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Sugar cane management with humic extract and organic and mineral fertilizer: impacts on Oxisol some physical properties

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The present investigation has as objective to study the impact of cultive systems, humic extract and organic and mineral fertilizers on Oxisol some physical properties cultivated of sugar cane. It was developed in Aparecida do Taboado, Mato Grosso do Sul, Brazil, in Manufactores Alcoolvale. The study was in sugar cane culture implanted on 3th and 4th cycle. The experimental design was at randomized blocks following scheme in zone with eight treatments and four replications. The two treatments in main zone were represented by cultivation systems (with and without chisel) and the subzone fertilization (T1-mineral, T2-mineral+sugar cane residue, T3-mineral+humic and fulvic acids and T4-mix of mineral, sugar cane residue and humic and fulvic acids). In three soil layers: 0.00-0.05; 0.10-0.20 and 0.20-0.40 m were studied the physical soil properties: macroporosity, microporosity, total porosity and soil bulk density. Also evaluate the technological quality of sugar cane. The conclusions are: the application of mineral fertilizer+sugar cane residue+humic extract (Humitec ®) and cropping system with chisel were more effective in improving soil physical; the system of crop of sugar cane ratton implanted in the 2th and 3th cycle, without the use of chisel was better in the recovery of soil physical properties; the crop system without the chisel and the combination of mineral fertilizer+sugar cane residue was promising to increase of Brix, Pol juice, Pol sugar cane and total recoverable sugars Pol.