

TECHNICAL REPORT Waldmensen S.A. 2022

FUTURO FORESTAL
IMPACT FORESTRY



OPERATIONAL PLAN IMPLEMENTED, 2022

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Index

Content

1. Introduction.	5
2. Reforested area per finca, year of planting and hectares of forest people reforested.	6
3. Regional map with the location of all fincas owned by Waldmensch S.A.	8
4. Description of the work to be performed under the 2022 Operational Plan.	9
5. Description of the preparation of fincas for planting 2022.	10
5.1. Planimetry	10
5.2. Orthophotos	11
5.3. Sectorization of Fincas	12
6. Finca La Reina	13
6.1. La Reina, reforestation project in 2013.....	13
6.2. Mortality planting 2022.....	15
6.3. Average growth of Teak in 2022.	16
6.4. Growth of native plantings La Reina in the year of planting 2015-2016.	17
6.5. POA 2022.....	18
7. Finca La Ponderosa.....	22
7.1. La Ponderosa plantations in the year2020.....	22
7.2. Growth of native plants in La Ponderosa, planted in 2020.....	23
7.3. POA 2022.....	24
8. Finca Clarita 1	26
8.1. POA 2022.....	28
9. Finca Clarita 2	33
9.1. POA 2022.....	35
10. Finca Darío Castro	40
10.1. POA 2022.....	42
11. Finca Raúl Castro	44
12. Finca Limite	45
12.1. POA 2022.....	47
13. Finca La Conexión.....	49
13.1. Native plants in La Conexión, planted in 2019.....	50
13.2. POA 2022.....	51

14.	Finca Gatun 1.....	52
14.1.	Growth of native species in Gatún 1, planted in 2020.....	53
14.2.	POA 2022.....	54
15.	Finca Gatun 2.....	55
15.1.	POA 2022.....	56
16.	Reforestation 2022.....	57
17.	Table: Preliminary plant mortality 2022 (Nov.2022 data).	58
18.	Table: Analysis of the possible causes of the high mortality rate in plantations in 2022.....	59
19.	Finca Genarino Peralta	60
19.1.	POA 2022.....	61
19.2.	Mortality planting.....	62
20.	Finca Gindi Trujillo.....	62
20.2.	POA 2022.....	64
20.3.	Mortality planting.....	66
21.	Finca Raúl Espinoza	67
21.1.	POA 2022.....	69
21.2.	Mortality planting.....	70
22.	Finca Sandra Fernández	71
22.1.	POA 2022.....	73
22.2.	Mortality planting.....	75
23.	Finca Joaquín Hernández	75
23.1.	POA 2022.....	77
23.2.	Mortality planting.....	79
24.	Curry Finca (The 15)	79
24.1.	POA 2022.....	81
24.2.	Mortality planting.....	83
25.	Finca Consuegra	83
25.1.	POA 2022.....	85
25.2.	Mortality planting.....	86
26.	Finca Geronima Castro	86
26.1.	POA 2022.....	88
26.2.	Mortality planting.....	90
27.	Finca Tello # 1.....	90

27.1.	POA 2022.....	92
27.2.	Mortality planting.....	95
28.	Finca Teófilo Herrera.....	95
28.1.	POA 2022.....	97
28.2.	Mortality planting.....	99
29.	Finca Tello # 3.....	99
29.1.	POA 2022.....	101
29.2.	Mortality planting.....	103
30.	Finca La Esperanza	104
30.1.	Finca Dalys García (La Esperanza)	104
30.2.	Finca Cati García (La Esperanza).....	105
30.3.	Finca Maite García (La Esperanza)	106
30.4.	Finca Miguel García (La Esperanza).....	107
30.5.	Finca Edilberta García (La Esperanza)	108
30.6.	Finca Maite García (La Esperanza)	109
30.7.	Finca Bélgica García (La Esperanza)	110
30.8.	POA 2022.....	112
30.9.	Mortality planting.....	115
31.	Finca David Fernández	116
31.1.	POA 2022.....	117
31.2.	Mortality planting.....	119
32.	Finca Lastenia #1 (Gilberto Samaniego).....	120
32.1.	POA 2022.....	122
32.2.	Mortality planting.....	125
33.	Finca Lastenia # 2 (Gilberto Samaniego).....	126
33.1.	POA 2022.....	127
33.2.	Mortality planting.....	130
34.	Finca Lastenia #3 (Hermenegildo Espinosa).....	130
34.1.	POA 2022.....	132
34.2.	Mortality planting.....	135
35.	Finca Lastenia #4 (Alfonzo Valdés).....	135
35.1.	POA 2022.....	137
35.2.	Mortality planting.....	140

36.	Finca Lastenia # 5 (Rosa Amelia)	140
36.1.	POA 2022	142
36.2.	Mortality planting.....	146
37.	Finca Nicanor #1 (Dalia Vega)	147
37.1.	POA year 2022	149
37.2.	Mortality planting.....	151
38.	Finca Nicanor #2 (Jennifer Moreno).....	152
38.1.	POA 2022	153
38.2.	Mortality planting.....	155
39.	Finca Nicanor # 3 (Elizabeth Moreno)	156
39.1.	POA 2022	157
39.2.	Mortality planting.....	160
40.	Finca Nicanor # 4 (Ruben Sanchez)	160
40.1.	POA 2022	162
40.2.	Mortality planting.....	163
41.	Finca Avendaño (Altos del Cristo)	164
41.1.	Mortality planting.....	166
42.	Roads	167
43.	Phytosanitary pRoblems	169
44.	Difficulties with planting 2022	170
45.	Recommendations	170
46.	General photos of the project.....	171

1. Introduction.



Finca: Avendaño (Altos Del Cristo)

The purpose of this document is to present in detail all reforestation and maintenance activities developed during the year 2022, as well as provide information on the exchanges between project-related communities and the Waldmensen S.A. team, and about the challenges and tasks for achieving reforestation and maintenance in 2022.

2. Reforested area per finca, year of planting and hectares of forest people reforested.

Finca	No. Finca	Year of planting	Hectare reforestation area
La Reina	2015	2013	12.00
		2015	2.70
		2017	6.00
		2022	1.06
Gatún 1	DP	2019	27.24
Gatún 2	4516	2022	4.05
La Conexión	6704	2019	5.07
La Ponderosa	218957	2020	7.20
	235655	2021	10.50
	280254	2020	2.70
	280254	2021	19.76
Clarita 1	30124630	2021	32.90
	30123319	2021	39.80
Claritas 2	218060	2021	12.62
Claritas 3	235668	2021	8.70
Agua Fría D. Castro	1866	2021	31.61
Agua Fría R. Castro	3479	2021	14.40
El Limite	30358872	2021	11.10
		2022	2.04
Genarino Peralta	2627	2022	9.81
Gindi Trujillo	886	2022	16.04
Raúl Espinosa	217884	2022	23.39
Sandra Fernández (Espavé)	960	2022	29.23
Joaquín Hernández	30387827	2022	15.87
Geronima Castro	30361092	2022	9.06
Tello #1	3905	2022	30.58
Teófilo Herrera	6087	2022	33.96
David Fernández	190400/190401/190371	2022	15.78
Tello #3	3123	2022	13.65
Curry (Las 15)	218047	2022	9.97
Consuegra	4869	2022	6.91
Dalys García	30359853	2022	13.54
Belgica García	30359029	2022	7.92
Cati García	30359842	2022	7.94
Ediberta García	30359110	2022	11.51

Maite García	30358613	2022	12.09
Maite García	30358742	2022	11.15
Miguel Gracia	1962	2022	32.85
Lastenia #1 (Gilberto Samaniego)	2453	2022	3.57
Lastenia #1 (Gilberto Samaniego)	1284	2022	23.14
Lastenia #2 (Gilberto Samaniego)	6159	2022	21.91
Lastenia #3 (Hermenegildo Espinosa)	342926	2022	19.15
Lastenia #4 (Alfonzo Valdés)	30163457	2022	14.14
Lastenia #5 (Rosa Amelia Perez)	2719	2022	49.96
Nicanor #1 (Dalia Vega)	1182	2022	16.71
Nicanor #2 (Jenifer Moreno)	5553	2022	11.24
Nicanor #3 (Elisabeth Moreno)	1519	2022	10.00
Nicanor #4 (Rubén Sánchez)	1781	2022	5.60
Avendaño (Alto del Cristo)	1289	2022	10.55
Avendaño (Alto del Cristo)	2162	2022	0.47
Avendaño (Alto del Cristo)	1663	2022	1.8
Total			750.94

3. Regional map with the location of all fincas owned by Waldmensen S.A.

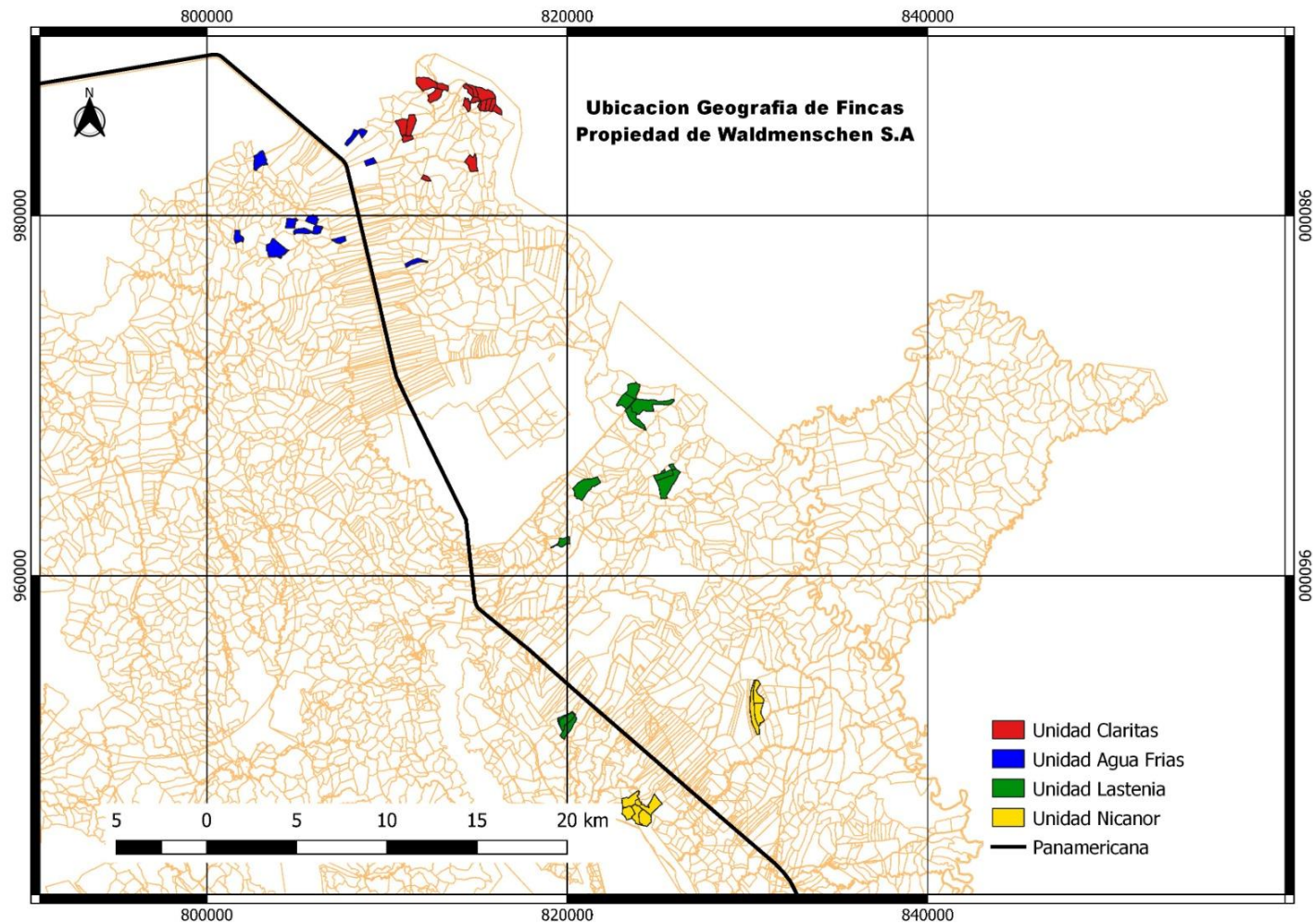


Figure 1: Map with the geographical location of the fincas of Waldmensen S.A.

4. Description of the work to be performed under the 2022 Operational Plan.

Description of the planting, maintenance and management work carried out as part of the Forest People 2022 projects.	
Weed control	Removal of vegetation that competes with planted trees for light and nutrients.
Cleaning in slices	Removal of vegetation with a machete within one meter of the tree.
Cleaning the belt	Removal of vegetation in the row of plants, this cleaning is done alternately with disc cleaning to reduce costs.
Removal of vines	Removal of entangled vegetation from trees.
Combatting Machete Fern	Ferns are strong and very costly competition for planted trees.
Clearance	The goal is to cut the branches of bushes that cast a lot of shade. The clearing should provide more light to the tree.
Tree clearance	Eliminate competition for valuable trees from natural regeneration.
Euphemism	Application of lime compounds to regulate pH, only when the pH is below 5, to the soil around the seedlings.
Fertilization	Fertilizer application.
Stakeout	To determine the percentage of new plantings, field staff conduct an inspection of the plantations between November and December to obtain a preliminary estimate of the mortality of the plantations on the farms. At the end of the summer, the plantations are rechecked to obtain more precise data (mortality) that will determine the need for replanting, and the measure is carried out once the rains begin.
Weeding	Elimination of regrowth at the base of the tree.
Trimming Teak	Elimination of Low Tails.
Height trimming	Removal of branches with a height of more than 7 meters.
Teak wood stripping	Offshoots are new branches on the marketable trunk. They should be removed when they are very tender to obtain good quality wood.
Formative pruning	This is the removal of low branches on young trees so that they reach a marketable height.
Thinning mark	Selection and marking of trees to be removed at an early age.

Thinning	Removal of trees that need to be removed so that the best trees can grow. This is to make room for those that remain.
Conservation of the soil	These are activities aimed at reducing water erosion. They involve the construction of physical barriers to slow the flow of water during rains.
Firewall	Cleaning up boundaries and firebreaks, removing flammable material of leaves and sticks.
Fence maintenance	Repair fences to prevent livestock from entering the fincas.
Phytosanitary control	Constant control of pests and diseases and muleteers.
Monitoring	Measurement of diameter and height growth of trees.
Subsoil protection	Deep excavation to improve soil structure.
Harrowing	Fragmentation of the soil after tillage.
Planimetry	Dividing acres into small squares to facilitate planting.
Sectorization	Identify areas suitable for each tree species.

5. Description of the preparation of fincas for planting 2022.

5.1. Planimetry

For the preparation of the fincas to be established, a survey of the boundaries of the finca is carried out with GPS. Once this information is available using a geographic information tool (QGIS), small grids of three thousand six hundred square meters are created, called planimetry, which is carried out by external employees of the company. These points are then identified on site with a half-inch PVC pipe.

