



White Fly

Why in News?

Recently, there has been a rise in the number of white fly attacks on cotton in various states like Punjab and Rajasthan.



What do we Know about White Fly?

▪ About:

- **Whitefly** is a **serious pest of cotton that lowers yield by feeding on the underside of the leaf** and spreading diseases like **Cotton Leaf Curl Virus**.
- They feed on the sap of the leaves and release fluid onto the leaves on which a black fungus grows, this affects photosynthesis, the food-making process of the plant, and so lowers the strength of the plant.

▪ Spread:

- The **first reported invasive spiralling whitefly (*Aleyrodicus dispersus*)** is now distributed throughout India.
- Similarly, the **rugose spiralling whitefly (*Aleyrodicus rugioeperculatus*)** which was reported in Pollachi, Tamil Nadu in 2016 has now spread throughout the country.
- *Aleyrodicus dispersus* and *Aleyrodicus rugioeperculatus* have been **reported on over 320 and 40 plant species**, respectively.
- Most of the whitefly species are **native to the Caribbean islands or Central America**.

▪ Reasons for Spread:

- The host range of all of the invasive whiteflies has been increasing due to their **polyphagous nature** (ability to feed on various kinds of food) and **prolific breeding** (produces a large number offsprings).
- The **increasing import of plants and increasing globalization and movement of people** have aided the spread of different varieties and their subsequent growth into invasive species.

▪ Concerns:

- **Damage to Crops:**

- Whiteflies reduce the production yield and also damage crops. Approximately **1.35 lakh hectares of coconut and oil palm** in India are **affected by the rugose spiralling whitefly**.
- **Other invasive whiteflies** were also found to **expand their host range on valuable plant species**, especially coconut, banana, mango, sapota, guava, cashew, oil palm, and ornamental plants such as bottle palm, false bird of paradise, butterfly palm and important medicinal plants.
- **Ineffectiveness of Insecticides:**
 - Whiteflies have been difficult to control by using available synthetic insecticides.
- **Controlling Whiteflies:**
 - They are currently being controlled by naturally occurring **insect predators, parasitoids** (natural enemies of pests, provide biological control of pests in greenhouses and crop fields) and **entomopathogenic fungi** (fungi that can kill insects).

What are other Pests/Insects Attacking Crops?

- **Fall Armyworm (FAW) Attack:**
 - It is a dangerous transboundary insect with a high potential to spread rapidly due to its natural distribution capacity and opportunities presented by international trade.
 - In 2020, the Directorate of Agriculture reported an armyworm attack on the standing crops in the northeastern Dhemaji district of Assam.
- **Locust Invasion:**
 - A locust (Migratory insect also known as tiddi) is a large, mainly tropical grasshopper with strong powers of flight. They differ from ordinary grasshoppers in their ability to change behaviour (gregarize) and form swarms that can migrate over large distances.
 - Locust adults can eat their own weight every day, i.e. about two grams of fresh vegetation per day. A very small swarm eats as much in one day as about 35,000 people, posing a devastating threat to crops and food security.
- **Pink Bollworm (PBW):**
 - It (*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.

Source: DTE

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