

Locust Attack



Locusts are a collection of certain species of short-horned grasshoppers in the family Acrididae that have a swarming phase. These insects are usually solitary, but under certain circumstances they become more abundant and change their behaviour and habits, becoming gregarious.

Locusts form enormous swarms that spread across regions, devouring crops and leaving serious agricultural damage in their wake.

What is a locust attack/invasion/plague?

When the locusts start attacking crops and thereby destroy the entire agricultural economy, it is referred to as locust plague/locust invasion.

What is the reason behind locust attack?

Thus, we have had two meteorological drivers behind the current locust invasions: one, unseasonal heavy rains in the main spring-breeding tracts in March-April, and, two, strong westerly winds.

How do farmers deal with locusts?

Farmers used to try to drive away the locusts by lighting fires. They also dug up the eggs. Now crops can be sprayed with insecticides from vehicles or aeroplanes. Scientists are trying to improve the control of locusts, by preventing or dispersing swarms.

Early-detection infrastructure — surveillance, monitoring and rapid target of nymphal bands of locusts — help in keeping a check on the spread of locusts.

Post-outbreak control measures: Using biopesticides help allay earlier environmental concerns.

India Suffers Biggest Locust Attack in 25 Years, Not Fully Controlled Yet

Source: thewire.in, 23 January, 2020

Estimates say crops were affected in more than 3.5 lakh hectares in districts of Rajasthan and Gujarat.

Jaipur: With estimations saying crops were affected in more than 3.5 lakh hectares in various districts of Rajasthan and Gujarat, the damage caused by locust attacks in 2019-20 is believed to be one of the worst in India.

Crops of mustard, cumin and wheat have been devastated in the two states, affecting lakhs of farmers. In Rajasthan, the worst hit districts are Jaisalmer, Barmer, Jodhpur, Jalore, Hanumangarh, Ganganagar, Bikaner and Sirohi.



Locusts, which are part of the grasshopper family, are highly mobile insects that can migrate across different countries and cause extreme damage to crops.

The Food and Agriculture Organisation (FAO) of the United Nations is the international agency that monitors and manages locust invasions. It says a swarm of locusts, which contains about 40 million insects, can eat the same amount of food in one day as 35,000 people, 20 camels or six elephants.

All locust-affected countries transmit data about attacks to the FAO, where the information is analysed in conjunction with the weather and habitat data and satellite imagery. The organisation also provides forecasts for locust attacks up to six weeks in advance and issues warnings for each country.

The Government of India deploys teams to control locust swarms, which spray a chemical called organophosphate in small, concentrated doses.

Tracking the locusts

In January 2019, the first locust swarms left to Yemen, Saudi Arabia, and south-west Iran, where heavy rains were reported, the FAO said. Between February and June, widespread spring breeding in Yemen, Saudi Arabia and Iran caused the formation of large numbers of locust swarms.

Control operations were less successful in Iran and Yemen and swarms invaded the India-Pakistan border between June and December. In India, the extended monsoon provided a favourable environment for the locusts to multiply.

“Each locust lays about 150 eggs. In fact, they lay eggs only in moist soil, therefore, when they arrived in India, the locusts multiplied uncontrollably because of the extended monsoon here,” S.L. Godara, director (research) at the Swami Keshwanand Rajasthan Agriculture University in Bikaner told *The Wire*.

He said when the locust department, during control operations, track areas where locusts stayed overnight to discover their eggs. “Once found, the chemical is sprayed over the eggs. The spray cannot be used over crops,” he added.

Godara also claimed that since the attack was larger than usual, the department was not efficiently equipped to handle the crisis. “Previously, such a large attack was reported in 1993. But it was still manageable. After that, it never occurred, which turned the locust department inefficient,” he said.

Officers of locust departments in India and Pakistan meet regularly to share information about locusts and potential danger of invasion.

The locust department in India has blamed Pakistan for this year’s attack, saying it failed to conduct control operations successfully. “If Pakistan had taken proper control measures, the breeding of locusts could have been stopped. Due to a longer monsoon in India, the swarms got a favourable environment to breed,” K.L. Gurjar, a participant in the India-Pakistan meeting told *The Wire*. He is also deputy director at the directorate of plant protection, quarantine and storage under the Centre.

The FAO's January 2020 update shows that the invasion may not have been put to rest yet. "A few residual swarms persistent along both sides of [the] India-Pakistan border where control operations are in progress. Adult and swarms were reported to be breeding along parts of the southern coast where heavy rains and flooding occurred earlier this month [January]," the update said. Godara says locusts usually stay in India until the Kharif season, but this time the swarms haven't left and are even damaging the Rabi crops.

Rajasthan government announces compensation

Recently, the Rajasthan state government announced compensation worth Rs 31 crore for four affected districts – Jaisalmer, Barmer, Jalore and Jodhpur – after conducting a special assessment of losses.

