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EVALUATION OF LIGNIN DEPOSITION, BY AURAMINE O FLUORESCENCE MARKING, ON PARTIAL RESISTANT SOYBEAN GENOTYPES AGAINST *Sclerotinia sclerotiorum* [1] / Avaliação da deposição de lignina, através da marcação por fluorescência de auramina O, em genótipos de soja com resistência parcial à *Sclerotinia sclerotiorum*.

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The efficient control of soybean white mold is obtained with the use of chemical products, biological control and recently with the introduction and adoption of the first partial resistant cultivars. The objective was to determine the cell wall lignin deposition by a fluorescence stain method with auramine O, on soybean genotypes with different levels of partial resistance against *S sclerotiorum*. The plant material for analysis under fluorescence microscopy was obtained from a resistance characterization experiment, with inoculation of a *S. sclerotiorum* isolate (Jataí) by *straw test* method, in V3-V4 soybean lineages, conducted at the Federal University of Uberlândia inside the Plant Protection and Micology laboratory (UFU - LAMIP) growth chamber (± 20 ° C) in the year of 2015. The material was collected five days after inoculation (dai), dried at 60 °C in a Pasteur oven, packed in, properly identified inside paper bags and stored in desiccant Chamber (silica gel) until analysis. The six treatments consisted of two standard cultivars, one cultivar having partial resistance (EMGOPA-316) and a second cultivar (M7908RR), susceptible to the pathogen, as well another four genotypes from the Laboratory of Germplasm Development at UFU (LAGER-UFU). For the detection of lignin, sections cut by stilettos, from the stem region near the floral gems, were firstly treated in HCl-Floroglucinol and later stained with 0.02 $g.mL^{-1}$ Auramine O (Baayen et al., 1996). The stained sections were taken and visualized with an Epi-fluorescence microscope Zeiss Axio Observer Z1 with the AxioVision software (Carl Zeiss, Germany), using a 20× Objective and the filter set Chroma 39004 AT 605/55m EM779/629. The fluorescence intensity was measured as Integrated Density using the ImageJ software in 10 image fields of 0.4 mm^2 as replicates for each treatment. The values were corrected according the total cell fluorescence calculation (CTCF) (Fernando et al., 2015). The data was compared with the plant lesion size (cm), measured five dai. There was significant difference at CTCF ($p<0.01$) on different genotypes, and the lignin fluorescence intensity data matched for lesions sizes, comparing resistant and sensible cultivars on TSD - Tukey Significant Difference (5%). This method showed a useful inference to characterize different plants, about the construction of resistance and horizontal lignin barriers against pathogens infection.

Key words: Horizontal resistance; lignin; white-mold; Fluorescence Microscopy.

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