

Chomp, chomp... look, what's eating away our crops!

Desert locust swarms are back to haunt farmers. After ravaging crops in Pakistan, the migratory insects have entered India, already wreaking havoc in Rajasthan, Haryana and Punjab. While locusts are among the most destructive, farmers are also plagued by a host of other pests. Here is a look at some of them...

WEEVILS

Getting their snouts in the trough

Weevils are beetles, known for their elongated snouts, which they use not only to feed, but also to bore holes into plants and lay their eggs. The hatched larvae may feed on flowers, stems, fruits, or nuts. Many species of weevils damage crops, while some infest stored grains. The coconut weevil and rice weevil are among the insects that cause trouble to farmers in India. The former lays between 200 and 300 eggs in the trunk of the palm, where the newly hatched larvae digest the inner core of the tree causing its eventual demise. And the rice weevil female makes a hole in a grain kernel and deposits an egg within the hole. New adults bore emergence holes from the inside, then leave to mate and begin a new generation.



FALL ARMYWORMS

Crop-guzzling army

The fall armyworm or *Spodoptera frugiperda* is a crop-guzzling insect with a high potential to spread and multiply rapidly. Indigenous to the Americas, the fall armyworm has been spreading across many parts of the globe. The mature larva is the most destructive as it develops biting mouth parts and a big appetite. The caterpillars eat away all plant matter they encounter in their wide dispersals, like a large army. While maize is their favourite, the worms may also feed on more than 80 plant species, including rice, sorghum, millet, sugarcane, vegetable crops and cotton. After pupation, adult moths emerge. A female adult moth lays about 1,000 eggs in her lifetime. Did you know they can fly up to 100 km in just one night?

APHIDS

The sapsuckers

Aphids are soft-bodied insects that use their piercing mouthparts to suck sap from plants they infest. About 250 species of aphids have been described as pests. Depending on the species, they damage a variety of crops, fruits, vegetables and ornamental plants. Infestations generally result from winged aphids, which deposit several wingless young on the most tender tissue. The nymphs mature in 10 days and then reproduce asexually. Each female is capable of producing 40 to 60 offspring. The process is repeated several times. When the plant becomes overcrowded, some young aphids develop wings and fly off to infect more plants. Because of excessive sap removal, infested leaves eventually wilt or turn yellow while flowers and fruits become malformed. Aphids also act as vectors for plant viruses and disfigure ornamental plants with deposits of honeydew they secrete.



FRUIT & SHOOT BORERS

Boring through plants

The fruit and shoot borer is a moth species that primarily affects the brinjal plant. But it may also infect potato, tomato, maize, sorghum, cotton, sunflower, pigeonpea, chickpea, field beans and roses. In spring, the female moth lays eggs on the underside of the leaves, stem, buds or base of fruits. The hatched larvae bore into any of these parts and start feeding until they pupate. After drilling through the fruit or shoot, the insects plug the bore hole with their waste. As a result, the affected flowers and fruits dry up. If they bore through the shoot, it results in stunted growth.



ACTIVITY

Write about three insects that harm humans and three that are helpful to them.

DESERT LOCUSTS

Swarm of invaders

Related to grasshoppers, desert locusts are harmless solitary insects. They become destructive only in their gregarious phase, when they form bands of nymphs (hoppers or young ones) or swarms of adults and congregate into a thick, mobile, ravenous mass. They travel long distances in swarms, multiply in numbers as they migrate and devour vegetation wherever they settle. They eat leaves, flowers, fruits, seeds and bark, and also destroy plants by their sheer weight as they descend on them in massive numbers. A single swarm of the desert locust can pack between 40 and 80 million individuals into less than half a square mile and eat 423 million pounds of plants every day! During a plague, desert locusts may spread across some 60 countries in Africa, the Middle East and Asia. This makes them a threat to global food security.



PHOTOS: SHAHID ALI AKBAR, THE HINDU AND WIKIMEDIA COMMONS

LEISURE CORNER

A bridge to new worlds

Through this column, we explore books that you must read before turning 17...

Childhood is defined by friendships. And Katherine Paterson's "Bridge to Terabithia," tells a story of a sweet friendship between two unusually gifted children, who create a world of their own to escape overbearing parents and school bullies.

What it's about:

Jesse Aarons, becomes friends with his new neighbour, Leslie Burke, after he loses a race to her at Lark Creek Elementary School. Both of them are from different backgrounds. Leslie's parents are artists, who move to the rural community to lead a quiet suburban life. Leslie is well read and has rich imagination. But she

fears social interactions. Jesse belongs to a poor family and is bullied in school. As they become friends, both of them help each other overcome their fears and weaknesses. They create an imaginary kingdom for themselves in the woods behind their homes. Leslie names it "Terabithia."