Farmers whose crop was damaged would be entitled to compensation worth Rs 13,500 per hectare of land. However, the administration has put a ceiling on compensation that can be sought. "Compensation will be given for damage suffered, but not beyond two hectares, irrespective of how much land the farmers have cultivated," C.L. Goel, additional district collector of Jalore told *The Wire*.

The move to limit the compensation has left the farmers upset. "We have heard that the government will pay compensation for only about two hectares of land, which would roughly be Rs 27,000-30,000. This is insufficient to compensate the losses, as farmers spend about Rs 80,000 to cultivate cumin. We borrow money from local lenders at a higher rate of interest," Saddam, a farmer from Barmer said.

Locust attack: India faces worst-ever pest invasion

Source: downtoearth.org.in, 5 February, 2020

Apart from India, the pests have attacked 60 countries including Pakistan and Somalia, that have declared national emergencies

India is suffering one of the worst locust attacks in its history.

Desert or yellow locusts have raided several districts in Rajasthan and Gujarat. These pests entering from Pakistan had damaged standing crops over 370,000 hectares by January 12, 2020. Pakistan and Somalia have declared emergencies to control the pests.

Locusts are short-horned grasshoppers belong to the family Acrididae. They have big hind legs for jumping. Locusts differ from grasshoppers in that they have the ability to change

their behaviour and habits and can migrate over large distances. They are capable of forming 'swarms' (adult's congregation) and 'hopper bands' (nymphal congregation).

They live for 90 days and eat voraciously — the equivalent to their bodyweight every day. They feed on green, leafy plants and always travel during the day time. An average adult locust swarm eats as much as about 10 elephants, 25 camels or 2,500 people.

When conditions are favourable for reproduction, locust numbers increase 20-fold in three months. The favourable conditions for breeding include moist sandy or sand / clay soil to a depth of 10-15 cm below the surface, or some bare areas for egg-laying, and green vegetation for hopper development.

Locusts take 50 days to develop from eggs to an immature stage. The immature locusts take another 30 days to reach the egg-laying stage. Once egg laying is done, the insects die.

When conditions are not favourable, their numbers decrease either by natural mortality or through migration. It restricts itself to the semi-arid and arid deserts of Africa, west and south Asia that receive less than 200 mm of rain annually. This is an area of about 16 million square kilometres, consisting of about 30 countries.

In the current case, climate change-induced unseasonal rain or frequent cyclones have been considered to be the main reasons for the infestations. Apart from India, the pests have attacked 60 countries in two major continents, comprising 30 million sq km.

Amid Covid-19 scare, Punjab braces up for locust attack

Source: indianexpress.com, 23 May, 2020



The locust attack has been seen frequently in the past six months in Fazilka's villages, including Roopnagar and Barreka.

Punjab are already engaged in a battle against Covid-19 and if locust attack takes place, it would be another challenge considering that the state is in the process of sowing paddy and has already completed 50 per cent sowing of cotton.

Amid the spread of coronavirus, Punjab is bracing up for locust attack after warning by the Food and Agriculture Organisation (FAO) of possible egg-laying of locusts and swarm attack in eight districts of Punjab bordering Rajasthan and Pakistan.

The fears have been confounded after a swarm attacked crops in Gharsana in Sri Ganganagar in Rajasthan, 125 km from Punjab's Fazilka during the last few days.

The agriculture department of the state has sounded an alarm to all districts bordering Rajasthan and Pakistan after FAO warnings and attack in the neighbouring Rajasthan.

Fazilka's Sadki block has been put on alert after the swarm was spotted in Rajasthan. The concerns are confounded as locusts can cover a distance of 150 km in a day. The administrations of all districts in

Punjab are already engaged in a battle against Covid-19 and if locust attack takes place, it would be another challenge considering that the state is in the process of sowing paddy and has already completed 50 per cent sowing of cotton.

The locust attack has been seen frequently in the past six months in Fazilka's villages, including Roopnagar and Barreka.

Agriculture Secretary Kahan Singh Pannu told The Indian Express, "The threat is looming large. We have assigned the officials of our department for locust duty. We are fearing that as cotton crop is being cultivated and in a few days paddy nurseries will have enough foliage, the hoppers can attack in Punjab as it will be all green."

He said in view of this, they have set up a Locust Control Room and issued instructions to the Deputy Commissioners of eight districts bordering Rajasthan and Pakistan, comprising Bathinda, Muktsar, Fazilka, Faridkot, Ferozepore, Amritsar, Tarn Taran and Gurdaspur, to prepare to thwart a locust attack.

He said a Locust Control Room was set up centrally and a Joint Director-level officer was made the incharge.

