Ontario Soybean Rust Sentinel Plots For 2005

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Introduction

Soybean rust (Phakopsora pachyrhizi) is a new and invasive fungal disease of soybean in North America. The risk to Ontario and Canadian soybean production from this invasive disease increased substantially with the confirmation and subsequent spread of P. pachyrhizi in the southern United States. As an extension of the comprehensive monitoring program put in place for the 2005 growing season by the United States Department of Agriculture (USDA), United Soybean Board (USB) and the North Central Soybean Research Program (NCSRP), a series of soybean sentinel plots (44) were established across the soybean production area of southern Ontario (from Windsor to Ottawa).

Scouting The Key!

The sentinel plot program involves intensive scouting for symptoms and field evaluations by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) in conjunction with Agriculture and Agri-Food Canada and industry partners. Questionable leaf samples were screened for the pathogen by Sarah Hambleton with Agriculture and Agri-Food Canada in Ottawa using a rapid PCR-based detection tool developed by the USDA. Scouting results were posted on the USDA website (www.sbrusa.net) and the Ontario Soybean Growers website (www.soybean.on.ca).

2005 Soybean Rust Sentinel Plot Locations

Ontario Soybean Rust Coalition

The Ontario Soybean Rust Coalition is a group of key industry players - including extension (government), producers, researchers, equipment and chemical companies - committed to providing resources to tackle the debilitating crop disease. Coalition members include: the Ontario Ministry of Agriculture, Food and Rural Affairs, Ontario Soybean Growers, University of Guelph, BASF, Bayer CropScience, Dow AgroSciences Canada, E.I. du Pont Canada Company, Monsanto Canada, Pioneer Hi-Bred Limited, Syngenta Crop Protection Canada Inc, Syngenta Seeds, and John Deere & Company.

Conclusions

Although soybean rust was not detected in Ontario or Canada during the 2005 growing season, the sentinel plot network provides an effective decision support tool for producers and advisors considering whether a fungicide application is appropriate. A “preventative” fungicide for instance, must be applied prior to the disease establishing and this network provides sufficient lead time. In addition, tracking the disease within the province can assist in the switch from “protective” to “curative” fungicides. The sentinel plot system proved to be a very effective and successful tool for producers, extension, consultants and the soybean industry.

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