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Invasive Agricultural Pest: Fall Armyworm

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The Indian Council of Agricultural Research (ICAR) has raised an alarm after the invasive agricultural pest **Fall Armyworm (*Spodoptera frugiperda*)** was recently found in Karnataka. The discovery of pest in Karnataka is the first report of the pest in Asia.

- Fall Armyworm is a major maize pest in North America, which arrived in Africa in 2016. Since then, it has threatened the continent's maize crop which is a staple food and feeds 300 million people.
- Africa's experience shows that the pest can quickly colonise a new continent. First reported in Central and Western Africa in 2016, it has spread to 44 African countries today and has proved hard to control.

Concerns

- Although the pests reported in Karnataka, are only feeding on maize and sorghum at the moment, they are likely to spread to other crops. The pest feeds on around 100 different crops, such as vegetables, rice, and sugarcane.
- The pest can easily spread from Karnataka to the rest of the country and further to the neighbouring countries. States like Andhra Pradesh and Tamil Nadu are at immediate risk.

Past Incidences

- India has seen dozens of invasive species arrive in the last decade, reflecting poor quarantine measures (the legal enforcement of the measures aimed to prevent pests from spreading in case they have already gained entry and have established in new restricted areas) at entry points like ports.
- In 2008, the Papaya Mealybug, a Central American native, was reported in Tamil Nadu. Eventually, it spread across the country, destroying papaya crop. Eventually it was contained by bio-control measures.

Possible Solutions

- The first line of defence against the Fall Armyworm can be insecticides like lambda-cyhalothrin.
- Some natural predators such as coccinellid beetles have also been found that can aid biological control.
- A fungal species called *Nomuraea rileyi* have been found to infect the Fall Armyworm. However, these natural enemies may not be as effective as insecticides.
- Predators such as stem borer, which feed on this worm, will also help in keeping its population in check.
- The mechanical and chemical methods adopted by farmers are also working effectively at the moment.