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Development of an organic crop-livestock-forestry system as a Technology Transfer tool

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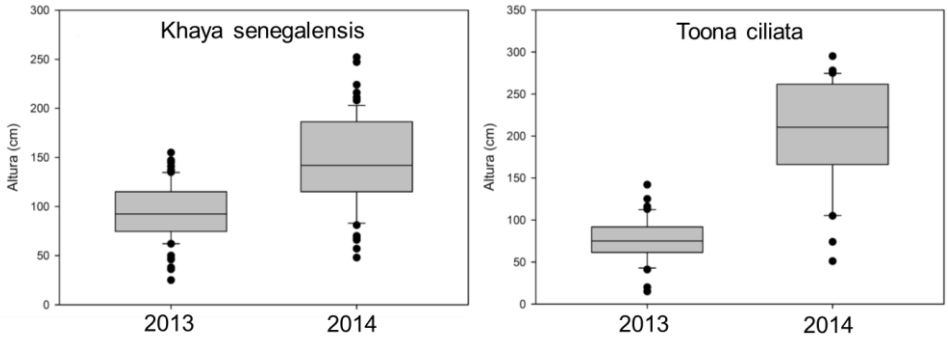
Introduction In order to implement alternative production systems and carry out forestry technology transfer (TT), Embrapa Forestry and the Cooperative Agricultural Production Vitória (Copavi) proposed an organic crop-livestock-forestry integration (CLFI) system using species *Khaya senegalensis* (African mahogany) and *Toona ciliata* (Australian cedar), crops and dairy cattle. This paper presents the preliminary results of the implemented production systems and the technology transfer method.

Material and Methods

In a forest TT action, Embrapa Forestry and Copavi had implemented an organic CLFI system in Paranacity, Paraná State, South Brazil, adapting from Porfírio-da-Silva e Baggio (2003). The strategy consisted of the planting of tree species *Khaya senegalensis* and *Toona ciliata* in areas cultivated with organic sugar cane and cassava respectively. Later, when the trees reach adequate size, crops will be replaced by cultivated pasture for dairy farming in organic production system. We presented here some preliminary results of the installation and conduct activities of areas and TT activities.

Results and Conclusions

Fig. 1. Box plot of *Khaya senegalensis* and *Toona ciliata* height in crop-livestock-forest organic integration systems, Paranacity-PR, in two years of evaluation.



The African mahogany establishment was satisfactory, with losses of 5% in the field. However, the Australian cedar lost 22% of the seedlings, due to heavy rains in the next planting week. Thus, we performed a replanting four months after the initial planting. The box plot indicated that the cedar grew, on average, more than mahogany in a year of evaluation. Furthermore, it indicated there was higher variability African mahogany compared to the Australian cedar, illustrated by the higher amount of outliers.

Together with the implementation of CLFI was started the TT activities. Were performed several technical visits and a training course for 30 technicians. In addition, after one year of implementation of the CLFI, there was adoption of technologies in other areas of the cooperative that indicates assimilation of technology. Those partial results indicate that CLFI installed in Copavi is promising as a TT tool.

References cited

V. Porfírio-da-Silva e A.J. Baggio (2003) Embrapa Florestas Documentos 83.