

## MEXICO

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### Local collaborating institutions:

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NGO: Asociación Mexicana para la Transformación Rural y Urbana, A.C. (AMEXTRA)  
(Mexican Association for the Rural and Urban Transformation)

NGO: Grupo Interdisciplinario de Tecnología Rural Apropiada, A.C. (GIRA)  
(Interdisciplinary Group for Appropriate Rural Technology)

### Description of Activity:

PLEC-Mexico has focused on the development of replicable models of *campesino* (small farmer) management of agrodiversity. Investigation has concentrated in two main regional sites with overall project coordination at CICA. First, in the western part of the State of Mexico, the *mazahua* indigenous people have a long cultural tradition in the *milpa* (maize cultivation) system, where a number of local varieties of maize are grown with associated crops, as an adapted form of the characteristic Meso-american traditional farming system. Diverse crops are produced from small areas, increasing the availability and variety of food while at the same time giving better nutrition, enhanced soil fertility and protection of biodiversity. PLEC works here in two communities: San Pablo Tlalchichilpa in the municipality of San Felipe del Progreso, and at San Marcos de la Loma in the municipality of Villa Victoria. In this second community, the CICA group works with AMEXTRA since 1999. AMEXTRA has extended the activities to the neighbouring *mazahua* community of Yebucivi. Secondly, PLEC works with its partner, GIRA, in the State of Michoacán, in the highlands of Pátzcuaro in the municipality of Salvador Escalante. Here the main activity has concentrated on the highest priority issue of local farmers, forage production.

Activities have all been directed towards the PLEC goals of developing sustainable resource management and farming techniques that can simultaneously improve rural livelihoods and conserve agricultural biodiversity. In common with other PLEC groups, Mexico has a focus on management diversity, and it specialises primarily but not exclusively in issues around maize varieties and home gardens (*solares*). A feature of the work has been the restoration of traditional *milpa* systems. Under current economic (e.g. NAFTA and diminishing crop prices) and social (e.g. dominant influence of

Mexico City) pressures, the demonstration site work has focussed on self-reliance through maize and associated crops. Faba beans, peas, *ayacote* (common squash) and *Amaranthus* spp. have been established by participating farmers. Detailed monitoring has been undertaken at a number of sites, with the active participation of farmers in assessment of crop mixtures as against maize monoculture. Work has also been conducted on forest biodiversity and pasture/forage production – but these are at a less advanced stage than the *milpa* investigations.

### **Record of Achievements:**

Two main beneficial outcomes, one direct and one indirect, have resulted from the PLEC work:

- (1) Ninety percent of participating farmers in San Pablo have recognised the importance of preserving and enhancing agrodiversity. This has been articulated through workshops and participatory exercises such as ranking, and in continuity of take-up of demonstration site activities through the communities. Economic benefits have also been calculated, and nutrition is felt by *campesinos* to have been improved.
- (2) PLEC activities have served as a catalyst to other development activities funded by the Mexican Government and administered by other NGOs. Such activities include fruit trees, soil erosion control, and soil fertility technologies. At their final workshop, farmers stated that, “all these would not have been possible without the work done by the PLEC project.”

Specific achievements include:

- a detailed database of farmers’ cultivation practices, including labour requirements, types and amounts of inputs, costs of production, for the *milpa* system
- a detailed inventory of five *solares*, and documentation of the use of all species
- a method developed more accurately to reflect the yield levels of associated crops in the *milpa*
- the rescue of the land race *cebada morado*, a local type of barley, which is noted for its frost and drought resistance. Eleven farmers planted this in 2001 and more are promised for 2002 after substantial seed-sharing within the community
- a database of forest plant species, along with uses
- for the first time in many years, farmers in San Pablo have sold surplus crops – a situation that only very rarely occurred with maize monoculture.
- In San Marcos de la Loma, 75 farmers participated in workshops; traditional methods of pest control were documented, demonstration sites for oats-vetch mixtures were established, and vegetable production and diversity was introduced in 2001.
- With their NGO partner, GIRA, four farmers converted infertile fallow lands to high quality mixed forage. An additional income of some US\$320/ha was recorded from these forages. Neighbouring farmers have been involved and have monitored progress with the view to extending production to their own land.

Dissemination and capacity building has been an important feature of PLEC-Mexico research. The PLEC work in Mexico has been reported in ten congress and conference papers, given mainly in Mexico, but also in Switzerland and Canada. A peer-reviewed journal article has appeared in *Mountain Research and Development* (2001) showing how the PLEC work has involved a partnership between *campesinos* and scientists. Six students have undertaken BSc-level dissertation work on the PLEC sites, and two others are currently writing their PhDs on agrodiversity topics. Over 100 farmers have participated in the various PLEC sites.