

California Seed Association Fact Sheet Series



Background

Cucumber green mottle mosaic virus (CGMMV), originally described in 1935, was first reported in the U.S. in a melon seed production field in California in the summer of 2013. It was detected again in California in 2014 in a commercial seedless watermelon field, but has not been reported elsewhere in the U.S. The disease has long been known in Europe, Asia, the Middle East, and more recently in Canada. CGMMV is a member of the genus Tobamovirus, which also includes the well-known Tobacco mosaic virus (TMV). It has a narrow host range that is primarily limited to cucurbit species, including watermelon, melon, cucumber and rootstock.

CGMMV has the potential to be seed transmitted. However, the literature suggests that if seed transmission occurs, it is typically at a low rate. It can be easily spread mechanically through contaminated farm equipment, workers hands and clothing, and irrigation water. In some environments and production cultures CGMMV can be especially problematic due to the ease with which it is transmitted, and its stability and long viability in plant debris, in soil or on greenhouse or equipment surfaces. The damage it causes to the host plant and fruit can be extensive, resulting in substantial yield losses. Therefore, it could be an important threat to fresh market, export and cucurbit seed industries. CGMMV is NOT a food safety issue but a seed quality and food production issue.

The USDA considers CGMMV to be a transitory quarantine pest under official control/eradication due to the limited occurrence of CGMMV in the U.S. to date, the potential impact of the disease on the cucurbit industry and the likely success of a concerted effort to eradicate the disease.

Recommended Guidelines for Seed Companies, Transplant Houses and Growers

- o Ensure the seed from your suppliers or purchased seed has been tested for CGMMV and/or produced in an environment free of CGMMV
- o Become educated on the symptoms that can occur on the plants and fruit in seed or commercial production fields, and regularly inspect for the disease
- o Prevent contamination of workers/equipment, and practice good cultural practices and sanitation
- o Avoid co-mingling seed from different sources, especially in transplant productions
- o Contact your seed supplier if you have questions regarding detection procedures for CGMMV

More Information

Cucumber Green Mottle Mosaic Virus; Seed Production and Growers Guide
<http://bit.ly/1Fvot3E>

California Seed Association <http://www.calseed.org>

American Seed Trade Association <http://www.amseed.com>

California Department of Food and Agriculture <http://www.cdffa.ca.gov>

Cucurbit Disease Guide <http://bit.ly/1MataVk>

Updated February 2015

California  Seed Association

Q What is CGMMV? What do I need to know to protect my production??

A Cucumber green mottle mosaic virus (CGMMV) is a seed transmitted pathogen which has the potential to cause extensive damage to Cucurbit host plants and fruit in both commercial and seed production fields.