MAGICAL SEEDS OF HARVEST

The story of corn farmer Rosalie Ellasus is an inspiring testimony on how biotechnology can transform lives. Her story encourages the exploration of modern biotechnology benefits and offers hope to farmers, communities and economies in the region.

Golden success

It's not difficult to find Rosalie Ellasus, the self-proclaimed "corn ambassadress" of Asia. The 47-year-old widow farmer and mother of three spends most of her time in her cornfield, tilling and admiring the bountiful, golden crops that earn her a 125 per cent return a year. With this money, Rosalie has sent her sons to college and grown her small-scale, 1.3-hectare farm into the 6-hectare business that it is today.


Rosalie admires her golden harvest of Bt corn.

And when Rosalie's not in the field, she's talking about it: The "corn queen" of the Philippines is only too happy to tell her inspiring story to other farmers and agriculture industry leaders. She chairs the Municipal Agricultural and Fishery Council. She leads the Philippine Maize Federation Inc., and she recently travelled to Australia to speak at APEC Private Sector Day in Canberra. In all of her various roles, Rosalie makes no secret about her ladder to sweet success – biotechnology.

Starting from scratch

Success wasn't always so golden for Rosalie. Born in the Philippines and raised by non-farmer parents, Rosalie tried her hand at several careers before she settled on the rewarding choice of agriculture. After marrying at an early age, Rosalie joined the overseas workforce and travelled to Singapore and Vancouver, working first as a domestic helper and then as a marketing executive.

But when her husband passed away in 1995, leaving her with three sons at various stages of education, Rosalie knew it was time for a change. She took her hard-earned savings from the corporate life and moved back to San Jacinto in the Philippines. Determined to send her sons to good colleges, Rosalie decided to invest in a small farm.

Bumps in the road

Rosalie didn't have any knowledge or skills when it came to agriculture. So, in 1998 she enlisted one of her relatives to manage the farm, leaving her with a portion of the profits. After a year, Rosalie could tell she wasn't making enough money to send her sons to decent universities.

Like many farmers in her village, Rosalie had discovered that pests and weeds could take their toll on cornfields, and render her crops unsuitable for selling. "We got so many rejections from buyers. The biggest problem with our corn was aflatoxin contamination," explains Rosalie. Insects drill small holes in the corn, thereby inviting mites, diseases and fungi that produce toxins, she adds.

From high heels to high esteem

Determined to find success, Rosalie attended an Integrated Pest Management – Farmers Field School (IPM-FFS) on corn in 2001. Although the other farmers thought she looked more like an insurance agent in high heels than someone who worked in the field, Rosalie won everyone over with her positive outlook and natural instincts for agriculture.

Rosalie says: *"Why I like biotechnology" . . .*

- Peace of mind. I am saved the trouble of monitoring my crops daily for corn borer attacks.
- Easier farming. Biotechnology offers me easier, more efficient ways of controlling weeds that invade crops.
- Higher yield. With biotechnology-enhanced varieties and good agricultural practice, I raised my yield from 3.5 tonnes to 7-9 tonnes of corn per hectare.
- Premium quality. I can sell corn at higher prices because biotechnology varieties produce premium quality.
- Good reputation. Our farmers' cooperative has earned a reputation of slim rejections from corn buyers.
- More recycling. Sturdy and flawless husk, roots, leaves, silk, tassel and cobs from biotechnology corn make ideal handicraft materials. We also use corn stalks or cobs for animal feed, charcoal, and mushroom culture.
- Community model. With biotechnology corn, I earned the respect of other farmers and became a model farmer in my own community.
- Open doors. My success with biotechnology earned various awards, leadership roles, and knowledge-sharing opportunities in my country and overseas.
- Quality of life. Even as a single parent, I managed to send my children to good universities from my additional income in growing biotechnology-enhanced corn.

After 16 weeks of IPM-FFS, Rosalie earned her diploma, and also the respect of other farmers in her community. She became active in programmes implemented in the municipality of San Jacinto, and throughout the greater province of Pangasinan. Rosalie found she was captivated by the science and skills that went into farming, and was eager to learn more and share her knowledge.

