

There is a small market for agricultural services. Mexico has inadequate resources to conduct agricultural research and to disseminate information to farmers. The *Secretaría de Agricultura, Ganadería y Desarrollo Rural (Sagar)*, Secretariat of Agriculture, Livestock and Rural Development, operates almost 1,000 support centres throughout the country. But budgets have been cut as a result of the economic crisis, and new cost-effective approaches are needed.

There is no reliable data on domestic production of specific types of agricultural equipment. Industry observers maintain that tractor sales provide a good indication of the overall state of the market. Farmers are believed to eventually purchase implements worth about 40 percent of the value of their tractors. Tractors are also used by livestock producers, especially since most of them also grow feed.

## TRACTORS

The Mexican market for tractors was estimated at 10,000 units in 1994. In 1995, sales fell by 60 percent to 3,800. New Holland and John Deere each control an estimated 40 percent of the market. Other significant firms include *Tractores Sidera*, which manufactures under the Massey Ferguson name, and Case International.

Tractors are used to cultivate only about half of all sown land in Mexico. The inventory of tractors in 1990 stood at just under 180,000 units of which only about 150,000 were in use. This works out to about 34 active farmers for every tractor. Given the expected life span of about ten years for one tractor, a normal program of replacement would imply a market of almost 20,000 units annually. But the 1994 market was only half that level. About half of all equipment in the inventory is technologically obsolete or in poor condition. Only about 10 percent of the 1993 inventory consisted of tractors with more than 90 horsepower and 14 percent had less than 60 horsepower.

Poor productivity is not the only outcome. Equipment not designed for the crop involved can also damage it, making it unsuitable for export. Experts say that Mexico requires a minimum of 60,000 tractors to replace obsolete machines and double that number to become fully mechanized.

Sales approaching these levels are not feasible unless there is a massive injection of capital into the sector. In particular, innovative financing mechanisms to give small farmers access to credit are needed. New government programs are moving in that direction, but most observers think the resources involved are inadequate.