Mexico's Agricultural Reforms

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To date, these reforms have not been successful. The ability to borrow against land was of little use given interest rates averaging more than 50 percent during 1995. There has been some backlash against the prospect of privatization of communal lands, most notably in the state of Chiapas, where an armed revolt began in 1994. The *campesinos* have a deeply-rooted preference for growing corn and beans, and many lack the resources to switch to other crops. In October 1995, the administration of President Zedillo unveiled an expanded rural support program called *Alianza para el Campo*, Rural Alliance. It continues *Procampo* and expands it to include livestock producers for the first time. It provides subsidies for new technology and decentralizes the administration of farm programs. Combined with the gradual recovery of the Mexican economy, *Alianza para el Campo* is expected to create substantial new opportunities for foreign suppliers of agricultural technology, equipment and services over the medium term.

The *Alianza para el Campo* is expected to affect the market for imported agricultural technology in two ways. First, it supports the assembly of *agroasociaciones*. These agricultural joint ventures combine the resources of small farmers and allow them to contract collectively with large buyers. The *Alianza para el Campo* supports these associations with a program of financial, technical and marketing assistance. Second, the *Alianza para el Campo* includes a program called *Produce*, which provides input and technology subsidies. This program aims to reduce the cost of domestically-produced tractors by 40 percent. The plan is to provide a federal subsidy of 20 percent; a state subsidy of 10 percent, and to ask tractor manufacturers to reduce their prices by 7 to 15 percent. All of the major tractor producers have agreed to the program.

These two elements of the *Alianza para el Campo* are expected to generally increase the demand for agricultural technology, equipment and services. Since *Produce* applies to domestically produced equipment, it will also generate new interest in technological joint ventures with foreign firms.

Agricultural Equipment

Although western Mexico is the nation's leading agricultural producer, it is not a major centre for the manufacture of agricultural equipment. Mexico's agricultural sector is badly under-mechanized. There are only about 180,000 tractors in Mexico, for a planted area of some 19 million hectares. This is a density of just over 100 hectares per tractor. The western region is relatively heavily mechanized. The major agricultural states of Nayarit and Sinaloa have 83 and 67 hectares per tractor respectively, and Jalisco has 74. Colima has 110 hectares per tractor, reflecting its mountainous terrain and specialization in crops that do not depend upon tractors, such as limes. Aguascalientes has 47 hectares per tractor, making it one of the most mechanized states in the nation.

The most important tractor manufacturers in Mexico are John Deere, New Holland, and Massey Ferguson, which are multinational enterprises operating mainly in the areas of Monterrey and Querétaro. Agricultural equipment manufacturers in the western region are focused mainly on implements. In 1993, there were 30 agricultural equipment establishments, employing about 1,300 persons in the region. The value of production was estimated at about US $30 million, about 13 percent of national production. Agricultural equipment is not produced in the states of Colima or Nayarit.

The manufacturers located in Aguascalientes specialize in tractor assembly and equipment. The most important companies are *Grupo Ruvesa* (a concession of International Harvester) and *Constructora de Maquinaria Triunfo*. The companies in Jalisco manufacture mostly irrigation and fumigation equipment, and windmills. Major producers include SwissMex and *Molinos Azteca*. Other significant manufacturers include *Grupo Ruvesa*, *Industrias Cabrera*, *Industrias Vázquez* and *Equipment Zetamex*. The principal manufacturer in Sinaloa is *Industrias Vázquez*, which produces field equipment. In Jalisco, production is concentrated in the municipalities of Guadalajara, Zapopan and Lagos de Moreno. In Aguascalientes, the major equipment producers are based in the state capital. In Sinaloa, they are located in Los Mochis and in Culiacán.

A study conducted for the Canadian consulate in Guadalajara polled ten companies to assess foreign participation in the industry. It concluded that foreign investment was not a major factor in the region's agricultural equipment sector. Only one company, SwissMex, had important foreign investment amounting to 20 percent of its capital. Another company, Tecnomec, reported that it was in the process of negotiating an investment with a US firm which would amount to about one third of its capital. This suggests that there are untapped opportunities for Canadian firms to form joint ventures in the region. The study concluded that lack of capital was the principal reason for the poor state of development of the local industry.