Agroforestry Systems as a Strategy for Conservation of the Golden Lion Tamarin (*Leontopithecus rosalia*) in its Habitat – the Atlantic Forest of Rio de Janeiro, Brazil,"

Report to Rufford Small Grant

Leader – Maria Inês da Silva Bento
Environmental Extension Program
Ref: 226.01.05

During the period enclosed for this project, the Golden Lion Tamarin Association (AMLD), with the support of the Rufford Small Grant*,* developed activities directed to the development of alternative and economic techniques, aiming at the improvement of the quality of life of the families of the agriculturists and the reduction of the human pressure on the forest remainders. The activities of this project had been developed in two agricultural Agrarian Reform Settlements (Cambucaes/Olhos D' Água, Aldeia Velha, both located near of the Poço das Antas Biological Reserve/Ibama, city of Silva Jardim, RJ, Brazil).

The project had implanted agroforestry systems - AFSs - in five lots of agriculturists, totalizing 3, 75 hectares. Previously, it also had been carried through workshops of planning of the areas of AFSs with the familiar agriculturists, being the same ones enabled with alternative techniques directed toward the agroecology and the generation of income.

During this exactly period, the community nursery of the Cambucaes Settlement produced 8.000 seedlings of fruitful and also native species of Atlantic Forest. These seedlings had been distributed for the five families of involved agriculturists in this project.

With the support of the Rufford Small Grant*,* today we have 26 families of benefited agriculturists and 4, 92 hectares of areas recouped by the implantation of the agroforestry systems, which had contributed in such a way in the improvement of the quality of life of the involved families and in the increase of the family's income.

Of the 26 involved families in this project, two are participating of fair-free in the city, having, thus, the chance of selling the organic products produced by them.

For the implantation of the related areas, a methodology was adopted which followed the described stages below:

Technical support visits to the lots of agriculturists: the directly responsible staff for the activities carried through technical support visits to the lots of five familiar agriculturists initially interested in the proposal of AFSs and agroecology handling of the property. These are familiar agriculturists who, through the diversified production, will also increase offer of foods for auto-consume, guaranteeing better alimentary security - it is important to stand out that it has the forecast of commercialization of the located excesses in fair-free in the neighboring cities. The seated local families almost always possess small creations of domestic animals; the implanted systems can consist in an important source of feeding for these animals.

Preparatory workshop for the families: based in the participatory methodology, a meeting with the agriculturists in the Ademar Coimbra Filho Educative Center, located in the Poço das Antas Biological Reserve, was carried through, aiming at the organization of cooperative system in the planting and in the planning of the areas where the AFSs will be implanted. In this meeting, each agriculturist presented and explained to the others, the drawing of its respective area. The main objective of this moment was to stimulate a quarrel on the related practical principles and to the agroforestry systems, aiming a bigger sensitization of involved with regard to the goals of this project.

Landmark of the areas for the implantation of AFSs: the staff of the AMLD carried through technical support visits in the lot of each agriculturist so that, together, they could be carried through: i. the mapping of areas; and ii. the planning with each one of the involved families for the choice of the forest and fruitful species to be used.

Choice and spacing of the seedlings and seeds to be implanted in the AFSs: the technician had respected the drawings elaborated for the families of the agriculturists, having guided them with regard to the choice of the native and fruitful species, being prioritized those already available in the community nursery of the Cambucaes settlement. On the basis of the elaborated drawings, had been distributed seedlings and seeds, as corn, pumpkin, etc.

Implantation of the demonstrative units of the agroforestry systems: the implantations of the AFSs had been lead in cooperative systems, where the benefited agriculturists had worked together objectifying the plantations, mainly of seedlings. A good acceptance of the agriculturists with regard to this system of work was verified, being the implantation carried through without bigger problems. It is important to stand out that this system of implantation works as a species of "qualification" for the agriculturists, being a chance so that the same ones change experiences, adapting itself with bigger success to new the practicals. All the seedlings indicated in the schematically drawing had been implanted.

Species used in AFS's

1. **Trees species:**

POPULAR NAME	SCIENTIFIC NAME	SUCCESSIONAL GROUP
01. Albízia	*Albizia polycephala*	Pioneer
02. Ameixa	*Prunus doméstica*	Climax
03. Amora	*Morus nigra*	Pioneer
04. Angico	*Anadenathera macrocarpa*	Initial Secondary
05. Araribá	*Centrolobium tomentosum*	Initial Secondary
06. Aroeira	*Schinus terembinthifulius*	Pioneer
07. Cambucá *	*Plinia edulis*	Late Secondary
08. Carrapeta	*Trichilia hirta*	Initial Secondary
09. Cedro rosa	*Cedrela fissilis*	Late Secondary
10. Crindiúva	*Trema micrantha*	Pioneer
11. Embira de sapo	*Lonchocarpus guilleminianus*	Initial Secondary
12. Graviola	*Annona miricato*	Late Secondary
13. Grumixama *	*Eugenia brasiliensis*	Climax
14. Goiaba *	*Psidium guajava*	Late Secondary
15. Guapuruvú	*Schizolobium parahyba*	Pioneer
16. Ingá de metro *	*Inga Edulis*	Initial Secondary
17. Ingá de quina *	*Ingá uruguensis*	Initial Secondary
18. Ipê Roxo	*Tabebuia heptaphylla*	Late Secondary
19. Jaca *	*Artocarpus heterophyllus*	Late Secondary
20. Jambo *	*Syzygium malaccense*	Late Secondary
21. Jatobá	*Hymenaea coubaril*	Climax
22. Jequitibá rosa	*Cariniana legalis*	Climax
23. Orelha de macaco	*Enterolobium timbouva*	Initial Secondary
24. Paineira rosa	*Chorisia Speciosa*	Initial Secondary
25. Pau jacaré	*Piptadenia gonoacantha*	Pioneer
26. Sibipiruna	*Caesalpinia peltophoroides*	Late Secondary
27. Tamararindo *	*Tamarindus indica*	Climax
28. Urucum	*Bixa olerana*	Initial Secondary

* Food species utilized by golden lion tamarins

Conclusion

By the year of 2010, AMLD has as goal to reach a population of 1.600 Golden Lion Tamarins living freely in 20.000 hectares of protecting and linked forests. One of the necessary objectives for the reach of this goal is to have all the families of agriculturists of the settlements, located near the existing units of conservation in the region, with at least an alternative of sustainable development (economical, social and environmental) implanted. In this direction, the Rufford Small Grant has contributed for the reach of the above described goal.

The farmer's fair

Community nursery of Plants

Agricultural Planting of Annual Cultures

Planting of AFSs