Early Locusts

Why in news?

Last month, the Locust Warning Organisation (LWO) observed desert locusts in western part of India.

What is LWO?

- It is a part of the Union Agriculture Ministry's directorate of plant protection, quarantine & storage.
- It has a field headquarters at Jodhpur in Rajasthan.

Why these locusts are a concern?

- These desert locusts are the destructive migratory pests currently devouring acres of crops in East Africa.
- While locusts are seen in India as well, that is normally only during July-October and mostly as solitary insects or in small isolated groups.
- This year, their being spotted along the India-Pakistan border before mid-April has raised the alarm bells.
- They have damaged the growing rabi crops along western Rajasthan and parts of northern Gujarat during December-January.

What exactly are locusts?

- The desert locust (Schistocerca gregaria) is a short-horned grasshopper.
- **Solitary phase** - In "solitary phase", these winged insects are safe.
- They become dangerous only when their populations build up rapidly.
- Close contact in crowded conditions trigger behavioural changes.
- **Gregarious phase** - They enter the "gregarious phase", by grouping themselves into bands and forming swarms.
- They travel great distances (up to 150 km daily), while eating up every bit of vegetation on the way.
- If not controlled at the right time, these insect swarms can threaten the food security of countries.

How the LWO's first sighting of the locusts should be viewed?

- **No worries, for now** - The rabi crops has already been harvested and kharif crops are yet to be planted.
- The LWO has detected "gregarious" hopper groups, including in Punjab adjoining the Pakistan border.
- But no breeding or swarm movement has also been seen so far.
- **Timing, a concern** - Their normal breeding season in India is July-October. But this year, they have been sighted by mid-April.
- Last year, too, they were seen towards end-May as isolated grasshoppers.

- But, they could breed to high enough populations for forming swarming and wreaking havoc during the rabi season in Rajasthan and Gujarat.
- The longer time to breed is more conducive for build-up of gregarious insect swarms, as opposed to solitary hoppers.

What kind of damage can they cause?

- Locusts are **polyphagous** i.e., they can feed on a wide variety of crops.
- Locusts can **multiply rapidly,** a single female desert locust lays 60-80 eggs thrice during its roughly 90-day life cycle.
- The damage potential of locusts has been limited in India, as India hosts only one breeding season.
- [In Pakistan, Iran and East Africa, they also multiply during January-June.]

What is the genesis of the present locust upsurge?

- It lies in the **Mekunu and Luban cyclonic storms** of May and October 2018 that struck Oman and Yemen, respectively.
- These turned large desert areas in remote parts of the southern Arabian Peninsula into lakes.
- This allowed the insects to breed undetected across multiple generations.
- The swarms attacking crops in East Africa reached peak populations from November onwards.
- They build up since the start of this year in southern Iran and Pakistan.
- Widespread rains in East Africa in late March and April have enabled further breeding.

What is the prediction?

- A part of the new generation of swarms forming in late-June/July may migrate from the Horn of Africa across to the desert areas along India-Pakistan border.
- During May-Junet, the locusts from spring breeding areas of southwest Pakistan and southern Iran would arrive in Rajasthan and Gujarat.
- They would, then, breed with the onset of the southwest monsoon rains and continue doing so through the kharif cropping season.

What should be done?

- If the monsoon is good, and in the absence of control operations, the magnitude of attack could be worse than in the 2019-20 rabi season.
- In 2019-20, Rajasthan and Gujarat had to treat over 4.30 lakh hectares of infested areas with sprayers mounted on tractors and other vehicles.
- Old generation organophosphate insecticides such as Malathion (96% ultra-low volume aerial application) are effective against locusts.
- About one litre of the chemical is necessary to treat a hectare of their breeding areas, including trees where they halt for the night.
- There is ample stock of pesticides to control any swarms.
- Control operations require procurement of equipment, training of field teams, prepositioning of supplies in key breeding areas and updating contingency plans.

Source: The Indian Express



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