

Brazil's Green Genetic Bank Soon to Be World's Fourth Largest

Contributed by Isaura Daniel
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Brazil is preparing to rise in the global ranking of leading holders of plant species. The Brazilian Agricultural Research Corporation (Embrapa), linked to the Brazilian Ministry of Agriculture, Livestock and Food Supply, is going to expand its germplasm bank up to 150,000 samples by the end of this year.

This means that the country will have 150,000 types of plant seeds, and their genetic material, stored for research and use in agribusiness.

Embrapa researcher Luciano Nass explains that the bank means safety to the country, as agribusiness is important to Brazil. "The ranking is led by powers such as the United States and China. The world's leading (food) producers have that type of reserve," explains Nass, who is in charge of the genetic resources program of the Embrapa Laboratory in the United States (Labex).

The seeds remain in storage to be used in the long term. In other words, should any culture have problems with pests, diseases, it is possible to resort to the bank in order to find, in the stored seeds, some kind of resistance to the disease.

The idea is for the bank to also contain, for instance, material best suited to high temperatures, as global warming should demand changes in agriculture.

The United States currently have the world's largest germplasm bank, with 500,000 samples, followed by China, with 390,000, and Germany, with 160,000. Brazil should reach the mark of 150,000 by the end of this year. Until recently, the country had 107,000 samples and was seventh in the ranking.

The bank will be complemented by material from the United States, by means of an exchange between Embrapa's Labex and the National Center for Genetic Resource Preservation, of the United States' Agricultural Research Service (ARS). The ARS and Embrapa have a cooperation agreement.

The United States will send to Brazil 17,000 samples of rice and 23,000 of soy. The rice samples have already arrived in the country, as did part of the soy samples. They should all be in Brazil until the end of this year, according to Nass.

The seeds are stored in a structure owned by the Embrapa in Brazilian capital Brasília. In addition to them, there are samples being used in different units of the company, which comprise the so-called active banks. In other words, they are being used for research.

The idea, according to Nass, is for the samples in the active banks also to be in the bank in Brasília. For preservation, they are stored at minus 18 degrees Celsius.

The samples from the United States, for example, undergo a quarantine process before entering the germplasm bank. During that period, the seeds are checked for contamination, for instance, and multiplied in order to generate a greater quantity.

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