The golden ticket

With this mindset, Rosalie and her fellow IPM-FFS graduates were invited to see a demonstration farm in Sta Maria, Pangasinan. The farm grew Bt corn – a variety resistant to certain insects that attack cornfields.

Rosalie exchanges tips on growing Bt corn with farmer friends.

"There was a magic transformation of my life by adopting biotechnology."

Bt corn was developed through nearly 15 years of biotechnology enhancements and plant breeding. This involved putting a Bt gene into the corn plant. The gene enabled Bt corn plants to make substances protecting against very damaging insect pests, such as the Asiatic corn borer.

According to Rosalie, this was the turning point in her fortunes: "When I saw the Bt corn field, I asked, 'Why does this look very different from what I have planted and seen earlier?' I was intrigued at how clean the kernel and the cob looked."

Although she had previously practised integrated pest management techniques to control pests, Rosalie had nonetheless ended up with blemishes on her corn. Upon learning that biotechnology was responsible for the glowing success before her eyes, she immediately signed up her land as a Bt corn demonstration farm. "I'm very open to technology," she says.

Leading in biotechnology progress

In November 2002, Rosalie held a Bt corn demo, using both conventional hybrid corn and Bt corn. It was the most well-attended technology showcase in her hometown, and the results were easy to see.

Administrators from her Local Government Unit and other community leaders were swayed by her persuasive demonstration. Bt corn was commercialised in her town, and other farmers began to plant Bt corn in their own farms. Rosalie even managed to convert those who had been rigidly against biotechnology by proving that Bt corn was safe feed for farm animals in her community.

Once she switched her whole farm to Bt corn, Rosalie found that her crops were well accepted by the feed mills. Her farm became much more profitable and generated enough money to send her sons to the schools of their choice. And because Bt corn husk looks flawless and is sturdy, she could sell it for local craft production – enabling her to recycle agricultural waste and earn additional income.

New technology, new benefits

Having benefited from biotechnology once, Rosalie kept up with advances in agricultural science. In 2005, she held a new demo on her farm, showcasing corn "stacked" with both Bt gene and a gene that makes plants herbicide-resistant.

"I never had second thoughts about converting my whole farm to stacked corn. It was plain enough to see that the demo results were outstanding," Rosalie says. "After the demo showcase, I was truly convinced that a marginal farmer can improve her lifestyle only if she will adopt biotechnology."

So Rosalie planted her entire farm with stacked corn in 2006. She reaped benefits not just in the ensuing harvest, but also in the way she farmed. In preparing her land for planting, she was able to cut her ploughings from three times to only once. By using herbicide-resistant varieties, Rosalie can now use herbicides (instead of labour-intensive hand-weeding or ploughing) to keep weeds in check without damaging the corn plants.

Sharing knowledge

Ever since she completed her IPM-FSS training, Rosalie has been helping other farmers follow in her footsteps. She has been active in her local community, as well as at national and international levels.

Some of her noteworthy awards included: Farmer Leader 2004, San Jacinto; Most Outstanding Student – School of Air for Corn 2005; Provincial Outstanding Corn Farmer (Gawad Saka 2004–2005); and Outstanding Rural Woman Achiever on Gender Concerns (Regional Winner 2006).

Her industry positions have been equally impressive: she has served as chair to the San Jacinto Kasakalikasan Multi-Purpose Cooperative from 2001 to the present, and is now first vice-chair to the National Corn Competitiveness Board. She is also president of the Philippine Maize Federation – a group of corn growers, professors, input suppliers, seed companies and hog-raisers that work closely with the government for the benefit of corn farmers.

A golden outlook

In all of her roles – farmer, technology advocate and community leader – Rosalie spreads the same message.

"There was a magic transformation of my life by adopting biotechnology," she says. "I am not stopping here, and I will continue to update myself with more new technologies to come. I believe corn technology and post-harvest facilities are the way to corn sufficiency in the Philippines and developing countries."

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