GAS EXCHANGE AND CHLOROPHYLL *a* FLUORESCENCE IMAGING OF SOYBEAN LEAVES INFECTED WITH *Colletotrichum truncatum* / Trocas gasosas e fluorescência da Clorofila *a* em folhas de soja infectadas por *Colletotrichum truncatum*.

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Anthracnose, caused by *Colletotrichum truncatum*, is one of the most important soybean diseases worldwide. However, there are no studies evaluating the physiological changes affecting this pathosystem. Therefore, one approach to evaluating events that occur at the site of infection and near the infected area on the leaf, over time, will contribute to a better understanding of the host-plant interaction and photosynthetic activity. The present study aimed to investigate chlorophyll *a* fluorescence parameters at injured and adjacent areas and the related changes in gas exchange and evaluation of photosynthetic pigments in soybean plants inoculated or non-inoculated with *C. truncatum*. However, there was a reduction in the concentration of Chl *a*, Chl *b* and Chl total (*a* + *b*) of inoculated plants in the 72 and 144 hours after inoculation. Reduction in chlorophyll *a* fluorescence parameters to as initial fluorescence (F_o), maximal fluorescence (F_m), maximal photosystem II quantum yield (F_v/F_m), quantum yield of regulated energy dissipation Y (NPQ) and coefficient non-photochemical (qN), and an increase in the effective PSII quantum yield Y (II), quantum yield of non-regulated energy dissipation Y (NO) and photochemical coefficient (qP) only in the symptomatic area. However, these parameters have undergone minor effects in adjacent areas from inoculated plants. Additionally, there were no significant differences regarding gas exchange parameters for inoculated plants. Thus, this study demonstrated that *C. truncatum* did not impair the photosynthetic efficiency in soybean leaves.

Key words: *Glycine max*; Anthracnose; Soybean.