Produce Foundations in Mexico
An Innovative Participatory and Demand-Driven Technology Innovation Model

A. SUMMARY

1. Title: Produce Foundations in Mexico: An Innovative Participatory and Demand-Driven Technology Innovation Model

2. Duration: 1997 – in progress

3. Objectives: To promote linkages between agricultural producers, end-users of agricultural products, agricultural research institutions, and advanced agricultural education institutions as a means of fostering the transfer and farm-level adoption of appropriate technological innovations.

4. Activities: Through 31 Produce Foundations and COFUPRO (the national coordinating organization), enlist Mexican farmers’ and end-users’ participation, along with that of other stakeholders from the public and private sectors, in agricultural research and technology transfer.

5. Main innovations: Produce Foundations represent a new institutional arrangement to support agricultural research and technology transfer. Created, led, and administered by producers, these Foundations have been established in every state in Mexico, where they are incorporated as civil associations. The Foundations allocate funds and are administered under a government program called “Alliance with the Rural Sector.” Another innovative institutional arrangement to support the Foundations is a trust fund, which has a mechanism for matching funds between the Federal and State Governments, agricultural producers, and the private sector. The Produce Foundations’ current operational strategy, as expressed by the slogan that accompanies their logo (“Linkage—Innovation—Progress”), is the product of a strategic planning workshop co-sponsored by the Inter-American Institute for Cooperation in Agriculture (IICA) and the various Foundations, with participation by Produce Foundation presidents and managers, appropriate experts from Latin America, and a specialist from the International Service for National Agricultural Research (ISNAR).

Changes are evident after three years of interaction and formal linkages among public and private sector institutions. These linkages involve strategic alliances with the National Institute for Forestry, Livestock and Agricultural Research (INIFAP) and other research and educational institutions, as well as the National Council for Science and Technology (CONACYT), the Mexican government agency responsible for funding research. A greater number of research projects, which are more responsive to producers’ needs, are being conducted. Beyond that, a valuable reservoir of earlier technological innovations is being made more accessible to producers through the linkage mechanisms.

The approach taken by the Produce Foundations, based on research and technology transfer linkages as a critical element in diffusing new technology, offers much promise with its focus on end-users, its emphasis on decentralized decision making, and its access to funding from various sources. Its very structure (which features 31 Foundations and encourages additional groupings along agro-ecological lines), combined with the diversity in Mexico’s agriculture, will yield a rich set of experiences in technology development and transfer, along with a host of useful insights into which approaches work best under which circumstances. Because virtually everything in developing world agriculture is represented in Mexico, we believe that the experiences generated through the Produce Foundations will be useful to members of the Global Fora, and we encourage others’ interest and observations as the Foundations’ experiences are monitored and documented.

6. Area: Policy Management and Institutions

7. Region: Latin America and the Caribbean

Paredes, A. and J. Moncada. President and Executive Secretary. Produce Foundations National Coordinator Entity. COFUPRO A.C. Version: 13/12/01
B. STAKEHOLDERS

Background

Mexican agriculture confronts risks and opportunities emerging from global trade agreements, including GATT, WTO, and NAFTA, and from the recently signed European Union trade agreement. Present and future scenarios emphasize the need for Mexican agriculture to attain significant, sustainable growth that is responsive to market demands, within a framework of economic realism, while the natural resource base is conserved at an appropriate level.

Agriculture is subject to increasingly strict ecological, food safety and quality norms. Therefore, a rising demand exists for practical, appropriate, cost effective, environmental friendly technological innovations.

Expected policies for the rural sector include: subsidies rationalization, reduced paternalism and an increasingly share of responsibilities between public and private sectors, on agricultural research, extension and technology transfer.

To support the development and modernization of the rural sector, in the latter part of 1995 the Mexican Government launched a special program called “Alliance with the Rural Sector.” Its main component, the Produce Program, fosters improvements in the productivity and sustainability bases of agricultural enterprises. The cornerstone of the Produce Program is its decentralized approach, in which administration and decision-making are delegated to the state level and stakeholders are actively engaged in setting priorities.

An Innovative Participatory Model

Under the Alliance Program, the Mexican Government has changed its agricultural research strategy to a new model featuring demand-driven innovation based on knowledge and technology and relying on widespread involvement by stakeholders. In this model, producers, as end-users, participate far more in selecting researchable problems so that research results will better meet their needs. This new strategy rests on new institutional arrangements, especially the Produce Foundations. These Foundations, established in each state of Mexico, are responsible for allocating funds and for administration under the Alliance Program.

Another innovative institutional arrangement to support the Foundations is a trust fund, which has a mechanism for matching funds between the Federal and State Governments, agricultural producers, and the private sector. In some States, producers and other private sector contributions provide additional financial resources.

