

# Adding value to local knowledge and biodiversity of Andean potato farmers

## The Papa Andina Project

Andean potato farmers' most important resources are local knowledge and biodiversity. Using these resources to improve livelihoods requires developing participatory technology and improving linkages to agrifood chains. Sharing knowledge and biodiversity between countries implies coming to terms with intellectual property rights (IPR). Papa Andina, a joint SDC and International Potato Center (CIP) regional project that began in 1998, is bringing research institutions and other actors together to put these ideas into practice in Bolivia, Peru and Ecuador.

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### 1. The approach

#### Participatory technology development

Andean potato farmers grow a wide range of potato varieties and rely on rich local knowledge of potato growing, storing, marketing and processing for traditional uses. Increased cross-border trade in potatoes and demands for chips and french fries by urban consumers benefit larger farms and threaten small-scale farmers' livelihoods. Biodiversity and local knowledge are a source of competitive advantage to smallholders. But local knowledge does not suffice when farmers are forced to respond to new market opportunities. For example, improved potato quality might require controlling pest insects and diseases and introducing improved post-harvest practices. Papa Andina has helped promote participatory development of integrated pest management (IPM) through farmer field schools (FFS) and farmer experimenters' committees to complement farmers' knowledge and resources.

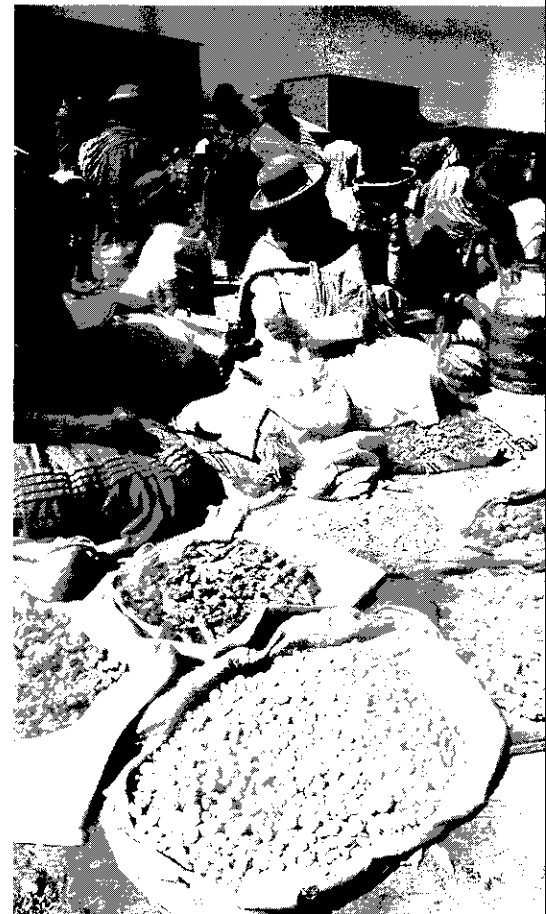
#### Better linkages to agrifood chains

Papa Andina is helping to establish local institutional platforms where

specific products in agrifood chains are analysed, in order to improve market access and terms for smallholders. Development of products for markets is a complex venture that simultaneously requires investigation of crop problems, training farmers in new methods, identifying new market niches, getting farmers organized, developing marketing channels and securing access to credit. The local institutional platforms bring research institutions, farmers' groups, potato food chain actors and development organizations (e.g. NGOs) together to carry out these tasks in partnership.

#### Poverty filters

Not all potato products have the same potential to benefit the poor. Taking advantage of new markets for products that will ultimately be taken over by large farms does not help to alleviate poverty. Some products that have stringent quality and uniformity requirements, particularly regarding non-visible characteristics such as dry matter or sugar content – which farmers cannot easily check – favour larger-scale farmers. Papa Andina is developing poverty filters to identify products which give



Potato market in the Altiplano selling traditional process products: chuño and Tunta.

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Farmers in Ecuador selecting native potatoes with good market characteristics.

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small-scale farmers a longer term competitive advantage. In the case of such products, smallholders have the benefit of better location, local knowledge, access to a wide range of local landraces or crop management practices. For example, some market niches require small tubers, which in turn require high planting density and manual harvesting. Such constraints favour small non-mechanized farms.

### Sharing knowledge

Papa Andina works with its partners to promote exchange of technology and information within the Andean region. Sharing technology based on genetic resources presents special problems in the Andes. Indeed, while the potato originates from the region, each country increasingly regards control of genetic resources as important to maintaining domestic competitiveness. Papa Andina also helps partners in the different countries to share lessons learned about the agrifood chain approach.

## 2. First experiences

One of the best opportunities to apply the approach described above is in the case of native potatoes from local landraces. These come in a range of beautiful colours and shapes. Many are especially tasty and form part of local dishes for special occasions. Farmers keep small fields with these crops for home

use and call them «gift potatoes», as they are reserved as presents for best friends and relatives. Some native potatoes are especially suitable for freeze drying in the cold highland nights and processing into chuño, a local food that goes back to the times of the Incas. Market studies supported by Papa Andina showed an unmet demand in major towns for native potatoes as a gourmet food and for chuño. But meeting the demand means improving product presentation and quality, as well as ensuring a regular supply to consumers. These changes would also contribute to improving smallholders' incomes.

To access these new markets, farmers have to adapt their existing technology. Often yields of native potatoes are low and farmers need help to increase production while using ecologically sound technology. Typically the seed of these potatoes has become infected with disease. One of the first steps is thus to help farmers have access to disease-free seed that will improve crop yield and quality. Farmer field schools, a training approach developed for integrated pest management as an alternative to chemically based control, are being extended to help farmers learn about product requirements and negotiation skills in these new markets. Farmers are collaborating to conduct research on so-called rustic stores to extend the period during which potatoes can be stored on farm and facilitate deliveries to market at a better price.

## 3. The challenges

Papa Andina has three major challenges for the future. The first is to turn ideas into concrete tools, such as the poverty filters and local platforms mentioned above. The second is to create a culture of cooperation between actors with diverging interests and philosophies. Such a culture is essential to the proper functioning of the platforms. Finally, perhaps the hardest part of Papa Andina's mandate is to promote sharing of technology and genetic resources between countries. A critical step in this direction is to develop and agree on easily understood and transparent procedures for dealing with intellectual property rights. If these three challenges are met successfully, the concept of access to biodiversity as a means of improving smallholders' livelihoods will become a reality.

### The Authors

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