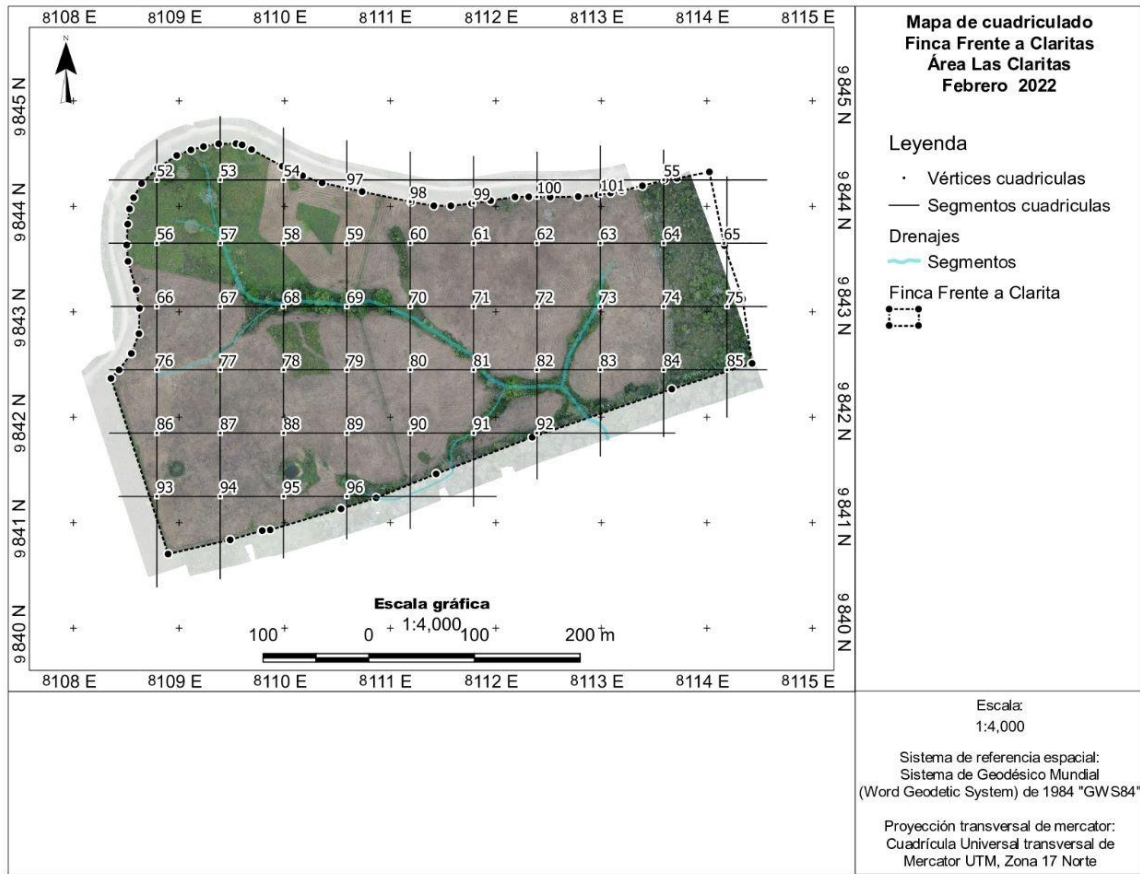


Figure 2: Planimetry of Finca Curry (Las 15), No. 8045.

5.2. Orthophotos

Orthophotos show the topography of the finca from the air, help decide on sectorization and allow to identify the natural drainage of the finca.

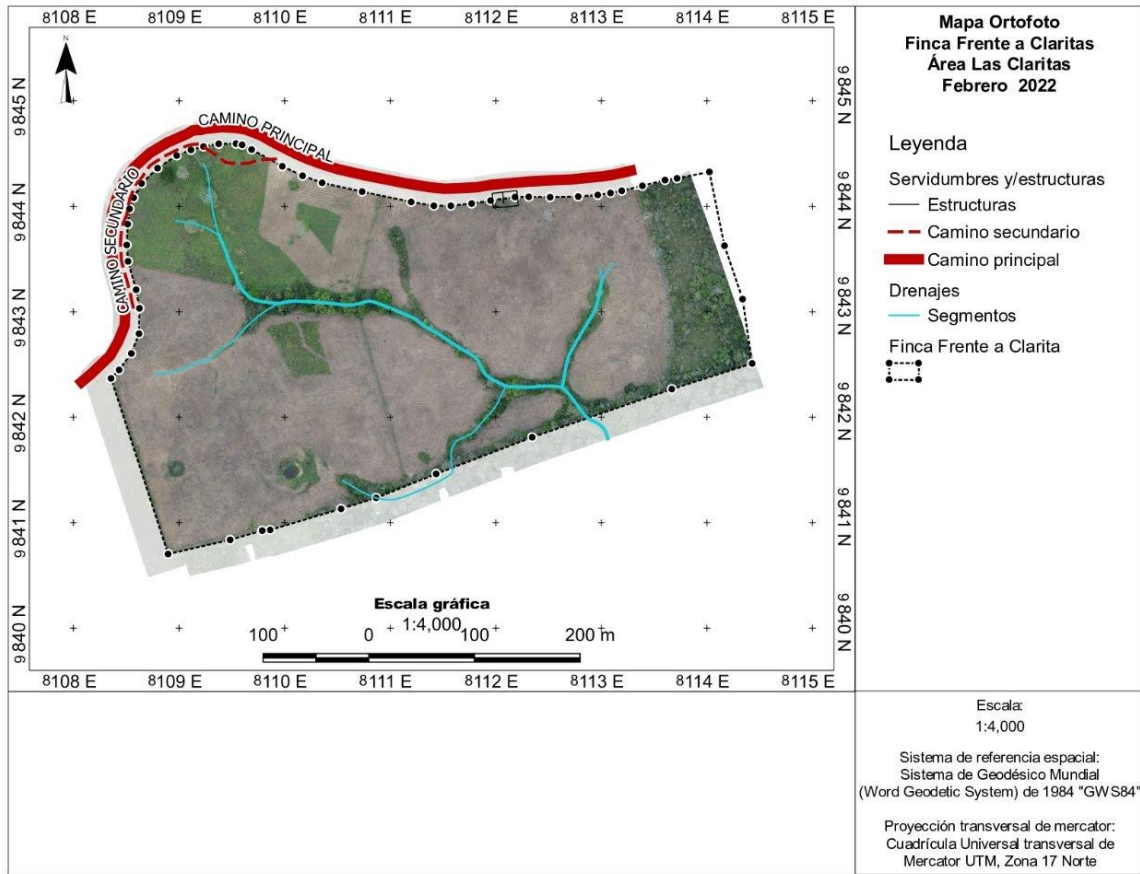


Figure 3: Orthophoto Finca Curry (Las 15), No. 8045

5.3. Sectorization of Fincas

Sectorization of a finca consists of using GPS and drones to propose and identify the areas that have the required characteristics for each species to be **settled**.

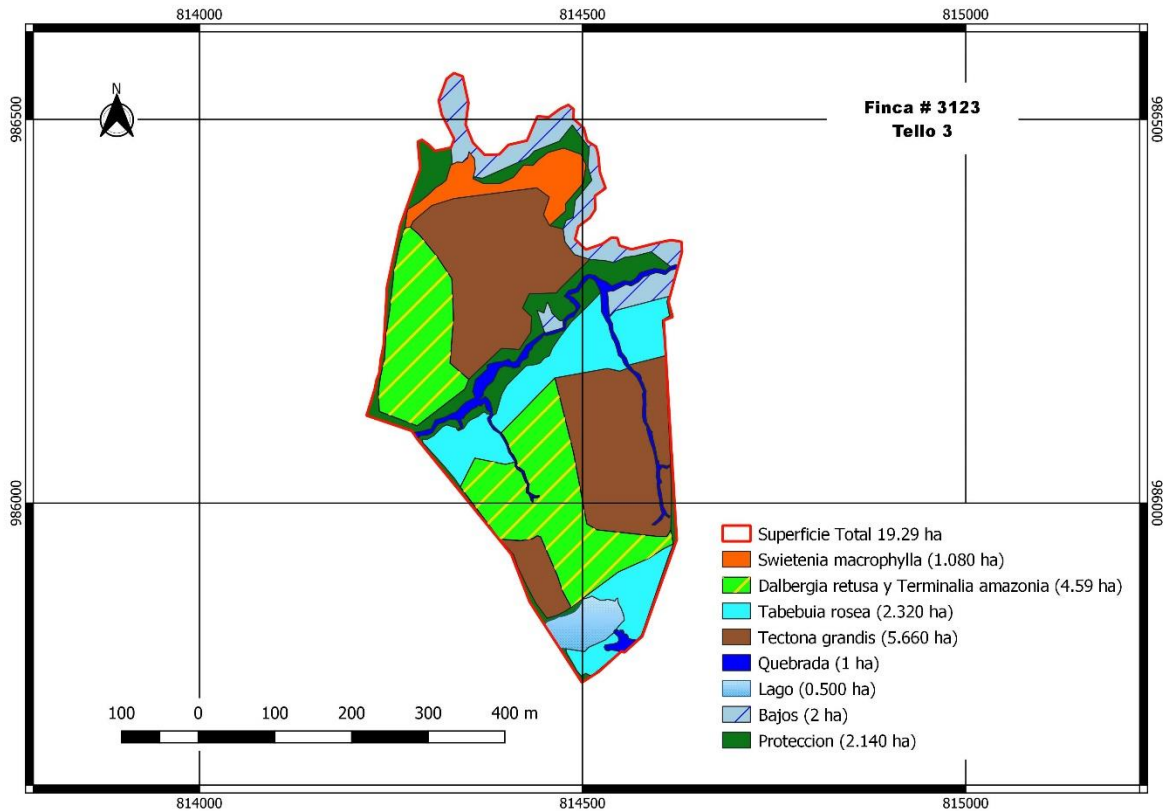


Figure 4: Sectorization of Finca Tello # 3.

6. Finca La Reina

6.1. La Reina, reforestation project in 2013.

The table below shows the reforested area of La Reina. The protected area was reduced because it was enriched with the species described in the following table.

La Reina

# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting				Afforested area/species (ha)
	General name	Scientific name			2013	2015	2017	2022	
2015	Cocobolo	<i>Dalbergia restusa</i>	4x4	625		2.7	2		4.7
	Bitter Cedar	<i>Cedrela odorata</i>	Scattered	Scattered			1	0.24	1.24
	Savanna Oak	<i>Tabebuia rosea</i>	Scattered	Scattered			2	0.24	2.24
	Mahogany	<i>Swietenia macrophylla</i>	Scattered	Scattered				0.11	0.11
	Teak	<i>Tectona grandis</i>	3x3	1111	12				12
	Almond Tree	<i>Dipteryx panamensis</i>	Scattered	Scattered				0.06	0.06
	Mora	<i>Maclura tinctoria</i>	Scattered	Scattered			1		1
	Balm	<i>Myroxylum Balsamo</i>	Scattered	Scattered				0.09	0.09
	Purple guayacon	<i>Tabebuia impetiginosa</i>	Scattered	Scattered				0.32	0.32
	Total afforested							21.76	
	Area to be planted								
	Protected area							3.64	
	Gorges, drainage								
Infrastructure									
Total area								25.4	

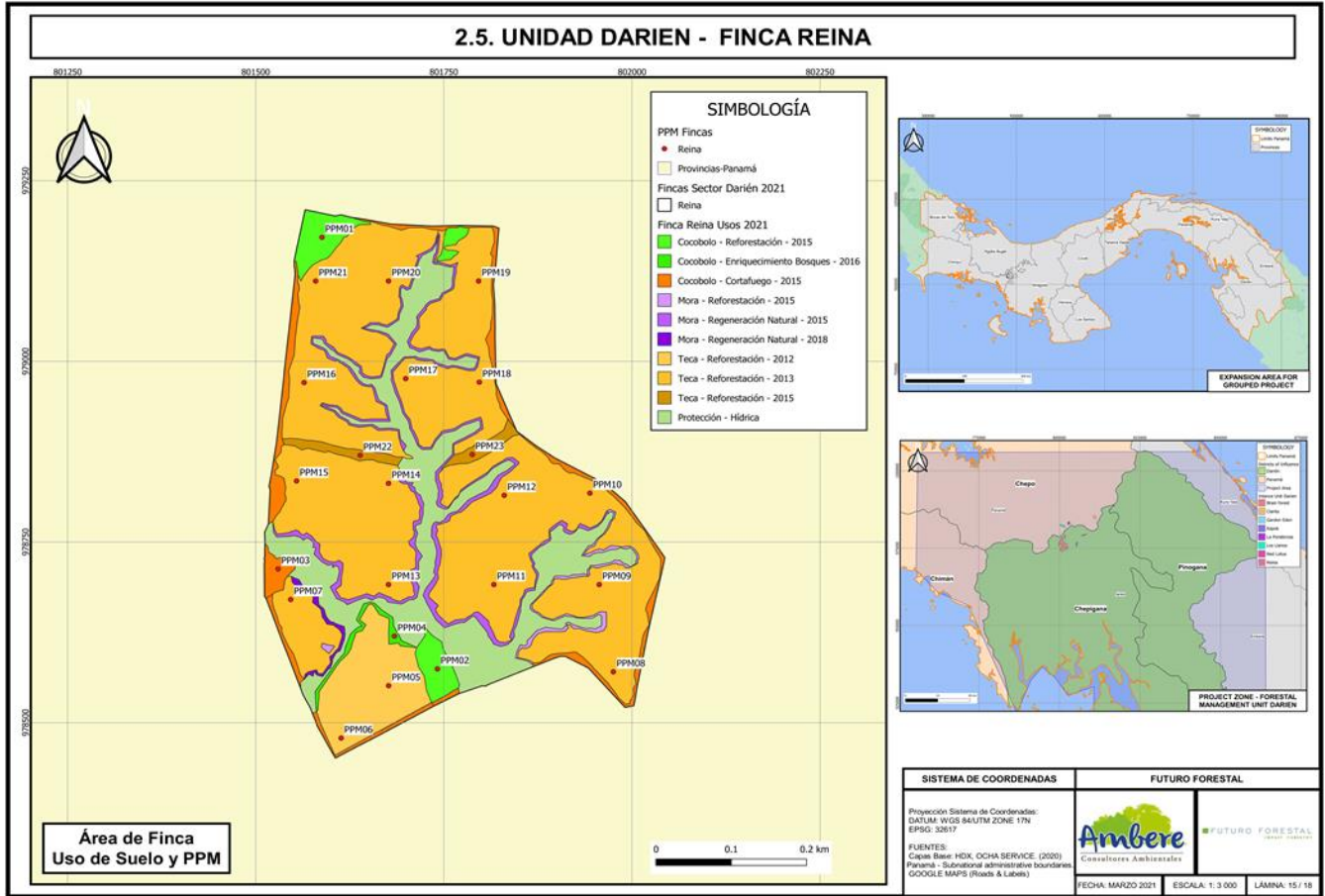


Figure 5: Finca Reina monitoring map

6.2. Mortality planting 2022.

MORTALITY TABLE FOR THE REPLANTING YEAR 2022 - LA REINA				
Types	Number of trees planted	Substrate type	Number of dead trees	Mortality in %
Savanna Oak - <i>Tabebuia rosea</i> (scattered over greater distances).	200	Coconut based pellets	20	10%
Purple Guayacon - <i>Tabebuia impetiginosa</i>	270	Tubes	21	8%
Mahogany - <i>Swietenia macrophylla</i>	94	Bare-root	5	5%
Almond tree - <i>Dipteryx panamensis</i>	50	Bare-root	15	30%
Balm - <i>Miroxylom Balm</i>	80	Bare-root	50	63%

In 2022, a second generation of native species such as Bitter Cedar, Almond, Balsam, Mahogany, and Purple Guayacan were planted in open areas scattered over a total area of 1.06 ha. Species such as Balsam and Almond were planted bare-rooted, meaning they have no substrate to provide them with nutrition and adapt to the site conditions, resulting in a high mortality rate. There are species such as Mahogany that are highly adaptable and can tolerate bare-root planting.

6.3. Average growth of Teak in 2022.

The Teak trees are generally well developed in height and diameter. The understory is also developing with natural regeneration.

Planted, 08-2013		Average growth in diameter and height, monitoring March 2022				
Age	Years	DBH (cm)	ALT (m)	IMA DBH (cm)	IMA ALT (m)	Vol /arb
2.1	2015	7.1	5.9	3.37	2.81	0.0049
3.7	2017	12.5	10.5	3.38	3.38	0.0306
5.4	2019	16.6	16.4	3.07	3.07	0.0812
6.4	2020	21.7	18.0	3.38	3.38	0.1382
7.5	2021	23.4	19.8	3.12	3.12	0.1613
8.5	2022	25.4	20.2	3.00	2.39	0.2280

This table is a summary of the growth per year of the annual measurements. The volume calculations were made with the trading heights at the time of measurement.

Growth range/site class in 2- to 10-year-old plantings.				
Variables	Unit	At	Medium	High
IMA DAP	cm/year	<2,4	2,5 a 3,0*	3,02 a 3,8*
IMA height	m/year	<2,2*	2,33 a 3,14*	3,15 a 4,05*

6.4. Growth of native plantings La Reina in the year of planting 2015-2016.

Year 2015

Average growth Cocobolo, planting 2015						
Types	Dap (cm)	Total H (m)	N	AB	AB/ha	N/ha
Cocobolo	3.8	4.8	48	0.0012	0.0115	480

It is noted that the table shows low values for DBH (Diameter at Breast Height) and total height. This is due to the poor location of the two monitoring plots. As in 2021, a new monitoring system was established for carbon measurement, where plots are randomly placed. In Cocobolo de Reina, 2 plots were established, one of which was in a location that is not representative of the plantation, as it is near a water source and therefore has more shade and less growth. This led to lower figures. This problem was recognized, and a correction was made. For the 2023 monitoring, the plots will be relocated to obtain more realistic values. Clearing was done to allow more light to the trees in the affected area.

