

**REINTRODUCTION AND PROMOTION OF PERNAMBUCO TREE PLANTATIONS, *Caesalpinia echinata* Lam., IN THREE STATES OF NORTHEASTERN BRAZIL**

**ASSOCIAÇÃO PLANTAS DO NORDESTE (APNE)**

**CURRENT STATUS OF PERNAMBUCO PLANTATIONS**

This is a brief presentation on the current status of all Pernambuco plantations made during the Project in the States of Pernambuco, Rio Grande do Norte and Paraíba.

SUMMARY OF THE PLANTATIONS									
State	Period	Name	Place	Plantation type	Purpose of Plantation	Original N° of seedlings	N° of seedlings delivered	N° of planted seedlings	Situation as of 10/2015
PE	Jun/12	IPA	Goiana	Homogeneous	Commercial	468	468	468	Efficient
	Jun/14	Jones Pereira	Abreu e Lima	Agroforestry system	Commercial	30	30	?	Not evaluated
	Jun/14	Cristina Petrônio	Igarassú	Agroforestry system	Commercial	50	50	?	Not evaluated
	Jun/14	Luiza Cavalcante Santos	Tracunhaém	Agroforestry system	Commercial	150	150	90	Deficient
	Jun/14	Maria José da Silva Lima	Barreiros	Agroforestry system	Commercial	40	40	40	Deficient
	Jun/14	Pedro José dos Santos	Ribeirão	Agroforestry system	Commercial	50	50	50	Efficient
	Jun/14	José Augusto da Silva	Rio Formoso	Agroforestry system	Commercial	200	200	?	Not very efficient
	Jun/14	Ailton da Paz	Rio Formoso	Agroforestry system	Commercial	200	200	38	Not very efficient

Jun/14	Cícera Ataíde	Água Preta	Agroforestry system	Commercial	50	50	?	Not very efficient
Jun/14	Francelí Gomes	Rio Formoso	Agroforestry system	Commercial	100	100	40	Not very efficient
Jun/14	Elizabeth Silva de Lima	Rio Formoso	Agroforestry system	Commercial	20	20	20	Efficient
Jun/14	Manoel Luiz Bezerra	Catende	Preservation plantation	Conservation	150	150	150	Deficient (fire)
Jun/14	Joabe Pantaleão	Tamandaré	?	?	20	20	?	Not very efficient
Jun/14	José Olávio da Silva	Tamandaré	?	?	10	10	?	Not very efficient
Jun/14	Rubineide Soares de Carvalho	Igarassú	?	?	10	10	?	Not very efficient
Jun/14	Júlio Araújo	Tamandaré	?	?	6	6	?	Not very efficient
Jun/14	Erivaldo Maciel Loureiro	Maraial	Reintroduction	Conservation	500	400	400	Deficient
Jun/14	Amara Magalí Tomé	Rio Formoso	Not delivered by partner		20			Inefficient
Jun/14	Genival Barbosa de Lima	Passira	Not delivered by partner		20			Inefficient
Jun/14	Pedro Silva de Oliveira	Barreiros	Not delivered by partner		20			Inefficient
Jun/14	Claudemir Pereira	Barreiros	Not delivered by partner		150			Inefficient
Jun/14	Ivanilda Maria Barros	Rio Formoso	Not delivered by partner		25			Inefficient
Apr/14	IPA	Goiana	Mixed	Commercial	412	412	412	Efficient
Jun/15	Severino Raimundo - Ubu	Goiana	Agroforestry system	Commercial	188	200	200	Not evaluated
Jun/15	Teresa Maria Fidelis - Ubu	Goiana	Agroforestry system	Commercial	240	300	300	Not evaluated

	Jun/15	Gildo - Ubu	Goiana	Agroforestry system	Commercial	80	100	100	Not evaluated
	Jun/15	Sueli - Ubu	Goiana	Agroforestry system	Commercial	248	260	260	Not evaluated
	Jun/15	José Mendes - Ubu	Goiana	Agroforestry system	Commercial	160	200	200	Not evaluated
	Jun/15	José Reginaldo da Silva - Ubu	Goiana	Agroforestry system	Commercial	170	190	190	Not evaluated
	Jun/15	José Carlos Salustiano - Mussumbú	Goiana	Agroforestry system	Commercial	200	200	Only in 2016	Not evaluated
	Jun/15	José Gerônimo - Mussumbú	Goiana	Agroforestry system	Commercial	200	200	200	Not evaluated
	Jun/15	José Canuto - Mussumbú	Goiana	Agroforestry system	Commercial	100	100	30	Not very efficient
	Jun/15	Leni - Mussumbú	Goiana	Agroforestry system	Commercial	350	350	30	Not very efficient
	Jun/15	Luiz Leonardo (Sula) - Mussumbú	Goiana	Agroforestry system	Commercial	50	50	50	Not evaluated
	Sep/15	Gutemberg - Sirigi	Aliança	Agroforestry system	Commercial	600	600	500	Not evaluated
		Gutemberg - Sirigi	Aliança	Preservation plantation	Conservation	300	300	Only in 2016	Not evaluated
RN	May/13	UFRN	Jundiaí	Homogeneous	Commercial	625	625	625	Efficient
	May/13	UFRN	Jundiaí	Mixed	Commercial	120	120	120	Deficient
	Jun/14	Axel	S. J. Mipibú	Homogeneous	Commercial	715	715	715	Deficient
	Jun/14	Axel	S. J. Mipibú	Reintroduction	Conservation	100	100	100	Deficient

