MACHINERY engineers at the CIMMYT international wheat-breeding centre in Mexico are designing conservation agriculture sowing equipment for the country’s subsistence and small-scale farmers to improve their productivity and sustainability.

Under the Mexican government-funded Masagro project, engineers have created new machines and adapted existing equipment that can be built by local producers and manufacturers.

CIMMYT machinery designer Gabriel Perez said so far they had developed 12 conservation agriculture machines, ranging from small units towed behind two-wheel tractors to larger planters pulled by medium-sized tractors.

“We develop multi-use, conservation agriculture machines for different crops so farmers can prepare the land, apply fertiliser and sow seed in the same operation,” he said.

“All the machines developed use the same concept. Their concept is to have a modular system and produce machines that are appropriate to every region. All the machines are meant to be adaptable to different conditions. “The equipment is being promoted among local farmers and as an alternative to what already exists in the market. We are working with local manufacturers to build the machines and make them available.”

Mr Perez said once a prototype machine had been developed, it was tested in the field for three months. Once its capabilities had been proven and any faults corrected, its design plans were distributed freely to local producers and manufacturers.

As part of the project, in the last year more than 2000 Mexican farmers have been trained in the principles of conservation agriculture.

Neil Lyon travelled to Mexico with the assistance of the Crawford Fund, and the Department of Foreign Affairs and Trade’s Council on Australia-Latin America Relations.

A multi-use seeder and fertiliser machine for small grains set up with bed formers and sowing tines.

ABOVE: CIMMYT engineer Gabriel Martinez Perez with a conservation planter fitted with residue spreaders and narrow point tines.

Sowing machine for planting wheat on two rows/fod...

LEFT: A seed and fertiliser hand planter for subsistence farmers.

ABOVE: CIMMYT engineer Gabriel Martinez Perez with a conservation planter fitted with residue spreaders and narrow point tines.

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