Members of the San Jacinto Kasakaliksan MPC farmers' cooperative: From left, Juliana Espinosa, Treasurer; Rosalie Ellasus, Chair and Clarito Pascua, Manager.

Sowing for a brighter future

Biotech crops changed the destiny of a single mum struggling to educate her children. Rosalie Ellasus believes it can change the way Philippine women earn their livelihoods

Filipina farmer Rosalie Ellasus, 50, is passionate about biotech crops.

Her message: Farming with biotech corn can transform the lives of Philippine women. They do not have to become migrant workers in a more developed country in order to give their families a better life. In fact, farming not only keeps the family together, it can also send children to private schools and universities.

From just over 1.3 hectares of land in 2001, she harvests corn from more than 10 hectares. As an officer of the Philippine Maize Federation Inc and the municipality councilor of San Jacinto in the province of Pangasinan, she is always sharing her knowledge of biotech corn with farmers.

Ellasus herself is an example of how using the right seeds changed her destiny. From working as a former domestic helper in Singapore earning over US$3,000 a year in the late 1980s, she now makes nearly US$23,500 annually as a corn farmer.

A single parent, Ellasus has been able to send her children to good universities, and has even started a piggery. Her eldest son has earned a degree in software engineering and has chosen instead to open a bakery business to be near his mum. Her second son is a science graduate with a young daughter.

Ellasus decided to stop working overseas and stay in the Philippines to be with her three children after the death of her husband in 1995. She put her savings in a small farm.

Ellasus' granddaughter, Ellora, enjoys the family's bountiful harvest.

It was a huge challenge for someone who had no background in farming as she soon found that pests and weeds made it difficult to sell the corn she harvested. She realized in the late 1990s that she would not make enough to send her children to university.

A lifeline came in the form of a 16-week class in the Integrated Pest Management – Farmers Field School (IPM-FFS), which Ellasus attended in 2001. She was captivated by what she describes as the "clean" corn that she saw at a Bt corn field trial site in 2002 at Pangasinan. Bt corn refers to corn that has been genetically modified by introducing a gene from *Bacillus thuringiensis*, a common soil bacterium that produces proteins that sicken and ultimately kill the corn borers that feed on it.

She has never looked back since, thanks to two reasons. The first is the use of IPM, which taught her how to use biological pest control through the help of beneficial insects or the natural enemies of the corn borer worm. The second factor to which she attributes her success is the cultivation of Bt corn, which cuts down on pesticide costs.

After Ellasus planted Bt corn as a trial for the Philippine government, she found that there was no need to use crop protection products against the corn borer. She turned to Bt corn when it was commercialized in 2003 in her town. "I was the first in our town to try it," she proclaims.

The result was a higher yield of 3.5 to 7.8 tons per hectare. It was also more profitable: her income soared. Indeed, statistics from PG Economics have shown that farmers in developing countries obtained as much as 50 percent of farm income gains over a 12-year period up to 2007. It has been estimated that there are about 50,000 farmers in the Philippines using biotech crops.

From 2006, she moved on to cultivate corn with stacked, or multiple traits, which gave even better harvests. Innovations such as stacked trait products are the result of scientific research, aimed at transforming agricultural practices and production.

"I only need to plow once rather than three times," she adds. "All I needed was to hire five people to weed and I only paid them for the days they are needed on the farm."

She has also moved into farming livestock. After starting the piggery in 1998 "as a backyard enterprise", she now has 30 pigs and six sows, and is raising eight heads of cattle and 42 goats for meat. "I hope to expand into integrated farming as 70 percent of feed mix is corn. Eventually if we can feed our corn to our livestock, there is no need to import corn and the country is economically better off."

She adds there is so much demand for Bt corn seeds that if farmers do not get to buy Bt corn seeds, they choose not to farm as they fear losing money invested in the farm.

Ellasus, who has also been municipal councilor for San Jacinto for two years, wants to make her town of San Jacinto a model of biotech farming.

"I want to make sure I go to every farmer to promote biotech," she says. "I am very proud for what biotech farming has given me and my family. It is very much possible to achieve what we never thought possible."

Empowering women

Bt corn has empowered women to stay in the Philippines to raise their children instead of going abroad to look for work.

Pangasinan, some 170 km from Manila on the northern island of Luzon, is traditionally known as the rice granary of the Philippines. Some 44 percent of the land there is farmed.

"Between 25 and 30 percent of the farmers growing Bt corn in San Jacinto are women," she says. "They used to be housewives. Women find it much easier to farm biotech crops as they are not only easier to manage, but require less labor."

Even the by-products of Bt corn farming, such as corn husks, she says, are of such a robust quality that they can be used in craft work to make flowers and dolls. This adds another source of income for the women.

"Now that they and their families are better off, they can send their children to good schools and universities. Many are graduating with degrees in nursing, for instance," Ellasus adds.