	Jun/15	Marcos	Nísia Floresta	Homogeneous	Commercial	1.600	1.600	1.600	Not evaluated
	Jun/15	Alexandre	S. J. Mipibú	Preservation plantation	Commercial	179	300	300	Not evaluated
	Jun/15	Alexandre	S. J. Mipibú	Reintroduction	Conservation	200	400	400	Not evaluated
	Sep/15	Geovane	Tibau do Sul	Preservation plantation	Conservation	600	600	Only in 2016	Not evaluated
PB	May/13	Usina Miriri	Santa Rita	Homogeneous	Conservation	673	673	673	Deficient
	Aug/14	Usina Miriri	Santa Rita	Mixed	Conservation	300	300	300	Deficient
	Aug/14	Usina Miriri	Santa Rita	Reintroduction	Conservation	200	200	200	Deficient
	Sep/15	Sérgio	Mamanguape	Homogeneous	Commercial	380	380	Only in 2016	Not very efficient
	Jul/15	Genilson	Marcação	Homogeneous	Commercial	200	200	200	Not evaluated
	Jul/15	Vlaminck	Pedra de Fogo	Reintroduction	Conservation	170	170	170	Not evaluated
	Jul/15	Rebio Guaribas	Mamanguape	Reintroduction	Conservation	2.000	2.000	2.000	Deficient
<b>TOTAL</b>							<b>12.899</b>		

Efficient	Plantation with normal development
Deficient	Plantation implemented but not very successful
Not very efficient	Seedlings delivered but only few have been planted
Inefficient	Seedlings delivered but not planted. Partner did not deliver the seedlings
Not evaluated	Recent plantation – too early to evaluate



### Assessment of Project impact:

The tables below present a careful and objective assessment of the outreach of Project plantations until today.

Classification	N° of seedlings delivered	N° of seedlings planted	% of delivered	% of planted total
Efficient	1.575	1.575	100%	14%
Deficient	4.698	4.638	99%	42%
Deficient (fire)	150	150	100%	1%
Not very efficient	1.506	138	9%	1%
Inefficient	235	0	0%	0%
Not evaluated	4.970	4.670	94%	42%
<b>Total</b>	<b>13.134</b>	<b>11.171</b>	<b>85%</b>	<b>100%</b>

Plantation type	Classification	Efficient	Deficient	Deficient (fire)	Not very efficient	Inefficient	Not evaluated	Total
?	Delivered seedlings				46			46
	Planted seedlings							
Mixed	Delivered seedlings	412	420					832
	Planted seedlings	412	420					832
Homogeneous	Delivered seedlings	1093	1.388		380		1.800	4.661
	Planted seedlings	1.093	1.388				1.800	4.281
Not delivered	Delivered seedlings					235		235
	Planted seedlings							
Preservation plantation	Delivered seedlings			150			300	450
	Planted seedlings			150			300	450
Agroforestry system	Delivered seedlings	70	190		1.080		2.300	3.640
	Planted seedlings	70	130		138		2.000	2.338
Reintroduction	Delivered seedlings		2.700				570	3.270
	Planted seedlings		2.700				570	3.270
<b>Delivered seedlings</b>		<b>1.575</b>	<b>4.698</b>	<b>150</b>	<b>1.506</b>	<b>235</b>	<b>4.970</b>	<b>13.134</b>
<b>Planted seedlings</b>		<b>1.575</b>	<b>4.638</b>	<b>150</b>	<b>138</b>		<b>4.670</b>	<b>11.171</b>

### Conclusions:

- the efficiency of the plantation effort can be considered high (85% of delivered seedlings are planted);

- plantation success, however, is variable: even if it is too early to evaluate a large part of the plantations, more than half (57%) show several problems (low

survival, low growth rate). Efficient plantations represent about 19% of the total of distributed seedlings (without considering 2015 plantations);

- the efficiency of the commercial plantations (homogeneous or mixed) is quite higher than that of conservation plantations (protection or reintroduction);

- seedling distribution in small quantities (< 100) amongst a high number of farmers causes high difficulty of monitoring and, up to a certain point, doubts on plantation quality (that, in spite of its social and inclusion of small farmers' appeal).

This evaluation should reorient Project strategies in order to achieve higher impact of implemented activities, on one hand, and in terms of demonstration potential of Pernambuco plantations, on the other.