Profile of the Produce Foundations

General Features—Produce Foundations are:
Producers’ organizations constituted as non-profit civil associations, with neither political nor religious affiliation;
Assembled in each state by the free will of leading and democratically elected outstanding farmers, producers’ organizations, and NGO and private sector representatives;
Responsible for fostering interaction between the private sector and the Federal and State Governments;
Produce Foundations in Mexico:

An Innovative Participatory and Demand-Driven Technology Innovation Model

Using an innovative organizational model in which the public and private sector support research and technology transfer projects, in response to producers’ and end-users’ demands; and

Have statewide coverage and regional, national, and international linkages.

Purpose of Foundations—To promote linkages between the agricultural producers, end-users of agricultural products, agricultural research institutions, and advanced agricultural education institutions as a means of fostering the transfer and farm-level adoption of appropriate technological innovations.

Priorities of Foundations—To promote the generation and adoption of technological innovations that are appropriate, practical, economically viable, profitable, socially acceptable, and environmentally friendly.

Challenge of Foundations—To support sustainable growth in agriculture, based on agricultural activities and enterprises that generate wealth for producers.

Profile of COFUPRO, the National Coordinator of the Produce Foundations

Origins of COFUPRO—COFUPRO originated in a national assembly held in October 1997, when the presidents of all Produce Foundations agreed to form, sponsor, and finance a civil association that would represent the Produce Foundations at the national level, before the various national and international institutions that are relevant to the Foundations’ mission and strategic objectives.

COFUPRO’s Mission and Objectives—COFUPRO’s mission is to strengthen the Produce Foundations’ capacity to attain their common objectives, which is to foster the generation of appropriate technologies and their adoption by farmers. More specifically, COFUPRO seeks to support the Foundations in their development and organizational consolidation and to represent them at national and international fora relevant to their endeavors.

C. PARTNERSHIPS

The Produce Foundations’ and COFUPRO’s current operational strategy (as expressed in the slogan that accompanies its logo, “Linkage—Innovation—Progress”) is the product of a Strategic Planning Workshop co-sponsored by the Inter-American Institute for Cooperation in Agriculture (IICA) and the Foundations, with participation by Foundation presidents and managers, appropriate experts from Latin America, and a specialist from the International Service for National Agricultural Research (ISNAR). As the slogan indicates, linkages—domestic as well as international—are of primary importance in the Foundations’ operational strategy.

Domestic Linkages

Domestic linkages include partnerships with the National Institute for Forestry, Livestock and Agricultural Research (INIFAP) and other research and educational institutions, as well as the National Council for Science and Technology (CONACYT), which is the Mexican government agency responsible for funding research.

Major constraints on technology transfer include producers’ lack of organization and lack of access to credit. To speed technology transfer, Produce Foundations have established partnerships with institutions such as trusts (i.e., Fideicomisos Instituidos en Apoyo a la Agricultura—FIRA), special funding agencies (i.e., Fondo de Capacitación e Inversión del Sector Rural—FOCIR), and foundations (i.e., Fundación Mexicana para el Desarrollo Rural, A.C.) to join forces and use their experience and strengths. These
Produce Foundations in Mexico:
An Innovative Participatory and Demand-Driven Technology Innovation Model

include the characterization of producers, organization of producers, training in technology transfer, and financing the adoption of technological innovations.

Close interaction has been maintained with the Ministry of Agriculture to link its extension programs (SINDER, PEAT) to Produce Foundation projects and to foster the development and application of technology transfer models appropriate to the producers’ varied economic and sociocultural conditions.

Based on their concern for the conservation of natural resources for future generations of Mexicans, Produce Foundations signed an agreement with the Ministry of Environment and Natural Resources (SEMARNAP) to support the generation and diffusion of knowledge for rational utilization and conservation of the natural resource base.

International Linkages

Through COFUPRO, the Produce Foundations have established linkages with foreign and international organizations whose missions, products, and services are relevant to the Foundations’ own mission. These include the Midwest Consortium of Agricultural US Universities, Texas A&M University System, Food and Agriculture Organization of the United Nations (FAO), IICA, and several centers of the Consultative Group on International Agricultural Research (CGIAR).

COFUPRO has interacted with the CGIAR by participating in International Centers’ Week and Mid-Term Meetings. Closer linkages have been established with individual CGIAR centers such as the International Maize and Wheat Improvement Center (CIMMYT), International Center for Tropical Agriculture (CIAT), and ISNAR.

In the case of CIMMYT, for example, the Produce Foundations of Sonora and Guanajuato States sponsor several CIMMYT wheat research projects. Querétaro’s Produce Foundation supports testing, selection, and validation of triticale lines. Through INIFAP, several Produce Foundations support testing, selection, and diffusion of quality protein maize.

