

In 2009 and 2010 the DATCP pest survey team conducted surveys of snap bean fields for the presence of diseases caused by viruses. Vegetable processors and fresh market producers cooperated in the survey by providing field locations and planting information. In 2010 a total of 78 fields were sampled between July 23 and August 24.

Fields were targeted for sampling at approximately 48 days post-planting. Plant disease specialists sampled each field by randomly choosing four sites in each field, and taking two leaflets from upper and mid-canopy from 5 plants at each site. Disease symptoms were noted when present. Aphids were counted on ten plants at each location. Leaves were kept on ice and promptly transported to DATCP Plant Industry Laboratory for testing.

Snap bean leaf tissue was tested using reverse-transcription polymerase chain reaction (RT-PCR) for AMV and enzyme-linked immunosorbent assay (ELISA) for all others. All samples were checked for the following viruses: alfalfa mosaic virus (AMV), bean pod mottle virus (BPMV), cucumber mosaic virus (CMV), potyvirus group, southern bean mosaic virus (SBMV) and tobacco ringspot virus (TRSV).

CMV was detected in 4 samples (5%) and a potyvirus was found in one field (1%). All CMV and potyvirus infected fields were located in Waushara County. None of the other viruses were detected. Most of the investigated viruses are seed transmitted to some degree but AMV and CMV are also be spread by aphids. It's notable that soybean aphid counts at the time of sampling were zero in all fields. BPMV and SBMV can be transmitted by bean leaf beetles. Bean leaf beetle counts were also very low in 2010. These virus test results lead to the conclusion that further investigation may be necessary including exploration of possible new viruses and new strains.

**Table 1. Snap bean virus summary from 2003 to 2010:**

Year	Total No of Fields Surveyed	AMV (%)	BPMV (%)	CMV (%)	Potyvirus group (%)	SBMV (%)
2003	25	NA	0	72	4	NA
2005	33	NA	0	3	9	NA
2006	62	NA	0	0	0	NA
2008	25	4	0	8	0	0
2009	101	7	0	4	2	NA
<b>2010</b>	<b>78</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>0</b>

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