The Dangers Of Green Bean Syndrome

Experts Explain How This Mysterious Syndrome Can Hurt Soybean Yields

MILAN, TENN.

The cause is unknown and it's hard to tell just where it may pop up, but in severe cases, a condition known as Green Bean Syndrome (GBS) can cause extensive damage to soybean fields.

With GBS, plants fail to mature, remaining green long after the rest of the field is ready to harvest. Leaves and stems of affected plants remain green and pod development is warped. GBS has plagued the Mid-South for decades, and while it typically only affects a few scattered plants, in 2008, severe outbreaks caused 10 to 100 percent damage in certain fields in Eastern Arkansas.

"The damage was extensive and was observed in a number of cultivars, maturity groups, and in both conventional and Roundup Ready cultivars," says Dr. John Rupe, University of Arkansas.

The cause of GBS is unknown, although there are several possibilities. One strong possibility is stinkbug. Stinkbugs feed on the developing soybean embryo. This feeding can result in seed death and saliva from the stinkbug can also cause abnormal plant growth. Field tests have shown that intensive stinkbug feeding can result in GBS. However stinkbugs have not been associated with all affected fields, indicating that they may be only part of the story.

Other possible causes are viruses and phytoplasms. The research into these possibilities as well as other observations from affected grower fields will be discussed more thoroughly at the presentation during the Milan No-Till Field Day on July 22, 2010. "Soybean Green Bean Syndrome" is one of five presentations on Tour F: No-Till Soybean Production. For more information on this or other tours go to our website: http://milan.tennessee.edu or call 731-686-7362. Δ