

ACTIVITY REPORT

Silvopastoral Systems Field Practicum for farmers from the Los Santos province, Panama

Los Santos and Chiriquí, Panama
March 26-28, 2010

A field practicum sponsored by:
Environmental Leadership & Training Initiative (ELTI)

Background: From September 1-4, 2009, ELTI and PRORENA held a field-based workshop entitled Native Species Reforestation, and Agroforestry and Silvopastoral Systems in the town of Pedasí, located in the province of Los Santos, Panama. The workshop was designed for a group of rural landholders from the provinces of Coclé and Los Santos that planted native trees on their land as part of the PRORENA on-farm trials. The overall goals of the workshop were to increase the capacity of these farmers to manage their native species plantations and to introduce them to ways to incorporate native trees into their farming practices. The topic of silvopastoral systems (SPS) was of particular interest to many of the participants since most practice small-scale cattle ranching and others practice cattle ranching as their primary economic activity.

Cattle-ranching is an important activity in many regions of Panama, including the Los Santos province. However, as in other regions of Latin America, traditional cattle-ranching practices in Los Santos have had a range of adverse environmental impacts, including the widespread clearing of native forests, severe soil degradation, and watershed contamination with agrochemicals. Silvopastoral systems (SPS) —combining trees, pastures and cattle in the same land unit— are an alternative approach to land management that offer the long-term benefits of tree planting and the short-term economic benefits of cattle-ranching. The adoption of SPS not only contribute to making cattle-ranching more sustainable and less detrimental to the environment, but also can serve as a strategy for climate change adaptation. Despite these and other benefits, adoption rates of SPS are low, mainly due to a lack of knowledge about these systems and to investment barriers.

In response to the interest in SPS expressed by the ELTI-PRORENA workshop participants, ELTI's Leadership and Neotropics training program partnered to design and facilitate a joint field-based activity that focused specifically on SPS. The primary goal of this event, referred to as the SPS field practicum, was to help farmers decide whether or not they will adopt SPS by providing them with the opportunity to visit farms with established SPS and to talk with farmers who are implementing these systems.



Objectives:

- Review the general principles of SPS and the benefits of these systems with regard to farm productivity and the protection of the farm's natural capital both in a classroom and field setting;
- Demonstrate the variety of SPS options available to farmers and how these systems can be adapted to real farm conditions;
- Facilitate farmer-to-farmer exchanges by providing participants with the opportunity to meet and interact with others who already established SPS in their farms and to learn about the challenges and benefits of each system.

Date and Location: The practicum took place from March 26-28, 2010, in the provinces of Los Santos and Chiriquí, Panama. The six farms visited during the trip were selected because they represent a wide range of factors, including different forms of SPS, diverse farm conditions (soil, precipitation, and terrain), level of investment, and labor intensiveness.

The Practicum: This practicum consisted of a three-day road trip, during which 18 farmers from Pedasí (Los Santos province) visited six farms with established SPS in the provinces of Los Santos and Chiriquí. The practicum combined both classroom and field-based activities. Instructors made brief formal presentations on a range of topics, including the technical aspects of different SPS, the basic elements of a SPS, productivity of cattle with SPS vs. traditional farming systems, the benefits that SPS provide to biodiversity, and project implementation. To complement formal lectures, instructors and the farmers visited during the practicum reviewed the technical and practical aspects of SPS in a farm setting. Explanations about the benefits of native trees and biodiversity for animal production were provided in the field and highlighted with examples. The specific native tree species best suited for different purposes also were discussed at length, as were the characteristics of the different pastures. The instructors and farmers also provided the participants with useful tips for less input-intensive animal production and other technologies and production systems. Participants were encouraged to ask questions throughout the event, particularly during the field visit. Course instructors and facilitators organized a discussion towards the end of the event about the feasibility of SPS adoption by the participants and the next steps required to in the process.



Agenda:

Day 1

- Meeting in Pedasí and presentation on the general aspects of SPS.
- Visit to Asentamiento Campesino Primero de Mayo, Guararé.
- **Topics covered:** Intensive SPS with leucaena (*Leucaena leucocephala*) and enhanced pastures, use of electrical fence, strengthening of organizations.
- Visit to Mr. Facundo García's farm, San Lorenzo district, Cerrillo community.
- **Topics covered:** SPS with disperse trees in pastures and selective pruning of natural regeneration; SPS with botón de oro (*Tithonia diversifolia*) and enhanced pastures in difficult soils; slow sand filter for water potabilization.

