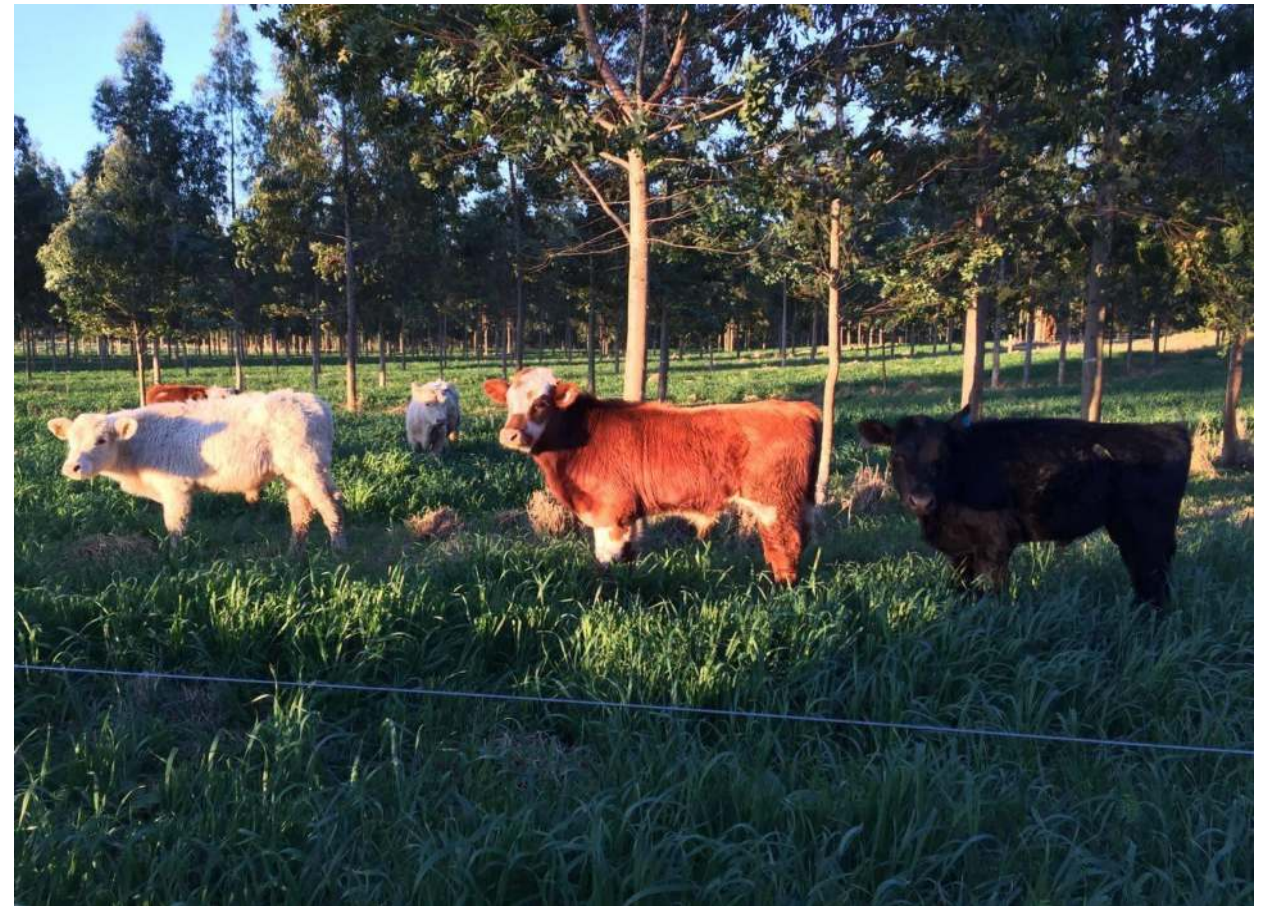


INFLUENCE OF THE TREE COMPONENT IN THE ANIMAL PRODUCTION IN AN INTEGRATED CROP-LIVESTOCK SYSTEM IN AN ENVIRONMENTAL PROTECTION AREA IN THE BRAZILIAN SUBTROPIC

Silvano Kruchelski, Thales Baggio Portugal, Breno Campos, Anibal de Moraes
Federal University of Paraná, Curitiba, Brazil



This study aimed to compare animal daily gain of beef cattle in four arrangements of Integrated Crop-Livestock Systems. The experiment was carried out at Canguiri Farm of the Federal University of Paraná, located in Pinhais – PR, (25°23'30"S 49°07'30" W), as part of the Technological Center of Innovation in Agriculture protocol. The protocol is located in an Environmental Protection Area with 1400 mm average of total annual rainfall, 12.5°C and 22.5°C of mean minimum and maximum temperature, respectively. The design was a randomized block with three repetitions and four treatments, livestock system (LS), silvopastoral system (SS), livestock and crop system (LC) and livestock - crop with tree system (LCT). Plot size was about 1.5 hectares for each experimental unit. The

tree species in the SS and LCT systems was *Eucalyptus benthamii* spacing 14.0 m between tree rows, and 2.0 m within the tree row. The average tree height was 13.65m. The grazing method was continuous stocking with variable stocking rate, to the "put and take" technique. A group of 36 animals (testers) was used on the study. Three animals testers (Angus breed) was taken for each treatment. The experiment was conducted from Jun/2017 to March/2018. The comparison of the mean variables evaluated between LS, SS, LC and LCT was performed by the Tukey test. Daily weight gain was evaluated weighing testers each 28 days during ten months. The daily weight gain did not present significant difference for treatments (LS=0.82kg; SS=0.77kg; LC=0.86kg; LCT=0.84kg).

Daily weight gain (kg/day⁻¹) in four arrangements of Integrated Crop-Livestock Systems

Treatments	Daily weight gain (kg/day ⁻¹)
Livestock system (LS)	0,82 a
Silvopastoral system (SS)	0,77 a
Livestock and crop system (LC)	0,86 a
Livestock - crop with tree system (LCT)	0,84 a

CONTATO: Silvano Kruchelski - silvanokr65@gmail.com – fone: (41)99155-0123