

Raja N.L.Khan Women's College (Autonomous)

Botany

UG-SEM-II Paper – C3T

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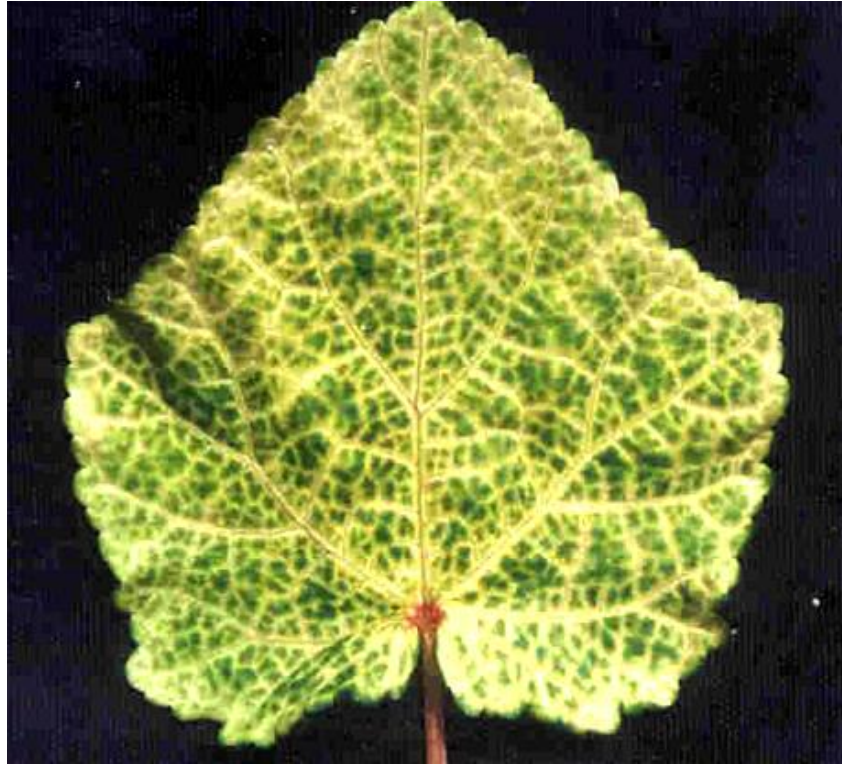
### **Vein-Clearing/Yellow Vein Mosaic of Bhendi (*Abelmoschus esculantus*)**

#### **Introduction**

It was first found in 1924 in Bombay of India and Sri Lanka. It is the major limitation of the production of okra. This disease is transmitted by the whitefly.

#### **Symptoms**

- Bhendi yellow vein mosaic virus Symptoms Yellowing of the entire network of veins in the leaf blade is the characteristic symptom.
- In severe infections the younger leaves turn yellow, become reduced in size and the plant is highly stunted.
- The veins of the leaves will be cleared by the virus and interveinal area becomes completely yellow or white.
- In a field, most of the plants may be diseased and the infection may start at any stage of plant growth.
- Infection restricts flowering and fruits, if formed, may be smaller and harder.
- The affected plants produce fruits with yellow or white colour and they are not fit for marketing.



### **Pathogen / causal organism**

Bhendi yellow vein mosaic (BYVMV) or yellow vein mosaic of okra (OYVMV) is a viral disease caused by *Monopartite Begomovirus*, *Bhendi yellow vein mosaic virus* (BYVMV, family: *Geminiviridae*) affecting Okra plants. (Bhendi virus-1 and Hibiscus virus -1.)

### **Mode of spread**

The virus particles are 16 – 18nm in diameter. The virus is transmitted by - white fly (*Bemisia tabaci*) Leaf hopper (*Empoasca devastans*) • Weeds – *Croton sparsiflora Malvastrum tricuspidatum, Ageratum spp.* • Not seed borne • Warm humid weather favor insect, population

### **Control of the virus**

#### **Physical control**

- Removal of infected plants & destroy.
- For sowing during the summer season, when the whitefly activity is high, the susceptible varieties should be avoided.

#### **Chemical control**

- Spraying monocrotophos 1.5 ml/litre of water can restrict the disease spread.

- It can be controlled by application of Chlorpyrifos 2.5 ml + neem oil 2 ml lit of water.
- Control of insect- Folidol @ 0.3% or Demecrane + Nuvan (1ml + 1ml) @ 1ml / 3 litre of water

### **Biological control**

- Management By selecting varieties resistant to yellow vein mosaic like Parbhani Kranti, Arka Abhay, Arka Anamika, and Varsha Uphar, Punjab -7, Hybrid -6 etc. the incidence of the disease can be minimized.
- The virus is transmitted by the whitely Bemisia tabaci,. Parbhani Kranti, Janardhan, Haritha, Arka Anamika and Arka Abhay can tolerate yellow vein mosaic.