Day 2

- Presentation: Technical Assistance for Integrated Management of Cattle Farms in Chiriquí Province Project (CONADES); benefits of biodiversity for animal production.
- Visit to Mr. Mair Aquiles Pitt's farm, Dolega district, El Banco community.
- **Topics covered:** SPS with botón de oro, enhanced pastures and dispersed trees; panela production.
- Visit to Mr. Eduardo González's farm, Dolega district, Balita community.
- **Topics covered:** Intensive SPS with leucaena and guinea mombasa and estrella pastures; watershed protection and the use of drinking stations.
- Visit to Mr. Jaime Batista's farm, Bugaba district, La Estrella community.
- **Topics covered:** SPS with botón de oro, enhanced pastures and native ground leguminose; live fences; the benefits of electrical fences; supplementation with fodder banks; productive and reproductive registries for dairy production.
- Discussion on ways to move forward with SPS implementation in Los Santos.

Day 3

- Presentations: Data comparing production in traditional vs SP systems; organic fertilizers; riparian corridors.
- Visit to Mr. Erasmo Santos's farm, Remedios district, El María community.
- **Topics covered:** SSP with botón de oro on acidic soils; use and management of sugar cane; low cost stable with farm materials; use of solar panels for electrical fences.
- Certificates and end of practicum.

Participants: A group of 18 participants from the Los Santos province attended the practicum, including cattle ranchers who participated in the PRORENA on-farm trials, other cattle ranchers in the region who are interested in SPS (including members of a local dairy- producing association), and regional representatives from Panama's National Environment Authority (Autoridad Nacional del Medio Ambiente -ANAM) and Institute of Agricultural Research (Instituto de Investigación Agropecuaria de Panamá -IDIAP). Local representatives from the country's Ministry of Agricultural Development (Ministerio de Desarrollo Agropecuario -MIDA) were invited to the practicum but were not able to attend. Most of the participants had attended the ELTI/PRORENA workshop in September, 2009, and the few who had not were selected for the practicum because they were interested in the theme and attended an informational meeting about the practicum held in January, 2010, in the town of Pedasí. Several of the practicum participants are interested in obtaining funding to establish a SPS in the region, particularly the Association of Dairy Producers.



Instructors and Coordinators: The instructors for the practicum were Fernando Uribe and Andrés Zuluaga, both of whom are researchers on sustainable cattle ranching with the Center for Research on Sustainable Agriculture Production Systems (Centro para la Investigación en Sistemas Sostenibles de Producción Agropecuaria -CIPAV). CIPAV is a Colombian NGO with over 20 years of experience in applied field research on sustainable agricultural systems in the tropics (see www.cipav.org.co for more information). More recently, CIPAV provided technical assistance to landholders who want to implement SPS in different parts of Panama, including the provinces of Chiriquí and the Darien. The farmers visited during the field visits were a subset of those with whom CIPAV has worked to establish SPS.

ELTI's Alicia Calle and Eva Garen planned and coordinated the practicum. Diógenes Ibarra, a former PRORENA employee and currently the owner of Forestal Bosques Diversos S.A., facilitated communications between ELTI and the farmers and also provided logistical support throughout the event.

Follow-up: Despite their interest in establishing a SPS on their land, many of the participants said that they would require financial support and technical assistance to establish a system. ELTI's Leadership and Neotropics Training Programs, therefore, are exploring a number of ways to support the farmers in this process. Some possible avenues of support include: (1) providing help in the design and development of a project proposal to solicit funding from GEF's Small Grants Program (SGP), which already expressed interest in supporting SPS in the region; (2) offering hands-on technical workshops to demonstrate how to establish specific SPS; and (3) offering additional trainings with different groups (i.e., the Dairy Producers Association of Pedasí) on SPS theory and practice. The Leadership Program also will support some of the participants that attended the practicum to participate in the 6th Latin American Congress on Agroforestry for Sustainable Agriculture Production in Panama in September, 2010. This event will showcase the growing interest in establishing both small and large-scale SPS in the region and its potential as a climate change adaptation strategy.



This event was possible thanks to Arcadia Fund, whose Environmental Conservation grants support programmes that protect and enhance biodiversity, and provide field training and academic research.