Cucumber mosaic virus (CMV) can occur wherever tomatoes are grown. The host range of the virus consists of more than 750 plant species, including many vegetables (such as tomato, pepper, cucurbits, and legumes), weeds, and ornamentals. Some strains are specific to tomatoes.

**Symptoms.** Tomatoes infected with CMV are often stunted and bushy (with shortened internodes) and may have distorted and malformed leaves. Leaves may appear mottled (an intermingling of dark green, light green, and yellow tissue), a symptom similar to those caused by other viruses. The most characteristic symptom of CMV is extreme filiformity, or shoestringing, of leaf blades. CMV symptoms can be transitory; that is, the lower or upper leaves show symptoms while those in the midsection of the plant appear normal. Effect of CMV on yield depends on a number of factors, including plant age when infected and environmental conditions. Severely affected plants produce few fruit, which are usually small.

**Persistence and Transmission.** The extensive host range of CMV includes many weeds, which can serve as sources of CMV and contribute to spread of the virus to crops. CMV is usually introduced to cultivated tomatoes by aphids after they have fed and acquired the virus from a wild reservoir host. More than 75 aphid species are capable of transmitting the virus in the nonpersistent manner. Generally, the virus is acquired by aphids within 1 minute of feeding on an infected plant, but the aphids’ ability to transmit the virus quickly declines and is lost within several hours. Transmission efficiency varies with the aphid species, virus strain, host plant species, environmental conditions, and time of year. CMV does not persist in crop debris or soil, and unlike tobacco mosaic virus, it is not readily transmitted by handling infected plants. The virus is not seedborne in tomato but can be carried in the seed of 19 other plant species.

**Control.** CMV can be controlled by the following strategies:

- Eradicate all biennial and perennial weeds and wild reservoir hosts in and around fields. Maintain a distance of at least 10 yards between susceptible crops and weeds or other susceptible plants, including those in ditch banks, hedge or fence rows, and other locations.
- Plant earlier to avoid high aphid populations that occur later in the season.
• Plant late settings as far as possible from fields used to produce early tomatoes and peppers. These areas can act as sources of viruses and aphids for subsequent crops.

• Scout fields for the first occurrence of virus disease. Where feasible, pull up and destroy infected plants but only after spraying them thoroughly with an insecticide to kill any insects they may be harboring.

• Use reflective mulches to repel aphids, thereby reducing the rate of spread of aphid-borne viruses.

• Monitor aphid populations early in the season and apply insecticide treatments when needed.