XVI BRAZILIAN CONGRESS OF PLANT PHYSIOLOGY

24th to 28th September, 2017
Fazenda Fonte Colina Verde Hotel
São Pedro, SP - Brazil

Abstract Book

I08 - Photochemical efficiency of photosystem in *Carapichea ipecacuanha* under shading in different seasons of the year

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The *Carapichea ipecacuanha*, known as ipecacuanha, is an undergrowth plant that presents low adaptation to high luminous intensity environments. Information regarding its adaptability to different light intensity level is an important factor for increasing the active principle produced by these plants which have high market value. The aim of this study was to evaluate the photochemical responses of ipecacuanha plants, grown at different levels of shading (50, 70 and 90%) in four different seasons of the year (spring, summer, autumn and winter). Plants were grown in greenhouse with different shading and arranged in lines with space of 0.30m between each plant. Chlorophyll *a* fluorescence analyses were performed at each season of the year, according to the shading. Plants under 50% of shading presented greater energy dissipation flux per reaction centre (DI_o/RC) on summer and lower energy flux dissipation on autumn. In addition, plants under 50% of shading showed greater reduction of the Performance Index (PI_{abs} e PI_{total}) for conservation from exciton to the reduction of photosystem I end acceptors, demonstrating that there was a decrease in the energy conservation capacity, mainly on winter. Therefore, plants under 50% of shading showed a greatness alterations on photosystem functioning compared to 90% of shading in all seasons of the year which demonstrates that both high intensity and prolonged exposure of the plants to radiation may influence negatively their metabolism.

Keywords: Ipecac, chlorophyll *a* fluorescence, light stress, photosystem efficiency, Rubiaceae.

Acknowledgments: CAPES, CNPq, FAPERJ and Embrapa Amazônia Oriental

I09 - Development of a protocol aiming at the estimation of pigment contents in maize leaves by hyperspectral remote sensing

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There is a current trend towards determination of pigment contents in plant leaves by non-destructive methods, especially with the use of spectral images acquired by multi or hyperspectral cameras. Such an approach makes the evaluation process of this characteristic