The department was now stocking up pesticides to destroy the locusts if they attack the fields in Punjab. "Our biggest worry is that we do not have open spaces like in Rajasthan which is a desert. Our entire land is cultivated. We cannot use the pesticide – Malathion –

recommended by the Centre in as too much of concentration of the chemical is required. We have crops, including foodgrains, cotton and fruits, in these eight districts. We need to stock up other pesticides. We are stocking up, have alerted fire brigades, asked Centre for some more spray pumps and are holding meetings with district administrations,” said Gurwinder Singh, incharge of the contrl room.

The wind direction is being watched, there is a vigil at the border to sound an alarm if locusts are spotted, he said. The kinnow and guava orchards are under threat in Fazilka, and cotton in Bathinda and Muktsar. The paddy season is starting in all other districts.

The paddy is the most paying crop in Punjab that gets the state over Rs 40,000 crore from the Centre. In the Covid-19 situation, the state cannot afford crop losses. The FAO in its warning note to the state has said, “The current situation and forecast are alarming as locust infestations are expected to extend to other areas in the Horn of Africa and southwest Asia.

In southwest Asia , hopper groups and bands are present in Southern Iran and in Pakistan where substantive control operations continue. Adult groups and small swarms from breeding in Baluchistan , the Indus valley, and Punjab in Pakistan will move to desert areas along both sides of Indo-Pakistan border from now onwards. This is expected to be supplemented by several waves of swarms coming from the spring breeding areas during June.”

The agriculture department has asked the DCs to activate control rooms, set up a system of regular coordination meetings of district revenue, agriculture and Locust Control Organisations (LCOs) for assessment of ground situation, exchange of field information, finalising next day /day’s strategy of control operations.

They have also been asked to make teams of local revenue and agricultural officials for field survey and sharing real-time information, a meeting of all gram pradhans to brief them about the serious forecasts of locusts’ incursion, and sanction and provide survey control vehicles as per requirement given by various LCOs.

It has also asked them to identify the places with coordination of BSF and LCOs where teams will be deployed and assist in temporary camps with basic facilities, including boarding and lodging in border and remote areas in the light of Covid situation.

India under worst locust attack in 27 years: Why you should be concerned

Source: indiatoday.in, 26 May, 2020

Locusts eat food, food that farmers grow for humans. Locust swarms devastate crops and cause major agricultural damage, which can lead to famine and starvation.

Social media has been abuzz this week with visuals of locust swarms descending upon residential areas in Jaipur.

These posts, often shared with doomsday speculations, instil merely a moment's concern. Sure, the millions of insects flying across the sky is not a pleasant sight, but they don't bite humans, so why worry. But worry you should.



A motorcyclist rides through a swarm of desert locusts in Kenya



Locust swarm in Rajasthan's Jaipur

WHAT IS A LOCUST SWARM?

First, let's understand what locust swarms are and how they damage crops. Locusts are insects that travel in large swarms that can travel up to 150 kilometres in a day depending on the wind speed.

Locust swarms devastate crops and cause major agricultural damage, which can lead to famine and starvation.

Locusts devour leaves, flowers, fruits, seeds, bark and growing points, and also destroy plants by their sheer weight as they descend on them in massive numbers.

A small swarm of the desert locust eats on an average as much food in one day as about 10 elephants, 25 camels, or 2,500 people. But swarms are not always small.

In 1875, the US reported a swarm estimated to be 1,98,000 square miles or 5,12,817 square kilometres in size. Delhi-NCR is only 1,500 square kilometres, for comparison.

A swarm the size of Delhi may consume the same amount of food in one day as every inhabitant in Rajasthan or Madhya Pradesh in one day.

LOCUST ATTACKS ARE NOT NEW

Although it may seem like the year 2020 is filled with unprecedented catastrophes, locust attacks are not new. The only reason many on the internet seem to be surprised by the recent locust swarms is that they have come to India in this proportion after 27 years.

Locust attacks have been mentioned in almost all ancient texts, right from wall paintings on ancient Egyptians pyramids to the Bible and Koran. Ancient Greeks talked about locust attacks and so did Sanskrit poems dating back to 747 BC.

The problem that troubled pharaohs, King Ashoka and King Solomon is still a menace in today's age. Within recorded history, India has witnessed several locust plagues and upsurges since 1812.

EXTENT OF DAMAGE LOCUST CAUSED DURING PREVIOUS ATTACKS

As per the Union Agriculture Ministry data, locusts damaged crops worth Rs 10 crore during the 1926-31 plague cycle. During the 1940-46 and 1949-55 locust plague cycles, the damage was estimated at Rs 2 crore per cycle, and at Rs 50 lakh during the last locust plague cycle (1959-62).

The government does not consider locust upsurges during 1978 and 1993 and several in-between as major outbreaks. But as per the government records, 190 locust swarms had attacked an area of at least 3,10,000 hectares in Jaisalmer, Barmer, Bhuj and Jalore districts of Rajasthan in 1993. Large areas in these districts again had to be treated with chemicals to get rid of locust swarms in 1997 and 2005.

