

The DATCP pest survey team, in cooperation with processors and fresh market producers, conducted a survey for snap bean diseases caused by viruses. A total of 101 fields were sampled between July 6 and August 13, 2009.

Fields were sampled at approximately 48 days post-planting. Ten leaves (five from the top of the plants and five mature leaves) were collected at each of four locations in each sampled field. Notes were made on disease symptoms present, and counts of aphids were made on ten additional plants at each location. Leaf tissue was kept on ice and promptly transported to DATCP Plant Industry Laboratory for testing.



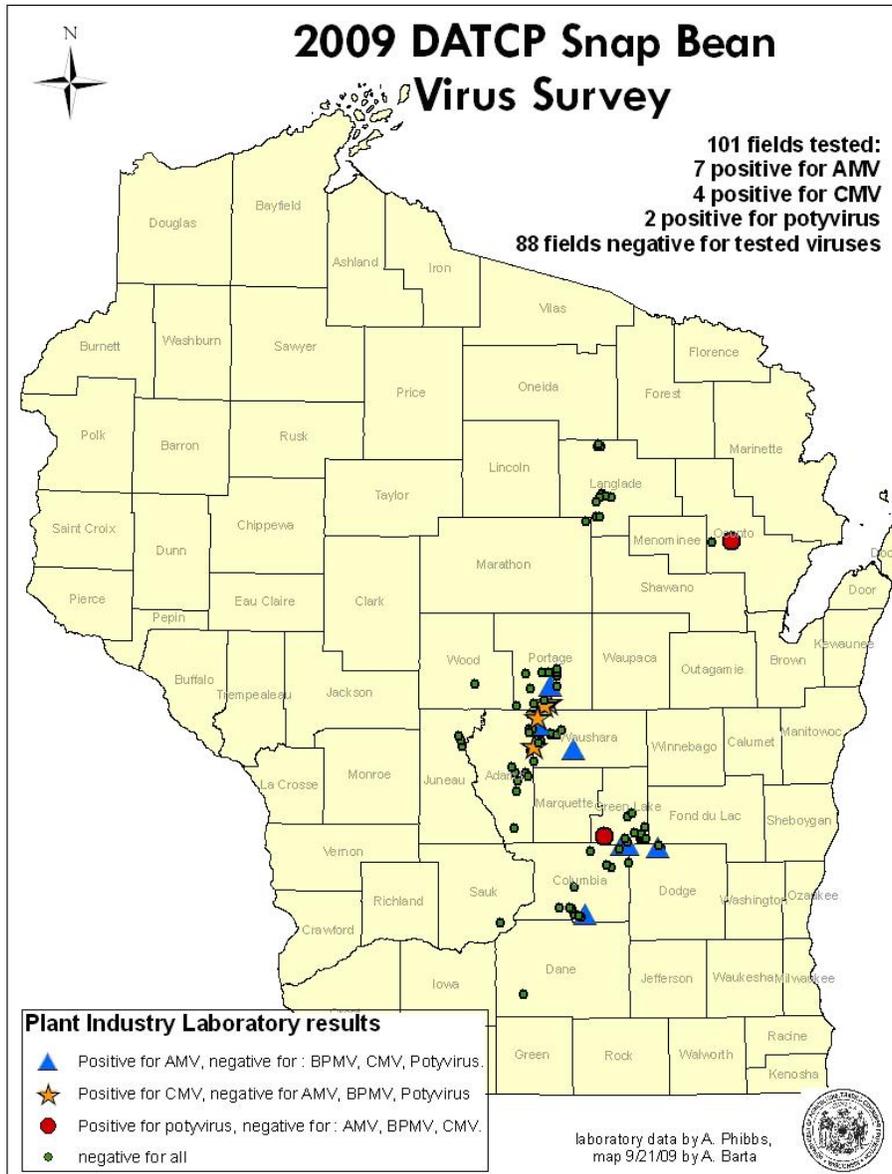
Foliage was tested for the following viruses: alfalfa mosaic virus (AMV), bean pod mottle virus (BPMV), cucumber mosaic virus (CMV), and the potyvirus group that includes bean common mosaic virus and bean yellow mosaic virus. Most of these viruses are seed-transmitted to some degree and can also be spread by aphids.

Laboratory analysis was conducted using reverse-transcription polymerase chain reaction (RT-PCR) for AMV, and enzyme-linked immunosorbent assay (ELISA) for all others.

Survey staff observed eleven fields with symptoms of white mold infection. Aphid counts were negligible throughout the sampling period. Laboratory results showed seven fields positive for AMV, no finds of BPMV, four fields positive for CMV and two fields positive for potyviruses that were not further characterized.

Snap bean virus summary from 2003 to 2009:

Year	Total No of Fields Surveyed	AMV (%)	BPMV (%)	CMV (%)	Potyvirus group (%)	SbDV (%)
2003	25	NA	0	72	4	0
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	0



Authors: Adrian Barta, WI DATCP Pest Survey, adrian.barta@wi.gov,
Anette Phibbs, WI Plant Industry Laboratory, anette.phibbs@wi.gov