

application of the CometTM concentrations tested. There are currently no studies testing the toxicity of pyraclostrobin to terrestrial organisms. Toxicological assays with *Danio rerio* fish indicate a highly toxic potential of this fungicide for the species (ZHANG et al., 2017). We suggest further studies evaluating the toxicological potential of the substance pyraclostrobin. It is concluded that the CometTM product, based on pyraclostrobin, was not able to cause toxicological effects on the lethality of *E. andrei* species at the concentrations tested

Keywords: Terrestrial ecotoxicology; *Eisenia andrei*; pesticides.

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(4500 - 1604) Baby corn and biomass production for green manure in organic production system

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The baby corn exports small amounts of nutrients from the system and when grown in consortium with other species of green manure has the possibility to pay the investment of the planting and still guarantee an extra gain with its commercialization. The objective of this study was to evaluate baby corn productivity and amount of aerial phytomass produced by green mucuna (*Mucuna pruriens* (L.) DC. Var. Utilis (Wall ex Wight) Baker ex Burck) and corn,). The experiment was installed in Fazendinha Agroecológica Km 47 (Embrapa Agrobiologia, Seropédica, RJ). A randomized complete block design was used, with three treatments and eight replications: a) corn at the density of 100,000 ha⁻¹ plants; b) green mucuna at the density of 100,000 ha⁻¹ plants and c) maize and green mucuna consortium at densities of 100,000 and 50,000 ha⁻¹ plants, respectively. In the monocultures, sowing was carried out on the same date and, in the consortium, the corn was sown 20 days after planting the corn. The baby corn harvest was started at 57 days after sowing, being performed three days after emergence of the stigmas and repeated every three days, totaling five harvests. The cut of the aerial part of the species had as reference the flowering of the green mucuna in monoculture, at 156 days after sowing. The results were submitted to statistical analysis using the F-test, with the help of the SAEG Program and the means were compared by the Scott-Knott test at the significance level of 5% probability. No differences were observed in relation baby corn productivity when it was compared to corn monoculture and intercropped with green mucuna. The amount of aerial phytomass produced differed among the treatments, being the highest value observed in intercropping, which shows that this consortium strategy, with a view to green fertilization, has a high capacity of soil cover and phytomass production "in situ", Associating species with different C/N ratios, in addition to replacing the system with N derived from the atmosphere, and allowing the farmer to generate monetary income with the production of mint.

Keywords: agroecology; agroecological management; soil fertility

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(7586 - 2846) Carbon and nitrogen soil in different management of long term pastures in the region of Mata Atlantica - Brazil

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Changes in land use can result in an important source or sink of carbon (C) from the atmosphere, depending on the management applied. The most important examples of land use changes in Brazil are the conversion of native vegetation to pasture and agriculture, and more recently the conversion to integrated systems. The objective of this work was to determine the carbon and nitrogen content and soil content in pasture areas under different managements. Samples were collected in the experimental field of Embrapa Cattle of Milk, in the municipality of Coronel Pacheco - MG, in pasture areas under Silvopastoral System (SSP) – composed of *brachiaria decumbens*, *Eucalyptus grandis* e *Acacia mangium*; Monoculture of Managed Pasture (PM); Degraded Pasture (PD) and Native Forest (NF) established for 20 years on a clayey red-yellow latosol in mountain topography. The samples for determination of total and labile C and N contents and stock were collected at depths of 0-100 cm and 0-30 cm respectively. The total and labile C content was influenced by the handling in the 0-10 cm layer, in the following order: PM (34.37 and 2.04 g.kg⁻¹), SSP (25.77 and 1.94 g.kg⁻¹), MN (21.90 and 1.49 g.kg⁻¹) and PD (19.20 and 1.37 g.kg⁻¹), in which the PM presented the same tendency of accumulation of carbon in depth. In this way, the largest stock was obtained in PM (121 Mg.ha⁻¹), SSP (108 Mg.ha⁻¹), NF (99 Mg.ha⁻¹) and PD (98 Mg.ha⁻¹). As for N, the total contents were similar in the different managements, whereas the labile N in the first layer was higher in the SSP (0.13 g.kg⁻¹), decreasing the depth content. This result is probably due to the presence of legumes (*Acacia mangium*) in the SSP that may have influenced the lower nitrogen availability, due to the higher uptake by the roots. The obtained stock was: PM (9.7 Mg.ha⁻¹), SSP (7.9 Mg.ha⁻¹), NF (8.5 Mg.ha⁻¹) and PD (8 Mg.ha⁻¹). It is remarkable the contribution of carbon by the well managed pasture in relation to degraded pasture and forest. These results can be attributed to the more developed, voluminous and well distributed root system of the grasses, which favors the high deposition of C to the soil in the form of roots. The apparent efficiency of the root system in contributing organic C to the soil probably results from the fact that they are not exposed to climatic factors and are in direct contact with the soil.

Keywords: Integrated systems, organic matter, soil management

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(1171 - 1763) Carbon stock in a sandy soil of the southwestern Amazonia

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Soil conservation management (SCM) system with no-till (NT), cover crops and cash crops in rotation and/or succession, limestone and fertilizers can recover and/or maintain soil quality in terms of its carbon (C) stock in comparison to the slash-burn system with or without conventional tillage (CT). The objective of this study was to determine the effect of SCM system on temporal variation of soil carbon stocks in its natural state (native forest – NF) and under different tillage/cropping systems. The experiment was conducted in an Acrisol of the smallholder property, Mâncio Lima municipality, Acre state, Brazil, in split-plot design in a randomized complete block design with three repetitions, for NT and CT (main parcels), and the succession manioc (*Manihot esculenta*)/cover crops (green manure)/maize (*Zea mays*). The sub parcels were: (1) control: slash and burn (C); (2) cover crops (*Mucuna aterrima* or *Canavalia ensiformes* or *Sorghum bicolor*) among cash crops (CC); (3) CC with addition of P-fertilizer (CCP); (4) CC with addition of