

AMBASSADORS OF BIODIVERSITY: A PARTICIPATORY PROJECT TO VALORIZE TRADITIONAL SEEDS

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“Ambassadors of Biodiversity” is a project of citizen science, which involves both growers and educational communities, who have a key role in this research, growing traditional seeds and collecting accurate data.

The objectives of this research were (1) to improve the quality of the information associated with some accessions stored at the Vegetable Germplasm Bank of the CITA-Aragón Spanish Research Center (BGHZ-CITA), making the collection more valuable, and (2) to involve citizens in biodiversity research, raising awareness in society, especially younger generations, of the importance of conserving and using plant genetic resources.

To reach these objectives two networks of “Ambassadors of Seeds” were established.

One network of “Ambassadors of Seeds” was formed by traditional non-professional growers from different localities of the Aragon region. These volunteers grew some traditional seeds collected years ago from their villages and preserves in the seed bank BGHZ-CITA. Many of the varieties are no longer cultivated, so the local growers had the opportunity to recover the seeds, transmit their knowledge, and collaborate in the research that will help their conservation and sustainable use.

A total of 104 vegetable landraces belonging to 12 crops were distributed among the network of growers formed by 43 people, as follows: tomato (41 accessions, henceforth ac.), pepper (14 ac.), melon (10 ac.), lettuce (10 ac.), onion (9 ac.), pea (7 ac.), broad bean (5 ac.), bean (5 ac.), chard (2 ac.), spinach (1 ac.), cucumber (1 ac.) and lentil (1 ac.).

The second network of “Ambassadors of Seeds” was formed by the educational community, including teachers and students, who grew the traditional seeds in their scholar orchards.

In this case, only two leguminous crops were grown: broad beans (*Vicia faba* L.) and “bisaltos”, a variety of pea (*Pisum sativum* L.) whose green pods are very appreciated

and traditionally consumed as a vegetable in the region. The reason was that both crops develop the whole growing cycle during the school year. To show how to take the data a Teaching Guide available online was developed according to the different educational levels of the students. The Guide for teachers explains the descriptors that have to be recorded, which are mainly based on the Bioversity International descriptors. The idea is that the students recorded the data in a similar way to the primary characterization is done in the seed bank, but according to their knowledge and available media. In that way, the students collected accurate data and processed the information for the project. In addition to aspects directly related to agriculture, agro-environmental education topics have been incorporated into the project to promote attitudes and values towards the environment and advertise the relevance of biodiversity conservation for the future.

A total of 59 seed samples belonging to 30 different accessions of the two crops were distributed among the network of the educational community formed by 31 school centers, as follows: 14 of broad beans and 16 of “bisaltos”, which were selected according to the scholar orchard location.

Since the project began in September 2019, it started as originally planned, but the health crisis due to the pandemic affected some of the programmed activities. Nevertheless, despite everything we got valuable information associated with the accessions of the seed bank collection that has improved the value and utility of this agrobiodiversity. Besides, some of the studied varieties will be grown again in their original regions, since several growers have produced their own seeds from the local varieties provided by the BGHZ seed bank for growing next year. For their part, the students and the large number of people who attended the dissemination and training activities became aware of the importance of conserving biodiversity for future generations.

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