In addition to Cocobolo, there are other valuable, naturally renewable wood species, such as Amarillo, Espave and Roble (Savannah Oak).

Year 2016.

Average growth Cocobolo, planting 2016						
Types	Dap (cm)	Total H (m)	N	AB	AB/ha	N/ha
Cocobolo	10.7	9.9	31	0.0090	0.0897	310

Cocobolo trees are well developed in height and diameter. In addition to Cocobolo, other naturally renewable species include Bitter Cedar, Mulberry, Ron Ron, and Savanna Oak.

6.5. POA 2022

FINCA LA REINA																										
DESCRIPCIÓN	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute
Conservation of the soil		-		-		-		-		-		-		-		-		26		-	15	15	15	2	30	43
Weed control - manual - chapia		-		-		-		-		-		-		-		-		-	30.5	36	33.5	2	33.5	-	98	38
Manual weed control - Chapia		-		-		-		-		-		-		-		-		-				1		-	-	1
Manual weed control - maintenance rollers		-		-		-		-		5	17	13		-		-		-				30		14	-	79
Weed control		-		-		14		4		-		-		-		-		-		-		-		-	-	18

- chemical cutting																					
Plant protection control - muleters	-	-	-	-	-	-	-	-	5	-	4	-	-	-	9						
Manual plant protection control - muleters	-	-	-	-	-	-	15	13	-	20	-	8	15	15	56						
Manual plant protection control - grubs	-	-	-	15	5	3	-	23	6	-	38	-	-	90							
Weeding	-	-	-	-	-	-	-	-	-	-	-	-	25	-	25						
Release	-	-	-	-	5	-	-	5	-	-	-	22	-	32							

Plant distribution	-	-	-	-	-	-	-	-	-	-	-	-	6	3	-	6	3
Foliar fertilization	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	8	8
Hoyado - manual	-	-	-	-	-	-	-	-	-	-	-	-	3	3	-	3	3
Unforeseen events	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	5
GPS measurement	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	2	2
Fence maintenance	-	-	-	-	-	7	-	-	-	-	-	-	-	14	-	-	21
Marking - Stakeout	-	-	-	-	-	-	-	-	-	-	6	12	-	-	-	6	12
Marking Estaquillo	-	-	-	-	-	-	-	-	-	-	-	-	12	6	-	12	6
Marking for	-	-	-	1	3	-	-	-	-	-	-	-	-	-	-	11	3

7. Finca La Ponderosa.

7.1. La Ponderosa plantations in the year 2020

La Ponderosa								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2020	2021		
280254-235655-218957	Cocobolo	<i>Dalbergia restusa</i>	3x4	833	4.7	12.26	16.96	
	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833	1.26	5.43	6.69	
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833	3.5	2.22	5.72	
	Mahogany	<i>Swietenia macrophylla</i>	3x4	833	0.17	0.87	1.04	
	Teak	<i>Tectona grandis</i>	4x5	500		6.5	6.5	
	Almond Tree	<i>Dipteryx panamensis</i>	3x4	833	0.07		0.07	
	Ron Ron	<i>Astronium graviolens</i>	3x4	833	0.29	1.51	1.8	
	Purple guayacon	<i>Tabebuia impetiginosa</i>	3x4	833		1.38	1.38	
	Total afforested						40.16	
	Area to be planted							
	Protected area						2	
	Gorges, drainage						6.66	
	Infrastructure							
Total area							48.82	

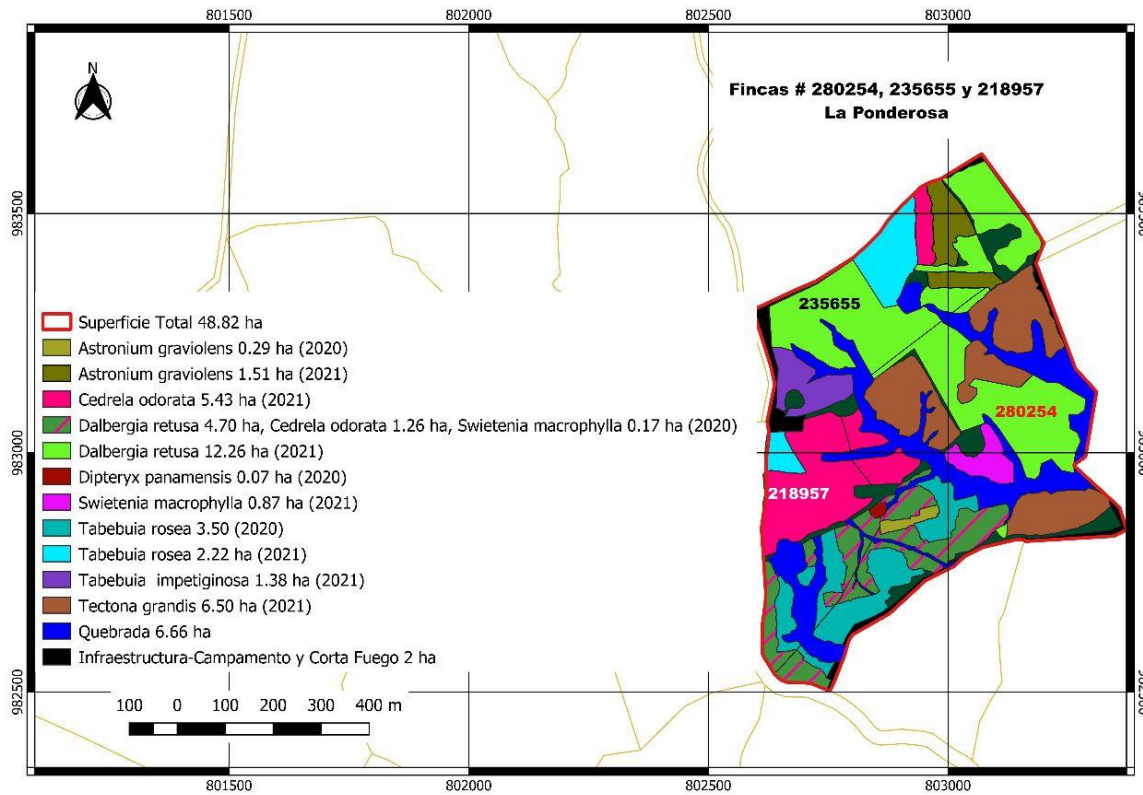


Figure 6: Map La Ponderosa

7.2. Growth of native plants in La Ponderosa, planted in 2020.

Average growth of native plants in La Ponderosa, planting year 2020, monitoring April 2022.						
Types	Dap (cm)	Total H (m)	N	AB	AB/ha	N/ha
Cocobolo	2.5	3.7	59	0.0005	0.0033	393
Savanna Oak	2.2	1.9	18	0.0004	0.0026	120
Ron Ron	1.3	1.4	33	0.0001	0.0009	220

7.3. POA 2022

FINCA PONDEROSA 2020																										
DESCRIPCIÓN	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute
Manual weed control - Chapia		-		-		-		4		-		-		-		-		-	55	58		-		-	55	62
Manual weed control - maintenance rollers		-		-		-		-		-		4		-		-		-		94		-		-	-	98
Hoyado - manual		-		-		1		-		-		-		-		-		-		-		-		-	-	1
Unforeseen events		-		-		-		-		-		-		-		-	10		4		-		-		10	4
Fence marking		-		-	30	37		1		-		-		-		-		-		-		-		-	30	38
Manual rounds		-	10	23		-		-		-		-		-		-		-		-		-		-	10	23
Fertilization	20	2		-		-		-		-		-		-		-		-		-		-		-	20	2
Monitoring		2		3		6		3		-		-		-		-		-		8		-		-	-	22
Straightening plants		-		4		-		-		-		-		-		-		-		-		-		-	-	4
Chainsaw guide		-		-		2		-		-		-		-		-		-		-		-		-	-	2

Formative pruning	-	-	-	40	7	-	-	-	-	-	-	-	-	-	-	-	40	7						
Weed control, chemical cutting	-	-	-	-	-	-	-	-	-	-	20	8	-	20	9	-	40	17						
Total, general	-	4	-	30	-	46	-	15	-	-	-	4	-	-	-	12	-	501	-	9	-	-	205	280

8. Finca Clarita 1

Clarita 1								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2020	2021		
30123319 30124630	Cocobolo	<i>Dalbergia restusa</i>	3x4	833		29.11	29.11	
	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		12.88	12.88	
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		0.42	0.42	
	Teak	<i>Tectona grandis</i>	4x5	500		15.65	15.65	
	Amarillo	<i>Terminalia amazonia</i>	3x4	833		0.3	0.3	
	Balm	<i>Miroxylum Balsamo</i>	3x5	834		0.54	0.54	
	Ron Ron	<i>Astronium graviolens</i>	3x4	833		6.13	6.13	
	Purple guayacon	<i>Tabebuia impetiginosa</i>	3x4	833		3.58	3.58	
	Enrichment		5x5	400		4.16	4.16	
	Total afforested						72.77	
	Area to be planted						0.33	
	Protected area							
	Gorges, drainage						8.7	
	Infrastructure						1.2	
Total area							83	

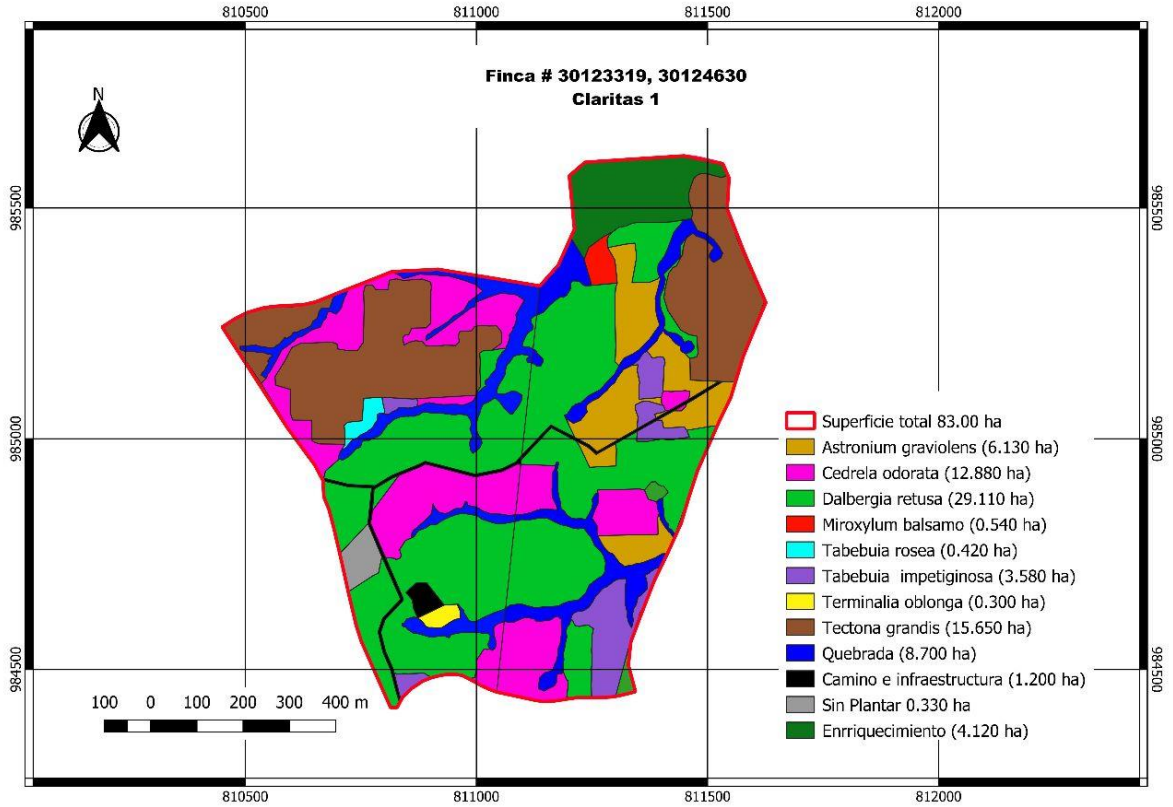


Figure 7: Map of Finca Clarita 1

8.1. POA 2022.

FINCA CLARITA 1																									
DESCRIPCIÓN	January	February	March	April	May	June	July	August	September	October	November	December	Totals												
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	
Manual weed control - Chapiá		-		-	103	103	8	8		-		-		32	32	100	100	112	112	140	108	495	463		
Unforeseen events		-		-		-		-		-		-		3		-		-		-		-		3	
Fence maintenance		-		28		-		-		-		-		-		-		-		-		-		28	
Monitoring		-		9		23		75		18		13		9		5		3		6		4		-	165
Monitoring		3		25		-		-		-		-		-		-		-		-		-		-	28
Weed control, chemical cutting		-		-		-		-		-		-		-		-		-		9		-		-	9
Release		-		-		-		-		-		-		-		-		4		-		-		-	4

Manual rounds	-	40	95	-	-	-	-	-	-	-	-	-	15	-	-	55	95				
Manual plant protection control-grubs	-	-	-	-	-	-	-	-	-	2	13	11	14	19	-	-	59				
Weed control-chemical	-	-	-	-	-	38	23	-	2	-	13	-	11	-	14	-	40	61			
New planted	-	-	-	-	47	63	30	56	-	-	25	-	-	-	-	77	144				
Manual weed control-care discs	7	-	136	18	4	90	83	90	71	31	96	42	32	59	-	180	579				
Weed control-chemical cutting	-	243	7	16	4	-	28	103	71	-	31	137	96	28	46	9	30	-	-	537	330
Low circumcison	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	
Formative pruning	-	-	-	-	15	3	-	-	-	-	-	-	-	-	-	-	-	-	15	3	

Phyto sanit ary-mech anical contr ol	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	8
Plant prote ction contr ol - trellis form ation	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	2
Plant prote ction contr ol - mule teers	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	5
Gran ular fertili zatio n	-	-	-	-	-	-	-	-	59	49	59	8	-	-	-	117	57
Chem ical weed contr ol - FUMI GATI ON of plots.	-	-	-	-	-	-	105	-	7	-	-	-	42	44	105	93	
Man ual plant prote ction contr ol -	-	-	-	-	-	-	-	-	6	-	-	-	4	-	-	10	

The extra consumption of 479 working days was due to the introduction of manual weed control, as it was combined with biological pruning to reduce the use of agrochemicals such as glyphosate. Another cause of extra consumption was the control of *Hypsipyla grandella*, a pest that affects the Meleacea families.

