIP-AGRI Focus Group on 'Genetic Resources - Cooperation models' brought together 20 experts with different backgrounds and experiences (scientists, farmers and advisers) in 2014-2015, to propose strategies to motivate public and private stakeholders to engage in cooperation models for genetic resources.
This brochure follows up on the final report in which the Focus Group listed its conclusions. All Focus Group results can be found online via www.eip-agri.eu.

This is an EIP-AGRI Service Point publication
Brochure 'Cooperating for genetic resources', April 2016
Pictures Bäuerliche Erzeugergemeinschaft Schwäbisch Hall, EIP-AGRI Service Point, Florent Mercier (for Diversifood), Shutterstock, Slow Food Foundation for Biodiversity, TRADITOM
more information: www.eip-agri.eu

Working together for genetic resources

Genetic diversity in food and agriculture is vital for ensuring high quality food production and for making animal breeds, forests and plants more diverse and better adapted to cope with changing environments, the impacts of climate change (such as drought), and new pests and diseases.

To reverse the loss of agricultural genetic diversity in the European Union (EU), we need everyone involved and interested in genetic resources to work together to conserve and promote existing and new genetic varieties and breeds.

Genetic resources play a valuable role in creating a diverse and economically viable agro-food value chain. The genetic basis of breeds and crops in our agricultural landscapes can be enlarged by using and promoting newly developed seeds and breeds that are more resilient, and by (re)introducing traditional breeds and crops in the value chain by making them commercially viable. By exploring existing and new cooperation between farmers, breeders, researchers, conservationists (for instance gene banks), seed and agro-food industries, as well as retailers and consumers, knowledge can be shared more efficiently.

This brochure provides examples of successful cooperation in the field of animal and plant genetic resources, hoping to inspire people to test new ways to cooperate, and to find ideas for potential Operational Groups or other innovative projects in the field of genetic resources.

How is the EU supporting genetic resources?

Following an initiative by the European Parliament, the European Commission launched a study project in 2014 that has mapped European initiatives for the conservation and sustainable use of genetic resources.

The project gives information and shows the relevance of genetic diversity for the future of European food and agriculture. It improves cooperation between farmers, researchers, breeders and consumers along the value chain by making all related information freely available.

The European map of genetic resources allows you to look for initiatives and databases on the conservation and sustainable use of plant, animal, forest, and microbial and invertebrate genetic resources in all 28 EU Member States: http://www.geneticresources.eu/map

Some examples: EU-funded research for sustainability and genetic diversity

Treasure - Funded by Horizon 2020, Sustainable Food Security call 2014
Research and networking for the benefit of sustainable pork chains, based on European local pig breeds and their production systems, for high-quality traditional pork products. http://treasure.kis.si/

Super-B - COST action (European Cooperation in Science & Technology) for Food & Agriculture
Brings together researchers and society, to support the conservation of natural ecosystems and the sustainable use of bees and other pollinators in European agricultural production. http://www.superb-project.eu/

European Cooperative Programme for Plant Genetic Resources (ECPGR)
Europe's main collaborative programme to ensure the long-term conservation and use of plant genetic resources in Europe. Financed by the participating European countries. http://www.ecpgr.cgiar.org/

In 2002, local farmers formed the Fardjma cooperative, which set out guidelines on how the sheep should be raised. The project helped producers to register the Alpagota brand name, promote the breed and market the meat.
The lamb is labelled with the brand, the name and address of the producer, and codes for the farm and the slaughterhouse, which guarantees the consumer complete traceability. These efforts resulted in increased sales, greater product awareness, and better prices for producers.

More information: http://www.fondazioneslowfood.com/en/slow-food-presidia/alpagota-lamb/

▶ Cooperation and interactive innovation in animal genetic resources

Slow Food safeguards the Italian Alpagota lamb

The Alpagota sheep breed, which takes its name from the historical Alpago region in the north-east of Italy, is one of the breeds that are being safeguarded from extinction by a Presidium project of the Slow Food Foundation for Biodiversity.

Alpagota sheep typically have a thick fleece and dark blotches on their lower legs and hornless heads. As is the case with many native breeds, the number of Alpagota sheep diminished drastically over the last century. In the early 1990s, the European Union added the breed to its list of local species at risk of extinction.

Today, about 2000 Alpagota sheep are still being farmed in the Alpago area. They are raised in wild or semi-wild conditions for their wool, milk, and – nowadays mainly – for their quality meat.

▶ What is a Presidium project?

The Slow Food Foundation for Biodiversity sets up Presidium projects to safeguard breeds, local plant varieties, and unique ecosystems at risk of extinction, and recover traditional processing methods.
These projects involve training activities to improve the quality of the product and the sustainability of production.

They help set up producers' associations, promote products, and create platforms where producers can interact with fellow practitioners and experts, both locally and internationally.

There are over 370 European Presidia. Find Presidia in your area on this map:
http://www.fondazioneslowfood.com/en/what-we-do/slow-food-presidia

TRADITOM: promoting traditional tomatoes

Nowadays, traditional tomato varieties are often replaced by modern varieties that tend to be higher-yielding and hardier. To make traditional tomatoes flourish on European markets, the TRADITOM research project highlights their unique benefits for consumers and offers new improved versions of traditional tomato varieties.