WHAT'S NEW THEN

Most of the attacks by locust swarms in India since 1993 have been localised to Rajasthan. But this time, favourable weather conditions have facilitated locusts' travel from Rajasthan to Gujarat, Madhya Pradesh, Uttar Pradesh and even Maharashtra.

Reports of crop damages have been pouring in from these states as farmers try and get rid of locusts by smoking them out, scaring them away by making loud noises or spraying chemicals.

India has a specialised Locust Warning Organisation, headquartered in Jodhpur. The centre is responsible for timely monitoring and planning for locust eradication and providing assistance to state governments in controlling invasions.

The state and central machineries, including the LWO, are actively trying to get rid of the locusts invading India through Pakistan, but their efforts may not be enough.

WORST YET TO COME

The locust swarms currently plaguing Indians crops bred and matured in Iran and Pakistan's Balochistan. But larger swarms that bred in Horn of Africa and parts of the Arabian Peninsula, due to abnormal weather activities caused by two cyclones in 2018, are also likely to move towards India soon.

The United Nation's food and agriculture organisation (FAO) has warned India of an impending locust invasion. As per the FAO, the locust infestation is likely to get severe by next month. The desert locust invasion is expected to move from East Africa to India and Pakistan next month and could be accompanied by other swarms. The FAO's Senior Locust Forecasting Officer Keith Cressman said: "Everybody knows we're facing one of the worst desert locust situations that we've probably had in a number of decades".

WHY YOU SHOULD CARE

Locust swarms eat food, food that farmers are growing for humans. If locust attacks of this proportion continue unabated, the insects will wipe out lakhs of tones of food grains and vegetables meant for human consumption.

Apart from a possible lack of food grains and vegetables, locust attacks on farms will also plunge India into fresh economic trouble.

Plagued by an economic slowdown and Covid-19 lockdown, the Indian economy is already on the edge. While experts hope that things will improve after a vaccine for the novel coronavirus comes into the market, an agrarian crisis due to locust attack will throw the government's plans off-balance.

More relief packages will have to be announced and more money will have to be taken out of government coffers, less and less revenue will be generated and food inflation will skyrocket as supply will fall below demand.

In short, even if you are sharing the locust videos from the safety of your airconditioned living room, you should be worried that it may cost you much more to put food on the table in the coming days.

First major locust attack in Maharashtra since 1993; 3 districts hit

Source: hindustantimes.com, 27 May, 2020

According to the state agriculture department, the swarm is reported to be at least 10-km-long and two-km-wide, which has covered a distance of around 120km between May 24 and 26, and it continues to spread.

Maharashtra is facing its first major locust invasion since 1993, with a swarm of short horned grasshoppers having invaded six talukas across three districts — Amravati, Wardha and Nagpur — in Vidarbha.

While major food crops are not under threat, fruit orchards and vegetable farms are likely



to be affected.

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According to the state agriculture department, the swarm is reported to be at least 10-km-long and two-km-wide, which has covered a distance of around 120km between May 24 and 26, and it continues to spread.

The main affected areas include 22 villages across Morshi and Warud talukas in Amravati; Ashti taluka in upper Wardha district; and Katol, Kalmeshwar and Narkhed talukas in Nagpur.

“The invasion began from Katol on Monday morning. While major crop damage is not expected since we are close to monsoon and sowing in these areas begins by June 7, but orange orchards are threatened by the invasion. A 25% loss is being estimated for those owning these orchards,” said Ravindra Bhosale, divisional joint director agriculture, Nagpur division.

“The swarm is now moving further deeper into rural areas of Nagpur division. At Kalmeshwar taluka, on Tuesday, we were informed of damage to vegetable crops across 5-6 hectares,” said Bhosale.

The last time Maharashtra witnessed such an invasion was in 1993 in Dhule district, the Locust Warning Organisation (LWO) under the Union agriculture ministry said.

“An escaping population of desert locusts made their way from Madhya Pradesh into Amravati district on May 24 owing to the current wind direction and the presence of forest patches where they can grow and breed. Over 48 hours, they have covered two more districts, showing an unusual swarming behaviour,” said Dr KL Gurjar, deputy director and national coordinator on mitigating locust attacks, LWO.

Subhash Nagade, divisional joint director agriculture, Amravati division, said, “There is fear and panic among villagers and farmers. With the Covid-19 pandemic underway and extremely hot weather in Vidarbha, the locust outbreak has made the situation worse. We are working with the municipal authorities for awareness drives across all affected areas.”

Between Monday night and early Tuesday morning, district officials with the help of the fire department carried out a six-hour drive to kill the locusts by spraying pesticides on the affected areas in all three districts.

