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INFLUENCE OF IRON MICRONUTRIENT AND WATER LEVELS ON THE CHLOROPHYLL INDEX IN SOYBEAN VARIETIES GROWN ON SANDY SOIL

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RESUMO

Soybean is one of the major commodities of the in the world agricultural sector, and Brazil plays an important role in this crop, being responsible for a large part of world production according to United States Department of Agriculture (USDA). Understanding the needs of this soybean plant at local conditions are indispensable precepts to achieve higher yields. In this sense, the recommendation of an appropriate variety for specific regions is a fundamental requirement, especially when dealing with soils with a sandy texture and low annual rainfall. In order to identify varieties that are more favorable to the development of such environmental conditions, an entirely randomized experiment was conducted, with 4 repetitions, in a triple factorial scheme, involving 5 varieties, 4 concentrations of Fe (0, 250, 500, 750 and 1000 mg/kg of soil), and 4 levels of soil water logging (8%, 25%, 45% and 100%). The experiment was conducted in a greenhouse, in the experimental area of the UNESP - Dracena Campus. Soil waterlogging was monitored with Falker's Hidrofarm equipment. The level of plant response associated with the chlorophyll index was evaluated using a Falker chlorophyllometer, assessed after 5 consecutive days of water stress. The availability of water allows the absorption of iron by the plant, which is potentially capable of damaging the photosynthetic apparatus of the soybean plant. In general, it was possible to verify that as the iron and water concentration increases, the chlorophyll index decreases, with 500 mg being the ideal iron dosage and a condition around 25% and 45% waterlogging being the most responsive for the varieties.

PALAVRAS-CHAVE: iron; Varieties; Water; chlorophyll

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