D. RESULTS AND IMPACT

Changes are evident in the three years that the Produce Foundations and COFUPRO have pursued their strategy of promoting interaction and formal linkages with public and private sector institutions. Today, more research projects, which are more responsive to producer’s needs, are conducted. Furthermore, a valuable reservoir of earlier technological innovations is more available to producers.

Benefits from Regional Projects and Regional Fora

Several Foundations and CONACYT have co-financed projects to tackle problems within an agro-ecological region. These regional projects go beyond state political boundaries and rest on institutional comparative advantage and resource pooling. To develop such projects, 19 Regional Fora were organized in which 49 production chains in 27 states were identified by sub sector (agriculture, 37; livestock, 10; and forestry, 2). Three additional Fora pertained to strategic issues (water, soils, and natural resources). The Fora integrated the views of more than 2,000 researchers, producers, and other end-users from the public and private sectors. To support the evolution of such Fora, the Foundations and CONACYT co-financed a workshop guided by ISNAR on demand identification and priority setting.
Produce Foundations in Mexico:  
An Innovative Participatory and Demand-Driven Technology Innovation Model

With this new institutional arrangement, everybody wins:
- Scientists become aware of problems and their importance, from market demands and producers’ perspectives.
- Producers become aware of research breakthroughs and available technological innovations.
- Communication and mutual trust are established between producers and researchers.

The resource pooling strategy has resulted in additional research projects co-funded by CONACYT and Produce Foundations. Furthermore, resource allocation is changing to include universities as well as INIFAP, so as to benefit from institutional comparative advantages. As a result, Produce Foundations are contributing to a more diversified research and innovation system that is more flexible and relevant.

Capacity Building

Produce Foundations and the Mexican Council for Science and Technology (CONACYT) co-sponsored a workshop guided by ISNAR. The product is a methodology to identify and prioritize research projects based on: relevance, expected results generation and adoption success probability along with economic, equity and ecological favorable cost benefit ratios.

Produce Foundations contribute to improving research governance, financing, administration, and monitoring mechanisms by exerting political pressure on the institutions involved. Through COFUPRO, the Foundations have also been active in capacity building. Examples include the Agro-food and Agro-industrial Chains Train the Trainers Workshop and a Seminar. Co-financed by the Consejo Nacional Agropecuario (CNA) and Produce Foundations, the seminar helped identify the technological innovations needed to cope with challenges (e.g., increased competitiveness) faced by the food and agro-industrial chains.

The above-mentioned events used training methodologies and materials developed jointly by national agricultural research institutes from Latin America (Argentina, Brazil, Chile, Colombia, Venezuela, and Mexico) and were co-sponsored by the Inter-American Bank (IDB) and regional organizations such as PROCISUR, PROCIANDINO, and IICA, under the leadership and coordination of ISNAR.

Information Network

Produce Foundation’s and COFUPRO’s linkages to Wizard (Web-based Information System for Agricultural Research for Development, based in the Netherlands) are being established to share information globally on Foundation-financed research and technology transfer projects. This sharing of information via cutting-edge technology will also provide access to CGIAR Research Projects as well as to the databases of other research institutions. Through COFUPRO’s liaison role, positive and negative lessons are shared among the 31 Foundations.

Technology Transfer

Diffusion and training have been high priority, fruitful activities supported by Produce Foundations, enabling producers to take advantage of technological innovations that are already available. By 1998, 95 Symposia and 279 Congresses, in which 7,130 extension personnel and 14,905 producers participated, had been co-financed. A total of 1,179 training events had been supported, along with 1,717 demonstrations plots involving 7,372 extension personnel and around 30,000 producers.
Produce Foundations in Mexico:

An Innovative Participatory and Demand-Driven Technology Innovation Model

Produce Foundations financed missions of producers and scientists within the country and abroad to scout for useful technological innovations adaptable to Mexico’s various agro-ecological regions.

Future Challenges

*Produce Foundations Consolidation*

Produce Foundation members believe that the most pressing near-term challenge is to consolidate the organization and its operations. To achieve this goal, several short-term actions must be taken:

- Reinforce a shared vision and common culture among Produce Foundations;
- Define evaluation criteria and parameters to assess Produce Foundations’ performance and impact;
- Document in a consistent way Produce Foundations’ successful projects and their impact;
- Actively pursue a diversified fund-raising strategy; and
- Enlist participation of other members of civil society in Produce Foundations’ endeavors.

Another significant challenge is to promote producer organizations’ opinions on CGIAR Research Agenda deliberations, supplementing present NGO and private sector views, and concentrating on issues of utmost interest to Latin America and the Caribbean.