Clarita 2								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2020	2021		
218060	Cocobolo	<i>Dalbergia restusa</i>	3x4	833		5.59	5.59	
	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		4.27	4.27	
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		0.91	0.91	
	Quira	<i>Platimisciun pinnatum</i>	3x5	834		0.61	0.61	
	Ron Ron	<i>Astronium graviolens</i>	3x4	833		0.81	0.81	
	Purple guayacon	<i>Tabebuia impetiginosa</i>	3x4	833		0.43	0.43	
	Total afforested						12.62	
	Area to be planted						1.45	
	Lakes						0.3	
	Gorges and drainage						2.1	
Infrastructure						0.83		
Total area							17.3	

9. Finca Clarita 2

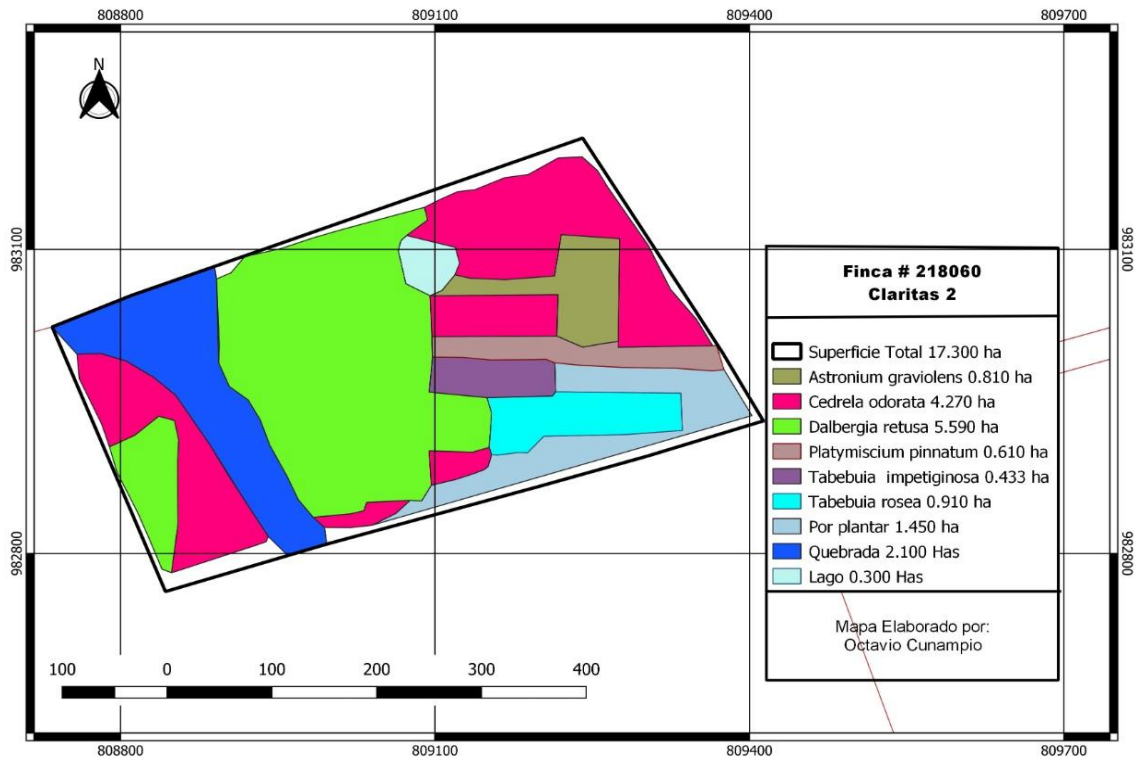


Figure 8: Map of Finca Clarita 2

9.1. POA 2022

FINCA CLARITA 2

DESCRIPCIÓN	January		February		March		April		May		June		July		August		September		October		November		December		Totals		
	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	
Manual weed control - Chapi a		-	38	9		-		-	38	8		-		38	20	-	38	5		-		-		38	16	192	58
Manual weed control - main tenance rollers		-		-		-		-		9		50		86		2		11		10		7			1	-	176
Monitoring		12		-		-		-		5		7		5		1		-		-		-		-	-	-	30

Monitoring	6	2	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Granular fertilization	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	8
Tractor driver	-	-	-	-	-	-	-	-	-	-	-	3	-	-	3	
Manual weed control - care discs	35	8	-	-	-	-	-	-	-	-	-	-	-	-	43	
Manual rounds	-	3	-	-	-	-	-	-	-	-	-	-	-	-	3	
GPS measurement	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	

New planted	-	-	-	-	-	8	57	-	-	8	6	8	7	-	-	23	70
Plant protection control - muleteers	-	-	-	-	-	-	52	3	-	-	-	-	-	-	-	52	3
Foliar fertilization	-	-	-	-	-	-	-	-	30	2	-	-	-	-	-	30	2
Chemical weed control - spraying plots of land	-	-	-	-	-	-	-	-	37	39	-	-	-	-	-	37	39
Formative pruning	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4

Weed control, chemical cutting	-	-	-	-	-	-	-	-	-	31	23	31	11	-	-	61	34	
Cleaning and shrinkage of the belt	-	-	-	-	-	-	-	-	-	57	9	-	-	-	-	57	9	
Phytosanitary - chemical control	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	2	
Manual plant protection control	-	-	-	-	-	-	-	-	-	-	-	10	3	-	10	9	20	12

10. Finca Darío Castro

Dario Castro								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2020	2021		
1866	Cocobolo	<i>Dalbergia restusa</i>	3x4	833		6.61	6.61	
	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		2.73	2.73	
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		3.09	3.09	
	Teak	<i>Tectona grandis</i>	4x5	500		9.99	9.99	
	Ron Ron	<i>Astronium graviolens</i>	3x4	833		3.99	3.99	
	Guayabo de Charco	<i>Terminalia oblonga</i>	3x4	833		1.9	1.9	
	Purple guayacon	<i>Tabebuia impetiginosa</i>	3x4	833		3.3	3.3	
	Total afforested						31.61	
	Area to be planted						1.79	
	Gorges, drainage						8.13	
	Infrastructure						1.1	
	Total area							42.63

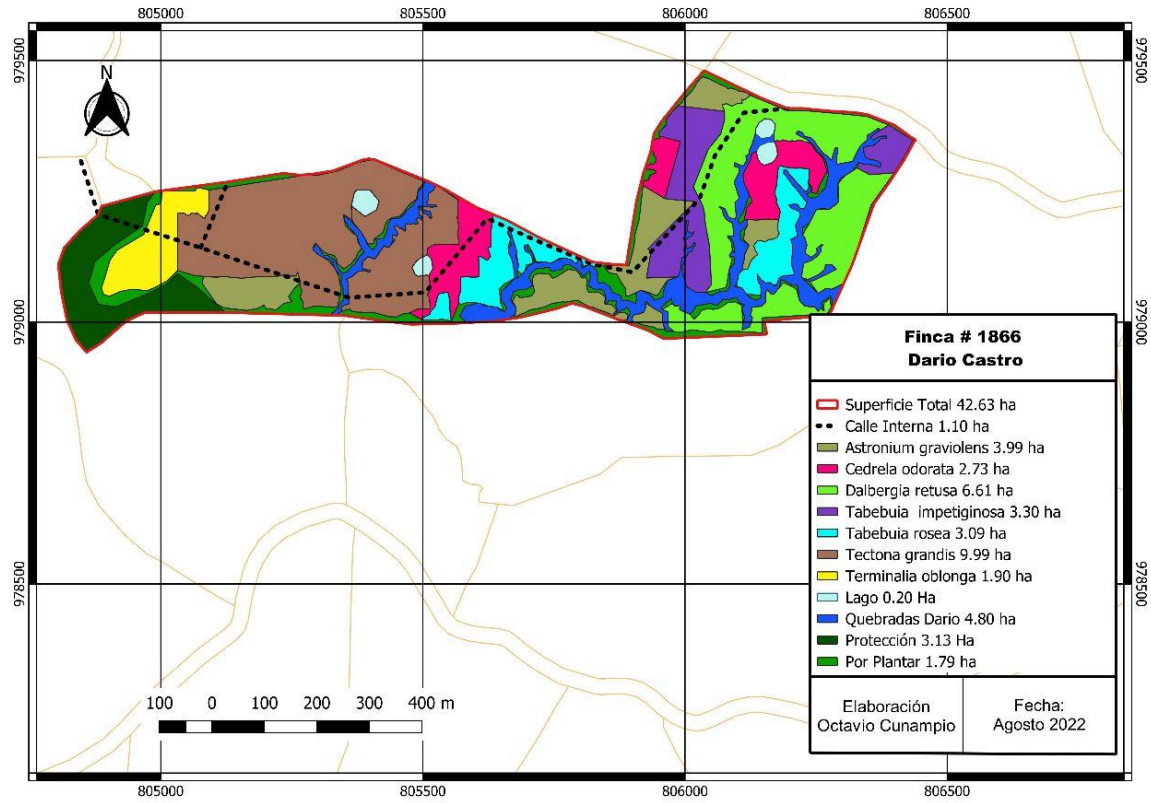


Figure 9: Dario Castro map

10.1. POA 2022

FINCA DARIO CASTRO																										
DESCRIPTION	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute
Line labels																										
Manual weed control - Chapia	-	-	-	-	-	-	147	72	-	-	-	-	-	-	147	126	147	5	-	-	147	19	-	-	586	222
Manual weed control - maintenance rollers	-	-	-	-	-	-	120	16	-	-	148	261	21	15	-	-	-	-	104	265	-	-	4	-	393	561
Monitoring	53	21	21	-	-	18	18	-	1	-	17	4	-	-	-	-	2	-	20	-	6	-	1	39	143	
Tractor driver	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	2
Manual weed control - care discs	-	237	208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	237	208
New planted	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	2	-	58	-	-	-	-	-	-	70
Plant protection control - muleteers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Chemical weed control - FUMIGATION of plots.	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	17	-	17	-	-	-	50	17	51	67	
Formative pruning	-	-	-	-	-	7	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	122	11
Phytosanitary - chemical control	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	5

Manual plant protection control - grubs		-		-	-	-	-	-	-	-	-	-	-	-	-	-	2		2	4	-	8				
Weed control - chemical cutting	151	103	38	6	-	-	-	-	-	-	-	-	-	-	8		77		10	-	188	204				
Manual rounds		76		26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	102				
Release		4		-	-	-	-	-	-	-	-	-	-	7	-	7	-	7	-	-	20	4				
Chainsaw guide		-		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1				
Low circumcision	48	-		-	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	16				
Plant distribution	24	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-				
Unforeseen events		-		-	-	-	-	-	-	6	-	-	1	-	11	-	-	-	-	-	-	18				
Manual plant protection control - muleteers		-		-	-	-	-	-	-	7	-	-	-	122	-	-	-	-	-	-	122	7				
Maintenance of internal roads		-		-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	3				
Conservation of the soil		-		-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	3				
Fence marking		-		-	-	-	-	-	-	-	-	-	-	3	-	-	9	-	-	-	-	12				
Plant distribution		-		-	-	-	-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	26				
Total, general		236	296	262	-	-	285	129	-	5	148	278	38	42	147	126	164	27	250	460	153	103	7	26	1,830	1,694

11. Finca Raúl Castro

Raul Castro							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2020	2021	
3479	Cocobolo	<i>Dalbergia retusa</i>	3x4	833		14.4	14.4
	Total afforested					14.4	
	Secondary forest					9.26	
	Gorges, drainage					3.3	
	Infrastructure						
	Total area						26.96

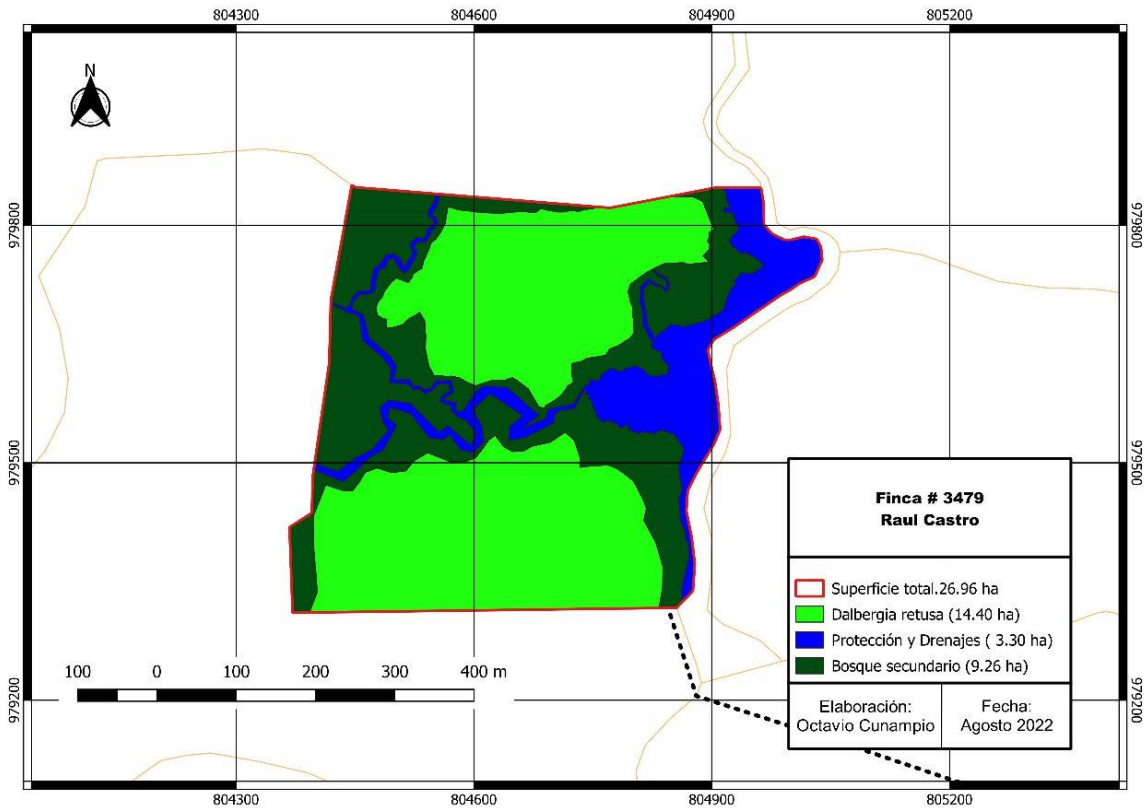


Figure 10: Map of Finca Raúl Castro

12. Finca Limite

El Limit								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
30358872	Cocobolo	<i>Dalbergia restusa</i>	3x4	833	6.6	1.74	8.34	
	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833	4		4	
	Balm	<i>Miroxylum Balsamo</i>	3x4	833	0.5		0.5	
	Mahogany	<i>Swietenia macrophylla</i>	3x4	833		0.3	0.3	
	Total afforested						13.14	
	Area to be planted							
	Drainage, gorges						1	
	Protected area						2.302	
	Infrastructure							
	Total area							16.442

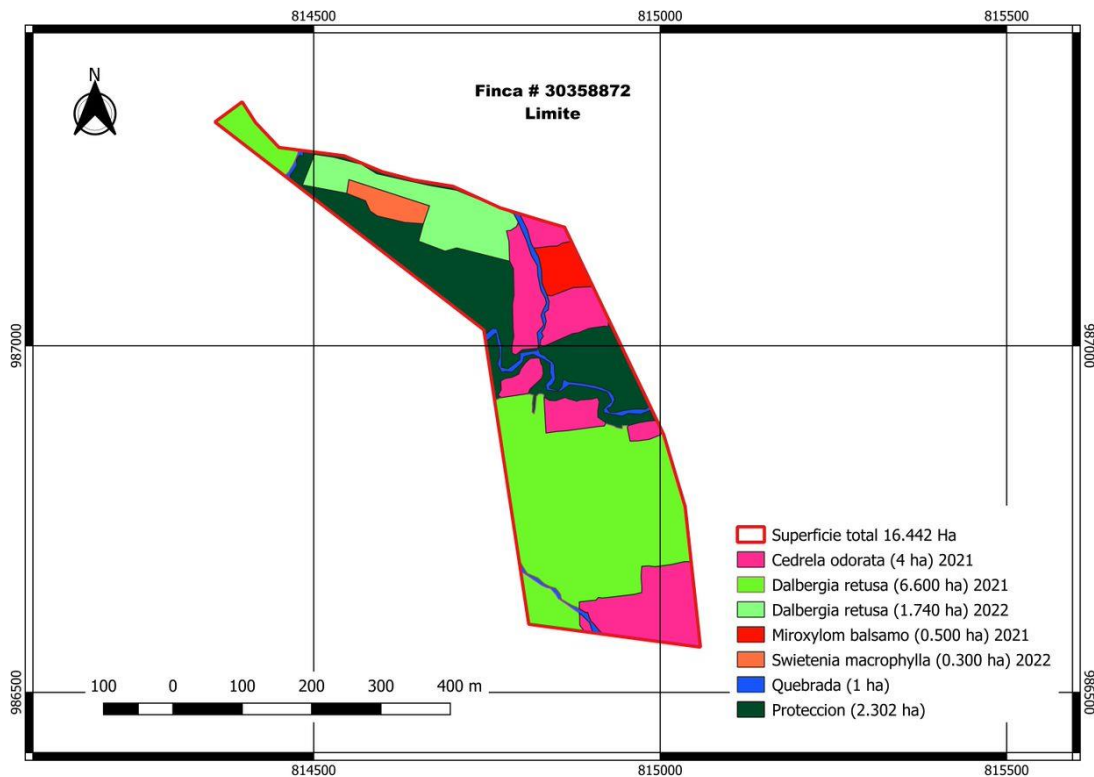


Figure 11: Map of Finca Limite

12.1. POA 2022

FINCA EL LIMITE																										
DESCRIPCIÓN	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute
Manual weed control - Chapia		-		-		-		-	47	3	47	6		-		-		-		-	47	9		-	141	18
Monitoring	33	28		-		-		3		10		-		15		-		-		-		1		-	33	57
Manual weed control - care discs	44	32	48	48	41			-		2		-	26	39		-		-		-		7		-	159	169
Weed control, chemical cutting		-		-		-		-		-		-	6		-		-	4		-		-		-	6	4
Manual plant protection control - grubs		-		-		-		-		-		-		-		-		2		-		-		-	-	2
Manual rounds		32		-		-		-		-		-		-		-		-		-		-		-	-	32
Release	33	8		-		-		-		-		-		-		-		-		-		-		-	33	8
Manual plant protection control - muleteers		-		-		-		-		-		-		-		-		-		-		1		-	-	1

