



# WHO WE ARE?

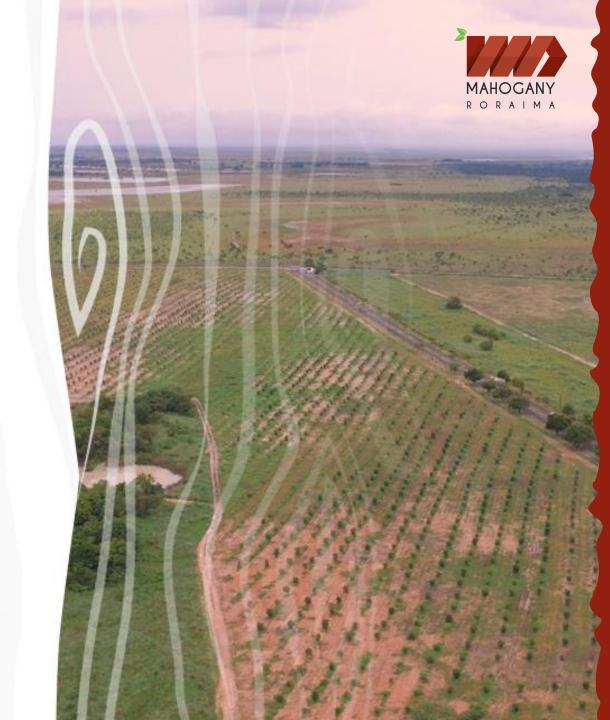
AgTech Mahogany Roraima is the largest African mahogany (Khaya Senegalensis) planter today. With 2,000ha planted and 7,000ha in production, it will be the largest producer of African mahogany wood in Brazil and one of the largest in the world.

Mahogany Roraima is a disruptive company that, among other solutions, has developed a modern management system that allows tracking from seed to cut, with all geoprocessed information.

The company created its own dormancy breaking method that guarantees germination percentages above 90%.

With an innovative planting method, it allows planting an average of at least 200ha / day with a team of only 35 employees.

We created the fastest and most efficient forest planting machine.



# WHO WE ARE? 2017. 2019



# INTERNATIONAL CREDIBILITY



### iPlantForest no Globo Rural

work. It is like a life system, an entire body. You have to make sure the heart, the stomach, everything is in the right position. To build an artificial body requires a lot of study," says Marcello Guimarães, chairman of Mahogany Roraima, a commercial timber and reforestation plantation in the northern

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Reportagem especial do Globo Rural sobre plantio de mogno africano da nossa consorciada Mahogany Roraima. A matéria ...







LesEchos



# WHERE WE CAME FROM?

Founders of this project, Marcello Guimarães and Eduardo Guimarães are entrepreneurs in the technology sector with 36 years of experience in developing innovative solutions.

They created the best-selling software in the history of computing in Brazil, Visual Kit 5. They published 11 books, all with sales exceeding 30 thousand copies, true technical best sellers in the Brazilian publishing market.

In 2003, they created the first mobile software store, the first social network based on live video straight from the cell phone to the web, ten years before the tool appeared on Facebook, and several other innovative and successful products.

Because of this professional profile, it was possible for the founders of Mahogany Roraima to organize and optimize in an innovative way all the activities of a forestry development company. Its afforestation and reforestation project is based on "industrial 4.0 / Smart Agriculture" and is absolutely disruptive.



