

Bean Common Mosaic Virus (BCMV)

Host Range and Symptoms

BCMV host range is limited but naturally infected plants include common bean, *Phaseolus vulgaris* L. var. *aborigineus*, *Rhynchosia minima* (L.) DC, and some wild tropical *Phaseolus* spp. Symptoms include light and dark green mosaic patterns on trifoliate leaves (Figure 1).

Other symptoms include: puckering, blistering, distortion, downward curling and rolling (Figure 2), and a mild or severe green-on-green mosaic mottle (Figure 3). Pinpoint, yellow dots or necrotic local lesions may often result in plant growth reduction. Plants infected at a young age may be stunted and distorted.



Fig. 1. Light and dark mosaic or typical green-on-green mosaic on green bean leaves, caused by BCMV. Note that veins have dark green areas. Photo: Robert Duncan

Causal Agent

BCMV belongs to the potyvirus group and is serologically related to them, especially to Bean Yellow mosaic Virus (BYMV).

Inoculum Source and conditions

This virus is spread between production areas and between seasons, especially in infected seed. The most important vectors are aphids, but also pollen, and mechanical transmission.



Fig. 2. Mosaic, leaf distortion and leaf roll, caused by BCMV. Photo: Robert Duncan



Fig. 3. Mild green-on-green mottling on bean leaves caused by BCMV. Photo: Robert Duncan

Management/Control

Control of vectors is the main form of virus control. Use of virus-free seed will also reduce incidence, however, the best method of control is by use of certified and/or resistant varieties or cultivars having the *I* gene or other Bean Common Mosaic Virus resistance genes.

Prepared by Dr. Ronald French¹ (rdfrench@ag.tamu.edu) Photos by: Robert Duncan².

¹Assistant Professor and Extension Plant Pathologist (Amarillo, TX);

² Assistant Professor and Small Grains/Oilseeds Extension Specialist

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