Maintenance of internal roads	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	5		
Trochad o	-	-	-	-	-	-	-	74	-	-	-	-	-	-	-	-	-	74		
Chemical weed control - fumigation of the plot	-	-	-	-	-	-	-	60	-	-	-	-	66	-	-	-	66	60		
Foliar fertilization	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	4		
Monitoring	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1		
Planted	-	-	-	-	-	-	-	22	11	-	-	-	-	-	-	-	22	11		
Total, general	110	100	48	48	41	-	3	203	-	-	-	7	-	-	113	18	113	18	460	446

13. Finca La Conexión

La Conexión								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2018	2019		
6704	Alcarreto	<i>Aspidosperma desmanthum</i>	5x6	333		0.28	0.28	
	Maria Grande	<i>Calophyllum bidentata</i>	5x3	666		0.13	0.13	
	Maria Grande	<i>Calophyllum bidentata</i>	5x6	333		0.32	0.32	
	Maria Chiquita	<i>Calophyllum brasiliensis</i>	5x3	666		0.87	0.87	
	Bateo	<i>Carapa guianensis</i>	5x3	666		0.3	0.3	
	Cocobolo	<i>Dalbergia retusa</i>	5x3	666		0.4	0.4	
	Almond Tree	<i>Dipteryx panamensis</i>	5x6	333		0.1	0.1	
	Almond Tree	<i>Dipteryx panamensis</i>	5x3	666		0.64	0.64	
	Nispero	<i>Manilkara bidentata</i>	5x3	666		0.8	0.8	
	Nispero	<i>Manilkara zapote</i>	5x6	333		0.35	0.35	
	Aceituno	<i>Simaruba amara</i>	5x3	666		0.31	0.31	
	Alcarreto	<i>Aspidosperma desmanthum</i>	5x6	333		0.57	0.57	
	Total afforested						5.07	
	Area to be planted							
Natural forest area						43.92		
Drainage, gorges								
Infrastructure								
Total area							48.99	

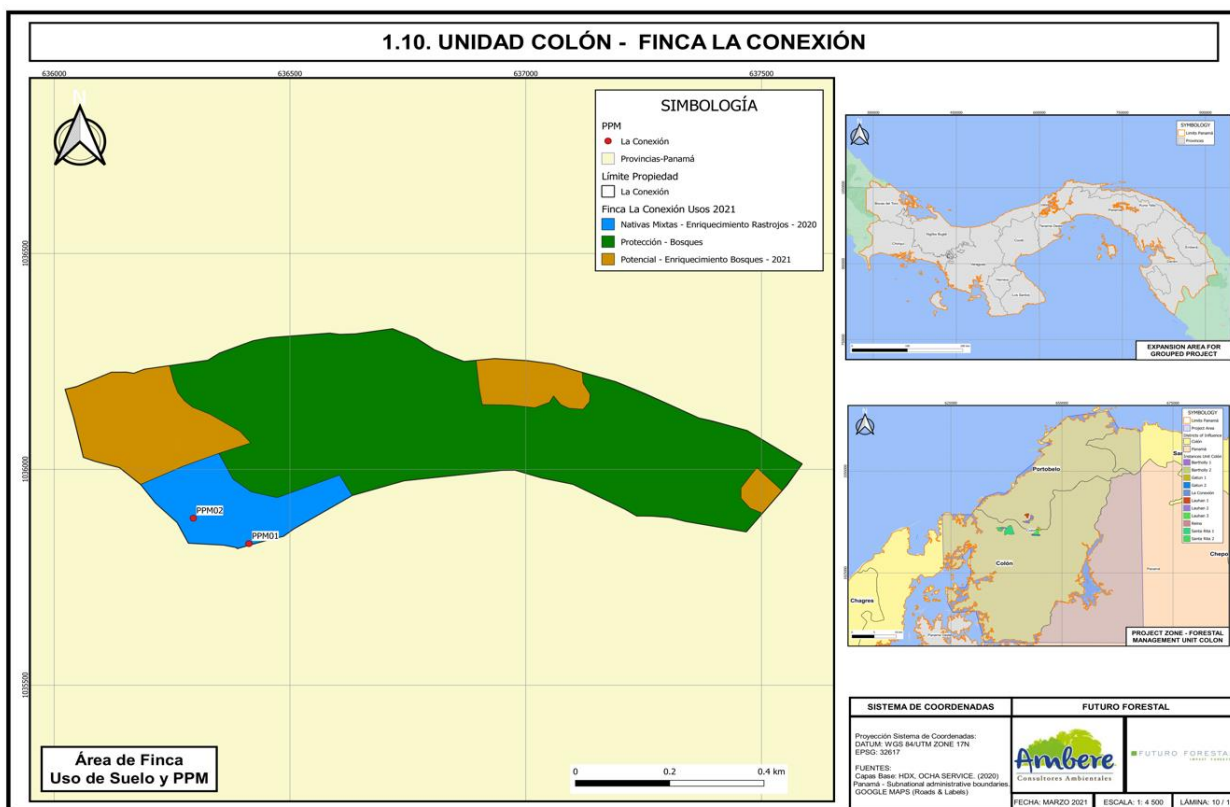


Figure 12: La Conexión monitoring map

13.1. Native plants in La Conexión, planted in 2019.

Average native growth in La Conexión, 2019 planting year, April 2022 monitoring						
Types	Dap (cm)	Total H (m)	N	AB	AB/ha	N/ha
Mayo*	2.4	2.9	9	0.0005	0.0046	90
Aceituno	1.8	2.6	1	0.0003	0.0025	10
Almond Tree	1.4	1.9	3	0.0002	0.0016	30
Amarillo	6.8	5.2	2	0.0036	0.0358	20
Berba	6.4	6.0	6	0.0032	0.0320	60
Cocobolo	1.7	3.2	10	0.0002	0.0024	100
Condon de Mono*	4.8	4.8	3	0.0018	0.0181	30
Jacaranda*	12.8	11.4	3	0.0128	0.1280	30
Maria	1.3	2.3	7	0.0001	0.0014	70
Yaya*	1.9	3.8	1	0.0003	0.0028	10

* Naturally renewable species

In La conexión the species with the best development are planted: Maria, Cocobolo, Aceituno, Almendro and Níspero. Some species, such as Alcarreto, had difficulty developing on this soil type, so a replanting with Maria was made to compensate for the loss of Alcarreto.

13.2. POA 2022

FINCA LA CONEXIÓN																											
DESCRIPTION	January		February		March		April		May		June		July		August		September		October		November		December		Totals		
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	
Manual weed control - Chapia		-	10	12		-		-		-		-		-		-	10	12		-		-		42	42	62	66
Formative pruning		-		-		-		-	3	2		-		-		-		-		-		-		-		3	2
Granular fertilization		-		-		-		-		-		-		-	7	1		-		-		-		-		7	1
Total, general	-	-	10	12	-	-	-	-	-	2	-	-	-	-	7	1	10	12	-	-	-	-	-	42	42	72	69

14. Finca Gatun 1

Gatun 1								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2018	2019		
DP	Alcarreto	<i>Aspidosperma desmanthum</i>	5x3	666		1.92	1.92	
	Brerba	<i>Brossimun alicastrum</i>	5x3	666		0.52	0.52	
	Maria Chiquita	<i>Calophylum brasiliensis</i>	5x3	666		2.24	2.24	
	Bateo	<i>Carapa guianensis</i>	5x3	666		2.1	2.1	
	Cocobolo	<i>Dalbergia retusa</i>	5x3	666		8.4	8.4	
	Cocobolo	<i>Dalbergia retusa</i>	3x3	1111		1.95	1.95	
	Almond Tree	<i>Dipteryx panamensis</i>	5x3	666		2.21	2.21	
	Nispero	<i>Manilkara bidentata</i>	5x3	666		1.93	1.93	
	Caobillo	<i>Tapiria guianensis</i>	5x3	333		1.09	1.09	
	Amarillo	<i>Terminalia amazonia</i>	5x3	666		1.84	1.84	
	Amarillo	<i>Terminalia amazonia</i>	3x3	1111		3.04	3.04	
	Total afforested						27.24	27.24
	Area to be planted							
	Protected area						21.74	
Gorges, drainage								
Infrastructure								
Total area							48.98	

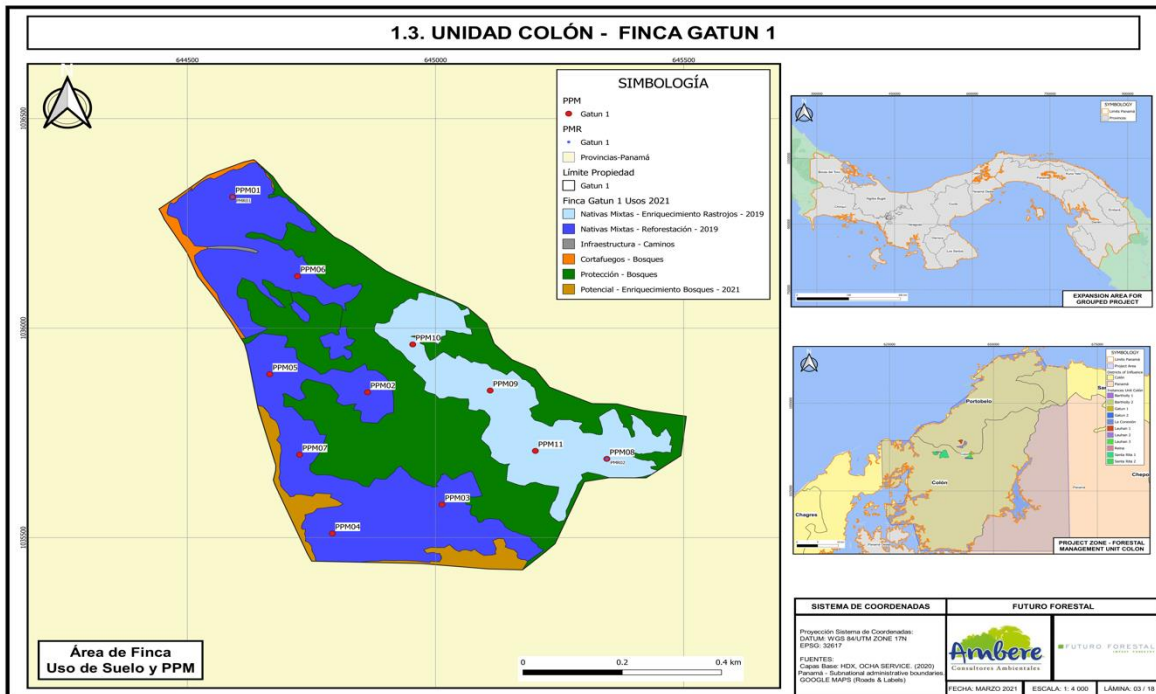


Figure 13: Monitoring map Gatun Finca 1

14.1. Growth of native species in Gatún 1, planted in 2020.

Average growth of native species in Gatún 1, planting year 2020, monitoring April 2022						
Types	Dap (cm)	Total H (m)	N	AB	AB/ha	N/ha
Mayo*	7.2	5.4	5	0.0041	0.0075	9
Olive tree*	3.7	4.6	6	0.0011	0.0019	11
Amarillo	4.5	3.7	60	0.0016	0.0028	109
Berba	3.5	4.4	3	0.0009	0.0017	5
Chutra*	5.3	6.1	1	0.0022	0.0040	2
Cocobolo	2.1	3.4	40	0.0004	0.0006	73
Jacaranda*	2.2	2.7	2	0.0004	0.0007	4
Maria Chiquita	1.1	2.3	3	0.0001	0.0002	5

* Naturally renewable species

In general, in Gatún 1 the best developing planted species are: Amarillo, Caobillo and Maria. These species have good growth rates. Cocobolo has been developing slowly and is a species that needs more care in the Colón sites. There is good natural regeneration of the species: Mayo and Jacaranda.

14.2. POA 2022

FINCA GATUN 1																										
DESCRIPT ION	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute
Manual weed control - Chapia	9	4	9	13	9	108	9	-	9	42	9	102	9	100	9	32	9	87	9	165	9	64		147	100	864
Monitoring		-		-		-		-		-		-		-		-		-		-		-		1	-	1
Trochado-balizado		-		-		-		-		-		-		-		-		-		-		133		-	-	133
Cleaning and maintenance of infrastructure		-		-		-		-		-		-		4		8		10		-		13		-	-	35
Weeding		-		26		-		-		-		-		-		-		-		-		-		-	-	26
Release		-		-		-	90	67	90	8		-		-		-		-		-		-		-	180	75
Formative pruning		-		-		-		2		-		2		-		-		-		-		-		-	-	4
Training		-		-		-		-		1		-		-		-		-		-		-		-	-	1
Manual weed control - maintenance rollers		-		-		-		-		-		-		-		20		-		-		-		-	-	20
Granular fertilization		-		-		-		-		-		-		-	32	47		4		-		-		-	32	51
Total, general	9	4	9	39	9	108	99	69	99	51		104	9	104	41	107	9	101	9	165	9	210	-	148	312	1,210

15. Finca Gatun 2

Gatun 2								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
4516	Almond Tree	<i>Dipteryx panamensis</i>	3x3	1111		0.16	0.16	
	Nispero	<i>Manilkara bidentata</i>	3x3	1111		1.41	1.41	
	Amarillo	<i>Terminalia amazonia</i>	3x3	1111		2.48	2.48	
	Total afforested						4.05	
	Area to be planted						39.52	
	Protected area						5.85	
	Gorges, drainage							
	Infrastructure							
	Total area							49.42

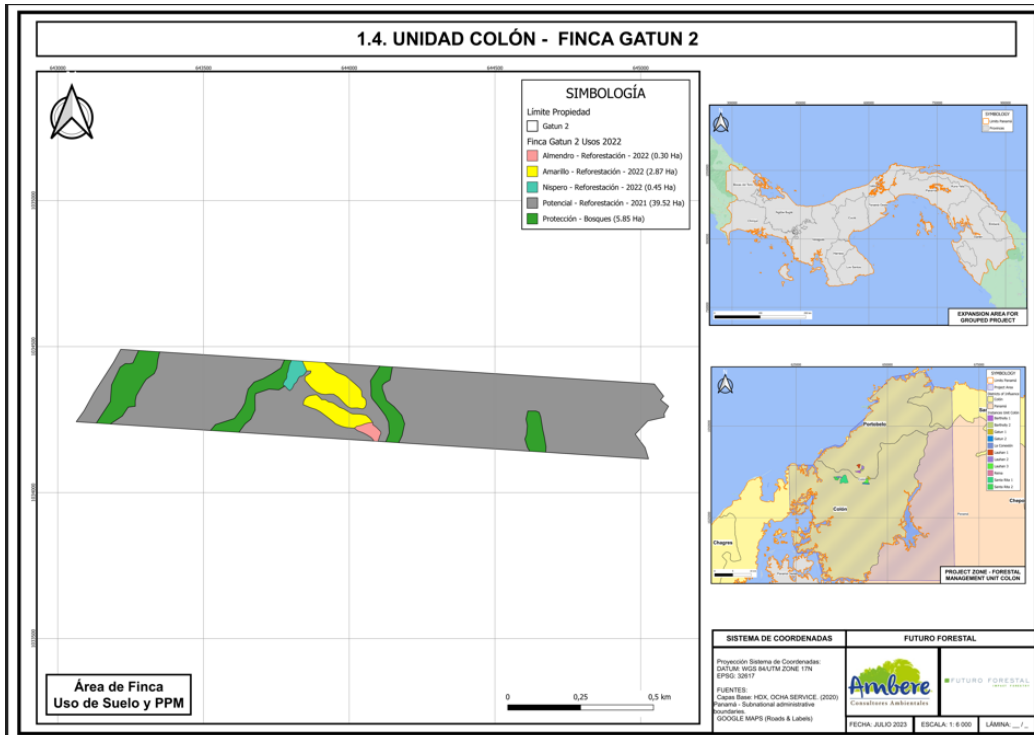


Figure 14: Map of Finca Gatun 2

15.1. POA 2022

FINCA GATUN 2																											
DESCRIPTI ON	January		February		March		April		May		June		July		August		September		October		November		December		Totals		
	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	
Line labels																											
Manual weed control - Chapia		-		-		-		-		-		-		-		-		-		-	900	39		-	900	39	
Monitoring		-		-		-		-		-		-		-		-		-		-	436	13		-	436	13	
Weed control, chemical cutting		-		-		-		-		-		-		-		-		-		-	50	16		-	50	16	
Marking - border clearance for surveyors		-		-		-		-		-		-		-		-		-		-	50	39		-	50	39	
Trochado - balizado		-		-		-		-		-		-		-		-		-		-	100	39		-	100	39	
Weed control - establishment discs		-		-		-		-		-		-		-		-		-		-	125	24		-	125	24	
Cleaning and maintenance of infrastructure		-		-		-		-		-		-		-		-		-		-	134	59		-	134	59	
Planted		-		-		-		-		-		-		-		-		-		-	250	21		-	250	21	
Total, general	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,045	250	-	-	2,045	250	

16. Reforestation 2022

In 2022, a total of 4.05 hectares were planted in Colón (Gatún 2), and 500.79 hectares in Darién province. The species used in Darién were: Cocobolo, Bitter Cedar, Savanna Oak, Almond, Teak, Amarillo, Laurel, Mahogany and Cativo.

