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Burkina Faso's GMO cotton mistakes won't be repeated in Africa, stakeholders say

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By Joseph Opoku Gakpo



A cotton field in Burkina Faso. Photo by Joseph Opoku Gakpo

Stakeholders in the agricultural biotechnology sector are offering assurances that the problems that prompted Burkina Faso to temporarily halt cultivation of genetically engineered cotton won't be repeated with GMO crops in other African countries.

The right lessons have been learned, they say, and this will inform how future projects are rolled out to avoid similar difficulties.

The GMO cultivar ([Bt](#) cotton) introduced in Burkina Faso in 2008 had been engineered with genes from *Bacillus thuringiensis*, a soil bacteria, to give it an inherent ability to resist attacks by bollworms — pests that have the potential to destroy up to 90 percent of yield on cotton farms.

The Bt cotton cultivar — introduced by agricultural firm Monsanto — succeeded in controlling pests on Burkina Faso cotton farms, reducing the use of pesticides by up to 70 percent. But challenges associated with the marketability of the shorter fiber length of the cultivar caused authorities in that country to pause planting of the variety in 2015.

Jonathan Jenkinson, the Asia Africa Breeding Lead at Monsanto, attributed the problem to the lack of an ongoing Burkina-based breeding program to improve upon the cultivar, which allowed undesired traits like short fiber length to re-emerge.

“What happened is that Burkina had a biotech crop approved,” Jenkinson explained. “They did not have an ongoing breeding program to improve the variety. So what was happening was, the [bollworm resistance] trait was there and it was providing all the necessary benefits, but the varieties that were being released were not new and improved ones every year.” He is convinced the problem would not have emerged if there was a continuous program in Burkina Faso to improve upon the Bt cotton during each of the eight years it was grown in that country.

A number of African countries, including Malawi and Nigeria, are currently undertaking confined field trials of Bt cotton as part of the regulatory process that leads to commercialization.

“Very soon next year [2018], Bt cowpea and Bt cotton should be ready for commercialization....,” Dr. Rose Susan Gidado, assistant director of the National Biotechnology Development Agency in Nigeria, said in an interview. “Some farmers are already aware... For cotton, I think it is going to be available in about 10 states in Nigeria.”

Nigerians are expecting the introduction of the GM cotton to be a major agricultural game changer, helping to stem the destruction by bollworm pests that are estimated to cause a 40 percent yield loss in West Africa’s cotton production.



Monsanto's Jonathan Jenkinson. Photo by Joseph Opoku Gakpo

Asked what will be different in the other countries, Jenkinson said the problem will not recur because the right conditions are in place to ensure the biotech cultivars are continually improved upon so undesired traits don’t emerge in future. “Part of the work in Nigeria and Malawi is that they have ongoing breeding programs. So the lesson is a very simple one. It is that in order for a biotech crop to have an impact on the market, it has to be side by side with an ongoing germplasm improvement program,” he said.

Ghana last year suspended field trials of GM cotton following the decision of Monsanto to close down its office in Burkina Faso, which was providing support to the work in Ghana. Though Dr. Emmanuel Chamba, principal investigator on the Bt cotton project in Ghana, announced the decision to suspend the work, he is confident that the situation in Ghana is far different than what occurred Burkina Faso.

“After two years of the on-station confined field trials, the next step was to go to the farmers’ field,” Chamba explained. “After which we will be thinking of commercial release. Unfortunately, because of the situation in Burkina Faso, Monsanto pulled out. But we weren’t going to repeat what happened in Burkina Faso.”

Edgar Traore, coordinator of the Open Forum on Agricultural Biotechnology (OFAB) in Burkina Faso, is equally convinced his country has learned the lessons with Bt cotton and previous mistakes won’t be repeated if they get the opportunity to re-introduce it on the market. “We only need to do more back crosses up to seven times and it will be OK,” he said. “We are going to do that.”

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Joan Conrow ▾

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JRLatham • 2 months ago

Pinning the short fibre side-effect of a Bt crop as the fault of Burkina Faso's experienced breeders is blaming the victim. Maybe Monsanto should have told them that their GMO trait had short fibres when they gave it to them?

6 ^ | v • Reply • Share ›



Joan Conrow ➔ JRLatham • 2 months ago

I don't think I'd ever consider Sofitex a victim. They benefit economically from keeping farmers enslaved to the pesticides and conventional seeds they "loan" poor, small-holder farmers at the start of each planting season. The farmers are the only ones suffering here.

3 ^ | v • Edit • Reply • Share ›



JoeFarmer ➔ Joan Conrow • 2 months ago

Yep. When Sofitex's marketing strategy is based on the 3-5% price premium the longer fiber cotton gets on the commodities markets, don't you think they should have paid particular attention to that characteristic?

Still, giving up a 3-5% price premium is a lot better than losing 25% or more yield to pests.

This really is a manufactroversy IMO.

5 ^ | v • Reply • Share ›



Chris Preston • 2 months ago

Bt in cotton is one of the traits that is of most value to small landholders. It protects yield, while at the same time reducing the need to apply insecticides. It would be a great pity if politics robbed farmers from Africa using this technology if they found it valuable.

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Damo ➔ Guest • 2 months ago

What does that even mean?

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JoeFarmer ➔ Damo • 2 months ago

It means that Bob should have stayed in school...

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Damo ➔ JoeFarmer • 2 months ago

Well, I don't agree with that. Given his limited mental capacities it would have proved to be a fruitless endeavor that wasted resources from everyone involved. Maybe he should seek employment sweeping floors?

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JoeFarmer ➔ Damo • 2 months ago



Crash test dummy?

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JoeFarmer ➔ Guest • 2 months ago

Clearly, anything involving science or agriculture is beyond your capabilities, Bob. Just trying to think of things that you're actually able to do.

^ | v • Reply • Share ›



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JoeFarmer ➔ Guest • 2 months ago

That might be raising the bar too high for you, Bob.

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Wackes Seppi • a month ago

In French here:

<http://seppi.over-blog.com/...>

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