



PRESS RELEASE

Terres Inovia, ICARDA, and French breeders join forces to broaden the genetic base of lentils and chickpeas

Objective: to promote the development of lentils and chickpeas in France
through research collaboration

Paris, September 5th 2023 – Terres Inovia, ICARDA and three French crop breeding companies – Agri-Obtentions SA, Pro'Pulse and Semences de Provence – signed a three-year research agreement to develop more nutritious, climate-resilient lentil and chickpea crops via natural breeding methods. By increasing the pool of plant genetic resources, the project will also make more lentil and chickpea varieties available in France.

Initiated as a part of the Cap Protéines program's project "Evaluating and disseminating varieties of legumes and oilseeds with a high protein content", this research collaboration will pool investment for lentil and chickpea varietal creation and promote genetic diversity. With a wider range of nutritious and resilient lentil and chickpea varieties offered to growers, this multi-partner collaboration will offer farmers better options for successful yields under the climate crisis.

Developing and evaluating a new gene pool

The project will run until 2025 and sets up two main areas of collaborative work focused on improving the pool of plant genetic resources and the identification of key traits. Firstly, the development of a new source of plant genetic resources adapted to, and evaluated under, French conditions. Secondly, the cooperation and sharing of scientific and technical information between the partners to rapidly assess relevant genetic resources currently existing in global genebank networks and research institutions, and to create a critical mass of genetic diversity available for chickpea and lentil development in France.

A wider gene pool means better crops

Due to a lack of research investment in pulses, there is a low supply of related genetic resources from which variety can be drawn. But growing consumer demand for legumes and pulses in France, along with the impact of climate shocks on agriculture, now means genetic diversification of legumes and pulses is vital to increase future production resilience and productivity.

"This new research agreement signed between Terres Inovia, ICARDA, Agri-Obtentions SA, Pro'Pulse, and Semences de Provence, is a major step forward for the future of lentil and chickpea crops. Not only will it allow the sharing of scientific and technical knowledge between partners, but it will also expand the genetic diversity available to ensure the future resilience of lentils and chickpeas under the climate crisis. Upcoming new lentil and chickpea varieties will ultimately increase added value on farms," says Gilles Robillard, President of Terres Inovia.

"By expanding the genetic pool of lentil and chickpea crops, we are not only creating more nutritious and climate-resilient varieties, but also offering farmers in France and around the world better options for successful yields in the face of the climate crisis. This multi-partner collaboration marks a significant step towards ensuring the future resilience of these crops, and we are proud to be a part of it," says Dr. Shiv Kumar, ICARDA Chief Lentil Breeder.

“We are happy to take part in this innovative collaboration, which shows the motivation of French breeders to work together to offer more suitable varieties for the market. Partnership with ICARDA, specialist of crops grown in arid zones, which are more water efficient and tolerant to drought, will allow us to better adapt our genetic pools to the climate changes that our farmers are living today”, says Julie Toussaint, manager of Semences de Provence.

“This collaboration reflects the commitment and determination of seed companies to innovate to strengthen and accelerate the development of pulses in France. The aim is also to provide sustainable solutions and rapid and practical answers for players in the sector,” says Blaise Rolland, Head of the Sector and Fabrice Terrot, Head of the Experimental Unit at Pro'Pulse. Patrice Jeanson, Head of the Pro'Pulse Breeding Unit, adds that *“this opportunity to work with ICARDA offers an opening for the introduction of original genetic diversity at the heart of our programs. This will enable us to develop innovative projects and create new varieties that are more resilient to climate change. We need to look further ahead and drive forward genetic progress not only in terms of tolerance to stress (particularly water stress) and diseases, but also by improving agronomic performance such as yield and protein content.”*

“The range of pulses offers diversified options to help the resilience of our agricultural production in a context of climate and food transition. And it depends on our ability to use most of the diversity of our genetic resources. We are delighted to be working with ICARDA, the reference institute for the conservation and use of the genetic diversity of Mediterranean agricultural species, particularly lentils and chickpeas, which are essential resources for the agro-ecological transition of our food production systems,” says Vincent Béguier, Managing Director of Agri-Obtentions.

About Terres Inovia

Terres Inovia is the French technical institute for applied research and development of professionals in the vegetable oils and proteins sector and the hemp sector. Its mission is to improve the competitiveness of oilseeds, protein crops and industrial hemp, by adapting the production and valorization of products to the economic context and societal demands.

www.terresinovia.fr

Terres Inovia is part of the Acta network – Agricultural technical institutes



About ICARDA

ICARDA is an international organization undertaking research for development. We provide innovative, science-based solutions for countries across the non-tropical dry areas. Our research aims to reduce poverty and enhance food, water, and nutritional security and environmental health, in the face of global challenges, including climate change.

www.icarda.org

About Agri-Obtentions SA

Agri-Obtentions SA is a subsidiary of INRAE set up in 1983 to disseminate INRA's plant innovations. For the past 20 years, its ambition is to develop in partnership with its shareholder varietal innovations for the agri-food industry in a context of environmental and climate change. Agri-Obtentions has a turnover of 15 million euros, 30% of which is invested in R&D that Agri-Obtentions' 57 employees use to develop, produce and distribute more than 450 varieties of cereals, legumes, fodder and service plants as well as vegetables and woody plants in France and in more than 30 countries thanks to its more than 400 partners. Agri-Obtentions is a well-known player on the straw cereals and pulses markets in France and Europe, particularly for peas, field beans and lentils. Through its portfolio of innovations, Agri-Obtentions aims to contribute to the agro-ecological transition of French and European agriculture.

About Pro'Pulse

Tomorrow's agriculture faces many challenges, including water shortages, environmental issues and changing eating habits. To meet these challenges, Lidea and TOP Semence, two major players in the research and production of seeds for legumes such as chickpeas, lentils and beans, have decided to combine their legumes breeding activities within a single company called Pro'Pulse, located at TOP Semence's Rhône Valley Experimental Centre. Through this collaboration, the plant breeding and genetic resources of the two companies will be combined to respond to the needs of farmers and the expectations of consumers, while supporting the objectives of the Protein Plan.

About Semences de Provence

Seed company since 1965, subsidiary of Arterris (French cooperative group), Semences de Provence drives breeding programs for France and Europe. The company offers complete ranges of grain, silage and multicut sorghum, rice, pulses, fodder plants and greenings, with the same spirit: the development of new species and varieties answering to actual economic and environmental constraints, with the aim to improve farm performances. The company recently launched the Im'Pulse Seeds brand, a new concept from field to plate for the creation of new pulses varieties (chickpeas, lentils, beans). The main focus is to work with producers, processors and consumers to create varieties that meet their expectations.

About Cap Protéines

Cap Protéines is the research, development, innovation and transfer program of the Protein Plan launched by the public authorities as part of the Recovery France Plan. Led by Terres Inovia and the Institut de l'élevage, it mobilized more than 200 technical partners, 100,000 oilseed and protein crop producers and more than 100,000 ruminant farmers in 2021 and 2022 and was endowed with a budget of €55.5 million. This program was funded by the Ministry of Agriculture and Food as part of the France Recovery and Univia Lands plan.

www.cap-proteines.fr



All information products, including metadata, under this project are open access, in line with the CGIAR Open and FAIR Data Assets Policy. The project was developed in line with the CGIAR Principles on the Management of Intellectual Assets.

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