MICROBIAL BIOMASS WITH INDICATOR OF SOIL QUALITY IN AREA OF THE SUB-REGION OF THE NHECOLANDIA, PANTANAL SUL MATO GROSSENSE

Pelissaro, G. E. H[1]; Zanella, M.S[1]; Filho,E.F[1] **;** Santos, S.A[2]; Brasil,S.M[1]

UFMS/CPAN-[1]Universidade Federal de Mato Grosso do Sul -Campus the Pantanal Corumba, MS, Brazil, [2] EMBRAPA PANTANAL - ,Embrapa Pantanal, Street September 21,no. 1,880, Corumba, MS

The ecosystems of native pastures of the Pantanal Sul Mato Grossense are rich, complex and dynamic. and one of the great challenges for the sustainable management are set actions and strategies to maintain and or sustain the biological diversity and productivity in the long term of this ecosystem. Therefore, within a property, each wintering (management unit) should be considered on an individual basis for the distribution of animals and the pressure setting of grazing. The microbial biomass and its activity has been identified as the most sensitive to changes in soil quality, caused by changes in use and management practices. The present work aimed was to evaluate and compare the soil microbial biomass (SMB) in wintering areas different with the booking . The samplings were collected in winter season 19, 22,3 considered and the booking of Fazenda Nhumirim, located in the sub-region the Nhecolandia, Pantanal Sul Mato Grossense , located between 18 ° 59 ' 06" and 19 ° 00 ' 06" South latitude and 56 ° 39 ' 40" and 56 ° 40 ' 40" west longitude. In these areas were collected 150 g of soil layer (0-10 cm), under the native vegetation dominant in triplicate. To evaluate the microbial biomass carbon was used the methods of fumigation and extraction . The significance of contrasts of interest was tested by the F test, at least 5% of probability, having taken into account the mean squared residue obtained by analysis of variance. It was observed that there was no significant difference in the C-SMB between the areas of native vegetation (125.12 $\mu g\ g^{-1}$), wintering 3 (125.71 $\mu g\ g^{-1}$) and the wintering 2 (105.74 $\mu g\ g^{-1}$). But the wintering 19 (58.3 $\mu g\ g^{-1}$) was lower than the other statistically differ from the other. Thus, soils under natural vegetation (booking), usually not variations occur in the content of organic matter, in the course of time, as a result, mainly, of equal quantities of organic material added and lost, characterizing a steady state. This decrease in the microbial population in the subsurface soil layer (wintering 19), in certain systems of wintering, can be explained, mainly, by the worst conditions for the development of micro-organisms, such as, for example, lower aeration of the soil and less availability of organic matter easily decomponível. So it is concluded that the area of over-wintering 3, offers the best conditions for the development of SMB and that the quality of the soil as the management system this appropriate compared to levels of SMB the reservation area.

Key words: estimates of carbon, microbial activity, Pantanal

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