Peruvian "guardians" lead Potato Park to a secure future

Peru's Potato Park, a unique 15 000 ha reserve high in the Andes, was established to conserve the region's potato biodiversity, a task that has become increasingly difficult as warming climates have altered the growing patterns of some of the area's local varieties. The reserve is home to six indigenous Quechua communities whose 8 000 residents manage their communal lands jointly for their collective benefit. The communal activities are spearheaded by the organization known as the "guardian of native potatoes", the Papa Arariwa Collective.

In the Potato Park, which is considered a centre of origin of potato, a typical farmer may grow more than 200 varieties, most of which are for local consumption or regional barter. Because of warming climate, local potato farmers now experiment at higher altitudes where the temperatures are lower. Ironically, they are using many varieties that had already disappeared from their fields but had been saved in the gene bank of the Potato Centre (CIP). The Treaty Benefit-sharing Fund Project is working with the local farmers as they repatriate varieties from the gene bank into their fields. Of the 1345 varieties now found in the potato park, 779 accessions were collected locally, 410 were repatriated from CIP and 157 were received through seed exchanges.

Association Andes, the NGO that established the project, supports potato farmers in adapting to the effects of climate change. This includes conservation efforts to halt the disappearance of potato varieties from local fields and thus ensuring farmers have more options for dealing with the impact of the new climate conditions.

Indigenous plant guides potato planting season

As climates change, local people in the Potato Park still use one of their traditional methods to know when it is time to plant – they study the season of another indigenous plant, the ruca (*Eruca vesicaria*). When the flower blooms are wide open, farmers consider it a good indication that the potato crop should be planted earlier than usual. When the flower does not open widely, they plant at the regular time, but when the flower remains closed, then they plant the potato later in the season.

The deeply-rooted local food systems of the local communities also are recognized in project activities. The project supports building on the area's traditional knowledge, using it as the basis for increasing the capacity of the local communities. This includes training such as cooking classes, with participants developing recipes for the new varieties they adopt, training in medicinal plants, and developing value-added biocultural products such as potato shampoo and soap. The project also is overseeing construction of a new building where accessions can be stored, which will help with conservation and also will be an attraction for the growing ecotourism activities in the area.

Peru

The International Treaty
ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

In just one year ...

Project objective I: Protect associated traditional knowledge of the native potato to enhance the sustainability of agricultural production, strengthen the rights of agriculturalists, and respond to the challenge of climate change.

The project has:

- conserved 1345 accessions of local potatoes dynamically, working with Papa Arariwa delegates and the Potato Park communities, including repatriating 410 varieties from the CIP gene bank,
- designed and established a database of native potatoes, traditional knowledge and climate change, and biocultural products,
- gathered background information on the effects of climate change on the cultivation of local potato varieties,
- documented traditional knowledge about climate change and extreme events using text, photos and video,
- drafted and signed an agreement with CIP to collaborate on the identification and technical characterization of local potato varieties.

Project objective II: Support the development of novel products based on native potatoes and associated traditional knowledge, practices, and innovation systems that directly benefit farmers in the Potato Park and indigenous, local farming communities in the Cusco region.

The project has:

- identified six biocultural products and set up participatory evaluations of their value and potential with the Papa Arariwa Collective,
- worked with local people to identify potential niches and markets for local products to strengthen the economy of Potato Park,
- identified and designated 12 potato varieties to be included in a training and mutual learning process for the conservation, sustainable use and management of traditional resources in the Potato Park.

Project objective III: Expand and improve the capacity of Potato Park farmers and their traditional institutions in the sustainable management of plant genetic resources for food and agriculture to contribute to the adaptation to climate change and food security.

The project has:

- raised awareness of the farmers of Potato Park and other Cusco regional federations of the work and objectives of the Treaty and on farmers' rights,
- transferred land for the construction of the Centre for Traditional Knowledge and Native Potatoes in the Potato Park, and drafted a preliminary design.

Still to come...

- The project will expand the data base in terms of the accessions included and the parameters under which the entries are quantified.

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