

PI: Frances Trail

PI's E-mail: trail@msu.edu

Project ID: FY11-TR-008

FY10 ARS Agreement #: 59-0790-6-068

Research Category: PBG

Duration of Award: 1 Year

Project Title: Towards the Elimination of Scab Inoculum from Crop Residues.

PROJECT 2 ABSTRACT

(1 Page Limit)

Ascospores are a major source of inoculum for the head blight disease. These wind-dispersed propagules are borne in ephemeral perithecia derived from overwintering, lipid-filled hyphae. These lipid-filled hyphae form underneath the plant epidermis and perithecia form in association with light-transmitting cells (stomates and silica cells). We hypothesize that these lipid-filled hyphae are the major overwintering stage of the fungus. Located close to the surface of the crop residues, these hyphae are relatively accessible to physical and chemical treatments that may reduce their viability.

We will investigate the fungal responses to environmental conditions that lead to overwinter survival and perithecium development.

This proposal addresses the priority 3: Develop new strategies for reducing impact of FHB disease and mycotoxin contamination in barley and wheat.