P0729 **Revisiting an Unfinished Business: the Genome Content of Elaeis guineensis, E. oleifera and its Inter-specific Hybrid**

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Aiming at generating a comprehensive genomic database on the Elaies sp. Embrapa is leading several projects with Elaeis guineensis (Oil palm) and E. oleifera (Caiué palm). One of these projects intends to perform the whole-genome sequencing of the Caiaué palm. Genome content information is therefore paramount, as it would allow us to correctly plan the sequence depth needed to reach a predefined coverage. Genome content estimates currently available for the Elaeis genus are however controversial, as it indicate that Caiué palm genome is about half of the size of the oil palm genome, and that the interspecific hybrid genome is far bigger than both of parental species genome. Since we needed high-quality data on that respect we then decided to revisit a theme that we consider unresolved: the genome content of the Elaies genus species. Our estimates indicate that on average the genome content of E. guineensis is 4.35 +/- 0.03 pg, while E. oleifera is 4.57 +/- 0.05 pg (when using soybean as internal pattern). This indicates that both genomes are similar in size, and that the genome content of the hybrid must be around the average of the two genomes. In fact, when we checked the genome content of the interspecific hybrid we noted that on average it is 4,44 +/- 0,09 pg. This completely contradicts the currently available data, and permit us to draw adequate strategy to fully fulfill our goal of sequencing the E. oleifera genome. More details in the Palm Genomics & Genetics Workshop.

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