Why you will love it: This coming-of-age book won the Newbery Medal in 1978. It has also been adapted into a 2007 Disney film. "Terabithia" is no less than Namia!



QUEST

Update your knowledge of Science

Here are a couple of snippets that provide interesting information...

Voracious appetite

The animal with the largest appetite is, of course, the largest of all animals – the blue whale. As much as 30 metres in length and 200 metric tonnes in weight, the blue whale eats almost 4000 kg of plankton every day. Elephants, the largest land animals, spend at least 20 hours each day, selecting, picking, preparing and eating food. The African elephant, a seven-tonner, eats more than 200kg of vegetation, and drinks over 90 litres of water every day.

Among carnivores, the animal that holds the record for the biggest appetite is the sea elephant. The 6.5-metre long creature weighs as much as 3,600 kg and eats 200 kg of fish every day. Strangely, animals that eat the most in relation to their size, are among the tiniest of all. The pygmy shrew, which hardly weighs 3 gm, eats insects that would altogether weigh three or four times its own weight. It needs to eat all day long, and would die within two to three hours if it does not get food.

Some insects feed voraciously. A female mosquito sucks the equivalent of its own weight in blood every time it bites a person – and it does this at least 15 times a day! The Polyphemous moth of

North America lays the largest eggs among insects. For the first 48 hours after the larvae emerge out of the eggs their appetite is so great that they eat as much as 86,000 times their own birthweight.

Simple to sip from

Joseph Friedman improved the drinking straw invented in the 1880s, to create the bendy straw in 1937. He was in a sweet shop watching his young daughter struggle to drink a milkshake out of a straw that was too tall for her. When he went home, he inserted a screw in the paper straw. He wrapped dental floss around the paper into the screw threads creating corrugations. After he removed the screw, the altered paper straw bent conveniently over the edge of the glass without obstructing the flow of the liquid. Friedman's company called Flex-Straw, made its first sale in 1947 to a hospital.

(Content provided by Amrita Bharati)



The new normal?

BERLIN, GERMANY: Germany gave fans across the world their first taste of elite football for two months. A few things we learned from one of oddest weekends in the game's history.

A vision of the future?

The Bundesliga has a headstart of at least a month over the other major leagues aiming to restart this summer, and some of the strange scenes seen might become the new normal. Fans across the world may have to get used to silent, empty stadiums, socially-distanced goal celebrations and substitute players on the bench, footballers wearing face masks and the spectre of players catching COVID-19.

All eyes on Germany

Specialist website DWDL.de reported on Sunday that over six million people in Germany watched the first top-tier matches in two months, with 3.68 million tuning into broadcaster Sky Germany's subscription channels on Saturday. The German Football League (DFL) said that matches had been televised by more than 70 broadcasters worldwide.

Temperature checks, empty terraces as Bundesliga returns



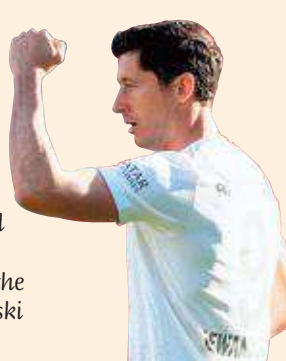
EVEN THE BALLS AREN'T SPARED Footballs are disinfected during a Bundesliga match between Duesseldorf and Paderborn. PHOTOS: AP, AFP

Bayern show no ring-rustiness

Heading into his team's tough trip to giant-killers Union Berlin, Bayern Munich coach Hansi Flick wondered whether his team would be able to last a full 90 minutes.

However a dominant display in the German capital, against a team that had already beaten two different league leaders at home this season, showed why they are the strongly tipped to win their eighth straight league title.

Bayern reestablished their four-point lead at the top of the table with goals by Robert Lewandowski (right) and Benjamin Pavard. AFP



TECH BYTES

What is a file hosting service?

Like a cloud storage service, a file hosting service is an Internet service designed to host users' files. It offers users the facility to upload their files using an Internet connection. Some even let users share their uploaded files. Users can use the hosting services to store and share different types of files using such as images, documents, powerpoint presentations, spreadsheets, PDFs and videos. While several file hosting services available online are free to use, most are paid. But even with a paid service, a certain amount of space is offered for free storage. Some popular file hosting services include Google Drive, OneDrive, Dropbox, SendSpace and iCloud. File hosting services are useful for users as they are cost-effective, offer a large storage space, facilitate ease of sharing and are accessible on-the-go.

ARTIVITY



Artwork by Kishika Chaudhary, Class 7, BBPS(GRH Marg), New delhi

Read the newspaper and create an original artwork based on a news item that interests you and send your entry to school@thehindu.co.in with the subject - Artivity. Select entries will be published. Please mention your name, class, school and city.