



Crops Lost to Pests

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Why in News

According to a recent report, as much as **40% of the world's agricultural crops** are lost to pests each year.

The **United Nations** declared 2020 as the **International Year of Plant Health**, which has been extended until 1st July, 2021.

Key Points

- **Reasons for the Spread:**
 - Half of all **emerging plant diseases** are spread by **global travel and trade**, which have tripled in volume over the last decade.
 - **Weather** is the second-most important factor.
- **Impact of Climate Change:**

It will **increase the risk of pests spreading** in agricultural and forestry ecosystems, especially in cooler **Arctic, boreal, temperate and subtropical regions**.
- **Controlling Invasive Pests:**
 - A single, unusually warm winter can be enough to assist the establishment of **invasive pests**.
 - **Fall armyworm pests**, which feed on crops like maize, sorghum and millet and **Tephritisid fruit flies** (that damage fruit and other crops) have already spread due to a warmer climate.
 - **Desert locusts (the world's most destructive migratory pests)**, are expected to change their migratory routes and geographical distribution because of climate change.

- **Impact of the Plant Pests:**
 - It leaves millions of people without enough food to eat.
 - It adversely impacts agricultural activities and thereby, the primary source of income for rural poor communities.
 - Invasive pests cost countries at least USD 70 billion annually and are one of the main drivers of biodiversity loss.
- **Key Recommendations:**
 - Farmers should adopt and policymakers should encourage the use of environment-friendly methods such as integrated pest management.
 - To make trade safe, it is important to implement international plant health standards and norms, such as those developed by the International Plant Protection Convention (IPPC) and Food and Agriculture Organization (FAO).
 - The IPPC is a plant health treaty signed by over 180 countries including India.
 - It aims to protect the world's plant resources from the spread and introduction of pests, and promote safe trade.
 - There is a need for more research as well as investment in strengthening national plant health systems and structures.
 - Policymakers and governments should ensure their decisions are based on sound preparation and data.
 - Regularly monitoring plants and receiving early warning information about emerging threats, helps governments, agricultural officers and farmers take preventive and adaptive measures to keep plants healthy.

Pest Controlling Methods

- The most popular methods of containing the pest include the use of Genetically Modified (GM) crops and pesticides, however, some armyworms have developed resistance to these tactics and are continuing to destroy crops.
- Natural approaches, including breeding predators such as wasps, to be released into fields when necessary, as well as developing a “germ warfare” that isolates diseases to which the caterpillar (armyworm) is prone, are being explored by the scientists.
- A quarantine system, under which imports of grains and plants that can host such insects are inspected at shipping ports, airports and land border crossings is the first line of defence taken by the countries across the world.
- The quarantine system in India is governed by the **Plant Quarantine (Regulation of Import into India) Order of 2003**, which is notified under the Destructive Insects and Pests Act of 1914.

In India, quarantine responsibility lies with the Directorate of Plant Protection, Quarantine & Storage (headquartered in Faridabad, Haryana). The short staffed directorate and the lack of a strong legislation have made the task of policing borders difficult in India.

Source: DTE