

FOLIAR FERTILIZER AND PYRACLOSTROBIN FUNGICIDE COMBINATIONS FOR CORN

John M. Shetley¹, Kelly A. Nelson², Bruce A. Burdick³, Peter P. Motavalli¹,
William E. Stevens⁴, and Laura E. Sweets⁵

¹Dept. of Soil, Environmental and Atmospheric Sciences, Univ. of Missouri, Columbia, MO

²Division of Plant Sciences, Univ. of Missouri, Novelty, MO

³Division of Plant Sciences, Univ. of Missouri, Albany, MO

⁴Division of Plant Sciences, Univ. of Missouri, Portageville, MO

⁵Division of Plant Sciences, Univ. of Missouri, Columbia, MO

Abstract

Incorporating a foliar applied fertilizer with fungicide application could reduce application costs, improve disease suppression, increase nutrient response, and enhance the management of crop response to environmental conditions within the growing season. A two-year field trial was initiated in 2008 at three sites in northeast, southeast and northwest Missouri. Treatments consisted of a factorial arrangement of 13 different commercially-available foliar fertilizers containing both macro- and micronutrients in combination with or without the fungicide, pyraclostrobin. These treatments were arranged in a randomized complete block design with three to five replications depending on the site. Corn injury, foliar disease incidence, and ear leaf nutrient content were evaluated and grain yield determined. Incidence of disease was less than 5% at all locations and the effect of pyraclostrobin on disease suppression was minimal. Fertilizer treatments at the northeast or northwest sites did not affect disease incidence while there was an inconsistent effect of fertilizer treatments on the disease incidence at the southeast site. Pyraclostrobin increased yield 691 kg ha⁻¹ when compared to the control at two sites in 2008. There was no significant increase in grain yield when foliar fertilizers were applied to corn at tasseling. Some foliar fertilizers reduced grain yield 879 to 1507 kg ha⁻¹ when compared to the non-treated control in 2008. These initial results indicate that use of fungicide alone may have the greatest effect on reducing disease incidence and increasing corn yield.

**PROCEEDINGS OF THE
THIRTY-NINTH
NORTH CENTRAL
EXTENSION-INDUSTRY
SOIL FERTILITY CONFERENCE**

Volume 25

**November 18-19, 2009
Holiday Inn Airport
Des Moines, IA**

Program Chair:

**John Lamb
University of Minnesota
St. Paul, MN 55108
(612) 625-1772
JohnLamb@umn.ed**

Published by:

**International Plant Nutrition Institute
2301 Research Park Way, Suite 126
Brookings, SD 57006
(605) 692-6280
Web page: www.IPNI.net**