

## **Case Study D1:**

### **Successful farmer-to-farmer promotion of sustainable crop and soil management practices in Mexico**

*Vicente Guerrero Group, Tlaxcala, Mexico* (adapted from Ramos S., 1998)

Problem statement. Soils in the state of Tlaxcala, Mexico have been under cultivation for thousands of years (Gliessman, 1990). Nevertheless, recent intensive farming practices, especially on sloping terrains, have eroded and degraded soils on a statewide level. Deep gullies scour significant portions of the landscape, complicating water catchment, silting rivers and degrading natural and agricultural ecosystems. *Tepetates*, severely eroded areas characterized by hardened, exposed subsoil completely devoid of topsoil, are common.

The overall deterioration of soil quality and quantity has greatly challenged peasant farmers (*campesinos*) in Tlaxcala. In addition, local farmers have contended with other serious factors inhibiting local agricultural production. These include, but are not limited to:

1. Inappropriate application of agrochemicals.
2. Excessive conversion of vegetatively diverse lands to monoculture production fields.
3. Loss of traditional intercroppings, especially corn-bean-squash.
4. Lack of soil and water conservation measures.
5. The disappearance of home gardens for family food self-sufficiency.
6. Little technical assistance in family nutrition, sanitation and health.
7. Scant knowledge of sustainable agroecological techniques, such as composting, cover crops, and green manures.
8. Government farm programs that work to the detriment of rural economies and environments.
9. Lack of government credits; low guaranteed prices for basic grains; high costs of agricultural inputs; etc.
10. Little time for capacity building among local farmers because they spend their time meeting immediate survival needs.

Brief history. In the mid-1970's a few peasant farmers in the small village of Vicente Guerrero, Tlaxcala, took small, but decisive steps (under the initial guidance of the Quaker House of Friends) to respond to these concerns. In particular, they began to experiment locally with an integrated agroecological approach to crop and soil management. Their purpose, was and still is, to generate, share, and promote experiences that will improve the local quality of life and that of their neighbors, while respecting and caring for the fragile lands upon which they live.

More than 20 years of on-the-farm efforts, changes in sponsors and growth in group membership have produced a successful, community driven organization, the Vicente Guerrero Group (now a legally registered non-governmental organization in Mexico), comprised of local men and women who act as farmer-promoters at regional, national and international levels. Their *farmer-to-farmer approaches* and *rural participatory processes* have led to notable successes in many areas of integrated crop and soil management (see Box 1).

**Box 1. “Management practices successfully employed by the Vicente Guerrero Group”**

The following are some of the important management practices disseminated by Vicente Guerrero promoters:

- *Natural fertilizers (compost and green manure)*
- *Soil restoration and water conservation*
- *Crop rotations*
- *Leguminous cover crops*
- *Home gardens for food self-sufficiency*
- *Reintroduction of native crops*
- *Backyard livestock production*
- *Improvement of locally adapted seed lines*
- *Use of traditional medicines in family health care*

The Vicente Guerrero Group advocates and teaches an integrated approach to the sustainable, agroecological management of crop and soil resources that includes four basic programs:

1. The ecological production of basic grains includes soil and water conservation measures, crop rotations, cover crops, diversifying crop associations, seed line improvement, the use of draft animals instead of mechanized traction, and the employment of organic fertilizers (e.g. those based upon stubble, harvest residues, animal manure and green manure).
2. Landscape management includes developing techniques for the capture and conservation of rainwater, incorporating backyard livestock into the family farm (e.g. reintroducing native races of chickens, turkeys, and rabbits), and restoring native agricultural biodiversity by planting native and medicinal plants and local tree species.
3. Gender, health and nutrition focuses principally on the needs of women, but also include those of children and the elderly. Health and nutrition activities center on the utilization of basic grains and garden vegetables, as well as food preservation. Alternative medicinal therapies emphasize the benefits of accessible native herbal remedies and traditional sweat lodges (*temezcales*).
4. Capacity-building and exchange programs operate at the regional, national and international level in areas of sustainable agriculture, rural participatory methods and gender issues. The Vicente Guerrero Group welcomes and receives capacity building from outside experts, however the group’s principal focus is to travel widely sharing this knowledge with other farmers.

The work of the Vicente Guerrero Group started in earnest in 1978. At this time a group of campesino farmers from the community, who had been previously trained by outside experts, voluntarily began to act as promoters, sharing their knowledge in intensive biodynamic horticulture, and later in soil and water conservation, with other local farmers. Since that time and up to the present, men and women from local farming families have been accepted and trained as promoters. Group members are convinced that such recruiting from within their community engenders a better understanding of the needs of rural farm families in the region (see Boxes 2 & 3).