“We learnt that the swarms move during the day and sleep on the fruit bearing citrus trees at night. Villagers informed us about their exact locations, and an overnight extermination drive saw thousands of dead insects across a 17-km stretch at Katol. However, on Tuesday morning, those that survived began swarming other talukas,” said Bhosale. Nagade said a similar thing was witnessed in Amravati.

“The swarm has reduced here and moved towards greener pastures in Wardha and Nagpur. However, we fear the possibility of another swarm making its way from MP,” he said.

“We are constantly in touch with local officers overseeing this. We expect the invasion to be controlled within a few days in Maharashtra.

However, another escaping population from MP cannot be ruled out,” said Gurjar The country is witnessing a severe locust outbreak active across Rajasthan, Gujarat, Uttar Pradesh, Madhya Pradesh, and now Maharashtra.

These rapidly reproducing crop munching pests can eat daily amounts equal to its weight, and can fly up to 150km in a day.

Central and state bodies have stepped up efforts to control the menace as it poses crop vulnerability and threat to food safety if the outbreak is not contained.

Overnight operations in Jhansi to clear swarms of locusts

Source: newindianexpress.com, 28 May, 2020

Instructions have been issued to officials to list elaborate details about the dangers posed by locusts and precautions need to be taken.



A swarm of locusts

JHANSI: Overnight operations were carried out by the administration and agriculture department to clear swarms of locusts in Moth and Garautha areas of the district here, official said on Thursday.

A large number of locusts has been eliminated with spraying of chemicals all through the night but a smaller number of those who survived has moved towards Pariksha near Jhansi on Thursday morning, Deputy Director, Agriculture, Kamal Katiyar, said Their further movement would depend on the direction of the wind, he said.

Senior officials including those from a central team were present during the night-long operation and a close vigil is being maintained on further movement of locusts, Katiyar said.

Two fire brigade vehicles loaded with insecticide had been deployed in all four Jhansi tehsils besides six vehicles were kept ready at the district headquarter.

Ten municipal employees with two insecticide spraying machines were posted in every block.

Locusts had earlier attacked some parts of Jhansi district on May 22 and 24.

Taking cognizance of the matter, Chief Minister Yogi Adityanath had on Wednesday issued directions to district magistrates of bordering districts of the state to take appropriate measures to deal with the menace.

Instructions were issued to DMs of Jhansi, Lalitpur, Agra, Mathura, Shamli, Muzaffarnagar, Baghpat, Mahoba, Banda, Chitrakoot, Jalaun, Etawah and Kanpur Dehat.

At the state level, teams have already been formed and control rooms established to track the movement of locusts.

At the district headquarter level, a nodal officer has been appointed, and a task force and control-room already set up.

Instructions have been issued to officials to list elaborate details about the dangers posed by locusts and precautions need to be taken.

These instructions should be circulated to all officials in districts through social media, and should also be made available to farmers and the common public.

An advisory was also issued to beat drums, tin containers, metal plates and create noise to shoo the locusts in case of an attack.

The officials of the agriculture department have been told to coordinate with members of the Locust Warning Team, locals and farmers.

Instructions have already been issued to take assistance of agriculture universities and pest management centres.

Locust attack: Nine Odisha districts under alert, officials asked to keep vigil

Source: downtoearth.org.in, 3 June, 2020



The government has started control rooms at state- and district- levels to ward off locusts

At least nine districts in Odisha are reportedly under threat of locust invasion, according to state government officials.

In a bid to prepare for the worst, the Odisha government on June 2, 2020 asked its officials to keep a vigil on the locust situation for at least next 10 days. It also directed them to spray medicines, if needed, on crops with the help of fire services.

The districts under threat include Nabarangpur, Nuapada, Kalahandi, Malkangiri, Koraput, Rayagada, Jharsuguda, Sundargarh and Bargarh.

States such as Rajasthan, Uttar Pradesh and Madhya Pradesh are already battling out the worst locust invasion in over 27 years.

A decision in this regard was taken at a high-level meeting in the office of the Chief Minister Naveen Patanaik. It saw top officials, including Chief Secretary Asit Tripathy, Development Commissioner Suresh Mohapatra, Special Relief Commissioner Pradeep Kumar Jena, Farmers' Empowerment Secretary Saurabh Garg and Fire Services Director-General Satyajit Mohanty, in attendance.

The members were informed that an army of locusts invaded crops in Chhattisgarh on June 1 before reportedly returning to Madhya Pradesh. There was speculation that the swarm may turn to Odisha. The government has started control rooms at state- and district- levels to ward off locusts, according to agriculture officials.

“The department has sent six lakh WhatsApp messages to more than eight lakh farmers to make them aware of the impending danger,” said a senior official. Farmers have been advised to create noise by beating utensils or tin boxes to drive the locusts away. They have also been asked to spray neem-based insecticides.

