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Plant Extracts of Straw from Sugarcane (Saccharum spp.) in the Attenuation of Toxicity by Aluminum

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Organic acids from decomposition of sugar cane straw are capable of interacting with elements of the soil solution, attenuating the toxicity by aluminum (Al) and promoting greater movement of cations in the soil profile. This research had as objective to analyze organic acids present in the straw of the sugarcane varieties RB855453, RB966928. The experiment was conducted under laboratory conditions. The experimental design used was the completely randomized, with five repetitions. The results showed that the analysis, chemical characterization and determination of water-soluble organic compounds of plant extracts (malic and acetic acid) was of great importance for the understanding of the development of the root system of sugarcane considering the soil management systems, since they provide information about the ability of the attenuation of the Al, exchangeable acidity of the soil and the mobility of basic cations to the soil sub layers. This study pointed out greater power of exchangeable cations transport throughout the soil profile, and Al neutralization phytotoxic by the vegetable extract of straw of RB867515 variety, because, besides highest content of basic cations and greater electric conductivity, the total concentration of organic acids was higher on the vegetable extract from the straw of this variety.