

The experience factor in operational cycle of semi-mechanized harvest in integrated crop-livestock-forest (iCLF) system with teak

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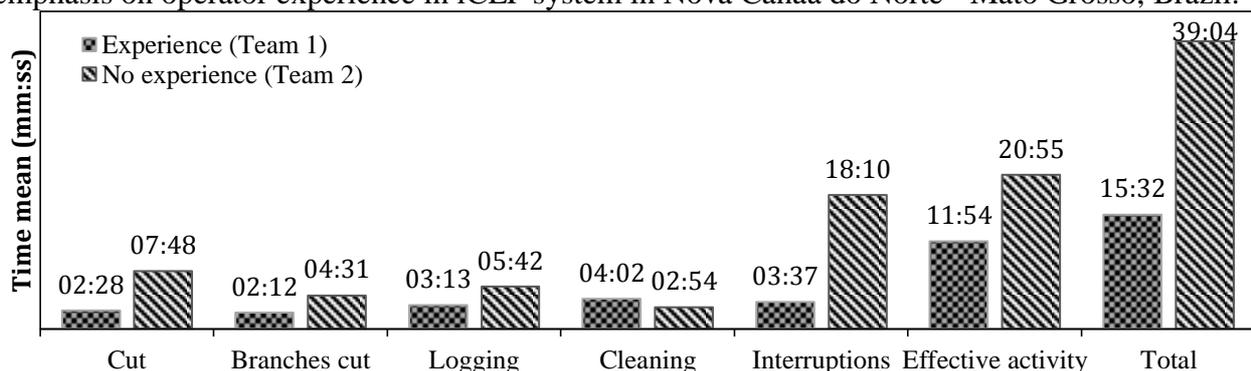
Introduction Investment and planning to reduce costs and duration of the activity, help to increase the viability of the process within the forest market, enabling greater profitability and expansion of the sector (SIMÕES et al., 2010). The experience and qualification factors can directly influence the worker productivity and quality of the semi-mechanized harvest final product.

Material and Methods

The research was conducted in the technological reference unit from Embrapa Agrossilvipastoril, located in Nova Canaã do Norte, Mato Grosso (10°38'13 " S, 55°42'32 " W). The teak forest has 6 years old and was implemented in iCLF system. The teak trees are placed in the field n° 7 with 0.5 ha, arranged in triple tree rows, spaced in 3 m x 3 m between trees and 20 m between the tree rows, with 250 m in length. The time data have been obtained by individual time method. The second systematic thinning was performed by two operators, alternating the chainsaw operator function and chainsaw operator aid. The operating cycle was divided into cut, trimming off the branches, logging, cleaning the area and interruptions. Each step belonging to the operating cycle was timed and recorded by the chainsaw operator aid. 52 cycles were analysed, achieving sufficiency with a sampling error of 25%, being processed from the software R version 3.1.2.

Results and Conclusions

Fig. 1. Mean values corresponding to operating cycle analysis of the second thinning Teak with emphasis on operator experience in iCLF system in Nova Canaã do Norte - Mato Grosso, Brazil.



The mean operating cycle times of the teams 1 and 2 (fig.1) were analyzed using the test "t" for heterogeneous variances at the level of 95% significance. Observing the results, all steps were different. The analysis demonstrated that experience factor affects productivity and total operating cycle time, being team 1 faster and more productive than team 2. Therefore, the experience is a factor that must be taken into account when planning the management of iCLF systems.

References cited

Simões et al. (2010) Sci. For., Piracicaba, v. 38, n. 88, p. 611-618.

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