

photo: Tirso Gonzales



Indigenous farmers show over 3,000 varieties of seeds at a regional "seed fair" in the Andes.

by Tirso Gonzales

The northern countries have recently become concerned with losses in biodiversity. Among other things, this has included concern for the loss of native crop seed diversity. The main causes of this loss are external to Indigenous populations, who have always considered the seeds of native plants part of their survival strategy and diet. These plants, which are described by scholars in the North as "under-exploited tropical plants with promising economic value" or the "lost crops of the Incas," have through the growth of biotechnology industries been converted into a promising source of profits for

Tirso Gonzales is completing a dissertation on Indigenous Knowledge and Biodiversity in the Peruvian Andes and Mexico in the department of Rural Sociology at the University of Wisconsin.

private industry in the North, if not for the farmers and Indigenous people of the "Third World."

Presently, Northern and Southern governments, transnational corporations, and international development and financial agencies link biodiversity in an almost natural way to biotechnology, and ignore the Indigenous peoples who inhabit the majority of the planet's regions richest in biodiversity. This absence of real interest in Indigenous peoples is consistent with the dominant practices of "development" and as well as those of conservation.

Development Institutions and the Loss of Biodiversity

Unfortunately, the Global Strategy for Biodiversity (GSB), one of the most influential recent policy frameworks relating to conservation of biological

"Development" Crop Diversity and Indigenous People in the Andes

diversity, continues within the same modernizationist vein. The GSB was prepared by the World Resources Institute, the World Conservation Union, and the UN Environment Program in consultation with the UN Food and Agriculture Organization, and included the work of more than 500 individuals over three years. It was designed for adoption by scientists, politicians, and governmental and non-governmental organizations in both the North and South. After three years of debate, only four of its 85 actions emphasize the role of Indigenous communities and campesinos in the protection of biodiversity.

Many international agricultural institutions also continue in the same modernizationist tendency. Two examples with particular impact on Indigenous agriculture are the International Centers

for Corn and Wheat in Mexico, and the International Center for Potato Research in Peru. The so-called Green Revolution, associated with 18 such international centers of agricultural research and backed by international development and finance organizations like the World Bank, the IMF and US AID, promoted a form of agriculture very different from that of Indigenous campesinos. The "revolution" was designed to use high inputs of chemicals and heavy machinery, and offers little of substance to Indigenous farmers. To the contrary, it has tried to transform them into modern farmers, dependent not only on seeds but also knowledge, tools, money and food. The green revolution is a principal cause of the loss of cultural and biological diversity in the countryside. Chemicals used in the "revolution" have also contributed to contamination of air, water, soils and living things in general.

Diversity in the Andes

The Andes form a mountain chain that crosses territories now known as Colombia, Ecuador, Peru and Bolivia. The great diversity of Andean cultures developed close connections with the earth, the Pachamama, and the rest of the living beings such as hills, water, animals, sun and moon. This region's extraordinary abundance of crops, medicinal plants, fruit trees, animals and micro-organisms has earned it designation as a global "mega-diversity" center. As several scholars have noted, this diversity in itself is not so notable as the manner in which it has occurred. The questions are: Why is there such high biological diversity in the Andes? Who creates, reproduces and cares for biodiversity? How is this done? Why is it done?

The answer to these questions is found in the interaction between the Quechuas, Aymaras, Jibaras, Chichimecas, Chinantecos, Chontal, Aushiri, Quichua, Shuar, Huitotos, Chichas, dozens of other Indigenous peoples, and the natural environment.

The culture of each and every one of these peoples—that is, the way they know things, their modes of being, and their modes of understanding the world around them—is shown in their relation to crops, plants and other living beings.

An Alternative Project

For the last two years, the Asociación Bartolome Aripaylla (ABA), one of more than 20 groups associated with the Lima-based NGO Andean Project for Campesino Technologies (PRATEC), has been working to revive traditional Andean techniques and crops in the Quechua community of Quispillacta, Ayacucho. The community's territory includes over 20,000 hectares of which less than five percent have been brought under cultivation. Like many Andean communities, Quispillacta is organized at three levels: the Ayllu, the neighborhood, and the community. Nuclear families are brought together in the Ayllu and strengthened through collective work and ritual fiestas. The ABA is made up of community members who left to study in the city and formed an NGO there. This has converted them, as they themselves recognize, into "visitors" in the community. They had stopped farming their own plots for over thirteen years, and depended on the city. After reflecting on this problem, the members of the ABA decided to return to the community. "Correcting our errors, we tried to intensify our actions of strengthening the community. We formed another group in the community, grew plants and worked in the fields like the other members of the Ayllus, and became part of the agricultural cycle of the community."

The ABA works in the collection and inventory of local and regional seeds, communal and group planting, exchange of experiences, information and seeds, and Andean practices for exchanging and maintaining seeds.

After these two years of work and study of genetic conservation and erosion, the enormous differences between

the western and the Indigenous vision have become evident. They have denominated these as "the culture of hybrid seeds" and the "culture of native seeds."

ABA held "Seed Fairs" in 1991 and 1993. These fairs have provided incentives to cultivate native seeds of many varieties, in contrast to agricultural fairs organized by the Ministry of Agriculture which promote "improved seeds." Among the objectives of the II Exposition of Andean Seeds were: to show the potential of native seeds that are raised in Quispillacta, to exchange seeds and knowledge, to demonstrate the role of subsistence farmers and increase phylogenetic variety, to promote and amplify the growth of diverse Andean seeds, and to show the nutritional richness and the diversity of dishes that can be made from Andean crops.

Nearly half of the area's Ayllus participated in the second seed fair, presenting over 3,000 samples of twelve Andean crops. When crop diversity was charted by region, it became evident that the greatest crop diversity was found in the Rio Papas watershed—especially in the areas of Pirhuamarca and Llaqtahuaran—where the development institutions have the least presence. This confirms—according to ABA—that crop diversity is greatly affected by projects that promote seed improvement, since they carry with them an established technological packet which tends to displace the native ecotypes and knowledge.

Cases such as that of the Asociación Bartolome Aripaylla suggest that the conservation of seed diversity depends more than anything on the conservation and strengthening of Andean cultures. True development in the Andes will never come in the form of modernization, particularly when this means—as often stated in the past—the replacing of everything Indian with "modern," Western techniques. Rather, Indigenous agriculture will play a critical role in any authentic process of Andean development.