# WHERE WE CAME FROM?



# OWN MANAGEMENT SYSTEM

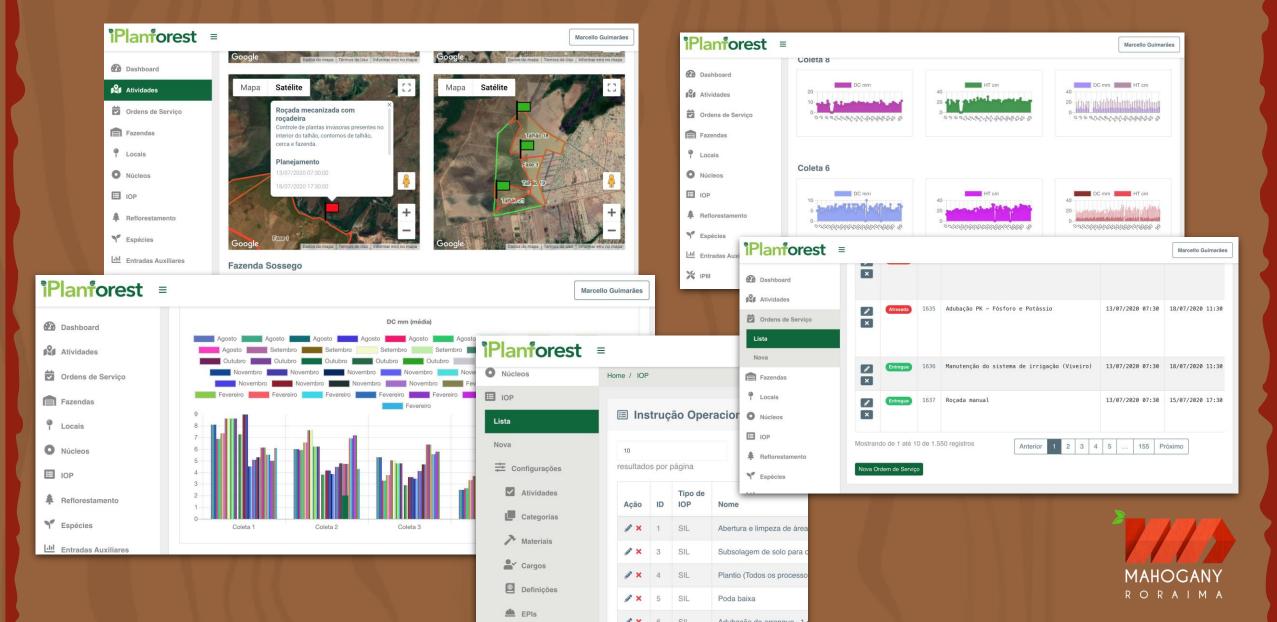
Mahogany Roraima developed its management system based on the requirements of the FSC (Forest Stewardship Council) for the certification of its wood. System that allows tracking from seed to wood cutting, following all company activities, 100% georeferenced, runs in the cloud (mobile, tablet, internet or computer).

All investors and partners follow, with their own Login, the company's activities in real time.

The Mahogany Roraima system allows full remote control of all company activities, when, where and by whom they are being carried out, in addition to technical reports on the development of seedlings and trees in the plots.



# **OUR MANAGEMENT SYSTEM**



# TECHNOLOGIES IN THE NURSERY

Mahogany Roraima has developed new methods for breaking dormancy, which have guaranteed germination rates above 90%.

The company produces African mahogany seedlings, well rusted for the specific conditions of Roraima, in periods of just 3 months, while the industry average is 6 months.

The rusting of the seedlings allows them to be planted throughout the year. The mortality rate, even during drought, is below 0.1%, even if no gel is used for planting.

Through our system it is possible to regularly monitor the development of seedlings, and the historical database allows to constantly improve the work of the nursery, in addition to contributing to numerous research in partnership with Universities.



# TECHNOLOGIES IN THE NURSERY





# TECHNOLOGIES IN THE NURSERY







# REVOLUTIONARY PLANTING SYSTEM

Mahogany Roraima has developed a method that ensures greater speed and quality in planting. The company plants an average of 200 ha / day with a team of 35 employees, with seedling loss below 0.1%, using the seedling transport cart developed by the company itself.

Under construction process, the 3rd Forest Planting Machine (RCCM - Real Carbon Capture Machine) version 3.0 will be able to plant 48 ha / day with only 3 employees operating the equipment; subsoiling, fertilizing, harrowing and planting in a single pass saving time and inputs.