The locusts have raided crops in Maharashtra, Rajasthan, Uttar Pradesh, Madhya Pradesh and Chhattisgarh so far. According to agriculture department officials, the pests are expected to enter Odisha from western states. Crops and trees in Bargarh, Sundargarh, Kalahandi and Balangir district are likely to be most vulnerable, they added.

Officials fear that locusts may also attack paddy crop, harvesting of which is underway in a few districts. Bargarh district, known as the ‘rice bowl’ of Odisha, shares its border with Chhattisgarh. A sizable part of paddy crop has yet to be harvested there.

The Bargarh district agriculture officials have reportedly created a WhatsApp group for all the 253 Gram Panchayats to share all relevant information. The department has also distributed leaflets among farmers.

Locust attack: Bigger swarms to enter India by June end

Source: timesnownews.com,6 June,2020



The Locust Control Organization is expecting bigger swarms by June end, coinciding with the sowing season. The authorities are not only worried about locusts but also about the after-effects of pesticides.

Jaipur: Locust swarms continue to enter India from across the border from Pakistan. Latest swarms have been observed in Nokha and Deshnok in Bikaner this week while Barmer and Jaisalmer continue to receive swarms of small proportions. Experts say that there has been a widespread breeding of locusts in East African countries and in Pakistan, and these

swarms are expected to hit India by the end of June. Sources believe that these locust swarms are going to be larger than ever before. "We are keeping a close watch on the situation and sharing information with the affected state authority." KL Gurjar Head of Locust Control Organization in Jodhpur said.

Meanwhile, the Union Home Ministry has notified that the states would be able to use fund allocated under State Disaster Relief Fund (SDRF) and National Disaster Relief Fund (NDRF) for locust control activities.

The Rajasthan government has already moved to allocate Rs 1.47 crore to district collectors for purchase of a hundred fire tenders which would be used for locust control also. The Gehlot government has also authorized the district collectors to hire the tractor-mounted sprayers and purchase of insecticide as per the local need. Recruitment of 290 assistant agriculture officers and 1,900 observers will also be done in Rajasthan.

"There will be no paucity of fund for locust control activities. We are working on a district-wise strategy to control the future attacks which are imminent," said Ashok Gehlot, the Chief Minister of Rajasthan.

But farmers in Rajasthan are a worried lot as the next wave of locust swarm will coincide with the sowing of Kharif crop. Maize, millet, sorghum are the major Kharif crop in Rajasthan while the state also produces large quantities of pulses in this season. As many as 23 districts of Rajasthan have been affected by the locust swarms.

The swarms which have entered India in the last ten days are flying further into the hinterland towards the east and south-east. According to the officials, 43 districts of five states have been severally affected by the attack of locust swarms in the month of May 2020.

This includes 23 districts of Rajasthan, 16 of Madhya Pradesh, Banaskantha and Kutch in Gujarat, Fazilka in Punjab and Jhansi in Uttar Pradesh.

But environmentalists are concerned about the widespread use of pesticide to kill the locust swarms. Experts say that indiscriminate use of pesticides will also affect the fauna such as birds, butterflies and other beneficial insects and could also prove cancerous to human beings in extreme cases.

"We have seen in states like Punjab that diversity of birds and insects have gone down over the years due to the high use of pesticide and insecticide. We need to control locust swarms but should also focus that measures we adopt today has its detrimental side effects and after-effects." Simrat Sindhu member of Rajasthan wildlife board said.

Fresh locust attack reported from UP, Maharashtra, Rajasthan

Source: hindustantimes.com, 11 June, 2020



A child attempts to chase away a swarm of locusts over a field in the outskirts of Prayagraj on Wednesday

Over the past two to three days, the wind direction has been favourable for locusts to move towards farmlands adjoining forests towards Nagpur, said Locust Warning Organisation deputy director KL Gurjar.

Swarms of desert locust have entered farm land in Nagpur in Maharashtra and Prayagraj in Uttar Pradesh, even as the worst affected Rajasthan has decided to send agriculture officers to districts to monitor the damage to crops and prepare for the next round of locust attack expected by mid-July.

Over the past two to three days, the wind direction has been favourable for the pests to move towards farmlands adjoining forests towards Nagpur, said Locust Warning Organisation deputy director KL Gurjar.

In UP's Prayagraj, a swarm entered the villages of Koraon and Meja development blocks. "We are trying our best to chase them away," said Akansha Rana, SDM, Karchana.

Locust swarm reaches Agra, attacks 35 villages in district

Source: indiatoday.in, 30 June, 2020



The locust swarm reached Agra on Monday night

The Agra district agriculture department had sprayed pesticides in the fields but it did not have much effect on the locust.

After attacking villages in Rajasthan and Madhya Pradesh, the locust swarm entered Agra on Monday evening, attacking villages in Firozabad, Mathura, Bah and Pinahat tehsils of the district.

