



Herbicide Tolerant (HT) Bt Cotton

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Why in News

The illegal cultivation of **Herbicide Tolerant (HT) Bt cotton** has seen a huge jump as the sale of illegal seed packets has more than doubled from 30 lakh in 2020 to 75 lakh in 2021.

Key Points

- **Bt Cotton:**
 - Bt cotton is the **only transgenic crop** that has been **approved by the Centre for commercial cultivation** in India.
 - It has been **genetically modified (GM)** to produce an insecticide to combat the **cotton bollworm**, a common pest.
- **Herbicide Tolerant Bt (HTBt) Cotton:**
 - The HTBt cotton variant adds another layer of modification, making the plant **resistant to the herbicide glyphosate**, but has not been approved by regulators.
 - **Fears** include glyphosate having a carcinogenic effect, as well as the unchecked spread of herbicide resistance to nearby plants through pollination, **creating a variety of superweeds**.
- **Need for Using HTBt Cotton:**
 - **Saves Cost:** There is a shortage of the labour needed to do at least **two rounds of weeding for Bt cotton**.
With HTBt, simply one round of glyphosate spraying is needed with no weeding. It saves Rs. 7,000 to Rs. 8,000 per acre for farmers.
 - **Support of Scientists:** Scientists are also in favour of this crop, and even the **World Health Organization (WHO)** has said it does not cause cancer.
But the government has still withheld approval for HTBt.

- **Issues Emanating from Illegal Sale of HTBt Cotton:**
 - As it is not approved by the **Genetic Engineering Appraisal Committee (GEAC)**, illegal sale takes place in Indian markets.
 - **Farmers are at risk** with such illegal cotton seed sale as there is **no accountability of the quality of seed, it pollutes the environment, the industry is losing legitimate seed sale and the government also loses revenue** in terms of tax collection.
 - It will not only **decimate small cotton seed companies** but also **threatens the entire legal cotton seed market** in India.

Genetic Engineering Appraisal Committee

- The Genetic Engineering Appraisal Committee (GEAC) functions under the **Ministry of Environment, Forest and Climate Change (MoEF&CC)**.
- It is responsible for the appraisal of activities involving large-scale use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle.
- The committee is also responsible for the appraisal of proposals relating to the release of genetically engineered (GE) organisms and products into the environment including experimental field trials.
- GEAC is chaired by the Special Secretary/Additional Secretary of MoEF&CC and co-chaired by a representative from the Department of Biotechnology (DBT).

Way Forward

- Regulators only limit their checking/regulation to licensed dealers and seed companies while illegal activity of HT seed sales is **carried mostly by unorganised and fly-by-night operators**.
Thus, focus must be shifted to catching them and taking exemplary and strong punitive action.
- **Collective action** of both centre and state government is required. The Centre has made the policy to ban this variant. But it is the State governments that must also work in tandem with the central government.
- **Environmental impact assessment** should be carried out by independent environmentalists, as farmers do not and cannot assess the long-term impact of GM crops on ecology and health.

Source: TH