In the planting of 2022, we can highlight the incredible teamwork of the administrative and technical staff to achieve the reforestation of more than 500 hectares.

The road closures and protests lasted about 20 days, during which the Pan-American highway was only partially open for a few hours at night. This posed a significant challenge in transporting the seedlings from the nursery in Piriati to the various farms that were being reforested during that period.

In Panama, in 2022, there were significant impacts of the La Niña phenomenon, leading to heavy rainfall during the planting phase. This resulted in an issue of soil oversaturation, exceeding the soil's capacity to drain and maintain an optimal moisture level. To mitigate this problem in 2023, we will be establishing a network of channels on some farms to facilitate faster drainage of water from the soil.

A new system for managing the fincas has been implemented, which involves dividing the fincas into sections based on species. This allows us to gather more precise information about the behavior of each planted species.

As part of the farm monitoring, the team conducted a post-planting mortality sample in November and December, at the end of the rainy season. These samples show high mortality (more than 10%) in some species, as shown in the following table:

17. Table: Preliminary plant mortality 2022 (Nov.2022 data).

Especie	Cantidad de árboles muertos	Cantidad de árboles plantado	%
Almendro-Dipteryx oleifera	10.474,00	35.696,00	29%
Amarillo Guayaquil-Centrolobium yavizanum	10,00	170,00	6%
Balsamo- Myroxylon balsamo	203,00	2.163,00	10%
Berba	754,00	994,00	76%
Caoba - Swietenia macrophylla	1.599,00	12.542,00	13%
Cativo- Prioria coipeifera	1.442,00	8.162,00	18%
Cedro- Cedrela odorata	4.249,00	27.238,00	15%
Cocobolo - Dalbergia retusa	6.033,00	117.397,00	5%
Espave- Anacardium excelsum	4.196,00	4.446,00	94%
Guasimo- Guazuma ulmifolia	189,00	1.498,00	13%
Guayacan morado - Tabebuia impetiginosa	295,00	4.640,00	6%
IPE	13,00	432,00	3%
Laurel- Cordia alliodora	37,00	3.018,00	1%
Mixta	1.533,00	1.533,00	100%
Mora- Maclura tictoria	64,00	363,00	18%
Myroxylon balsamum	60,00	700,00	9%
Ormosia	18,00	141,00	13%
Quira- Platymiscum pinnatum	17,00	960,00	2%
Roble - Tabebuia rosea	6.534,00	37.481,00	17%
Roble - Tabebuia rosea (dispersos distancias mas grandes)	20,00	200,00	10%
Teca- Tectona grandis	5.438,00	54.026,00	11%
Amarillo-Terminalia amazonia	3.356,00	62.427,00	5%
Total general	46.534,00	376.227,00	12%

In 2022, we tested the bare-root planting method, which showed poor adaptation to the site for some species such as Almond, Cedar and Savanna Oak, reflecting high mortality of these species, while the result was satisfactory for species such as Mahogany, as the adaptability was high. For the year 2023, we decided to change the planting method from bare-root planting to pellets of coconut fiber substrate.

An in-depth analysis of high mortality cases was conducted, the results of which are summarized in the table below. Corrective actions have been established for the year 2023. It is important to note that these data are preliminary, as this is an initial sampling before the summer, which is an internal and indicative procedure. The final mortality data cannot be obtained until the end of the dry season (April). Only with the data from April will we have the final mortality data.

18. Table: Analysis of the possible causes of the high mortality rate in plantations in 2022.

Table of cooperative reforestation mortality by finca and rationale for range > 10%.	
Planted species	Results of the mortality analysis
Almond tree <i>Dipteryx panamensis</i>	The finca with the highest mortality rate is Teofilo with 50% and the one with the lowest is Espave with 6%. It was planted bare-root, a system that has not proven successful for Almond trees.
Berba- <i>Brossimum alicastrum</i>	All these species were planted bare-root, with the highest mortality rate at Finca Nicanor #3. There were only a few specimens for testing.
Cativo- <i>Prioria copaifera</i>	It was a new species to be planted this year 2023, the management of its taproot is very long and this made it difficult to plant. The finca with the highest percentage of mortality is Raul Espinosa with 89%.
Cedar - <i>Cedrela odorata</i>	Field seedling size and bare-root system influenced mortality. The fincas with the highest mortality rate were Gindi, Teofilo, Nicanor #2, and Lastenia #4.5. The fincas with the lowest mortality rate were Espave and Nicanor #1. Mortality averaged 12%.
Espave - <i>Anacardium excelsum</i>	This species was planted bare-root. The highest incidence was in the Fincas La Esperanza, Lastenia #4, Raul Espinosa, of these the mortality ranges from 100% to 62%.
Guásimo- <i>Guazuma ulmifolia</i>	The finca with the highest mortality rate is Gindi with 17%, planted bare-root, and the one with the lowest is Geronima with 6% (brought to the field in tubers).
Mixta	Here is the finca with the highest mortality Tello#1. These were test species. Species like Espave are included here.
Blackberry - <i>Maclura tinctoria</i>	It was planted bare-root and weather conditions were not good at the time the intervention was carried out. Mortality was higher at Finca Gindi, at 18%.
Ormosia - <i>Ormosia coccinea</i>	This species was planted on an experimental basis at Finca Nicanor#1, and to date 18 seedlings have died, representing 13% of the total planted.
Savanna Oak - <i>Tabebuia rosea</i>	This species has an average mortality of 10%, and the high mortality is due to the bare-root system, with the highest percentage in Finca Nicanor #2 at 100% and the lowest in Lastenia #4 at 4%.
Teak - <i>Tectona grandis</i>	In Teak, the average mortality is 9%, which is still within the range but an increase from normal. Mortality is highest in Lastenia #1 with 55% and lowest in Hernandez and Nicanor #1 with a range of 3%. It is important to reduce mortality in the coming years.

19. Finca Genarino Peralta

Generino Peralta								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
2627	Cocobolo	<i>Dalbergia retusa</i>	3x4	833		4.15	4.15	
	Amarillo	<i>Terminalia amazonia</i>	3x4	833		3.67	3.67	
	Teak	<i>Tectona grandis</i>	3x4	833		1.99	1.99	
	Bambu		0	0		0.52	0.52	
	Total afforested						10.33	
	Area to be planted						7.4	
	Protected area						3.04	
	Gorges, drainage						0.83	
	Infrastructure							
	Total area							21.6

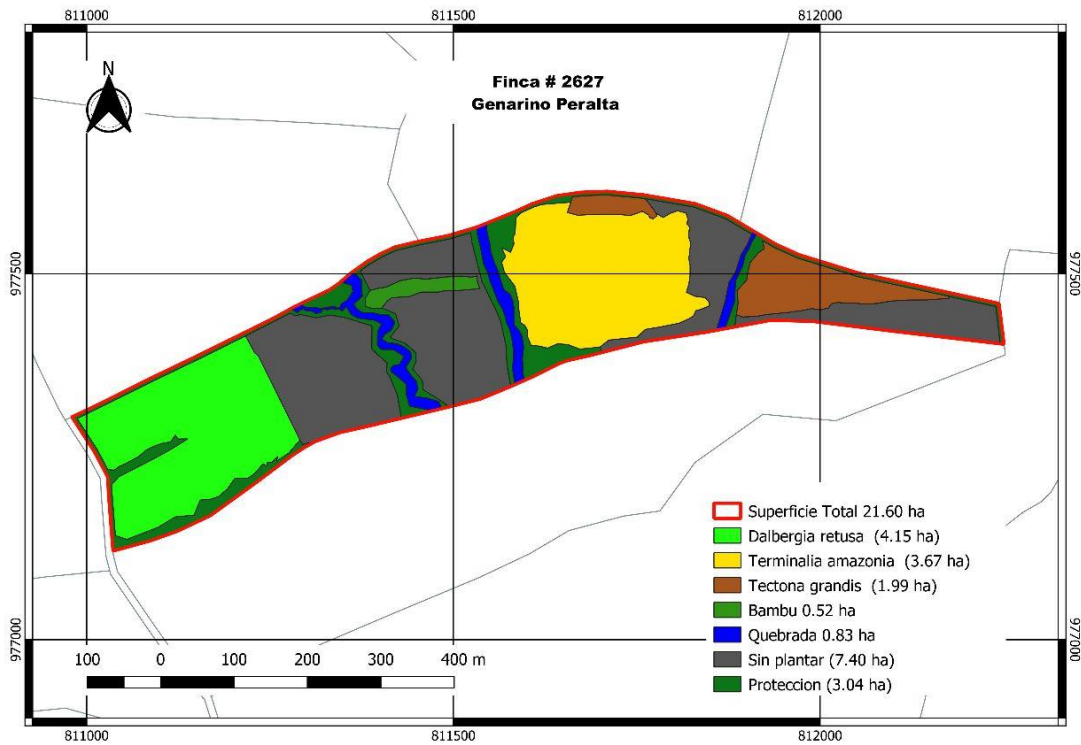


Figure 15: Reforestation map of Genarino Peralta

19.1. POA 2022

FINCA GENARINO PERALTA7																										
Line labels	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute
Monitoring	-	-	-	-	8	8	-	-	-	-	-	-	7	7	-	2	-	-	-	-	-	-	-	-	15	17
Weed control - manual weed control	-	-	-	-	11	11	-	-	-	-	-	-	-	-	-	46	46	50	50	56	59	99	38	262	204	
Hoyado - manual	-	-	-	-	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Marking of the Esaquillado	-	-	-	-	50	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
Chainsaw guide	-	-	-	-	25	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	10	
Manual weed control - maintenance rollers	-	-	-	-	48	4	-	-	-	-	-	-	-	-	-	-	-	-	-	48	59	48	54	144	117	
Planted	-	-	-	-	-	-	-	-	-	-	-	65	79	65	23	-	-	-	-	-	-	-	-	129	102	
Unforeseen events	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	5	-	-	-	-	-	-	-	15
Plant distribution	-	-	-	-	-	-	-	-	-	-	-	-	-	90	22	-	-	-	-	-	-	-	-	90	22	
Total, general	-	-	-	-	92	91	-	-	-	-	-	-	72	96	155	47	46	46	50	55	104	118	147	92	665	545

19.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	% Mortality
Genarino	2627	Teak - <i>Tectona grandis</i>	996	145	15%
		Amarillo - <i>Terminalia amazonia</i>	1989	364	18%
		Cocobolo - <i>Dalbergia retusa</i>	4520	120	3%
Total, average			7505	629	8%

Amarillo and Teak are very adaptable species, but at the time of planting it rained very heavily and the soil was excessively saturated with water, which is not conducive to the adaptability of the plant and resulted in high mortality.

20. Finca Gindi Trujillo

Gindi Trujillo								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
886	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		2.75	2.75	
	Cocobolo/Amarillo	<i>Dalbergia retusa/Terminalia amazonia</i>	3x4	833		2.62	2.62	
	Teak	<i>Tectona grandis</i>	4x5	500		4.12	4.12	
	Cocobolo Mixto	<i>Dalbergia retusa mixed</i>	3x4	833		2.57	2.57	
	Mahogany	<i>Swietenia macrophylla</i>	3x4	833		0.88	0.88	
	Amarillo/Almond	<i>Terminalia amazonia/Dipteryx panamensis</i>	3x4	833		2.65	2.65	
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		0.45	0.45	
	Total afforested						16.04	
	Area to be planted							
	Protected area						1.9	
Gorges, drainage								
Infrastructure								
Total area							17.94	

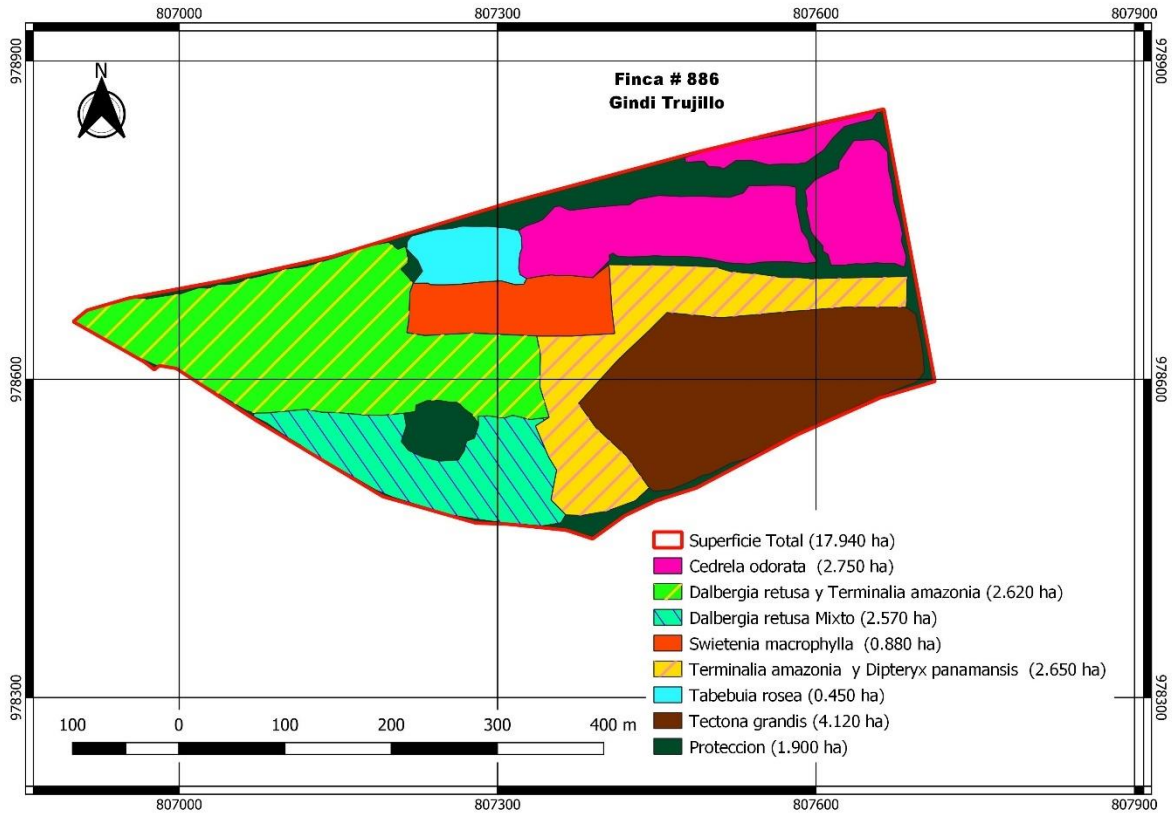


Figure 16: Reforestation map of Gindi Trujillo

20.2. POA 2022

FINCA GINDI TRUJILLO																												
DESCRPTION	January		February		March		April		May		June		July		August		September		October		November		December		Totals			
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute		
Monitoring		-		-		-		-		2		-		-		12		4		-		2		-		-	20	
Hoyado manual		-		-		9		-		-		-		-		-		-		-		-		-		-	9	
Manual weed control - maintenance rollers		-		-		-		-		-		-		-		-		48		-		8		-		-	56	
Planted		-		-		-		-		-		-		-	98	94		-		-		-		-		98	94	
Unforeseen events		-		-		-		-		-		-		-		5		-		-		-		-		-	5	
Fence marking		-		-		-		-	20	1		-		-		-		-		-		-		-		20	1	
Plant protection control - trellis formation		-		-		-		-		-		-		2		-		-		-		-		-		-	2	
Weed control - manual - chapia		-		-		-		-		-		-		-	178	109		-		-		-		-	178	72	356	181
Granular fertilization		-		-		-		-		-		-		-		-		-		-		49		-		-	49	

Total, general	-	-	-	-	-	9	-	-	2 0	3	-	-	-	2	276	220	-	52	-	-	-	59	178	72	474	417
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20.3. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	% Mortality
Gindi	886	Teak - <i>Tectona grandis</i>	2058	197	10%
		Cocobolo - <i>Dalbergia retusa</i>	1822	128	7%
		Amarillo terminalia amazonia	2525	65	3%
		Almond tree <i>Dipteryx panamensis</i>	950	66	7%
		Savanna Oak - <i>Tabebuia rosea</i>	375	232	63%
		Cedar - <i>Cedrela odorata</i>	2294	1157	50%
		Guacimo- <i>Guazuma ulmifolia</i>	868	149	17%
		Blackberry - <i>Maclura tinctoria</i>	363	64	18%
		Mahogany - <i>Swietenia macrophylla</i>	732	5	1%
Total, average			11987	2063	17%

Although Savanna Oaks and Cedars have a very good adaptability to almost all site conditions, it is shown that their survival probability decreases significantly when planted with bare-roots. Therefore, we will change the planting method from bare-roots to pellets with coconut substrate by 2023.