By late evening, the swarm had spread over most of Agra and farmers spent the entire night and most of Tuesday morning making noises and lighting fires in their fields to ward off the locusts with smoke. However, despite these efforts, the locusts settled down in at least 35 villages on Monday night.

The district agriculture department had sprayed pesticides in the fields in these villages but it did not have much effect on the locust.

Villagers in Agra said this is the first time that the young generation has seen a locust attack. 104-years-old Imamuddin, a local resident, said in earlier times people used to primarily grow Arhar (a type of pulses) and if there was a locust attack, they spray a

mixture of cow dung and water over the crops and smoked the fields with cow dung cakes. "This irritated the locusts and they would fly away," he said. However, this time the standing crop of bajra has been badly affected by the locusts.

The locust swarm have also attacked the central Paliwal Park of Agra and severely damaged the trees and plants there.

District Horticulture Officer Dr Ram Pravesh Verma said the swarm comprised about 200 crore locusts, spread in an area of 10-12 km.

Keeping in view of the size of the swarm, pesticides were sprayed at the Taj Mahal and other some parks using four fire tenders and 10 tractors. However, the locusts still damaged the greenery.

East Africa is suffering its worst invasion of desert locusts in 25 years

Source: [edition.cnn.com](https://edition.cnn.com/2020/01/25/africa/locusts/index.html), 25 January, 2020

Nairobi (CNN): The Horn of Africa has been hit by the worst invasion of desert locusts in 25 years, the UN's Food and Agriculture Organization (FAO) said Friday.

The invasion poses an unprecedented threat to food security in the entire sub region, where more than 19 million people in East Africa are already experiencing a high degree of food insecurity, the agency said.

In Kenya, it is the worst invasion in 70 years, and the government is spending \$5 million to manage the swarms of locust and prevent spreading.

Invasions of desert locusts are irregular in the region, the last instance occurred in 2007 at a much smaller scale.

"This current invasion of desert locust is significantly larger in magnitude and scale than previously experienced in Kenya and across East Africa," said Dr. Stephen Njoka, the Director General of Desert Locust Control Organization.

Irregular weather and climate conditions in 2019, including heavy rains between October and December, are suspected to have contributed to the spread of locusts in the region.

A cyclone that swept through northeastern Somalia and eastern Ethiopia in December, bringing heavy rains to the area, created ideal conditions for the insects to breed for the next six months, said Keith Cressman, FAO's senior locust forecasting officer.

Large swarm areas of northeastern Somalia and eastern Ethiopia are not being detected or treated, leaving the area vulnerable to new generations of locusts.

If locusts are left untreated by control measures, swarms can potentially grow 400 times larger by June, Cressman said.

Unexpected and unpredictable rainfall in northern Kenya that carried into January also continues to enable favorable breeding ground. As large swarms continue to move into Kenya and multiply, "you have a recipe for the situation to deteriorate further," said Cressman.

"Under a worst-case scenario," the invasion could become a plague if it is not contained quickly, the FAO said in a statement.

Emergency action plan



A man walks through a locust swarm in Kenya on 22 January 2020, Samburu County, Ololokwe, Kenya.

The locusts have already devastated large swaths of food and pasture in the region, but the extent of the damage cannot yet be determined since new swarms are spreading across borders everyday, said Njoka. While Njoka remains positive the pesticides are working, the rapid and constant movement of the locusts makes it difficult to assess just how effective it has been.

The FAO has escalated the situation to the highest disaster level, leading the agency to put in place a six month emergency action plan and suggest it will take USD \$70m to contain the swarms across the region.

The desert locust is the most destructive of all food-eating locust species because of its speed and ability to multiply rapidly. According to the FAO, the insects do not attack people or animals and there is no evidence they carry diseases that can harm humans. Desert locusts swarms can stay in the air for very long periods of time, traveling up 130 kilometers (80 miles) or more a day, the FAO said.

A swarm can vary from one square kilometer to several hundred square kilometers with up to 80 million adult locusts in each square kilometer of a swarm. A swarm the size of Paris can devour as much food as half the population of France, according to the FAO.

After East Africa locust attack threatens South Asia

Source: dailysabah.com, 20 February, 2020



Nibbling their way across a large part of Africa in the worst outbreak, locust swarms are now threatening South Asian countries with India taking extra measures to ward off a new outbreak that could ravage crops.

India is buying drones and specialist equipment to monitor the movement of locusts and spray insecticides.

Earlier this year, Indian authorities were able to bring swarms of desert locusts under control, but an outbreak in neighboring Pakistan has again raised concerns about the safety of crops such as wheat and oilseeds in India.

Pakistan has declared a national emergency to battle the swarms of desert locusts which are eating crops on a large scale and raising fears of food insecurity.

