

COURSE REPORT

FOREST RESTORATION AND SILVOPASTORAL SYSTEMS IN CRITICAL WATERSHED LANDSCAPES

ELTI-IPÊ Focal Training Site:
Cantareira System, São Paulo, Brazil
October 10, 17 & 24 – 2018

A field course organized by:
The Environmental Leadership and Training Initiative (ELTI) and the Faculty for Environmental Conservation and Sustainability of the Institute of Ecological Research (ESCAS-IPÊ) and the “Semeando Água” Project.



Photo: Tiago Baccarin

Participants of “Forest Restoration and Silvopastoral Systems in Critical Watershed Landscapes”

ELTI is an initiative of:

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Background

The Cantareira system is one of the largest water supply systems on the planet. It provides water to nearly nine million people in São Paulo state, covers 230,000 hectares and captures 44,200 liters of water per second. As part of the Atlantic Forest, the Cantareira system houses several endangered species and is a biodiversity corridor and a priority area for conservation actions. Despite its important role in water production and biodiversity conservation, the land use in the region is often inadequate. Only about 43% of the region consists of native forest. The other land uses comprises 41% of non-forest (especially very degraded pasture), 13% of reforestation (especially eucalyptus) and 3% of dams and ponds. In addition, about 49% of the zones demarcated as areas of permanent protection (APP) present anthropic occupations. Undeniably, water supply, biodiversity and livelihoods are at risk around this landscape dominated by highly degraded pastures and small fragments of native forests.

To help in restoring these degradation processes, ELTI has partnered with IPÊ *Semeando Água* (Sowing Water) project , sponsored by “Petrobras Socioambiental” Program, to promote capacity building in eight municipalities over Cantareira Supply System. The goal is to influence rural producers to adopt sustainable land-use practices and to restore the forests that has been suppressed.

Objectives

Within the above mentioned context, ELTI and IPÊ created a three days field course focused on forest restoration and sustainable productive systems,



specially silvopastoral. The goal was to give the participants (mostly small farmers and extensionists) the opportunity to learn about and practice some principles of ecological restoration. Participants also had the chance to construct implementable projects with the support of experts.

Course content

Forest restoration

- Site contextualization: local environmental problems and ecosystem services
- Brazilian Forest Code
- Forest restoration: principles and applications (theory and practice)

Pasture restoration

- Ecological management of pastures: principles and applications (theory and practice)
- Silvopastoral systems: principles and applications (theory and practice)

Seed nursery, rural credit and Individual project

- Establishing a seed nursery: seed collection and germination methods, costs and economic potential
- Accessing rural credit
- Project planning

Field-course format

Day 1 *Cravorana Farm, Piracaia, São Paulo*

The first day of the course took place at Cravorana Farm, administrated by Miguel Uchôa. Miguel is restoring the farm APP's and implementing ecological



pasture systems with the support of Semeando Água. He kindly allowed the farm to be a demonstration unit for this training.

We started the day with an introduction of the participants, trainers, ESCAS/IPÊ and Semeando Água staff, followed by a presentation of the course agenda. Then, we had the presentations about ELTI and about ESCAS-IPÊ. Following, Dr. Alexandre Uezu explained the Cantareira System and gave a contextualization of the region history, environmental questions and challenges.



Photo: Tiago Baccarin

Zezé lecture on Brazilian Forest Code in the beautiful Cravorana farm barn, Piracaia - São Paulo, Brazil



Tiago Pavan explaining how to plant the trees saplings at Cravorana restoration site, Piracaia - São Paulo, Brazil.

After the coffee break, we had a lecture given by Dr. Maria José Zakia (Zezé) who talked about the Brazilian Forest Code. She discussed historical aspects, different scenarios and how to comply with the Forest Code demands. Next to Zezé presentation, we had Dr. Tiago Pavan speaking about forest restoration principals and applications, that included methods and strategies to start a restoration process



Day 2 Santa Cruz Farm, Joanópolis, São Paulo

For the second day of the course we went to Santa Cruz Farm, in Joanópolis. Santa Cruz is a property from Ricardo Troster, who is also restoring the farm APP's and working with ecological pasture management. Ricardo generously allowed us to use Santa Cruz facilities.

