

ENRICHMENT OF ORGANIC COMPOUND WITH MICRONUTRIENTS

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The filter cake is a residue of the sugarcane industry. The filtration of the sugarcane juice, in general presents high levels of organic matter, potassium, calcium and magnesium among other nutrients. When supplemented with mineral fertilizers, the filter cake can replace planting fertilization by providing sufficient amounts of nutrients. An alternative of organomineral manufacture is the mixture of this organic compound with sources of micronutrients to supply the requirement of sugar cane. The objective of this research was to evaluate the enrichment of the organic compound with a source of micronutrients in the form of salts totally soluble in water, containing the micronutrients boron, copper, manganese, molybdenum and zinc. The research project was carried out in a partnership between the University of Sao Paulo and Abengoa Agroindustry, being conducted in the composting yard of the unit located in Pirassununga, São Paulo. Three doses of MS-MultiMicro® fertilizer, recommended for planting or sugarcane ratoon and a control treatment, composed of the residue without enrichment, with four replications, were evaluated. The treatments were arranged entirely at random on a filter cake line of approximately 150 tons. The enriched area of each treatment was 20 linear meters, equivalent to approximately 20 tons of compost. In order to follow up the chemical parameters, the composites were evaluated at the moment of the experiment assembly for the chemical characterization and at 15, 30, 45 and 60 days after the application of the treatments. The analysis of the micronutrient contents in the organic compound were carried out according to the methodology that uses an acid extractor (HCl 1N). Statistical analyzes of the results were performed in SAS statistical software. It is possible to verify linear increase of micronutrient contents as a function of the evaluated doses of nutrients for copper, iron, manganese and zinc

Biography

Jessica Angela Bet has completed Graduation in Agronomic Engineering from the Brazilian University in 2011 and Master of Sciences from the University of Sao Paulo in 2015. Currently, she is a PhD student in Sciences at the University of Sao Paulo-University of Animal Science and Food Engineering. She works on the following topics: artificial vision for identification of the nutritional status of plants, soils and plant nutrition, technology of fertilizer application and use of residues in fertilization.

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