

Early Locust Invasion

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INTRODUCTION

Locusts (Tola in Marathi) normally arrive during July-October, but early locust swarm have already been spotted in Rajasthan last year. At a time when India is battling Covid, their present a new worry with their potential for exponential growth and crop destruction. Western Rajasthan and parts of northern Gujarat during December-January — have raised the alarm bells, and comes at a time when the country is battling the more high-profile novel coronavirus pandemic



According to Keith Cressman, senior locust forecaster at the FAO (Food and Agricultural Organization) of the UN, a part of the new generation of swarms forming there in late-June/July may migrate from the Horn of Africa across the Indian Ocean to the desert areas along both sides of the India-Pakistan border. Locust came to Jaisalmer in May end. Rajasthan has witnessed three generations of breeding instead of the regular one generation. The first two generations caused a lot of damage to crops. The third generation was weak.

Big Concern

A Desert Locust adult can consume roughly its own weight in fresh food per day, that is about 2 gm every day. A very small part of an average swarm (or about one ton of locusts) eats the same amount of food in one day as about 10 elephants or 25 camels or 2,500 people.

What exactly are Locust?

The desert locust (*Schistocerca gregaria*) is a short-horned grasshopper that is innocuous while it is in a “solitary phase” and moving about independently. These winged insects differ from normal hoppers, and become dangerous only when their populations build up rapidly and the close physical contact in crowded conditions triggers behavioural changes. They, then, enter the “gregarious phase”, by grouping into bands and forming swarms that can 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.

List of Locust Swarm

Locust swarms have been recorded throughout history. Those which have their own Wikipedia articles are listed here, but there are many more notable ones that have happened.

Swarm	Year	Location	Size	Type
Plagues of Egypt	1213 BC	Egypt		Desert Locust
Albert's swarm	1875	Western United States	3.5 -12.5 trillion	Rocky Mountain locust
1915 Ottoman locust infestation	Syria 1915	Palestine, Mount Lebanon, and Syria		
2003–05 Africa locust infestation				
2013 Madagascar locust infestation	2013	Madagascar	billions	migratory locust
January Argentinean locust swarm	2016			
2019–20 East Africa locust infestation		Ethiopia, Kenya, Eritrea, Djibouti, and Somalia		desert locust
2019–20 Pakistan locust infestation				desert locust

Climate change

Wind patterns are changing over India and Pakistan. Because of climate change in the Indian Ocean, there are more cyclones. The frequency of cyclones has increased. Usually, there was a cyclone every five to six years, but in the past three years there have been three cyclones each year. Cyclones bring rain to coastal Gujarat, Pakistan, Arabian Peninsula, Somalia and north-eastern Africa. This creates good breeding conditions. History shows that these plagues spread due to cyclonic winds.

Control Measures

Breaking up a Swarm

1. In order to break a locust swarm If we can increase the randomness or “noise” a swarm experiences, then we might be able to break it apart. The huge size of swarms, however, make this method impractical, too.

2. By burning tyres to create an exclusion zone, catching them in nets or digging trenches

3. Currently, the most commonly used control is insecticide. Sprayed from land or aerial vehicles, whole swarms can be targeted in relatively short periods of time. However, this has obviously led to some environmental concerns.

4. Perhaps more promising are so-called biological control mechanisms. Natural predators such as wasps, birds and reptiles may prove effective at keeping small swarms at bay. Newly-developed targeted microbial biopesticides, such as the fungus-based “Green Muscle”, offer a larger-scale solution.

CONCLUSION

Controlling locust swarms is no easy task. And the larger the swarms, the more difficult the task becomes. Prevention, then, is likely the best medicine, but this requires keeping a very keen eye out. Remember, it only takes three locusts to make a swarm.

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