

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

RATE OF N IN STRAW OF MAIZE WITH SUNNHEMP AND N RELEASE DURING DRY SEASON

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The Brazil stands out worldwide as a producing country of agricultural commodities. However, degraded areas with both soil and grasslands in loss process are common. Therefore, due to Brazil's productive and economic performance of cattle culture for meat/dairy and given that these practices commonly take place on grasslands, the adoption of conservationist practices are extremely important. The Cerrado soils are acid and with low fertility, but this obstacle can be circumvented with the addition of organic matter to the system by planting forage crops with high potential for both production and accumulation of mass, which will benefit the soil fertility and grass production. Though the straw managing in Cerrado is a challenge due to its climate conditions. Thus, the objective of this study was to evaluate the N content and release of straw made of maize with sun hemp plants for 180 days during the dry season. The experiment was conducted at UEG farm school, in iLPF area on dystrophic Red Latosol (Oxisol) in Cerrado conditions. After maize crop at area in consortium with sunnhemp, was follow the managing of plants to form the straw, the sampling first started in May/2017 and the following ones with interval of 30 days, finishing in November/2017. The straw was collected in an area of 1m² delimited for metallic square (1 m x 1 m) in six random sites per sample. The weight was measured and the samples forwarded to lab analysis. The treatments were seven periods of sampling occurring in 0, 30, 60, 90, 120, 150 and 180 days. To perform the statistical analysis we relied on the software Sisvar 5.6. There was an effect of sampling periods on concentration and release of N ($p < 0,05$) fitting in the quadratic regression. Initially the rate of N in straw was 10,25 g Kg⁻¹ and the N amount, in function of the mass, was 70,21 Kg N ha⁻¹. At 130 days it occurred the highest rate of release, that was 55,99 Kg N ha⁻¹, which means a release of 80% in 130 days. Thereafter the accumulation and the content were respectively 12,46 Kg N ha⁻¹ and 5,20 g Kg⁻¹, and the release has become slower. In summary, this study shows that the accumulation of N in straw made of maize with sunnhemp was of 70,21 Kg ha⁻¹ and, from that, 80% was released up until 130 days after straw managing during the dry season.

Keywords: cerrado, cover crops, no-till system, soil conservation

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