**Box 2. “Profile of a Vicente Guerrero farmer-promoter”**

According to members of the Vicente Guerrero Group, a promoter should be:

*A model farmer, modest and accessible, dynamic and sociable, collaborative, receptive, honest, respectful, observant, fully committed to the community, and an initiator and experimenter.*

**Box 3. “Methods and techniques used by Vicente Guerrero promoters”**

Various tools used by promoters include:

- *Visits to farmer’s fields*
- *Field demonstrations of crop and soil management techniques*
- *On-the-farm experimentation*
- *Optimal use and recycling of organic matter*
- *Rapid participatory diagnostics*
- *Workshops, talks, courses, didactic games, and community theater*

Philosophy of the organization. In its broadest sense, the work of the Vicente Guerrero Group is a testimony to the importance of shared purpose and collective will. As group members readily attest, their successes have depended heavily on initiatives to organize themselves and direct their own learning experiences, as well as to commit themselves unhesitatingly to share knowledge with other farmers. Over the years, intangible factors such as these have proven to be as important as the specific technical assistance the group has received from outside experts and agencies.

Three philosophical mainstays support the work of the Vicente Guerrero promoters:

1. *Promoters should be morally committed to their work.* Promoters affirm their obligation to share all techniques and knowledge that they have acquired with other peasant farmers. This commitment is characteristic of the farmer-to-farmer approach to learning in which the promoter has become aware of the wider social impact of his or her knowledge.
2. *Promoters should continue to cultivate their own lands.* The promoter must not lose his or her identity as a farmer. Instead, the promoter should remain connected to the livelihood practices of the local rural community and aware of its needs for assistance. The promoter is considered an example for other peasant farmers and should be visible in this capacity as a role model.

Specifically, each promoter dedicates half time to farming their own land and half time to promoting the programs of the Vicente Guerrero Group. Each promoter is responsible for knowing about all the group's activities, however, each one also must develop an area of expertise. For example, a campesino farmer specializing in natural, organic fertilizers would also be expected to understand the general medicinal properties of native plants, whereas a local woman managing medicinal herbs would also be familiar with composting techniques and green manures.

3. *Promoters should work as community volunteers.* In the Vicente Guerrero Group, promoters work as half-time volunteers for two to three days a week, over a one to two year period. During this time, they receive no salary, however they are provided with reimbursements for their travel expenses from village to village. During this provisional training, promoters are evaluated according to their management of a specialty area, their willingness to participate responsibly in group endeavors and their ability to work as part of a team. At the end of the evaluation period, if a promoter is asked to stay on with the group, he or she might be expected to receive a small monetary compensation for his/her continued participation.

Successes. In addition to having trained more than two thousand campesino farmers in Mexico and elsewhere in Latin America in integrated crop and soil management practices during the past two decades, members of the Vicente Guerrero Group count the following as some of their principal successes:

- ✓ An increase in local agricultural productivity

The Government of Tlaxcala has formally recognized 15 local farmers in recent competitions. For example, in 1986, one farmer-promoter from the Vicente

Guerrero Group won first prize in a statewide competition for improved yield in dryland maize, registering a 5.5 T ha<sup>-1</sup> yield in grain production (much higher than the average yield in the state).

- ✓ Significant reduction in chemical fertilizer use by many farmers who initially rejected natural, organic fertilizers.
- ✓ Total elimination of agrochemicals in the production fields of some farmers.
- ✓ An important reduction in the burning of local fields.
- ✓ Greater incorporation of stubble and crop residues into the soil.
- ✓ Greater sensitivity among rural citizens to local environmental problems.
- ✓ Increased soil and water conservation measures.
- ✓ Important erosion control and soil fertility efforts.
- ✓ Increased group capacity to organize and attract outside funding due to group experiences and successes.

Conclusion. The success of the Vicente Guerrero Group highlights the importance of an integrated, farmer-to-farmer approach to sustainable crop and soil management on marginal and degraded lands. Furthermore, it suggests that the motivating forces behind such participatory efforts are equally as important as the technical capacity and training of the group. These intangible, but essential factors include (1) a profound respect for the environment, evidenced by an evolving, integrated and ever-more sustainable use of local natural resources, and (2) the firm conviction that sharing knowledge with other farmers is an undeniable, and even moral obligation resting upon members of the group.

## References

- Gliessman, S.R. (1990) Understanding the basis of sustainability for agriculture in the tropics: Experiences in Latin America. In: C.A. Edwards, R. Lal, P. Madden, R.H. Miller and G. House (eds.), *Sustainable agricultural systems*. SWCS, Ankeny, USA. pp. 378-390.
- Ramos S., F.J. (1998) *Grupo Vicente Guerrero de Españita, Tlaxcala. Dos décadas de promoción de campesino a campesino*. Red de Gestión de Recursos Naturales and Rockefeller Foundation, México City, Mexico.