Editor's Page

5 million bales of cotton from BT seeds

Out of total of 15 million bales of cotton yield forecast almost 5 million bales of cotton this season are harvested from BT Cotton seeds, which amounts to 30% to 40% of expected cotton yield.

The BT cotton seeds or GM genetically modified seeds are either being smuggled from India or trans-shipped from Australia via Dubai or Hong Kong as a miss-declared item. Officially, the Government of Pakistan has not adopted bio-technological cotton seed (Bt cotton seeds) which has been banned for a long time. In this context, the Government issues warnings to the farmers every year at the time of cotton sowing in June against use of BT cotton seeds.

BT is a scientific name for Baccilus Thuringiensis, a bacterium that kills insects. It is a major component of pesticide industry used for control of specific caterpillar-like crop pests. The BT cotton seeds offer better pest resistant quality of cotton and thus assumes a higher yield, therefore, it has become more economical for the growers. For example last season, growers in Sindh obtained one million bales of cotton, from BT seeds smuggled from India. Farmers in Sindh call BT seeds "Bhittai seed" and it was just a matter of time before growers in Punjab started this practice.

Predictably, this season, the farmers in Punjab have sowed BT seeds and expect at least 30% of cotton being obtained this season from the genetically modified seeds. NIBGE (National Institute of Biotechnology and Genetic Engineering) at Faisalabad, and CEMB (Center of Excellence in Molecular Biology) University of the Punjab Lahore, have come forward and submitted applications to the National Biosafety Committee (NBC).

NIBGE applied for commercialization of their BT Cotton variety "IR-FH-901". It is worth to know that NIBGE had sought special permission in 1997 from the Ministry of Environment under "Voluntary Code of Conduct for release of GMO into the environment" to conduct field trials to check and analyze many safety tests on various cotton varieties which contain genetically modified BT gene "cry1Ac", that is deadly to the Bollworms known as "Sundies".

Similarly CEMB has also submitted an application to NBC for the permission of GM cotton variety "MNH-93" and "CIM 482" with bacterial pesticidal BT genes e.g. "cry1Ab", "cry1Ac" and "cry2A" respectively to conduct field trials with the collaboration of a local and a multinational company National Biosafety Committee (NBC).

The genetically modified seeds were introduced in Pakistan about six years ago by an American multinational firm Monsanto that has its office in Lahore. This company has registered its patent internationally and if the government allows the cultivation of BT cotton, then all international patent rules will have be followed by the growers and the Government. In addition, there are other multinational, such as Aventis Novartis, Pioneer Group and ICI who are operating as seed agencies in Pakistan.

It is important to note that BT seeds should be properly modified to suit our soil and our environment, and in terms of marketing, Pakistan should not be entirely dependent on the supply of seeds by multinational. Some advocates of BT cotton say that BT seeds are more economical with a better yield and offer effective pest resistance. The countries like India and China have already adopted these modified seeds but are entirely dependent on the foreign multinational companies. China, India and Pakistan are also the largest consumers of cotton, accounting for approximately 60% of the worldwide cotton consumption, therefore dependence on the seeds to an outside agency can lead to multinational control on the economy.

In Africa, Uganda will get a grant $160,000 from the United States Agency for International Development (USAID) to support BT cotton field trials in Uganda. BT cotton has been tested and commercially released in a number of countries, which include South Africa, Brazil and India. It is now under a testing study in Kenya and Burkina Faso.

It has come to light that the longevity of BT cottonseeds and their pest-resistance capability decline with the passage of time. This is owing to the fact that in the genome of cotton the longevity of seeds and protective DNA (deoxyribose nucleic acid -- master molecule of life and traits) have been switched off in GMOs (genetically-modified organisms) by the developers so that farmers may remain dependent on BT cotton seeds supplied by them. Therefore, the bio-technological research initiated by Government of Pakistan should be directed towards the blending of Bt. cotton technology with local seed production, to foster long term economical advantages. ◆