

te trabalho tem como principal objetivo avaliar e comparar microbiologicamente a água de poços rústicos em bairros do município de breu branco/pa, sendo coletada uma (01) amostra por bairro, totalizando dez bairros. **Materiais e métodos.** Para a determinação das coliformes totais e termotolerantes presentes na água analisada, utilizou-se a técnica do número mais provável (nmp), cujas etapas consistiram em: teste presuntivo (caldo LST – Caldo Lauril Sulfato Triptose), teste confirmativo para coliformes totais (caldo VB – Caldo Verde Brilhante) e teste confirmativo para coliformes fecais/termotolerantes (caldo EC – Caldo *Escherichia coli*). **Resultados.** Todas as amostras dos bairros do centro do município (4, 100%) apresentaram resultados negativos para ambas as análises, coliformes totais e fecais, respectivamente com valores inferiores a 0,3 nmp/mL e ausência, conforme preconiza a referida legislação. Todas as amostras da periferia (6, 1000%) foram positivas para coliformes totais apresentando valores entre 0,91 nmp/mL e 16 nmp/mL. Destas, duas amostras (2, 33,3%) foram positivas para coliformes termotolerantes com valores de 0,36 nmp/mL e 0,91 nmp/mL, mostrando-se fora dos padrões estabelecidos por conterem coliformes de origem fecal. **Conclusões.** Conforme as análises obtidas, sugere-se um tratamento adequado da água para o consumo humano nos bairros analisados da periferia, bem como medidas sanitárias e de higiene.

TLP-131. Micro-organismos promotores do crescimento vegetal na aclimatização de plantas de mangabeira micropropagadas

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Introdução. A inoculação de micro-organismos promotores do crescimento vegetal, na fase de aclimatização de mudas, favorece sua formação precoce, assim como maior crescimento e uniformidade do sistema radicular e da parte aérea. A mangabeira (*Hancornia speciosa* gomes) se destaca como uma promissora árvore frutífera para programas de exploração sustentável. Avaliar o efeito da inoculação de micro-organismos solubilizadores de fosfato (msf) e do fungo micorrízico arbuscular (fma) *Glomus clarum*, na aclimatização de plântulas micropropagadas de mangabeira, sob diferentes substratos, na presença e ausência de câmara úmida.

Materiais e métodos. Plântulas de mangabeira micropropagadas foram aclimatizadas em três substratos: solo; solo + areia + vermiculita (1:1:1) e Bioplant®, na ausência ou presença de câmara úmida, em vasos e com quatro tratamentos de inoculação: msf; fma; msf + fma e controle.

Resultados. As plantas de mangabeira inoculadas com fma, quando aclimatizadas em câmara úmida, utilizando Bioplant®, tiveram maior formação de raízes adventícias e folhas expandidas. As plantas inoculadas com msf tiveram menor comprimento de parte aérea e formação de folhas expandidas, porém, maior formação de raízes adventícias e volume destas no Bioplant®. Em solo + areia + vermiculita, as plantas obtidas estavam menores, com folhas expandidas e menor número de raízes adventícias. As plantas aclimatizadas em solo + areia + vermiculita + fma continham folhas expandidas menores com pigmentação vermelha e formação de raízes, enquanto que em solo + areia + vermiculita + msf, as plantas eram parecidas com as descritas anteriormente, porém o volume de raízes foi menor. A co-inoculação de fma + msf se sobressaiu, na ausência de câmara úmida.

Conclusões. A inoculação de fma e msf foi adequada para aclimatização de plântulas micropropagadas de mangabeira com a utilização de câmara úmida, utilizando os substratos Bioplant® e solo + areia + vermiculita.

TLP-132. Isolation and production of cellulose by filamentous fungi isolated from composting process at São Paulo zoo park foundation

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Introduction. There is a large search of microorganisms for producing hydrolytic enzymes like cellulases that can be employed as an increment

for second generation bioethanol processes. Composting organic waste process represent a promising habitat to recovery microorganisms with special capabilities. The improvement of this process with sugar cane filter cake as substrate can enhance the chances to have efficient microorganisms with cellulolytic potential. The present study had as goals the isolation and screening of fungi strains with cellulase activity from the composting process at São Paulo zoo park foundation (fpzsp). **Materials and methods.** The composting cells were filled by sugar cane filter cake mixed with soil, trees and leaves debris from the atlantic forest park. The first sampling was done in august 2012. After twenty and forty days, it was collected the second and third sampling. About 10 grams of composting soil were collected. The samples were serially diluted in sterilized distilled water. Aliquots of 100 µL were inoculated onto petri dishes containing the media mea and pda. The petri dishes were incubated at 28°C during 1-4 weeks. The obtained isolates were conserved by cryopreservation (-80°C) and castellani (4°C). Micromorphology analyses were done. Enzymatic screening was done by culturing of strains into 50 mL of liquid medium me supplemented by 10 g L-1 Celuflok 100®. The activity was quantified by the using of the commercial kit azo-cm-cellulose (Megazyme®).

Results. One hundred and ninety filamentous fungi were isolated. Most of them were affiliated to phylum ascomycota followed by Zygomycota. Sixteen strains were selected as efficient cellulase producers. The strain fpzsp3 15 (not identified), showed cellulase activity of 70.80 u mL⁻¹; followed by the fpzsp3 1 (70.60 u mL⁻¹), identified as *Aspergillus* sp.

Conclusions. The results showed the importance of filamentous fungi from composting and their potential for future use in second generation ethanol production.

TLP-133. Comparative characterization of the archaeal community in the Amazon forest: Native forest and oil palm plantation by high-throughput sequencing

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Introduction. The introduction of monocultures modifies not only the physicochemical properties of the soil, but also the composition of the microbial communities. This study aims to compare the archaea microbial communities of an Amazon native forest soil and soil cultivated with oil palm.

Materials and methods. Archaeal microbial communities were characterized using 16S rRNA genes pyrosequencing.

Results. More than 700,000 sequences were analyzed in this work. Despite this relatively large sequencing effort, it was not possible to cover all the archaeal biodiversity in either the native forest or the oil palm cultivated area. In total 977 otus were obtained, 681 from the native forest and 455 belonging to the oil palm cultivated area, 159 otus being shared by the native forest and oil palm cultivated area communities. The predominant phylum in both areas was the euryarchaeota, followed by thaumarchaeota; sequences belonging to other phyla were not found. However, the native forest soil archaeal community showed more than twice the number of thaumarchaeota otus than the oil palm cultivated area. Within the phylum euryarchaeota the predominant classes identified were Halobacteria, Methanomicrobia and Thermoplasmata, in that order; the latter two being significantly more abundant in the oil palm cultivated area. In the phylum Thaumarchaeota, south african gold mine gp 1, terrestrial group and soil Crenarcheotic group were the main classes identified, the latter two classes being significantly more abundant in the native forest soil. We also found more rare archaeal genera in the native forest soil than in the soil cultivated with oil palm. Examples of such genera are *Methanomicrococcus*, *Methanospirillum*, *Methanoregula* and *Methanoculleus*.

Conclusions. There is a decrease in the richness of the archaeal community in soils of the Amazon native forest when the land is used for agricultural purposes such as for oil palm farming.