



Time	First name	Surname	Organization	Title of presentation
11:20–12:00	Elaine	Fidalgo	Embrapa	
	Joyce	Monteiro	Univ. Federal de Santa Catarina (UFSC)	Questions and Recommendations
	Abdon	Schmitt		

III. ABSTRACTS

The abstracts appear in alphabetic order based on the last name of the first author. The first author is the presenting author unless indicated otherwise.

1. Type of submission: **Abstract**

S. Sectoral Working Group sessions: S1a Multiple Ecosystem Services in Agriculture

Greenhouse gases mitigation in a crop–livestock–forest integration system

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Agriculture depends on numerous ecosystem services (ES) for its operation. Besides being a consumer, agricultural activities can also be suppliers of ES, through the management of agroecosystems. Integrated systems are more efficient in the exploitation of natural resources and are alternatives for sustainable agricultural production. The crop–livestock–forest integration system (CLFI), in addition to the provision of plant food, animal food and wood, improved soil fertility, nutrient cycling, crop diversification and carbon sequestration. Carbon sequestration is a currently valued ES by mitigating the effects of climate change. In a CLFI system implanted in the Brazilian Savana region, state of Minas Gerais, the 333 eucalyptus trees per hectare planted in 15 x 2 rows, after 60 months of planting produced the average volume of 82.75 m³ per hectare. This wood production was responsible for sequestering from the atmosphere 14.90 Mg of C ha⁻¹, estimating the amount of 54.63 Mg ha⁻¹ of CO₂ equivalent sequestered. This carbon retention was able to neutralize the emission of methane from 5.81 animal units (AU) ha year⁻¹, equivalent of 29 adult bovines per hectare (29 AU) in five years. Considering the average stocking rate of Brazilian pastures near 1.0 AU ha⁻¹ year⁻¹



1, and 1 AU equivalent to 450 kg of live weight for an adult bovine, the great capacity of CLFI to mitigate emissions of greenhouse gases from livestock production in these systems.

Keywords: carbono sequestration, climate changes, eucalyptus, CLFI

2. *Type of submission: Abstract*

S. Sectoral Working Group sessions: S1a Multiple Ecosystem Services in Agriculture

Ecosystem services perception by landowners in a region under high agricultural pressure

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The Pontal do Paranapanema region, located in the extreme west of the São Paulo state (Brazil), is characterized by conflicts over land tenure, great loss of native vegetation cover, presence of rural settlements and lands with high agricultural potential. Therefore, landowners are key parties in decisions related to the conservation of biodiversity and the provision of ecosystem services (ES) in the region. Including their perception about the environment enables the establishment of more successful participatory actions for the sustainable management of landscapes. In this study, we identified, through interviews, the perception of the environment and ES by two groups of social-actors in the region: landowners of agrarian reform settlements (n=18) and owners of large farms (n=16). We verified that, in general, owners of large farms have higher educational levels, have owned properties for a longer time and often live in urban areas, while all settlers reside in the rural area and have been living in the property for less than 30 years. Although they recognize benefits from nature, these stakeholders do not act to intensify such benefits, neither have proactive attitudes to restore natural environments or to approach green areas. Agroforestry systems were only present in the settlements. The environments with the highest frequencies and quantities of ES perceived by landowners were forests and water bodies. ES were more frequently perceived by owners of large farms, reflecting their higher educational levels, higher frequency of visitation to the green areas and tenure time. This study has improved the understanding of attitudes and factors that affect