### **Proposal of improved Project strategy:**

To concentrate efforts only in commercial plantations, preferably mixed and at least of 0,5 to 1,0 hectare (> 200 seedlings).

Farmer selection should highlight the compromise with the conservation and plantation of Pernambuco, or, guarantee minimum conditions to maintain the plantations.

We should dedicate efforts and invest in the quality of the plantations, both in terms of high-quality seedlings and high-level plantation protocols (terrain preparation, plant hole preparation, high quality sites (soil type), maintenance and clearing, pruning and technical monitoring by the project team. This means a higher cost per hectare but probably with higher success rate.

This strategy presents two major challenges:

- The compromise of the farmers with the plantations;
- The guarantee of regular technical assistance (especially in the initial phase) by the project team.

These kinds of plantations should receive most of the project's attention. Other plantation types, due to their social and promotional importance and inclusion of the bigger society, should continue to receive support but with less efforts and resources from the project. These plantations can be better promoted by means of other initiatives (for instance Anne Fontaine Foundation) and partnerships (Municipalities, environmental restoration projects).

Below we present some pictures on the situation of most of the plantations in 2015.

## PERNAMBUCO

- **Experimental Station of Itapirema – IPA (Goiana/PE)**

### Homogeneous plantation

Plantation period: June 2012

#### Visit to the plantation on 29/09/2015





Mixed plantation

Plantation period: April 2014

**Visit to the plantation on 29/09/2015**



- **Settlement Ubu (Goiana/PE) Agroforestry System**

Plantation of Mr. Reginaldo

Plantation period: June 2015

**Visit to the plantation on 07/10/2015**



Plantation of Ms. Tereza

Plantation period: June 2015

**Visit to the plantation on 07/10/2015**



Plantation of Ms. Sueli

Plantation period: June 2015

**Visit to the plantation on 07/10/2015**



Plantation of Mr. Gildo

Plantation period: June 2015

**Visit to the plantation on 07/10/2015**





Plantation of Mr. Mendes

Plantation period: June 2015

**Visit to the plantation on 07/10/2015**



Plantation of Mr. Severino

Plantation period: June 2015

**Visit to the plantation on 07/10/2015**



- **Partnership with NGO Centro Agroecológico Sabiá** Tracunhaém/PE  
Agroforestry Systems

Plantation of Ms. Luiza

Plantation period: April – July 2014

**Visit to the plantation on 07/10/2015**





- **Settlement Mussumbú** Goiana/PE  
Agroforestry System

Plantation of Mr. José Gerônimo (consortium with pineapple)

Plantation period: June 2015

**Visit to the plantation on 07/10/2015**



Plantation of Ms. Leni

Plantation period: June 2015 (not all seedlings are planted yet) (plantation along fence)

**Visit to the plantation on 13/10/2015**





- **Settlement Sirigi** Aliança/PE  
Agroforestry system

Plantation of Mr. Gutemberg

Plantation period: September 2015 (not all seedlings are planted yet)

**Visit to the plantation on 13/10/2015**



- **Botanical Garden of Recife Recife/PE**

Conservation plantation

Plantation period: June 2014

**Visit to the plantation on 17/06/2015**



**Rio Grande do Norte**

- Escola Agrícola de Jundiá –UFRN Jundiá/RN

Homogeneous plantation

Plantation period: May 2013

**Visit to the plantation in September 2015**



Mixed plantation (Pernambuco in eucalypt plantation)

Plantation period: May 2013

**Visit to the plantation on 08/07/2015**



- **Plantation of Mr. Axel** São José do Mipibú/RN

Homogeneous plantation

Plantation period: June 2014

**Visit to the plantation on 08/07/2015**



- **Plantation of Mr. Marcos Lopes** Nísia Foresta/RN

Homogeneous plantation

Plantation period: April - June/2015

**Visit to the plantation on 29/09/2015**



- **Plantation of Mr. Alexandre** Nísia Floresta/RN

Agroforestry System

Plantation period: April 2015

**Visit to the plantation on 29/09/2015**



## PARAÍBA

- **Plantation of Mr. Vlamincck** Pedra de Fogo/PB

Reintroduction plantation

Plantation period: July 2015

### Visit to the plantation on 28/09/2015



- **Plantation at Miriri** Santa Rita/PB

Homogeneous plantation

Plantation period: May 2013

### Visit to the plantation on 13/07/2015



- **Plantation of Mr. Genilson** Marcação/PB

Agroforestry system

Plantation period: July 2015

**Visit to the plantation on 28/09/2015**



- **Plantation of Mr. Sérgio** Mamanguape/PB

Homogeneous plantation

Plantation period: September 2015 (not all seedlings are planted yet)

**Visit to the plantation on 28/09/2015**



- **Plantation at Botanical Garden of João Pessoa** João Pessoa/PB

Reintroduction plantation

Plantation period: April 2015

**Visit to the plantation on 29/09/2015**

