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# Soybean Fungicide Phytotoxicity Study, Northwest Research Farm

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## **Abstract**

This study was done to evaluate the potential leaf burn (phytotoxicity) of two fungicides on 32 commonly grown soybean varieties. These 32 varieties represented diverse genetic backgrounds and ranged in maturity from late maturity group (MG) 0 to late MG II. Most of the varieties were in the late MG I to early MG II maturity range and would be commonly grown in northern Iowa.

## **Disciplines**

Agricultural Science | Agriculture

# Soybean Fungicide Phytotoxicity Study, Northwest Research Farm

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## Introduction

This study was done to evaluate the potential leaf burn (phytotoxicity) of two fungicides on 32 commonly grown soybean varieties. These 32 varieties represented diverse genetic backgrounds and ranged in maturity from late maturity group (MG) 0 to late MG II. Most of the varieties were in the late MG I to early MG II maturity range and would be commonly grown in northern Iowa.

There has been some concern that the triazole group of fungicides may cause some leaf burn to soybean leaves, when applied under hot, humid conditions. Two triazole fungicides were used in this study. Metconazole was evaluated and it is currently under consideration as a section 18 emergency exemption fungicide. Caramba is the trade name of metconazole used in this experiment. Tebuconazole was also evaluated and it is currently available as a section 18 emergency exemption fungicide in the United States, where it is sold under the trade names of Folicur, Orius, and Uppercut.

## Materials and Methods

The fungicide treatments were a 1X rate of metconazole (9.6 oz/acre), a 2X rate of metconazole (19.2 oz/acre), and a 2X treatment of tebuconazole (8.0 oz/acre). Treatments were applied on July 19, 2005, to soybeans that were in the full bloom (R2) stage. Conditions were ideal for crop injury as the air temperature was over 90°F with high relative humidity.

## Results and Discussion

There was little to no crop injury on any of the 32 varieties in this study. Some varieties showed a small amount of crop injury when the 2X treatments were applied immediately after the initial application. However, even this injury was cosmetic and disappeared after about 10 days. This study shows that the fungicides metconazole and tebuconazole would not be expected to cause significant crop injury from phytotoxicity.

## Acknowledgments

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