RCCM is a "Industry 4.0 / Smart Agriculture" machine, which uses Artificial Intelligence to geoprocessing, in order to automatically generate the planting map indicating where each seedling was planted (exact GPS position), in order to allow forest management with high technology.



# REVOLUTIONARY PLANTING SYSTEM



# **New TECHNOLOGIES**

In order to make forest management even more efficient, Mahogany Roraima constantly invests in R&D (Research and development). A new autonomous machine for the chemical cutting is in the final stages of development, a drone with LIDAR for the forest inventory of 100% of the planted areas, a drone for assessing the health of the trees, as well as technologies for irrigation, planting and fertilization 100% autonomously. The equipment uses artificial intelligence, robotic technologies, cloud and georeferencing systems.

Mahogany Roraima is an AgTech 100% focused on the automation of all processes that involve forest management and this was only possible due to the professional experience of its founders with over 30 years of experience in the technology area.



# THE BUSINESS

The Mahogany Roraima business consists of planting, cutting and selling certified wood based on premises.

We base the business on 3 pillars:

- 1. Assortment (SisMogno EMBRAPA),
- 2. Harnessing / unfolding (MaxiTora),
- 3. Prices (SINAPI/Caixa Econômica).



# 1st premise - ASSORTMENT

SisMogno System (EMBRAPA). This system provides, from parameters and thinning periods, the assortment of DAP / Number of trees per year.

### SORTIMENTO DE ÁRVORES REMOVIDAS NO DESBASTE (6 ANOS).

Classes DAP Árv./H	la Alt.N	lédia Alt.F	uste Vol.F	uste Vol.T	otal > 3	5 cm 2
				cm		
12,0-15,0	14	13,4	7,3	1,2	1,3	0,0
					0,2	
15,0-18,0	113	13,6	7,4	14,8	15,6	0,0
					2,8	
18,0-21,0	65	13,9	7,6	10,9	11,4	0,0
					0,1	
21,0-24,0	15	13,2	7,1	3,3	3,5	0,0
					0,5	
Totais		13,7	8,5	30,3	31,9	0,0
					3,6	

SORTIMENTO DE ÁRVORES REMOVIDAS NO DESBASTE (9 ANOS).

### SisMogno

### TABELA DE CRESCIMENTO E PRODUÇÃO - Mogno-africano (Khaya spp.)

Descrição: Exemplo 1 Índice de Sítio: 25,0

Densidade (árvores por hectare): 555

Porcentagem de sobrevivência (1º ano): 100 %

Idade	Alt.Dom.	Árv./ha	DAP	Alt.Media	Alt.Fuste	Área Basal	Vol.Fuste	Vol.Total	I.M.A.	tCO2
1	2,1	555	1,0	1,9	0,6	0,0	0,0	0,0	0,0	0,0
2	5,7	555	5,7	5,1	2,1	1,4	3,1	3,3	1,6	2,9
3	8,9	555	10,6	8,0	3,7	4,9	16,7	17,6	5,9	15,9
4	11,4	555	14,5	10,3	5,2	9,2	40,7	42,8	10,7	38,6
5	13,6	554	17,6	12,3	6,5	13,4	70,5	74,1	14,8	66,9
6	15,5	553	19,9	14,0	7,7	17,2	102,7	107,9	18,0	97,5

O povoamento foi desbastado pela remoção de 207 Árvores.

Idade	Alt.Dom.	Árv./ha	DAP	Alt.Media	Alt.Fuste	Área Basal	Vol.Fuste	Vol.Total	I.M.A.	tCO2
7	17,1	346	21,9	16,0	9,2	13,0	89,3	93,9	18,0	84,8
8	18,5	345	23,9	17,3	10,1	15,5	114,7	120,5	19,0	108,8
9	19,7	345	25,5	18,4	11,0	17,6	138,6	145,6	19,7	131,5

O povoamento foi desbastado pela remoção de 139 Árvores.

