

# INTEGRATED CROP MANAGEMENT

## **Bean pod mottle virus: Back with a vengeance**

As stated in an earlier article in the *ICM Newsletter* ([May 15, 2006](#) [1]), bean leaf beetles are back with a vengeance this year. Based on observations from agronomists across the state, this year seems to have the highest level of bean leaf beetles since 2002. This also has resulted in an apparent high incidence of bean pod mottle virus disease in Iowa fields. Infected plants can be characterized by the leaves, which show a yellow to green blotchy appearance called leaf mottle. Sometimes leaves have a raised or blistered appearance.

Not all soybean varieties show symptoms, which can be variable based upon virus isolate and soybean cultivar. Research sponsored by the soybean check-off through the Iowa Soybean Association and the North Central Soybean Research Program has demonstrated three potential sources of the virus in Iowa. These include virus in overwintered leaf beetles, virus in perennial host species, and virus in infected seed. Present research is examining the potential importance of some of these sources.

Presently, disease management is focused on managing the principal insect that spreads the virus, the bean leaf beetle. Management options developed at Iowa State University, based upon control of the beetle, were published in the *ICM Newsletter* on [May 2, 2005](#) [2].

## **What can we expect for this fall?**

Unfortunately, due to the high incidence this year, yield loss may approach 10-20 percent of yield potential for some susceptible varieties. Also, seed quality problems will be significant in seed harvested from infected fields. Typically, seed will be characterized by seed staining or hilum bleeding.

## **Can we expect more effective disease control strategies in the future?**

Preliminary results from current research sponsored by the soybean check-off provide information that allows us to be optimistic. Results that examine the potential for use of insecticidal seed treatments are currently being analyzed. In addition, cooperative research between Iowa State University and the University of Wisconsin has identified, for the first time, field tolerance to this disease. Expect to read more about these exciting results in future issues of the *ICM Newsletter*.



[3]

Soybean plant infected with bean leaf mottle virus. (Palle Pedersen)

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<http://www.ipm.iastate.edu/ipm/icm//ipm/icm/2006/8-7/bpmv.html>

**Links:**

[1] <http://www.ipm.iastate.edu/ipm/icm/2006/5-15/blb.html>

[2] <http://www.ipm.iastate.edu/ipm/icm/2005/5-2-2005/integrated.html>

[3] <http://www.ipm.iastate.edu/ipm/icm/node/638>

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