Europeans love tomatoes. As the second most consumed vegetable in the European Union, tomatoes are a major source of nutrients, vitamins and antioxidants.
Since tomatoes were introduced to Europe in the 16th century, European farmers have developed many traditional varieties.

TRADITOM wants to promote the unique nutritional qualities of these traditional varieties, and identify consumer preferences. Authentic varieties will be protected through Protected Designation of Origin (PDO) or Protected Geographical Indication (PGI) denominations. The aim is to make them successful on today's competitive market and to have an impact on traditional cultivation methods.

The project collects genetic information on these authentic varieties and their methods of cultivation. Seeds of different varieties are stored, and all information will be made available to breeders, growers and consumers via the TRADITOM website.
TRADITOM also pinpoints those traits that make traditional tomatoes more appealing to consumers. The team wants to offer new improved versions of traditional tomato varieties that are more resistant to diseases and drought, have a good yield, but maintain their delicious flavour and quality.

The TRADITOM multi-actor project is funded under the European Horizon 2020 programme. It brings together experts from European research institutions with local farmer communities, consumer experts and small seed companies: http://www.traditom.eu

DIVERSIFOOD: cooperation along the food chain

▶ Working together to create diversity in forgotten crops

"Diversity is key to a more sustainable and resilient agriculture", says Véronique Chable, coordinator of the Horizon 2020 project DIVERSIFOOD. DIVERSIFOOD explores how underutilised and forgotten plant species can be more broadly used, to create more diverse cultivated plant populations, increase the quality of crops and their products, and contribute to sustainable agriculture in the light of environmental challenges.
By stimulating cooperation between farmers, researchers, processors, consumers and others in the food chain, DIVERSIFOOD promotes the use of diverse plants and produce with a local character, strengthening local high quality food networks across Europe.

▶ The case of the 'forgotten' Poulard wheat

One case where DIVERSIFOOD supports local associations in exploring new varieties is that of the French 'Poulard wheat' *(Triticum turgidum)*. This 'forgotten' crop was mentioned in 19th century documents, when pasta was produced in the French Auvergne region.

Poulard wheat was noted for its special aroma, and bakers from the North of France added it to soft wheat flour to increase the flavour of bread or pancakes. Farmers from Triptolème, a seed association from the West of France, started experimenting with Poulard wheat in 2006 to create new diverse varieties based on historical resources, using different selection strategies.

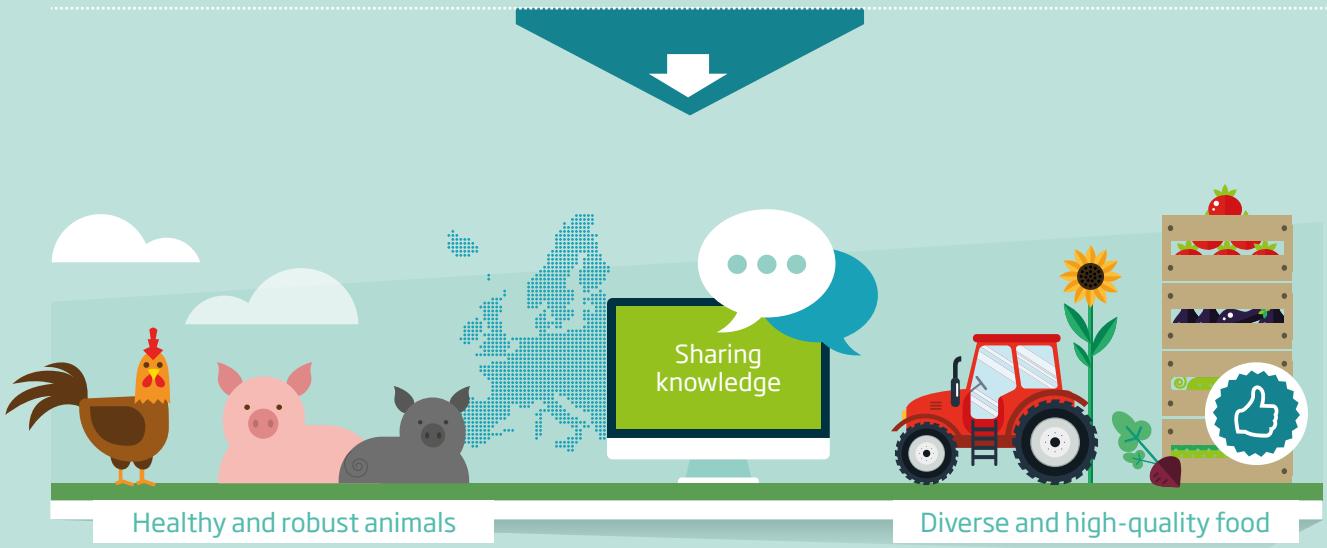
By involving farmers and millers, these new varieties are better adjusted to individual farmers' and market needs. They are for instance better adapted to traditional baking with natural sourdough. Supported by DIVERSIFOOD, farmers and researchers are now working together to develop and test new wheat populations with the same qualities and a better yield stability, especially for organic farming.

DIVERSIFOOD helps to spread knowledge about successful selection strategies to farmers in local and European networks. The project also supports the promotion of Poulard wheat products on the European markets, and will in a later stage invite consumers to evaluate the flavour and quality of products made from Poulard wheat.

This way, everyone in the food chain from farm to fork can contribute in the selection of new varieties.

More information: http://www.diversifood.eu

Cooperation models for genetic resources



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