



Creating markets for orphan crops

Bioversity International supports marketing link in food value chain

In India, children may soon have school lunches that include finger millet instead of their usual rice. In Bolivia, a popular restaurant chain is offering its customers a menu containing a variety of dishes made from cañahua, an ancient Andean grain. Though on different sides of the world, these two activities are connected – both are outcomes of a Bioversity International initiative focused on using and conserving orphan crop species and varieties. These plant species and varieties are often highly nutritious, locally adapted and highly resilient crops that, for a variety of reasons, have been left out of the agricultural advances of recent decades, neglected by scientists who concentrate on only a few major staples and no longer used by farmers. The initiative is not just focusing on saving the seeds of these crops; it is encouraging farmers to grow them in their fields. Establishing market outlets for their harvests encourages the farmers to grow these orphan crops, resulting in improved school lunches in India and diverse restaurant offerings in Bolivia.

Finger millet, one of the world's oldest and most versatile grains, has been part of the food culture of India and Nepal for millennia. Yet in spite of its traditional importance, it has been marginalized in recent decades, with farmers encouraged to grow commercial crops such as rice and wheat to sell rather than grow their traditional crops for family subsistence and barter. Yet finger millet actually has more nutritional value than the crops that replaced it in family meals and those new, modern crops never reached the expectations for increasing income, especially in those marginal areas where millet species have a strong advantage to establishing themselves compared to major cereals.

Some 16,000 kilometers away in the high Andes, cañahua, a grain that predates the Incas, has a similar story. Bioversity International conducted a survey of 467 families in Bolivia and found that, out of more than 200 varieties of cañahua that had been cultivated in the past, only 20 were still in farmers' fields and more than 85% of the farmers were cultivating just one of them. Yet this grain has extremely high nutritional value and is known for its resilience to climatic changes.

Both finger millet and cañahua are classic examples

of what orphan crops are up against in today's agricultural sectors – traditional grains that have lost out to modern agriculture. For more than 10 years, Bioversity International has been working to conserve the genetic diversity of these species with a specific focus on finding marketing avenues for production, working with six species of minor millets in South Asia and quinoa, cañahua and amaranth in Andean countries. But, although marketing is the most sustainable way to promote underutilized crops, establishing these markets is not so straightforward.

Marketing's place on the food value chain continuum

Bioversity International's marketing goals for orphan species represent just one link in a food value chain which shows marketing as part of a continuum. In order to put marketing in context, researchers went back to the field to map the genetic diversity of, in this case, the minor millets and the cañahua. With that information, they were able to identify specific varieties of the species that would be helpful for the farmers and began the process of selecting, multiplying and distributing quality seeds. Then

they looked at how the crop was being cultivated, harvested and processed for adding value to the produce.

In effect, the removal of the drudgery especially in post-harvest work represented a key way for making these crops more attractive for farmers to grow. Through the initiative, important health processing hazards were corrected, such as the case of seed popping machines for Andean grains whose lids were often made of lead. The lids could be dangerous if the lead entered the food; so adding another level of investigation, the initiative designed a safer lid. It also helped communities pull together recipes on millets and Andean grains into books that are being shared with neighbouring communities to safeguard indigenous food culture. Policymakers were also closely involved, helping to develop food safety standards related to cultivation and processing, or introduce species in school meal programmes.

It is only at this stage that marketing enters the picture – when farmers know they have selected the best varieties for their needs and have grown and produced the millets or cañahua in forms that will be more appealing to consumers in the market and in quantities that will enable them to meet new market demands.

Successful marketing allows creativity

As the initiative has shown, the marketing step allows a great deal of latitude and creativity. For example, the initiative took advantage of the ecotourism of Lake Titicaca in Bolivia and invited tourists to visit fields of Andean grains in Santiago de Okola, a village suffering from heavy migration of younger people to La Paz. As a result of these promotional activities, the farming area of the village is now expanding and creating incentives to keep young people in the area. This new ‘agri-tourism’ activity also received a boost when *Lonely Planet* devoted a special section on these innovative participatory approaches in its tourism guide to Bolivia.

With the influx of tourists, local people have now opened their own museum explaining their agricultural customs and culture. At the same time, the initiative convinced a restaurant chain to develop dishes with cañahua, and produced materials about the history and nutritional qualities of Andean grains that customers can read while they are eating. As for the millets in India, the initiative has raised awareness of the nutritional and environmental advantages of millets over rice. Now, in addition

to the government plans to include millet-based foods in school lunches, UNICEF India is working to include minor millets in its children’s food aid program.

Adding to all this, incomes have improved, consumers have access to healthy and nutritious grains and tradition has been reignited.

Partners

India:

Research and academic institutions:

- Central Food Technological Research Institute, Mysore
- G.B. Pant University of Agriculture and Technology (GPAU&T), Raichauri
- International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)
- M.S. Swaminathan Research Foundation, Chennai
- Swiss Agency for Development and Cooperation (SDC/COSUDE)
- More than 50 self-help groups across India
- University of Agricultural Sciences Bangalore
- University of Agricultural Sciences, Dharwad
- Farmers and their associations from project sites
- Millet value chain actors from project sites and especially from Kolli Hills (involved in the marketing of the ‘Kolli Hills’ millet products Brand)

Others:

- Unità e Cooperazione per lo Sviluppo dei Popoli, (UCODEP), Italy
- MOVIMONDO, Italy

Bolivia:

- Centro de Investigaciones Fitoecogenéticas de Pairumani (CIFP)
- Fundación Promoción e Investigación de Productos Andinos (PROINPA)
- Instituto Boliviano de Normalización y Calidad, Bolivia (IBNORCA)
- High Andean Germplasm Bank (BNGA)
- Laboratorio de Análisis y Servicios en Alimentos (LAYSAA)
- Procesadora de cereales Andina
- Universidad Mayor de San Andrés (UMSA)

- Andes Trópico Company
- Irupana Organic Andean Food
- Universidad Católica Boliviana
- Community of Pomposillo
- Andes Tropico Company
- Insituto Benson
- Pasta Snack Coronilla
- Sociedad de Provincial de Productores de Quinoa (SOPROQUI)
- Cooperativa Irpa Chico de Jalsuri
- Cooperativa Huacullani
- Desarrollo Integral Campesino
- Municipalidad Tahua
- Municipalidad Llica
- Municipalidad Pucarani
- Municipalidad Achacachi
- Municipalidad Batallas
- Municipalidad Umala
- Municipalidad Tiahuanaco
- Municipalidad Mizque
- Sumaj Kausay (SUKA)
- Universidad Siglo XX
- Autoridad Local de Coromata
- Autoridad Local de Santiago de Okola
- Asociacion Sedeges y Aldeas Infantiles S.O.S
- Sobre La Roca
- Rowland Laboratories
- La Paz on Foot
- Sendas Altas
- Alexander Coffee
- Proyecto Fomento Empresarial (FOMEM)
- Amaranth Promoting Committee
- Alianza Cambio Andino
- Visozial

Links

- [Marketing diversity for income and equity](#)

Publications

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Bioversity Headquarters
Via dei Tre Denari 472/a
00057 Maccarese, (Fiumicino)
Rome, Italy
www.bioversityinternational.org
Tel. (39) 06 61181
Fax. (39) 06 61979661
Email: bioversity@cgiar.org