Idade	Alt.Dom.	Árv./ha	DAP	Alt.Media	Alt.Fuste	Área Basal	Vol.Fuste	Vol.Total	I.M.A.	tCO2
10	20,8	206	25,5	20,8	12,8	10,5	93,3	98,0		
									ROR	AIMA

# 1st premise - ASSORTMENT

The assortment provided by the EMBRABA System allows us to calculate precisely which products and quantities we can extract from thinning to shallow cutting.

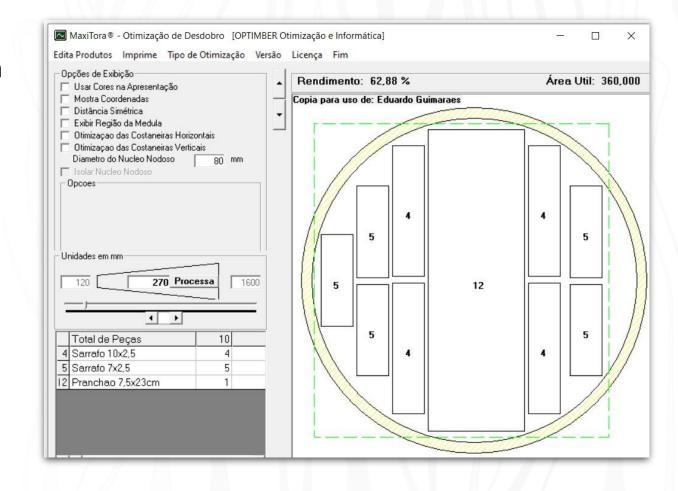
es DAP Árv./H	a Alt.M	édia Alt.Fu	ıste Vol.Fu	uste Vol.Te	otal > 35	cm 25	a 35 cm 1	8 a 25 cm 8 a	a 18 cm
				cm					
12,0-15,0	14	13,4	7,3	1,2	1,3	0,0	0,0	0,0	1,1
·		•			0,2				
15,0-18,0	113	13,6	7,4	14,8	15,6	0,0	0,0	0,0	12,8
	'				2,8				
18,0-21,0	65	13,9	7,6	10,9	11,4	0,0	0,0	0,0	11,3
	1	, ,		-	0,1			,	
21,0-24,0	15	13,2	7,1	3,3	3,5	0,0	0,0	0,8	2,1
	1	,	- '		0,5	,		,	
Totais		13,7	8,5	30,3	31,9	0,0	0,0	0,8	27,3
		•	-		3,6		,		,

# 2nd premise - UNFOLD

Once the DAP is defined by lot, we use the MaxiTora system to identify the best use based on the sale price.

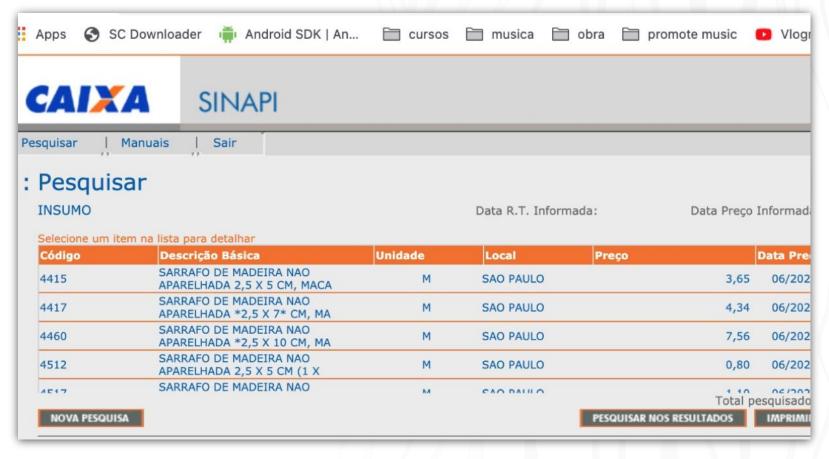
As in the example to the side, we know that a tree with 27cm DAP, can supply 4 battens (10x2.5cm), 5 battens (7x2.5cm), and 1 plank (7.5x23cm).

