

**P324. Evaluation of fungicide application methods
in post flowering soybeans to support
recommendations for control of soybean rust,
Phakopsora pachyrhizi, preliminary report**

M.R. Miles¹; A. Blaine²; C. Tingle³; D. Lancos⁴;
M. Draper⁵; L. Giesler⁶; G.L. Hartman¹; W. Pederson⁷

¹USDA-ARS, University of Illinois; ²Mississippi State
University; ³Louisiana State University; ⁴University of
Arkansas; ⁵South Dakota State University;

⁶University of Nebraska; ⁷University of Illinois.
e-mail: mrmiles@uiuc.edu.

Asian soybean rust is one of the most devastating
diseases of soybean with yield losses of 10 to 100%
reported. The disease is found primarily in the lower
canopy before flowering and in the middle and upper
canopy after flowering. Heavily infected plants often

prematurely defoliate causing significant yield losses. Until useful genetic resistance can be identified and moved into commercial cultivars, fungicides will be the primary means to control the disease. There is not much information on fungicide application in soybean. Fungicide use in soybean has been limited to seed treatments and a single late season foliar . With soybean rust the canopy needs to be protected from onset of flowering through pod fill. The research presented is a preliminary summary of the measurement of canopy penetration using high and low water volumes with two fungicides, Bravo and Quadris. Fungicide were applied aerially at 5 and 10 gal/ac in six locations in the southern US and by ground in three locations in the midwest US. In the ground application experiment air induction, flat fan pointed down, flat fans on drops set to spray 105° and twin jet on forward facing right angle drops set to spray 80° nozzles were compared. Field design was set up as a strip plot with at least three replications per location. Three water sensitive paper strips were placed at mid canopy across the spray swath in three locations the length of the plot. Increased water volume in both ground and aerial application improved fungicide coverage when compared to the lower application volume. Among the nozzle tips evaluated in ground applications, overhead flat fans provided the least fungicide coverage in mid canopy.