Guácimo and Mora were also planted in the mixed Cocobolo plot. They were planted bare-root and are species that we use to create competition in valuable species such as Cocobolo.

21. Finca Raúl Espinoza

Raul Espinoza							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2021	2022	
217884	Espave	<i>Anacardium excelsum</i>	3x4	833		0.78	0.78
	Cocobolo/Amarillo	<i>Dalbergia retusa/Terminalia amazonia</i>	3x4	833		3.12	3.12
	Cocobolo	<i>Dalbergia retusa</i>	3x4	833		7.55	7.55
	Cativo	<i>Prioria copaifera</i>	3x4	833		0.92	0.92
	Mahogany	<i>Swietenia macrophylla</i>	3x4	833		2.77	2.77
	Savanna Oak/Bitter Cedar	<i>Tabebuia rosea/Cedrela odorata</i>	3x4	833		3.43	3.43
	Teak	<i>Tectona grandis</i>	3x5	500		4.82	4.82
	Total afforested					23.94	
	Area to be planted						
	Protected area					10.75	
	Stubble					0.3	
	Gorges, drainage					2	
	See					0.5	
	Infrastructure						
Total area						37.49	

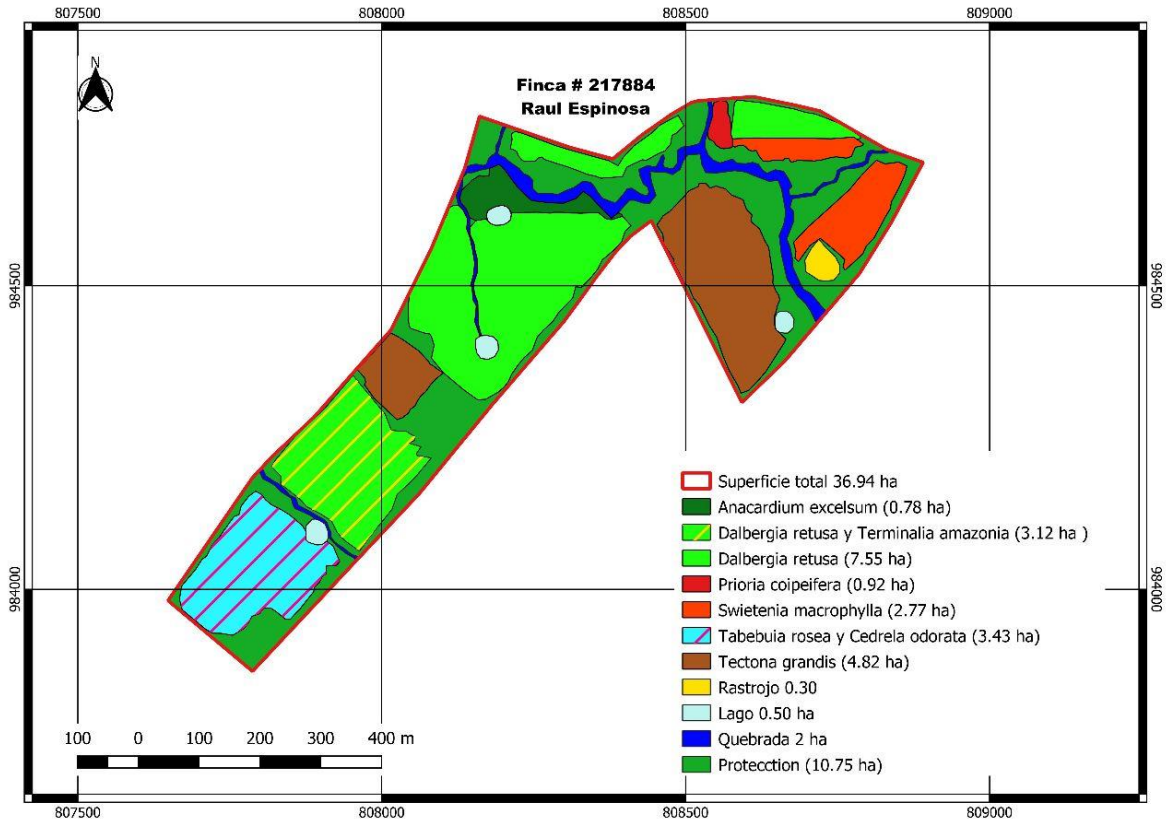


Figure 17: Reforestation map of Raúl Espinoza

21.1. POA 2022

FINCA RAÚL ESPINOZA																											
DESCRIPTION	January		February		March		April		May		June		July		August		September		October		November		December		Totals		
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	
Manual -Chapia		-		-		-		-		-		-		-		-		6		-		-		9		-	15
Monitoring		-		-		-		-		14		2		8		2		2		-		2		2		-	32
Hoyado - manual		-		-		-		-		-		-		-		-		4		-		-		-		-	4
Care discs		-		-		-		-		-		-		-		-	408	88		-		-		-		408	88
Planted		-		-		-		-		-		-	205	241		23		20		-		-		-		205	284
Unforeseen events		-		-		-		-		-		-		24		7		-		-		-		-		-	31
Granular fertilization		-		-		-		-		-		-		-		-		-		-		34		16		-	50
Plant distribution		-		-		-		-		-		-		-		-	70	4		-		-		-		70	4
New planted		-		-		-		-		-		-		-		-		5		-		-		-		-	5
Chemical cuts		-		-		-		-		-		-		-		-		-		-		5	33		16	5	49
Chemistry - spraying plots		-		-		-		-		-		-		-		-		-		-		-		15		-	15
Total, general	-	-	-	-	-	-	-	-	-	14	-	2	205	273	-	32	478	129	-	-	5	69	-	58	688	577	

21.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	Mortality in %
Raul Espinosa	217884	Teak - <i>Tectona grandis</i>	2409	516	21%
		Cocobolo - <i>Dalbergia retusa</i>	7586	245	3%
		Amarillo terminalia amazonia	1296	54	4%
		Savanna Oak - <i>Tabebuia rosea</i>	1266	76	6%
		Cedar - <i>Cedrela odorata</i>	1600	125	8%
		Mahogany - <i>Swietenia macrophylla</i>	2307	105	5%
		Espave - <i>Anacardium excelsum</i>	650	400	62%
		Cativo- <i>Prioriacoifera</i>	764	678	89%
Total, average			17878	2199	12%

Espave was planted bare-root and showed very low adaptability in this planting, while the Cativo was planted bare-root because it could not be planted in pellets of coconut substrate or in tubers due to the size of the seed and its adaptability was not good bare-root, while the site chosen for the Teak had all the characteristics required by the plant (slope, good drainage, etc.), but due to the heavy rains, the soil was oversaturated with water, which caused some plants to die due to excess moisture.

22. Finca Sandra Fernández

Sandra Fernandez							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2021	2022	
960	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		4.4	4.4
	Cocobolo	<i>Dalbergia retusa</i>	3x4	833		15.56	15.56
	Almond Tree	<i>Dipteryx panamensis</i>	3x4	833		5.85	5.85
	Balm	<i>Myroxylon Balsamo</i>	3x4	833		0.93	0.93
	Mahogany	<i>Swietenia macrophylla</i>	3x4	833		0.55	0.55
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		0.42	0.42
	Amarillo/Amarillo Guayaquil	<i>Terminalia Amazonia/Centrolobium yavizianum</i>	3x4	833		0.37	0.37
	Quira	<i>Platymiscium pinnatum</i>	3x4	833		1.15	1.15
	Total afforested					29.23	
	Area to be planted					2.3	
	Protected area					15.34	
	Gorges, drainage					3.7	
	Infrastructure						
	Total area						50.57

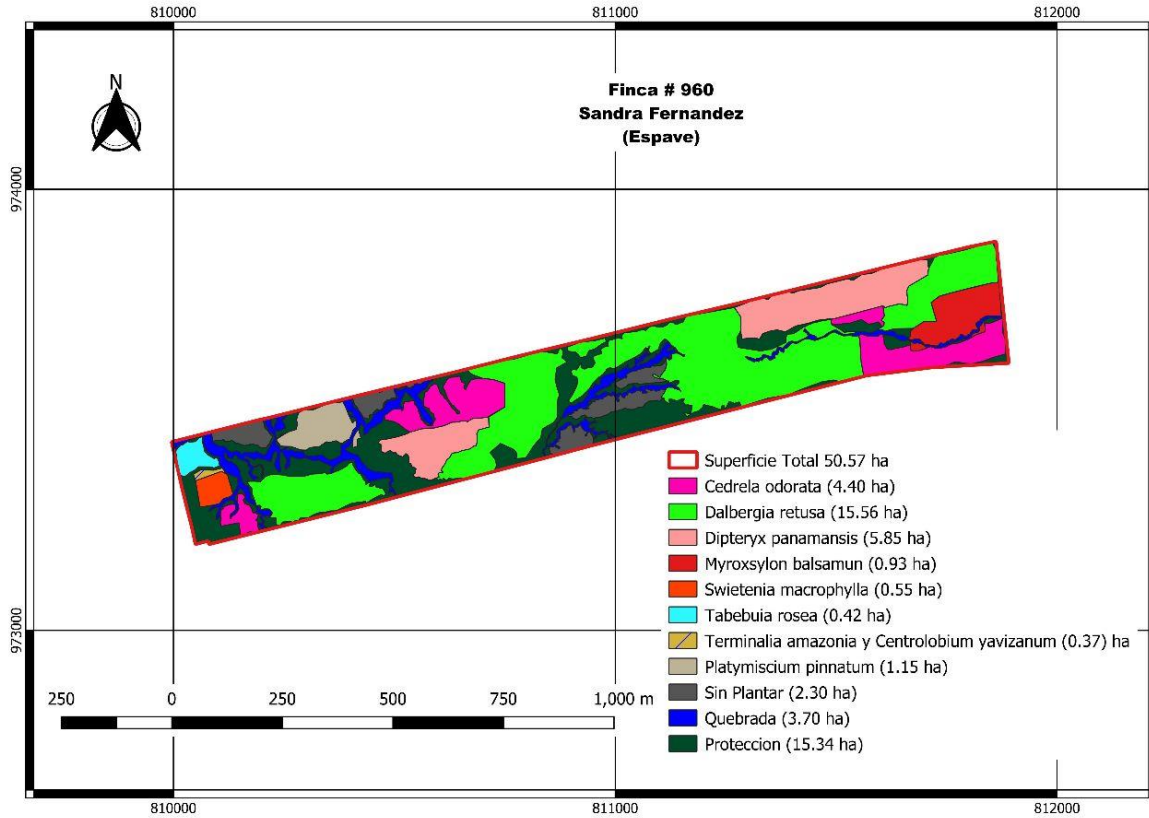


Figure 18: Reforestation map of Sandra Fernandez

22.1. POA 2022

FINCA SANDRA FERNÁNDEZ																										
DESCRIPTION	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute
Line labels																										
Manual weed control - Chapia		-		-		-		-		-		-		-		-		-		-	10	7		-	10	7
Monitoring		-		-		-	70	62		-		-	20	24	15	13	15	14	5	2	5	2	5	7	135	124
Humidification - manual		-		-		-		-		-		-		-		-	12	12		-		-		-	12	12
Manual weed control - maintenance rollers		-		-		-		-		-		-		-		-	15	13	40	42	48	34		-	103	89
Planted		-		-		-		-		-		-		-	100	95	120	74		-		-		-	220	169
Unforeseen events		-		-		-	2		-		-		7		-		15		1		-		-	-	-	25
Granular fertilization		-		-		-		-		-		-		-		-		-		-	10	10		-	10	10
Plant distribution		-		-		-		-		-		-		-	8	8	10	10		-		-		-	18	18
Weed control, chemical cutting		-		-		-		-		-		-		-		-	11	11		-		-		-	11	11
Weed control - manual weed control		-		-		-	140	136		-		-		-		-		-		-		-		-	140	136
Weed control - mechanical		-		-		-		-		-		-		-		-		-		-		-		-	-	-
Rastrojo-Peal		-		-		-	250	273		-		-	160	163		-		-		-		-		-	410	436

Chainsaw guide	-	-	-	25	24	-	-	-	-	-	-	-	-	-	-	-	-	25	24					
Assistant chainsaw operator	-	-	-	25	22	-	-	-	-	-	-	-	-	-	-	-	-	25	22					
Fence maintenance	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	1	2					
Plant protection control - trellis formation	-	-	-	-	-	-	-	5	5	-	-	-	-	-	-	-	-	5	5					
Trochado	-	-	-	-	-	-	-	40	39	-	60	60	-	-	-	-	-	100	99					
Plant protection control - muleteers	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3					
Weed control - establishment discs	-	-	-	-	-	-	-	50	52	50	46	15	12	-	-	-	-	115	110					
Hoyado - mechanic	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	4	4					
Trochado -balizado	-	-	-	-	-	-	-	-	3	3	3	3	-	-	-	-	-	6	6					
GPS measurement	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	1	1					
Manual plant protection control - muleteers	-	-	-	-	-	-	-	-	1	1	1	1	-	-	2	2	-	4	4					
Marking of the Esaquillado	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	2	2					
Trochado - cutting beacons	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	2	2					
Input transfer	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	3	3					
Maintenance of internal roads	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	2	2					
Training	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	1					
Release	-	-	-	-	-	-	-	-	-	-	60	54	80	83	-	-	92	140	229					
Total, general	-	-	-	-	-	511	521	-	-	-	275	293	182	171	332	289	125	128	75	55	5	99	1,505	1,556

22.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	% Mortality
Sandra Fernández (Espave)	960	Almond tree <i>Dipteryx panamensis</i>	4869	316	6%
		Amarillo terminalia amazonia	140	6	4%
		Savanna Oak - <i>Tabebuia rosea</i>	350	16	5%
		Cocobolo - <i>Dalbergia retusa</i>	12960	187	1%
		Mahogany - <i>Swietenia macrophylla</i>	460	26	6%
		Cedar - <i>Cedrela odorata</i>	3667	16	0.4%
		Balsam - <i>Myroxylon Balsamum</i>	775	56	7%
		Quira- <i>Platymiscum pinnatum</i>	960	17	2%
		Yellow Guayaquil <i>Centrolobium yavizanum</i>	170	10	6%
Total, average			24351	650	3%

Mortality of the selected species was low and within the expected range, especially Cocobolo, Cedar and Quira are the species with a very low mortality rate.