The final products will be calculated by the number of linear meters of the shaft.



# 3rd premise - PRICES

To set prices, we use the SINAPI (Caixa) system as a basis. This system is used to estimate construction costs in the Federal Government, States and Municipalities. It is accredited and used throughout Brazil.



# Calculation6th YEAR

Based on the three previous premises we have: Year of thinning / cutting, DAP, product, quantity of products, Shaft (m), unit value and number of trees for this DAP.

Ano	1									
	Credito de Reposição Florestal	150		BRL 40,00		14	BRL 6.000,00	BRL 6.000,00		
Ano	6									
Classe DAP	Produto	qtde	metros	Valor	Total p/Árvore	Árvores	Total hectare		Metros Cúbicos (m3)	Média m3 por árvore V
1215	Sarrafo 10x2,5	2	7	BRL 7,56	BRL 105,84	14	BRL 1.481,76		1,3	0,09
	Sarrafo 7x2,5	2	7	BRL 4,34	BRL 60,76	14	BRL 850,64			
1518	Sarrafo 10x2,5	3	7	BRL 7,56	BRL 158,76	113	BRL 17.939,88		15,6	0,14
	Sarrafo 7x2,5	3	7	BRL 4,34	BRL 91,14	113	BRL 10.298,82			
1821	Sarrafo 10x2,5	3	7	BRL 7,56	BRL 158,76	65	BRL 10.319,40		11,4	0,18
	Sarrafo 7x2,5	7	7	BRL 4,34	BRL 212,66	65	BRL 13.822,90			
2124	Sarrafo 10x2,5	7	7	BRL 7,56	BRL 370,44	15	BRL 5.556,60		3,5	0,23
	Sarrafo 7x2,5	5	7	BRL 4,34	BRL 151,90	15	BRL 2.278,50			
								BRL 62.548,50	31,8	
		I								

## **REVENUE**

The main revenues of the project are the sale of CRF (forest replacement credit) from the 1st to the 2nd year, an average of R\$ 6,000.00 reais / ha, and from the 6th year on, the sale of wood. We quote the most used wood in civil construction, the simplest and cheapest, to guarantee an ultra conservative analysis. Any better cut will bring superior financial results. Important: The return of 100% of the profitable investment will take place until the 6th year.

PERCENTUAL RETORNO INVESTIDOR	50%
TOTAL DE HECTARES	1.000
RESULTADO GERAL	
	Nacional
TOTAL DE DESPESAS	29.386.376,35
TOTAL DE RECEITAS	750.157.580,00
RESULTADO BRUTO	720.771.203,65
I.R	-321.704.153,35
LUCRO LIQUIDO	399.067.050,30
TIR	29%
MAIOR EXPOSIÇÃO	29.386.376,35
ROI	13,58
APORTE TOTAL	822.700,00
TMA	10%
VPL 10%	446.196.115,52
RESULTADO LIQUIDO	399.067.050,30
RESULTADO LIQUIDO POR HECTARE	R\$ 399.067,05
RENDIMENTO MÉDIO HECTARE 18 ANOS	R\$ 22.170,39
RESULTADO DO INVESTIDOR 50%	R\$ 199.533.525,15

# WHERE?

The project will be carried out on the partner's land in the state of Roraima.

Mahogany Roraima has plans to expand to other states and countries, however, the project we are presenting will be carried out in the state of Roraima.

The state of Roraima has a lot of land availability and is still the cheapest land in Brazil. Therefore, the partner in the planting of mahogany, who owns the land where we are going to plant, will also own the land, therefore, he will be able to enjoy the gain in the sale of wood and the gain in the valuation of his properties.