*National Agricultural Research System*

Few countries have a fully operational, effective, and efficient national agricultural research system. Mexico is no exception. Based on the present and future challenges for Mexican agriculture, the Government decided to support the creation of a National Agricultural Technology Innovation System. In this endeavor, the Produce Foundations and COFUPRO have a significant role to play as stakeholders, given that they represent producer organizations and are already committed to providing moral, political, and financial support to a demand-driven technology innovation model based on widespread participation.

Because Mexico is a mosaic of varied agro-ecological and sociocultural conditions, Produce Foundations have established linkages between producers, researchers, and the advanced educational institutions in the country’s main agro-ecological regions. The working hypothesis is that Produce Foundations—now responsible for fostering interaction between the private sector, Federal and State Governments, and domestic and external research institutions—are well placed to promote and steer the creation of an effective innovation system.

We believe that the experience of the 31 Foundations will be a rich source of data and of guidance for those concerned with technology innovation systems, and we encourage others, especially participants in the Global Fora, to join us in observing and monitoring the activities underway.

**E. CONCLUSIONS**

Produce Foundations are stakeholder-based and located within different parts of Mexico. Regional differentiation is more easily achieved than in the earlier, centralized model. The identification of research problems and opportunities now better responds to farmers’ concerns, thereby increasing the relevance of the innovation agenda and the commitment of the key stakeholder group. The political voice in support of agricultural innovation is also strengthening.
Produce Foundations in Mexico:  
An Innovative Participatory and Demand-Driven Technology Innovation Model

Produce Foundations have successfully established strategic alliances to increase their influence (e.g., with CONACYT). The separation of research funding and execution has helped to articulate supply and demand at a higher level of relevance and quality and is opening new funding sources. The average quality of innovation projects increases, as more teaming up of research suppliers is encouraged to meet the objectives of the project, and because research suppliers are aware that they need to compete.

The Produce Foundations are the recognition of the fact that agricultural research and diffusion are often semi-public (or semi-private) goods. Farmers and other end-users tend to reap part of the benefits of research and technology transfer, which suggests that they should contribute to the funding of these activities. The Produce Foundation model recognizes that farmers and other end-users will not do so, however, until they can effectively define what is done with their money.

By developing matching grants facilities, the Produce Foundations are an instrument for gradually shifting control and funding of agricultural research toward producers and other end-users, at a speed congruent with their funding capacity, degree of organization, and satisfaction with research outcomes. However, depending on research project endeavors and products, permanent Government responsibility in funding or co-funding research is acknowledged.

Produce Foundations must emphasize their social responsibility, or the Mexican Government will not continue to channel public resources through the Foundations. Thus the Foundations have a clear requirement to balance concerns for increasing profitability with concerns for improving social equity by working on behalf of disadvantaged farmers and giving attention to the natural resource base. The Produce Foundations must reinforce dialogue and partnership with other organizations that represent these concerns.

Produce Foundations must also be aware that the viability of Mexican agriculture will be defined increasingly in the post-harvest stages. Potential agricultural income is increasingly based on an ability to understand urban consumers and cater for their needs. The Produce Foundations will need to pursue strategic partnerships with their colleagues in the rest of the value-added chain to increase the competitiveness of Mexican agriculture.

Produce Foundations now responsible for fostering interaction between the private sector, Federal and State Governments, and domestic and external research institutions, are well placed to promote and steer the creation of an effective innovation system. This new framework should lead to more effective identification of researchable problems and, because of the potential for competition among those supplying research to the Foundations, a more efficient allocation of research funds. Part of the challenge will be in attending to the various demands emerging from Mexico’s notably diverse agricultural sector—for example, in balancing the needs of small- and large-scale producers, the trade-offs between today and tomorrow’s demands for natural resources, and the concerns of the rest of society.

The approach adopted by the Produce Foundations, which is based on research and technology transfer linkages as a critical element of diffusing new technology, offers much promise with its focus on end-users, its emphasis on decentralized decision-making, and its access to funding from various sources. Its very structure (which features 31 Foundations and encourages additional groupings along agro-ecological lines), combined with the diversity in Mexico’s agriculture, will yield a rich set of experiences in technology development and transfer, along with the promise of useful insights into what work best under which circumstances. Virtually everything in developing world agriculture is represented in Mexico, we believe that the experiences generated through the Produce Foundations will be useful to members of the Global Fora, and we encourage others’ interest and observations as the Foundations’ experiences are monitored and documented.

Paredes, A. and J. Moncada. President and Executive Secretary. Produce Foundations National Coordinator
Entity. COFUPRO A.C. Version: 13/12/01