# SOYBEAN APHID AND VIRUS INCIDENCE IN SNAP BEANS

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## Introduction

Coincident with the appearance of the soybean aphid, *Aphis glycines*, in Wisconsin during the 2000 growing season there was an precipitous increase in the appearance of virus symptoms on snap beans in southern and eastern Wisconsin. In 2001, the area affected by the virus disease complex appeared to be expanding in Wisconsin and was reported in Michigan and New York. The economic losses caused by the virus aphid vector complex in these states are having a devastating affect on the snap bean industry. To begin to characterize this epidemic, we conducted a survey during the 2002 growing season in five major snap bean production areas in Wisconsin to determine the incidence, geographic distribution and, to some extend, the timing of appearance of cucumber mosaic virus (CMV) and alfalfa mosaic virus (AMV). While other viruses are likely to be involved, we focused on these two because of preliminary data suggesting their involvement, their association with soybean aphids and their non-persistent manner of transmission indicating that aphid control procedures would have a minimal impact on virus transmission.

## Results and Discussion

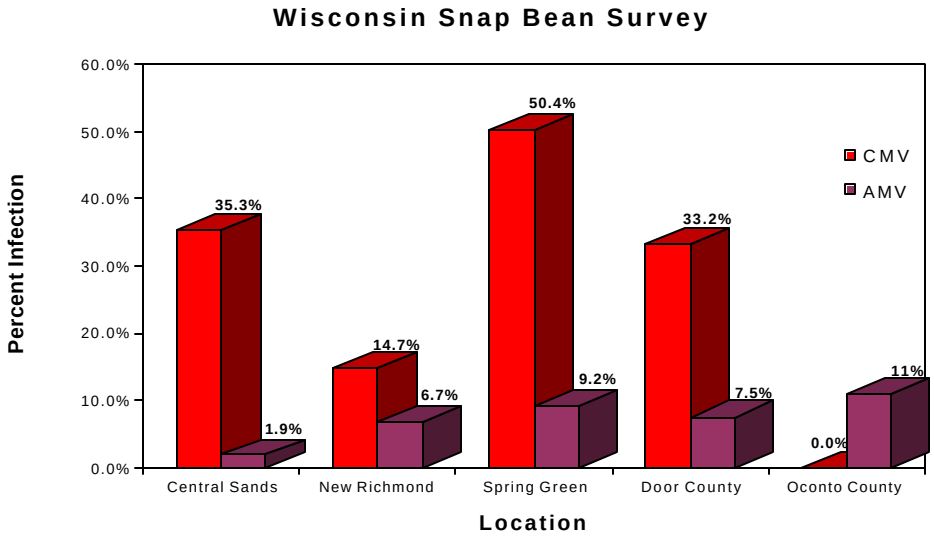


Figure 1

We found a high incidence of one or both viruses in all of the growing regions where we sampled (see figure 1). The data suggest that southern locations and late planting date are associated with the highest incidence of virus infection.

If the soybean aphid continues to be present in high numbers it will be essential to develop IPM procedures to address the severe virus incidence in the snap bean production areas. To begin this process we have worked with others to help them develop insecticide programs to reduce vector spread or to identify sources of plant resistance to the several viruses involved.

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