



Corn response in consortium with cedar and chestnut integration system Crop-Livestock-Forest

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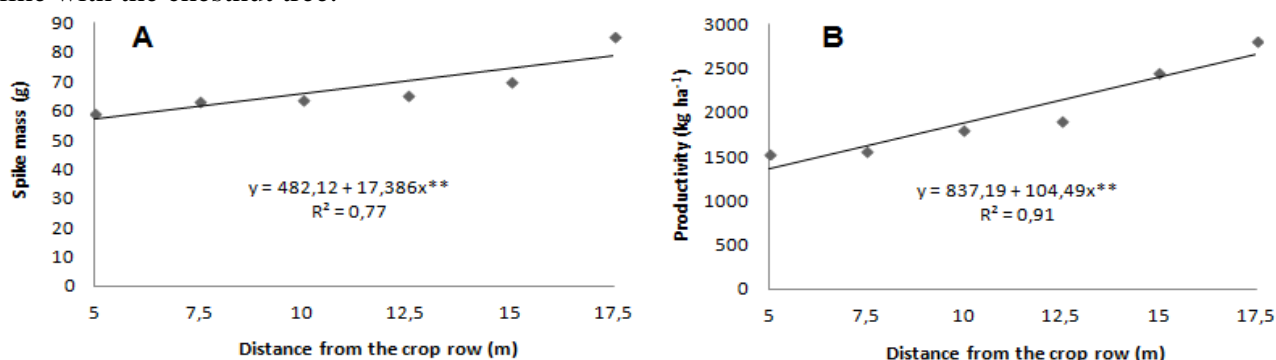
Introduction The combination of agricultural activities, livestock and forestry gives great versatility to the productive system by allowing social, economic and environmental components to be considered for the adequacy of the ideal model of integration to the Cerrado region (BALBINO et al., 2011). Corn stands out in the context of iLPF due to the numerous applications that have cereal on the agricultural property, whether in animal feed, human consumption or to generate revenue through marketing and also for providing significant amount of straw and organic matter to the system. In this presentation we report the results of maize yield in consortium with cedar and chestnut system in crop-livestock-forest in the state of Roraima.

Material and methods

The experiment was conducted in the agricultural year 2014, in savannah-forest transition area, in the field Serra da Prata belonging to Embrapa Roraima located in the municipality of Mucajaí-RR in the geographical coordinates 60°58'40" W and 02°23'49,5" N. The experimental design was a randomized block with four replications, the effect of six corn sowing tracks (5.0 m, 7.5 m, 10.0 m, 12.5 m, 15.0 m and 17.5 m), distanced from row planting cedar (*Pachira quinata*) with the nut (*Bertholletia excelsa*). These forest species were aged six years and were planted in consortium with the tier consisting of a cedar plant and other walnut, spaced 6 m. The corn seeding was carried out in the form of tillage on the *Brachiaria ruziziensis* straw previously desiccated. Data were subjected to analysis of variance, determining the significance through the F test at 5% probability, when observed effect of treatments, proceeded to polynomial regression analysis.

Results and conclusions

Fig. 1. Spike mass (A) and productivity (B) of corn depending on the distance from the Cedar plant line with the chestnut tree.



It shows a linear correlation for both characteristic with the distance from the plant line of forest species, where the best average were observed in 17.5 m, with 85.2 g per spike (Fig. 1A) and productivity 2804.1 kg ha⁻¹ (Fig. 1B) respectively. The competition for water, light and nutrients were probably the most important factors influencing the productive characteristics of corn plants. In this context to give mass satisfactory yields spike and productivity is recommended corn seeding in larger distances cedar plantation line with the chestnut tree.

Reference cited

Balbino et al. (2011) Pesq. Agropec. Bras. v. 46.