



# Cucumber Mosaic Disease

**Dr.Sanjay Srivastava**

**Botany department**

**Harish Chandra P.G.College**

**Varanasi (U.P.)**

**Email [sanjaychandravns@gmail.com](mailto:sanjaychandravns@gmail.com)**

**Mobile 9415635846**

- Attacks cultivated varieties of cucumber.
- The host range includes melons, squash, peppers, spinach, celery, beets, tomatoes, banana, beans, crucifers, tobacco etc.
- The disease is considered important throughout the world particularly in temperate countries



# Symptoms

- Infection occurs in usually 6 week old plants.
- Young leaves become mottled, distorted, wrinkled and their edges begin to curl down.
- The internodes of stems and petioles are shorter.
- Necrotic areas develop on entire leaf.
- Such leaves get killed and hang down.
- The dwarf plant produces few runners, few flowers and few fruits.
- The fruits show pale green or white areas mixed with dark green.
- Wart like areas are seen on infected fruits and have bitter taste.
- Fruits become soft and spongy.

# Causal organism

The disease is caused by cucumber musac virus (CMV).

It is tripartite polyhedral virus.

The diameter of the virus is 30 nm.

Its molecular weight ranges from 5.8 to 6.7 million.

The virus particles consists of 82% protein and 18% RNA

# Disease cycle

- Between the growing Seasons the virus perennates on perennial weeds or on greenhouse plants and also in the seeds of *Echinocystis lobata*, a species of wild cucumber.
- The virus is easily **SAP transmissible**.
- Transmission also takes place by many **aphids** in non-persistent manner.
- The primary infection in the growing season mainly occurs by insect vectors
- While feeding on infected weeds and wild hosts, the insect vectors acquire the virus attached on their stylets.
- When such vector feeds on cucumber plants, they inoculate the virus in the.
- The virus multiplies within the hosts cells and move systemically throughout the plant resulting in the disease.
- Secondary infection occurs during the same season. It usually occurs by insects and human beings.
- Human act as agency of viruse spread through various cultural practices especially during the picking time.

# Control or Disease Management

- Perennial weeds and wild hosts should be uprooted from around greenhouses.
- Screen fitted on greenhouse ventilators helps keep out insect vectors.
- Use resistant varieties.

# References

- Plant Pathology by R.P.Singh
- Plant pathology by AGRIOS
- Plant Pathology by R.S.Singh