BayCEER Kolloquium

Lectures in Ecology and Environmental Research



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Looking for the best land management practices to enhance soil C sequestration in smallholder farming systems in South Africa

Natural ecosystems provide vital functions for the sustainable economic development of rural societies. In many regions of the world such landscapes are undergoing extensive degradation with severe implications for soil health and its capacity to provide essential services. A large proportion of South African smallholder farming lands are highly degraded and exhibit a variety of constraints, including nutrient deficiency and low soil organic matter. Poor and inappropriate management has exacerbated these problems.

In this talk, I will highlight the severity of soil erosion and how this affects soil C fluxes in degraded grasslands. Furthermore, an evaluation of short- and long-term grassland management practices (i.e., grazing, burning, mowing) and cropland management, e.g., tillage and residue management under continuous maize cultivation, will be presented. Finally, potential cost-effective management practices for better ecosystem functioning are proposed.



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