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 intervenal 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 (*Empoasea 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 Chlorpyriphos 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.