

## RESULTS FOR THE 2002 DISEASE SURVEY

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### Introduction

In 2002, the WI Department of Agriculture, Trade and Consumer Protection (DATCP) conducted a number of surveys for diseases of agricultural crops. Two surveys of potential particular significance (bean pod mottle virus and potato mop top virus) are reported here.

### 1 — Bean Pod Mottle Virus

Bean Pod Mottle Virus (BPMV) is a relatively new disease of soybeans in Wisconsin. This virus is vectored by the bean leaf beetle (*Cerotoma trifurcata*). Infection by BPMV can reduce pod formation and reduce seed size, weight, and number. BPMV may also contribute to green stem syndrome and seed mottle, and may predispose the plant to seed infection by *Phomopsis*.

### Materials and Methods

Leaf samples were collected from 177 soybean fields distributed throughout the state. Samples of upper leaves were collected from five random sites in each field, for a total of 25 leaves per field. Leaves from an individual field were pooled. Field samples were placed on ice until frozen at -20C.

Samples were tested for BPMV using DAS ELISA according to manufacturer's instructions (Agdia, Inc., 30380 County Road 6, Elkhart, IN 46514). Ten leaves were randomly selected from the 25 in the sample, and tissue for testing was taken from each of the ten leaves.

### Results

ELISA testing indicated that 53 samples of the 177 collected were positive for BPMV. Positive fields were found primarily in the southern two tiers of counties, with the highest concentration of positive fields in the Southeast region of the state.

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## **2 — Potato Mop Top Virus**

A recent find of potato mop top virus (PMTV) in Aroostook County, Maine, led to concerns about the possibility of the disease occurring elsewhere in the country. As part of a national effort, DATCP sampled every lot of certified seed potatoes in the state for the presence of PMTV.

### **Materials and Methods**

Six tubers were collected from each of the 579 seed lots registered with the Wisconsin Seed Potato Certification Program. Tissue samples were taken from tubers and run to a TAS ELISA according to manufacturer's instructions (Adgen Lt, Nellie's Gate, Auchincruive, Ayr KA6 5HW, UK). Some early generation seed lots were tested at less than six tubers per lot, for a total of 3,242 tubers tested.

### **Results**

No positive tubers were found in the survey. The negative results will allow Wisconsin seed growers to continue to ship seed potatoes interstate and to Canada.