

A switch for the better

Growing Bt cotton has helped Li Xiuli build a better life for himself and his family



Li Xiuli: After switching to Bt cotton, productivity per hectare rose about 20 percent compared with conventional cotton.

With his serene rounded features, twinkly eyes and a contented smile, Li Xiuli is the embodiment of prosperity itself.

The 57-year-old has planted cotton with his family for over 30 years in China's Henan's province. Since the mid-1990s, Li has been growing Bt cotton on his 13-hectare farm. He is also the proud owner of a thermal paper factory and a house with seven rooms.

But life was not always this smooth-sailing, he recalls.

Even though his farm was situated in the fertile Qiliying Village of the Xinxiang County in Henan, growing cotton was risky business for generations before he switched to Bt cotton, especially in the last two decades of the century.

"As more cotton was grown in the 70s and 80s," he says, "the cotton bollworm became more and more prevalent. Except for wire poles, any crop that was grown was damaged by the bollworm."

This prompted him to try growing Bt cotton on a small scale in 1996, with training provided by researchers from the China Academy of Agricultural Sciences (CAAS). Since then, Li has been enjoying the benefits of plant biotechnology and crop protection products, used to counter problems such as weeds and other pests.

Bt cotton is a cotton hybrid that is resistant to the bollworm, according to the International Service for the acquisition of Agri-biotech Applications (ISAAA), a not-for-profit organization dedicated to alleviating poverty by sharing knowledge for sustainable crop production. This trait is possible because of the *Bacillus thuringiensis* gene introduced into the seeds to produce proteins that are lethal to the bollworm.

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Productivity per hectare rose about 20 percent compared with conventional cotton.

The ease of growing Bt cotton also meant savings in labor costs. Previously, Li used to hire up to 180 people to work on the farm. After switching to Bt cotton, the number of farm hands has fallen to about 75. With lower operating costs, his income improved.

Six years ago, he decided to diversify into light industry, setting up a factory producing thermal fax paper, which employs 20 people. The annual income from this venture is a tidy sum of some RMB100,000 (US\$14,600).

Now he has a huge house with seven bedrooms “without rats like before”. And he has been able to vacation twice a year, he says proudly.

Mr Li is not the only farmer who has seen their life improve with the cultivation of Bt cotton, which is largely sold to middlemen.

In Mr Li’s county, the Qiliying township has also become one of the most affluent townships in China as the people diversified from crop cultivation into light industry to protect against fluctuations in commodity prices. Apart from the cultivation of cotton, wheat and vegetables, factories producing pharmaceuticals, paper, machinery and chemicals have also emerged.

There are some 140 million people involved in the production and commercialization of cotton in China. As more Bt cotton was grown from the late 1990s, social wealth grew by RMB8 billion.

Furthermore, an ISAAA report has found that the use of Bt cotton suppressed cotton bollworm infestations in crops such as maize and peanuts as well. This has in turn benefited some 10 million non-cotton farmers.

For Mr Li, his greatest gain is having more time to enjoy life, he says.

“I have been able to take holidays and I’ve been to Kunming, Hainan Island, Japan and northeastern China. My two children, who are in their 30s, are running the factory and

the farm. I get to play computer games on my three computers with my grand-daughter. My wife is taking dancing classes to keep fit.”

“There are lots of biotech crops and more research is being done each day to manage them so that they work better for us,” he says.

He adds he still dreams of expanding his farm “many, many times”.

“I want to groom my grand-daughter to take over my farm,” he quips proudly.

Growing sustainably

With the elimination of bollworm infestation on Bt cotton crops in Qiliying Village of the Xinxiang County in Henan, secondary pests like aphids and red spider mites have come to the fore. Thus, farmers use pesticides responsibly by using appropriate personal equipment and following instructions on product labels.

Aphids tend to attack the back of cotton leaves and young shoots for cotton sap between May and July. This stunts the growth of the leaves, which become shriveled and flowering is delayed.

Red spider mites attack the leaves of cotton saplings and can cause leaves to be malformed, resulting in failed harvests. They tend to appear between May and June. In a year, these mites can reproduce for between 12 and 15 generations.

Li says, “I am confident that with increased knowledge, we can tackle the secondary pests better. I am finding out more about experimenting with different seeds and plant protection techniques.”

About CropLife Asia:

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