In Roraima you can buy land with values between R \$ 1,000.00 to R \$ 3,000.00 reais per hectare, and the planting ratio is, as a rule, 100%, that is, to plant 1,000 ha of mahogany, the partner must buy land 2,000 ha on average.

# **Comparative RETURN**

Investments in forests are considered long-term investments, however, in our business model, the capital invested more than doubles in 6 years and exceeds in profitability bank applications with interest of 10% per year.

The gross ROI for our project is 25.55, while the ROI for investment in bank would be 4.59.

The project's IRR is 29%.

	AN	ALISE SOBRE RESULTADO BRI	UTO CENÁRIO NACIO	ONAL		
	M	erc. Financeiro			Floresta	
Ano		Aporte	%		Parceiro Bruto	Retorno a Mais
1	R\$	14.679.340,68	10%			-R\$ 14.679.340,68
2	R\$	16.147.274,74	10%	R\$	3.000.000,00	-R\$ 11.679.340,68
3	R\$	17.762.002,22	10%			
4	R\$	19.538.202,44	10%			
5	R\$	21.492.022,68	10%			
6	R\$	23.641.224,95	10%	R\$	31.274.250,00	19.594.909,32
7	R\$	26.005.347,45	10%			
8	R\$	28.605.882,19	10%			
9	R\$	31.466.470,41	10%	R\$	58.724.300,00	78.319.209,32
10	R\$	34.613.117,45	10%			
11	R\$	38.074.429,20	10%			
12	R\$	41.881.872,12	10%	R\$	56.679.280,00	134.998.489,32
14	R\$	46.070.059,33	10%			
15	R\$	50.677.065,26	10%			
16	R\$	55.744.771,79	10%			
17	R\$	61.319.248,97	10%			
18	R\$	67.451.173,87	10%	R\$	225.400.960,00	360.399.449,32
				R\$	375.078.790,00	360.399.449,32
ROI Floresta		25,55				
ROI no Banco		4,59				

# COSTS

All project costs were raised with a wealth of detail, depreciation of equipment, PPE costs, costs of everything necessary for the execution of the project, including cutting and processing wood.

					PRE	PAK	O DO SOI	.0
Descrição item de custo	Unidade	QTDE	C	usto Unitário	Custo de Implantação			1° /
I. SERVIÇOS					Coef. (qnt/há	)	Valor	Coef.
LIMPEZA DO SOLO								
BRAÇAL INTERNO 2 (FISCAL)	HR	6	R\$	10,78	0,33	R\$	21,56	
OPERADOR	HR	11	R\$	14,38	0,33	R\$	52,71	
TRATOR PNEUS 118CV TRAÇADO DUP CAB	HR		R\$	35,08	1,00	R\$	35,08	
TRATOR PNEUS 110CV TRAÇADO	HR		R\$	30,06	0,20	R\$	6,01	
ROÇADEIRA HIDRAULICA P/ TRATOR (3,0M)	HR		R\$	3,01	0,80	R\$	2,41	
SULCADOR 1 HASTE	HR		R\$	0,75	0,20	R\$	0,15	
PULVERIZADOR AGRICOLA 2000 LT	HR		R\$	8,35	0,40	R\$	3,34	
SUBSOLAGEM + ADUBAÇÃO BASE				Š.				
BRAÇAL INTERNO 2 (FISCAL)	HR	6	R\$	10,78	0,33	R\$	21,56	
PERADOR	HR	11	R\$	14,38	0,33	R\$	52,71	
TRATOR PNEUS 260CV TRAÇADO GPS	HR		R\$	100,21	1,50	R\$	150,32	
TRATOR PNEUS 110CV TRAÇADO	HR		R\$	30,06	1,00	R\$	30,06	
SUBSOLADOR 1 HASTE	HR		R\$	0,75	1,50	R\$	1,13	
GUINCHO	HR		R\$	2,84	1,00	R\$	2,84	
PLATAFORMA DE TRANSPORTE	HR		R\$	4,18	1,00	R\$	4,18	
CALAGEM								
BRAÇAL INTERNO 2 (FISCAL)	HR	6	R\$	10,78	0,33	R\$	21,56	
OPERADOR	HR	11	R\$	14,38	0,33	R\$	52,71	
TRATOR PNEUS 118CV TRAÇADO DUP CAB	HR		R\$	35,08	0,30	R\$	10,52	
TRATOR PNEUS 85CV TRAÇADO	HR	1	R\$	16,70	0,30	R\$	5,01	
MINI CARREGADEIRA	HR		R\$	39,25	1,00	R\$	39,25	
GRADE ARADORA 20 DISCOS	HR		R\$	5,01	0,30	R\$	1,50	
PLATAFORMA DE TRANSPORTE	HR		R\$	4,18	1,00	R\$	4,18	
CALCAREADEIRA 12 TON	HR	1	R\$	15,87	0,30	R\$	4,76	
MANUTENÇÃO PREVENTIVA								
/Elculos	HR		R\$	15,06	1,00	R\$	15,06	
MPLEMENTOS	HR		R\$	5,97	1,00	R\$	5,97	
otal serviços						R\$	544,57	
. INSUMOS				C.Unit.	Quant.		Valor	
GLIFOSATO SHADOW	LT		R\$	18,50	1,00	R\$	18,50	
DIESEL COMUM	LT		R\$	3.95	77.28	R\$	305.24	