Villages in India's western states of Gujarat and Rajasthan states, which share a border with Pakistan's desert areas, are especially susceptible to the locust invasion.

Locust swarms can fly up to 150 kilometers a day with the wind, and adult insects can consume roughly their own weight in fresh food per day. A small swarm eats as much in one day as about 35,000 people.

The plague has already caused extensive damage to pastures and crops and threatened food security in several countries over the Indian Ocean in East Africa, including Somalia, Ethiopia, Kenya Eritrea and Djibouti.

Swarms have also spread into Tanzania, Uganda and now South Sudan. Officials have warned that the outbreak, could lead to famine in Africa already struggling with food insecurity.

Plague-Like Locust Swarms Sweep Saudia Arabia, East Africa, Asia

Source: interestingengineering.com, 13 March, 2020

Swarms of locusts are sweeping through Saudia Arabia, East Africa, and Asia, and they may be about to breed.

Locusts are swarming across East Africa, Asia, and the Middle East, threatening local food supplies and basic livelihood, reports the journal Nature.

At least 20 million people are in danger as scientists and governments rush to bring the insects under control.



Locust swarms sweep the 'cradle of civilization'

The outbreak today coincides with cyclones in 2018, and the warm weather at the end of 2019, compounded by unseasonably heavy rains. Scientists detected vast swarms at the beginning of 2020 in Somalia and Ethiopia, and afterward they insects spread wild across countries like Kenya — where they've been a constant plague-like presence for 70 years — Sudan and Uganda. Swarms were also detected in Saudi Arabia, Iran, Pakistan, and India.

Previously, Kenya saw an incredibly large swarm occupy an area of 2,400 square kilometers (926 square miles), more than three times the size of New York City. A swarm of locusts typically occupies 100 square kilometers, but even at this smaller size, between 4 and 8 billion locusts are flying and buzzing around inside, collectively capable of eating the equivalent of what 3.5 million people can eat in a single day.

The swarm could even spread as far north as Turkey, according to the country's Head of Chamber of Agricultural Engineers, Özden Güngör.

The United Nations' Food and Agriculture Organization (FAO) has appealed for US\$138 million in immediate funding.

Meanwhile, researchers have stressed the need for better monitoring to predict insect movement and growth, adding that alternatives to synthetic chemical pesticides are necessary to attack locust populations before they breed into an even larger swarm.

Locust population explodes

The desert locust — also known by its scientific name, *Schistocerca gregaria* — is found in more than 65 of the world's countries, and doesn't normally join into large swarms in the deserts that stretch from West Africa to India. Locusts breed following periods of rainfall, when soil is moist — ideal for locusts to lay eggs.

But when it pours rain, locust populations build up incredibly fast, into vast, maddening swarms.

Additional swarm factors

There are of course other factors in play, said Director-General Segenet Kelemu of the International Centre of Insect Physiology and Ecology in Nairobi, which has advised the Kenyan government on control measures.

For example, continuing war and violence in the region has made much of Yemen inaccessible to research workers and humanitarians, slowing the world's ability to combat outbreaks.

"Swarms also develop when control efforts break down or political or natural disasters prevent access to breeding areas, and interventions do not start early enough," Kelemu said, to Nature.

"Countries like Yemen, where there are human catastrophic situations due to conflict, are in no position to take care of invasive pests."

Pakistan locust situation worsens as swarms enter via Afghanistan

Source: [newindianexpress.com](https://www.newindianexpress.com), 12 June, 2020

Minister for National Food Security and Research Syed Fakhr Imam said the government was keeping a vigil on the movement of swarms of desert locusts.

ISLAMABAD: The desert locust situation in Pakistan was fast deteriorating and swarms have found a new corridor from Afghanistan to attack agricultural fields in Khyber Pakhtunkhwa, it was reported on Friday.

Crop loss have been reported in several areas of Khyber Pakhtunkhwa, particularly in Dera Ismail Khan district, from where these locust swarms were entering Punjab thereby posing a serious threat to the food basket of the country, said the Dawn news report.



Locusts swarm above a mango tree orchard

Winding up the debate on locusts in the National Assembly on Thursday, Minister for National Food Security and Research Syed Fakhr Imam said the government was keeping a vigil on the movement of swarms of desert locusts entering Pakistan from four countries: Ethiopia, Somalia, Eritrea and Djibouti via Saudi Arabia, Yemen and Iran.

He said that new swarms of desert locusts would enter Balochistan from Iran over the next two weeks, adding that the province was already the worst-hit with its 33 districts already invaded by insects.

In Balochistan, he said, ground operation against locusts had been carried out over 85,000 hectares by ground teams and aerial sprays had been carried out over 500 hectares.

The Minister added that the federal government was in close coordination with the Food and Agriculture Organisation (FAO) which was keeping Pakistan informed on a daily basis on the movement of locust swarms in the region.