The main topic of this second day was pasture restoration. The trainer, MSc. Leonardo Calsavara, works for the agency of Technical Assistance and Rural Extension of Minas Gerais State (EMATER-MG) and has an extensive experience giving support to small farmers. His lecture comprised several case studies on pasture management and silvopastoral system. He also talked about soil improvement, life fences, animal



Photo: Tiago Baccarin

Desirée Lopes planting a tree at the restoration site in Cravorana Farm, Piracaia - São Paulo, Brazil.



Photo: Ilana Bar

Leonardo Calsavara lecture on silvopastoral systems at Santa Cruz Farm.



Photo: Ilana Bar

Leonardo Calsavara discussing about rotational ecological pasture management at Santa Cruz Farm.



Photo: Ilana Bar

Alexandre Uezu talking about soil importance at Santa Cruz Farm.



Photo: Ilana Bar

Soil observation during the course "Forest Restoration and Silvopastoral Systems in Critical Watershed Landscapes"



Photo: Miriam Perilli

Day 3 *IPÊ, Nazaré Paulista, São Paulo*

On the third day we went early in the morning to IPÊ's seed nursery. There, Mauro Rufato Jr gave a lecture about seed collection and germination methods, costs and the economic potential of a seed nursery activity. Then, Dr. Tiago Pavan offered a lecture on forestry with native species.

In the afternoon we went to IPÊ's facilities so the participants could work on their projects. In this hands-on exercise, the sketches of their properties should incorporate the knowledge they received during the course.

Our lunch table ready. One of our courses prerogatives is zero disposable material. Santa Cruz Farm, Joanópolis - São Paulo, Brazil.

Participants

This field course was announced in ELTI's website and advertised mainly in agricultural stores and social medias. Indeed, WhatsApp was our main channel of communication. We gave preference to the farmers and extensionists of the Cantareira system, especially the ones closer to the municipalities were the



course was going to take place. We had a total of 10 farmers and 07 extensionists. The farmers were mainly small ones and most of them were seeking for a diversification of their activities. They were also interested in the process of adequacy to the forest code and the potential of forestry with native species.



Photo: Miriam Perilli

Participants incorporating the knowledge received during the course in their properties with the support of Alexandre Uezu. IPÊ, Nazaré Paulista, São Paulo, Brazil.



Participants showing their certificates by the end of the course. IPÊ, Nazaré Paulista, São Paulo, Brazil

Instructors and staff

- Alexandre Uezu, ESCAS/IPÊ
- Andrea Pupo, IPÊ
- Bruno Landini, IPÊ
- Eduardo Badialli, ESCAS/IPÊ
- Desirée Lopes, ELTI
- Leonardo Calsavara, EMATER – MG
- Maria José Brito Zákia, IPEF
- Mauro Rufato Jr, IPÊ
- Miriam Lucia Lages Perilli, ELTI - ESCAS/IPÊ
- Simone Fraga Tenório Pereira Linares, IPÊ
- Tiago Pavan Beltrame, IPÊ



Outcomes and Follow-up:

By the end of the course the farmers worked developing a project with the help of the trainers and in association with the extensionists. The idea was to inspire them to think about sustainable alternative production that could be adopted to their reality. With that, we hope to have stimulated them to start a change for more sustainable and productive production. We also hope to support some of them through our Leadership Program.

Another outcome, is that the strategy of dividing the course into one day per week was very positive. The feedback from the participants indicated that otherwise they would not be able to enroll in the course. In addition, some participants commented that with this format they could study a little between the days of class and participate more actively in the discussions.

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