

Mosaic Viruses

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Why in news?

- Tomato crop in Maharashtra was impacted by attacks of the **cucumber mosaic virus (CMV)**, while in Karnataka and other South Indian states the farmers blaming **tomato mosaic virus (ToMV)** for crop losses.

What is Mosaic virus?

- It is a **parasite that destroys plants**, gardens, and crops down to their molecular level.

- Once a plant contracts the mosaic virus, the infected plant can then spread the virus to other plants and even affect an entire harvest if left untreated.
- It affects a wide **variety of horticultural and vegetable** crops — roses, beans, tobacco, tomatoes, potatoes, cucumbers, pumpkins, squash, melons, and peppers.

What is ToMV?

- It belongs to the **Virgaviridae** family and is closely related to the tobacco mosaic virus (TMV).
- It hosts include tomato, tobacco, peppers, and certain ornamental plants.
- It spreads mainly through **infected seeds, saplings, agricultural tools**.
- It would require only a few infected saplings for the virus to take over an entire field in a matter of days.
- It can remain dormant in weeds and plant remains around the field, and come back later.

What is CMV?

- It has a **much larger host pool** that includes cucumber, melon, eggplant, tomato, carrot, lettuce etc.
- It was identified in cucumber in 1934, which gave the virus its name.
- It is **spread by aphids** which are sap-sucking insects.
- It can also spread through human touch, but the chances of that are extremely low.
- Conditions of high temperature followed by intermittent rain, which allow aphids to multiply, are conducive to the spread of CMV.

Q1) What are Aphids?

Aphids are small, soft-bodied insects that belong to the order Hemiptera. They are commonly found in gardens, agricultural fields, and other plant environments. There are numerous species of aphids, and they can vary in color, size, and appearance.

Source: [CMV and ToMV: the two 'mosaic' viruses that hit tomato crop in Maharashtra and Karnataka](#)

Source: <https://vajiramandravi.com/current-affairs/mosaic-viruses/>

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