

How to handle locust swarms

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Swarms of locusts are currently on the rampage in Maharashtra, Uttar Pradesh and Punjab, after leaving a trail of destroyed crops in Rajasthan, Gujarat, Madhya Pradesh and Haryana. These are no ordinary hoppers in that they become dangerous when they enter the gregarious phase, by forming swarms that can travel up to 150 km per day and eat as much as about 10 elephants in a day. When millions of locusts descend on a crop, they destroy everything, devastating the agricultural supply chain and livelihoods of farmers.

During the last wave of desert locust attack—from July 2019 to February 2020—almost 1.7 lakh hectares of agriculture land in India was affected, with Rajasthan and Gujarat being the worst hit. The attack caused an estimated loss of Rs 100 crore.

UN-led Food and Agriculture Organization's (FAO) desert locust bulletin has informed of the possibility of successive bigger swarm waves entering Rajasthan throughout June, coinciding with the sowing season. The locusts will be either settling in cropping areas or will continue eastwards to Madhya Pradesh, Maharashtra, Uttar Pradesh and Chhattisgarh, going even as far as Bihar and Odisha.

The locusts invading several states now are in the nymphal stage. Once they reach adulthood, in just three breeding seasons—spanning over three to five months—their population can expand 16,000 times. They are a threat not just to agricultural crops but also to horticultural crops. In fact, fruit trees are particularly vulnerable to attack by immature swarms, which prefer to roost in them. Once damaged by locusts, the trees are likely to have their fruit yield affected for more than one year.

To ward off locusts, India has bought drones to spray insecticides, and specialised equipment to monitor their movement. FAO has made several innovations in locust survey and surveillance, such as the use of survey data that is geo-referenced, and is in conjunction with weather, habitat data and satellite imagery.

The attack earlier this year is attributed to cyclones in Indian Ocean that hit a sandy area in the Arabian Peninsula, creating congenial breeding conditions for the locusts. With wetter conditions and increased intensity of precipitation events being projected by climate experts, the increased risk and frequency of locust attacks in the coming years is a cause for concern.

Given the magnitude of the recent attacks, and the vulnerability of the agriculture sector, the Government of India should consider certain policy initiatives to alleviate the woes of the farmers. Crop diversity, which has been traditionally considered the best option to tide over adverse conditions including climate change, pest attacks, and diseases, should be encouraged. Crop diversity allows farmers to plant and harvest more than one crop. The growing seasons are staggered throughout the year, and therefore, in the incidence of a locust attack, farmers are likely to have already harvested some crops. This leaves them with buffer stocks of stocks of foodgrains and seeds to sow.

The Government should also mull reinforcing policies for social protection to farmers, such as the Krushak Assistance for Livelihood and Income Augmentation (KALIA) scheme, implemented by Odisha recently. Crop insurances, which provide financial support to farmers in the event of crop failure due to natural calamities, pests and diseases, should be considered. However, according to the Pocket Book of Agricultural Statistics (2017), the percentage crop area insured under all insurance schemes, in the states under locust attack is less than or about 30%, with 22% in Gujarat and Uttar Pradesh each, and 32% in Haryana and Maharashtra each. Bridging this gap between farmers who are protected by crop insurance and those outside its ambit is important.

While temporary measures such as spraying of insecticides is on to battle locusts, a long-term solution involves restoring the environment and formulating strategies for a resilient agriculture sector.