Emergency Measures to Tackle Pink Bollworm

The state Government of Maharashtra has announced emergency measures to check the menace of pink bollworm (PBW) infestation in parts of the state.

- The state government will also set up a 16-member committee in each district to monitor relief measures and minimise economic losses to farmers.
- The government floated a cluster of compensation schemes for small farmers and passed a resolution demanding that seed companies should take responsibility for giving compensation.

Background

- India is the only Bt cotton-growing country facing the problem of pink bollworm infestation.
- Unlike other bollworm insect species that also attack other crops such as pigeon-pea, sorghum and sunflower, PBW feeds only on cotton.
- The infestation of this insect pest — whose larvae bore into cotton bolls through the lint fibre to feed on the seeds — happened during October, just when the crop was maturing and almost ready for its first-flush pickings, and further aggravated by unseasonal rains.

Concerns

- To overcome this problem, the union government has recommended a unique RIB (Refugia In Bag) concept, wherein 25 grams of non-Bt Cotton seed is mixed with 450 grams of Bt Cotton seeds.
- The strategy of growing 'refuge' plants around the GM plants is to prevent or delay the development of Bt-resistant insects. This enables planting non-BT cotton which can host PBW wild insects and prevent resistance build-up in PBW.
- The RIB concept has also been backed by National Seeds Association of India (NSAI) according to which it will weaken the proliferation of PBW on BT Cotton.

NOTE:

- The National Seed Association of India (NSAI) is the apex organization representing the Indian seed industry with more than 250 companies as its members.
- Its aim is to create a dynamic, innovative, and internationally competitive, research based industry producing high performance, high quality seeds and planting materials which benefit farmers and significantly contribute to the sustainable growth of Indian Agriculture.

  The farmers have raised concerns that the infestation would reduce the area under cotton crop by at least 10% resulting in low yield and drop in prices.

Why the case is unique for India?

- The pink bollworm grew resistant because India restricted itself to cultivating long-duration hybrids since the introduction of Bt cotton in 2002.
- All other Bt cotton-growing countries like China, US mainly grow open-pollinated cotton varieties rather than hybrids.
- This is said to be the reason for the pink bollworm growing resistant to toxins in India.

Way Forward

- NSAI has popularised the Integrated Pest Management (IPM) programme which involves crop rotation of cotton with other crops, biological control of insects with the help of insects and parasites that devour pink boll worms and destroying crop residue and trash in the field.
- NSAI has also suggested the government to move back to Bollgard.
- Farmers should move swiftly to the short-duration crop varieties.
- Seed companies cannot develop open-pollinated varieties with BG-2, but they can develop with BG as Monsanto did not patent BG in India.

Pink Bollworm (PBW)

- The pink bollworm (Pectinophora gossypiella), is an insect known for being a pest in cotton farming.
- The pink bollworm is native to Asia, but has become an invasive species in most of the world's cotton-growing regions.
- In parts of India, the pink bollworm is now resistant to first generation transgenic Bt cotton (Bollgard cotton) that expresses a single Bt gene (Cry1Ac).
- Monsanto has admitted that this variety is ineffective against the pink bollworm pest in parts of Gujarat, India.