Improving regional capacities in gene editing

A project that consolidates the regional capacities in gene edition for breeding of species of agricultural interest as a contribution to technological sovereignty, for aggregating value to production and productive development.

A public-private initiative for a more level playing field with developed countries in gene edition

The implemented initiative

“Gene editing” makes it possible to modify the DNA sequences of specific genes to alter their expression, introduce favorable alleles or place transgenes at specific sites in the plant or animal genome, generating new variability, reducing breeding times with less cost and more accessibility. They would not even present special regulatory requirements according to the definition of GMOs of the Cartagena Protocol. The project will generate capacities that allow the creation of new genetics for key species. A platform for research and application of EG knowledge is created, which will consolidate the capacities of public institutions and companies from 7 countries. FONTAGRO, PROCISUR, producer organizations and private companies provide the financing.

The technological solution

The project creates an inter-institutional platform for research and application of gene edition knowledge (EG) that will consolidate the regional research and innovation capacities in species of agricultural interest. Specifically, this project includes the implementation of technological pilots oriented to:

- Obtaining potato varieties with increased nutritional and industrial quality.
- The development of soybeans suitable for consumption by monogastric (pigs, birds, fish) through the decrease in anti-nutritional compounds in the grain.
- The generation of animals with modified characteristics to generate products and/or by-products of interest for livestock production.

How is it gene edition with CRISPR-CAS9?

Results

- The project rescues the spirit of cooperation between countries and promoting public-private collaboration.
- Likewise, it contributes to (re)create the instances to stimulate technical integration throughout the chain, from those who dominate molecular engineering techniques (EG, in this case) to geneticists and phyto-improvers with their roles lead.
- Finally, it should be noted that the project seeks to solve problems of the region or each country.

Main donors

Participating Organizations

+12
Trained staff in gene edition

+9
Women trained in gene edition

+4
Workshops

Argentina / Chile / Colombia / Ecuador / Paraguay / Uruguay / Brazil