



# SPOTLIGHT ON PEANUTS

Every 20 minutes, a container of Argentinean peanuts is exported. These exports represent 1 billion dollars annually for the country, and the peanut seed is produced in Córdoba.

## ORIGIN OF THE PEANUT

Cultivated peanut, *Arachis hypogaea*, is a natural hybrid that originated more than nine thousand years ago, in southern Bolivia and northern Argentina. Today its wild ancestors can still be found there: *A. duranensis* and *A. ipaensis*.

*A. hypogaea* is tetraploid, which means its chromosomes are found in groups of four, while its wild ancestors are *diploid* (chromosomes in pairs). *Tetraploidy*, together with the characteristics of the plant, make artificial crossings and plant breeding difficult.

## WILD PEANUTS

Juan Soave, a breeder at the "El Carmen" breeding farm, has an interest in looking for wild peanuts. He stressed the importance of having material to choose from in order to reach the goal of developing improved varieties that are better adapted to local conditions and market demands. The varieties that grow naturally in the vicinity of Yala (Jujuy) and in southern Bolivia are now preserved on his breeding farm, and used as a source of genes for cross-breeding with cultivated varieties, mainly to pass on disease resistance.

## A HIGH OLEIC VARIETY

After many years of cross-breeding, trials and the meticulous evaluation of every grain, Juan and his team obtained the first peanut cultivar with low linolenic acid content (3-7%), which increases the proportion of oleic acid, a fundamental fatty acid that prevents peanuts from becoming rancid. After more than 10 years of work, they developed a cultivar which they named "Granoleico", that has 75-80% of oleic acid in its composition.



Semillas y  
Propiedad  
Intelectual

## SOME FACTS...

- Argentina is the world's leading peanut exporter.
- Peanuts represent the 2nd most important economic activity in the region, and one of the activities that has contributed the most dollars to the national economy in the last decade.
- Córdoba produces 90% of Argentinean peanuts and exports 600,000 tons to more than 100 countries.
- Forty percent are exported as confectionery peanuts (with skin) and 60% as blanched peanuts (without skin).
- This product is transported by 24,000 trucks each year.



## ...AND NOW, THE CHARCOAL!

In 2010, Charcoal Disease, caused by the fungus *Thecaphora frezii*, emerged and attacked all of Argentina's peanut plantations. With the Granoleico cultivar as a starting point, the hard work of conducting crosses in greenhouses began again, with hopes of obtaining some seeds and selecting those that were resistant to Charcoal Disease, and finally testing them in soil with the disease present. This is how the first high oleic and Charcoal-resistant variety was developed in 2019.

## SHORT CYCLE AND DROUGHT TOLERANCE

Other objectives of breeding are to obtain short cycle (130 days from sowing to harvest as opposed to 150 days in traditional varieties) and drought-tolerant cultivars. Reaching these objectives involves a group of professionals dedicated to studying molecular markers, which are biotechnological tools that can help select the best plants in the early stages of a breeding program.

## RECOGNITION OF INTELLECTUAL PROPERTY

For Juan Soave and his team, the recognition of intellectual property of the varieties developed by the breeding farm is fundamental for the investment in materials and human resources dedicated to the research and development of new varieties.



**"IF THE "EL CARMEN" BREEDING FARM HAD RECEIVED ONE DOLLAR FOR EVERY HECTARE PLANTED WITH ITS SEEDS, MORE IMPROVED PEANUT VARIETIES COULD HAVE BEEN PUT ON THE MARKET BY NOW"**

JUAN SOAVE