CUSTO		
		Mercado INTERNO
PRODUÇÃO DE MUDAS - VARIÁVEL	R\$	898.258,85
PRODUÇÃO DE MUDAS - FIXO	R\$	2.371.350,00
PREPARO DE SOLO - VARIÁVEL	R\$	2.137.366,31
PREPARO DE SOLO - FIXO	R\$	1.100.550,00
PLANTIO - VARIAVEL	R\$	1.043.614,96
PLANTIO - FIXO	R\$	822.700,00
MANUT. PÓS PLANTIO - VARIÁVEL	R\$	6.928.593,70
MANUT.PÓS PLANTIO - FIXO	R\$	200.000,00
DESBASTE - CORTE - SERRARIA	R\$	4.204.600,00
EPI	R\$	919.562,00
ALIMENTAÇÃO	R\$	376.529,04
MAQUINÁRIO	R\$	8.355.556,50

# **SECURITY**

To ensure the safety of our African mahogany forests, we keep the plots permanently cleared, trained firefighting staff, equipment and kites always on hand, and a modern system of cameras and software that identifies smoke, fire and issues alerts via the system developed by us to activate our fire brigade.

On the other hand, African mahogany does not have self-combustion properties, therefore, it does not catch fire easily like eucalyptus.





Ordens de Serviço

Núcleos

\* Espécies Intradas Auxiliares ₩ IPM

# RESULTS

	Valores
Área plantada base para cálculos	1000ha
Participação do parceiro	50%
Investimento Total do Parceiro	R\$ 14.679.340,68
Resultado Bruto (Parceiro)	
1º a 2º ano - venda CRF	R\$ 3.000.000,00
6º ano (venda madeira certificada)	R\$ 31.274.250,00
9º ano	R\$ 58.724.300,00
12º ano	R\$ 56.679.280,00
18º ano	R\$ 225.400.960,00
Total Receita Bruta (Parceiro)	R\$ 375.078.790,00
Total Receita <b>líquida</b> (Parceiro)	R\$ 199.533.525,15

# CONTACT

Sites / Redes Sociais / Contatos	
Sites	https://mahoganyroraima.com.br/
Consório	https://iplantforest.com/
Relação com investidor	https://ri.iplantforest.com/
Institucional	https://iplantforest.com/
Redes Sociais	
Instagram	https://www.instagram.com/iPlantForest/
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