23. Finca Joaquín Hernández

Joaquin Hernandez							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2021	2022	
30387827	Cocobolo/ Amarillo	<i>Dalbergia retusa</i> / <i>Terminalia amazonia</i>	3x4	833		3.98	3.98
	Teak	<i>Tectona grandis</i>	4x5	500		11.89	11.89
	Total afforested					15.87	0
	Area to be planted						
	Protected area					9.13	
	Gorges, drainage						
	Infrastructure						
	Total area						25

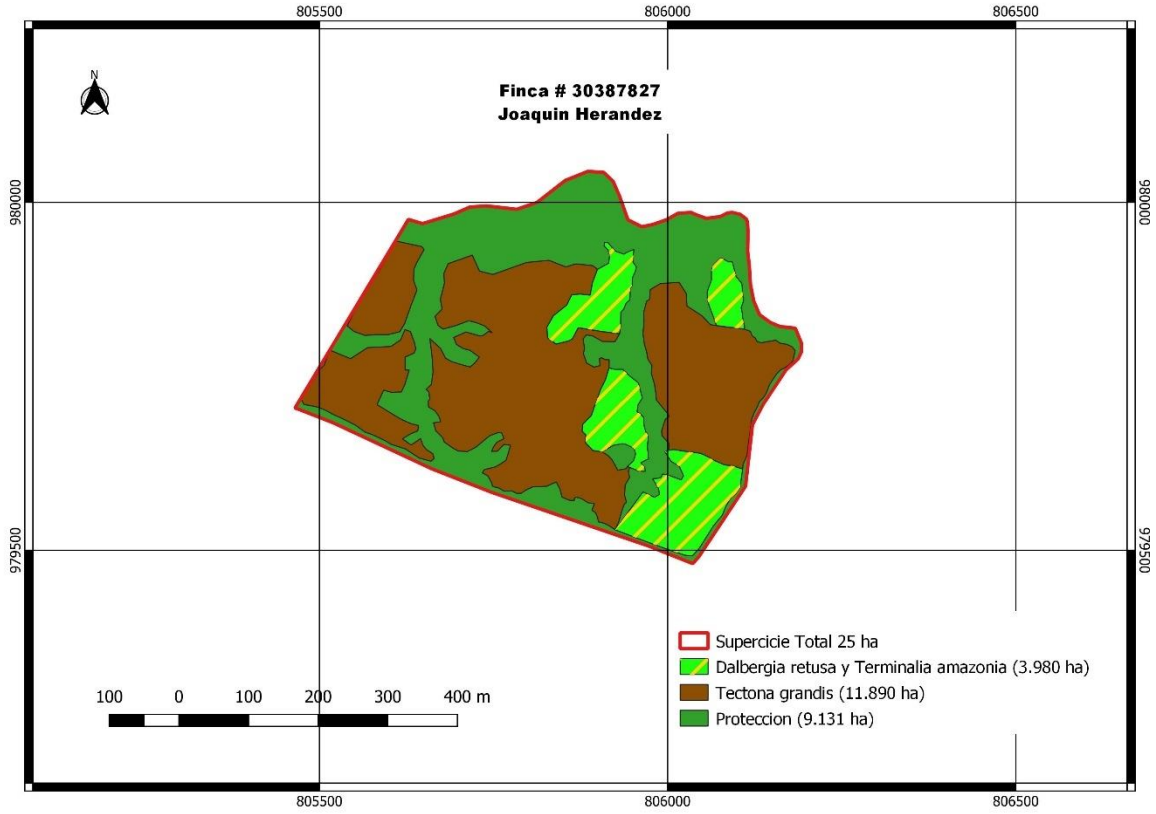


Figure 19: Reforestation map of Finca Joaquín Hernández

23.1. POA 2022

Finca Joaquín																										
DESCRIPTION	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute
Monitoring		-		-		23		3		-		-		-		3		8		1		-		6	-	44
Hoyado manual		-		-		5		-		-		-		-		-		4		-		-		-	-	9
Manual Maintenance Boxes		-		-		15		-		-		-		-		-		86		7		36		-	-	144
Planted		-		-		-		-		-		-		-		-	147	66		-		-		-	147	66
Plant distribution		-		-		-		-		-		-		-		-	20	5		-		-		-	20	5
Weed control - manual weed control		-		-		107		-		-		-		-		-		-		-		-		-	330	107
Trochado		-		-		-		-		-		-		-		60		44		-		-		-	-	104
Cutting beacons		-		-		-		-		-		-		-		19		-		-		-		-	-	19
Fence construction		-		-		-	35	10		-		-		-		-		-		-		-		-	35	10
chemical - FUMIG		-		-		-		-		-		-		-		-		-		-		-	40	85	40	85

23.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	% Mortality
Joaquin Hernandez	30387827	Teak - <i>Tectona grandis</i>	5946	191	3%
		Cocobolo - <i>Dalbergia retusa</i>	1728	97	6%
		Amarillo - <i>Terminalia amazonia</i>	1585	145	9%
Total, average			9259	433	5%

Mortality of the selected species was low and within the expected range.

24. Curry Finca (The 15)

Curry (Las 15)							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2021	2022	
218047	Cocobolo/ Amarillo	<i>Dalbergia retusa/Terminalia amazonia</i>	3x4	833		4.63	4.63
	Teak	<i>Tectona grandis</i>	4x5	500		3.36	3.36
	Cocobolo/Laurel	<i>Dalbergia retusa/Cordia alliodora</i>	3x4	833		1.04	1.04
	Guayacan Purple	<i>Tabebuia impetiginosa</i>	3x4	833		0.94	0.94
	Total afforested					9.97	
	Area to be planted						
	Protected area					4.26	
	Gorges, drainage					0.5	
	See					0.1	
	Total area						14.83

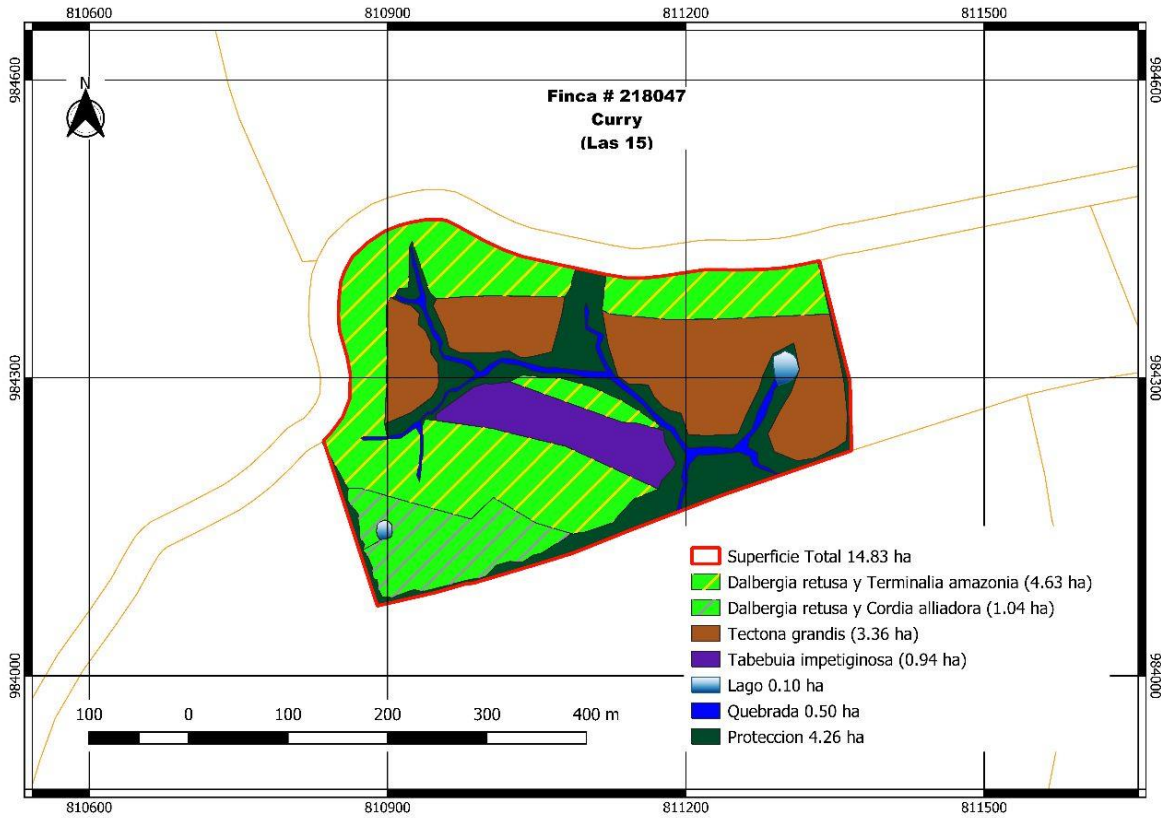


Figure 20: Reforestation map of Finca Curry (Las 15)

24.1. POA 2022

Finca Las 15																												
DESCRIPCIÓN	January		February		March		April		May		June		July		August		September		October		November		December		Totals			
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute		
Monitoring		-		-		9		14		-		-		-		-		1		-		2		-		-	26	
Manual weed control - maintenance rollers		-		-	30	43	30	-		-		-		-		-	30	-		-	30		33		-	120	76	
Planted		-		-		-		-		-		-		-		-	87	49		-		-		-		87	49	
Weed control - mechanical		-		-		-		-		-		-		-		-		-		-		-		3	23	3	23	
Weed control - manual weed control		-		-	30	30	5	5		-		-		-		-		-		-		-		105	97	140	132	
Fence marking		-		-	1	26		-		-		13		-		-		-		-		-		-		1	39	
Input transfer		-		-		-		-		-		-		-		-	74	6		-		-		-		74	6	
Granular fertilization		-		-		-		-		-		-		-		-		-		-		28		-		-	28	
Manual plant protection	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	1	20	1

control - muleteers																										
Tractor driver		-		-		-		-		-		-		-		-		-		3		-		3		
Total, general	2	-	2	-	63	108	37	19	2	-	2	13	2	-	2	-	193	56	2	-	3 2	63	110	124	445	383

24.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	Mortality in %
Curry (All 15)	218047	Teak - <i>Tectona grandis</i>	1681	107	6%
		Cocobolo - <i>Dalbergia retusa</i>	2380	221	9%
		Amarillo terminalia amazonia	1909	78	4%
		Laurel- <i>Cordia alliodora</i>	432	23	5%
		Guayacan Purple - <i>Tabebuia impetiginosa</i>	780	134	17%
Total, average			18700	1787	10%

The Purple guayacán is a species that is very sensitive to sudden climatic changes in the first months, and the heavy rains we recorded in the days we planted this finca increased the death of this species a little.

25. Finca Consuegra

Ubalдино Consuegra							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2021	2022	
4869	Cocobolo/ Amarillo	<i>Dalbergia retusa/Terminalia amazonia</i>	3x4	833		6.62	6.62
	Cocobolo	<i>Dalbergia retusa</i>	3x4	833		0.29	0.29
	Total afforested					6.91	0
	Area to be planted					14.42	
	Protected area						
	Gorges and drainage					1.28	
	Infrastructure						
	Total area						22.61

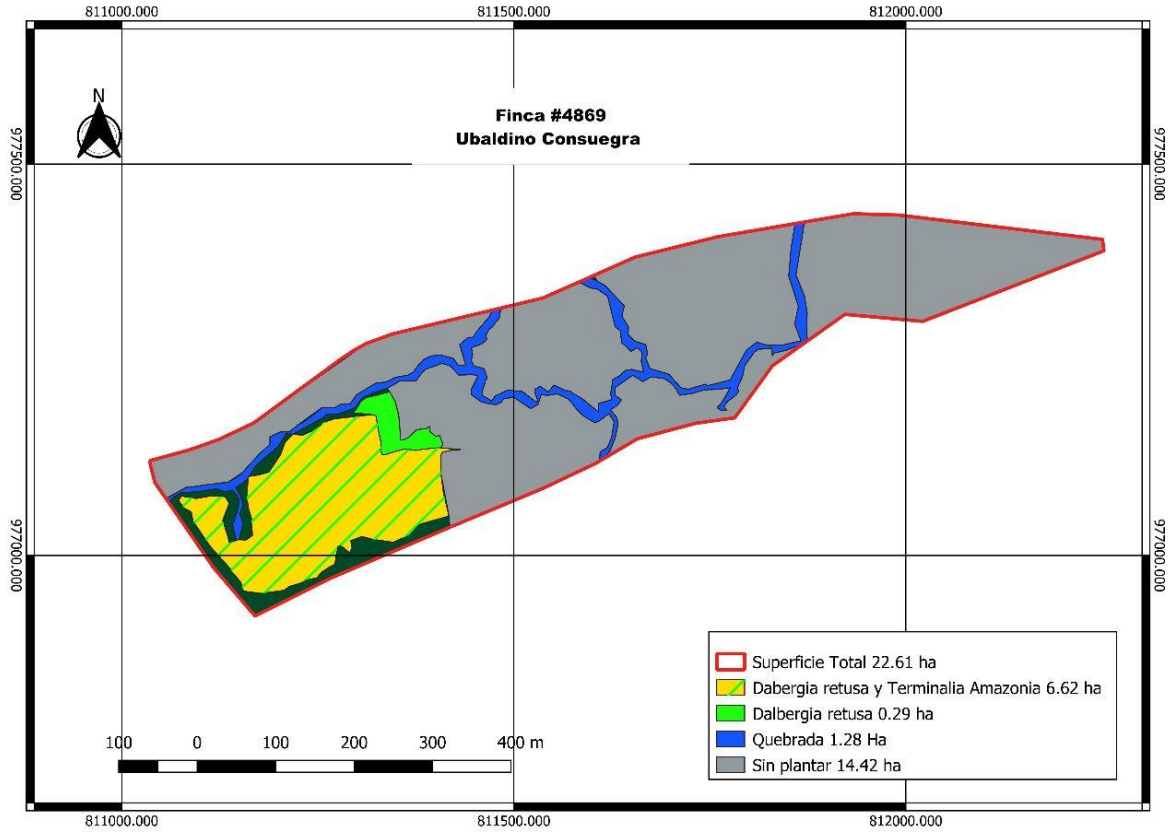


Figure 21: Reforestation map of Finca consuegra

25.1. POA 2022

FINCA CONSUEGRA																												
DESCRIPTION	January		February		March		April		May		June		July		August		September		October		November		December		Totals			
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute		
Hoyado - manual		-		-		-		-		-		-		-		-		5		-		-		-		-	5	
Planted		-		-		-		-		-		-		-		-	113	18		-		-		-		-	113	18
Plant distribution		-		-		-		-		-		-		-		-	90	7		-		-		-		-	90	7
Trochad o		-		-		-		-		-		-		-		-		2		-		-		-		-	2	
Weed control - establishment discs		-		-		-		-		-		-		-		-		6		-		-		-		-	6	
Unforeseen events		-		-		-		-		-		-		-		-				7		-		-		-	7	
Total, general	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	203	38	-	7	-	-	-	-	-	203	45	

On this finca, out of the 22.6 hectares of the finca, only 4.3 hectares were planted, which led to a big difference between planning and execution, as it was one of the last fincas acquired by Waldmensch S.A..

25.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	Mortality in %
Consuegra	4869	Cocobolo - <i>Dalbergia retusa</i>	3667	298	8%
		Amarillo - <i>Terminalia amazonia</i>	2092	314	15%
Total, average			5759	612	11%

26. Finca Geronima Castro

Geronima Castro								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
30361092	Berba	<i>Bosimun alicastrum</i>	3x4	833		0.33	0.33	
	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		0.59	0.59	
	Cocobolo / Amarillo	<i>Dalbergia retusa/Terminalia amazonia</i>	3x4	833		5.95	5.95	
	Cocobolo /Guasimo	<i>Dalbergia retusa/Guazuma ulmifolia</i>	3x4	833		1.53	1.53	
	Mahogany	<i>Swietenia macrophylla</i>	3x4	833		0.66	0.66	
	Total afforested						9.06	
	Area to be planted							
	Protected area						1.36	
	Gorges, drainage							
	Infrastructure							
	Total area							10.42

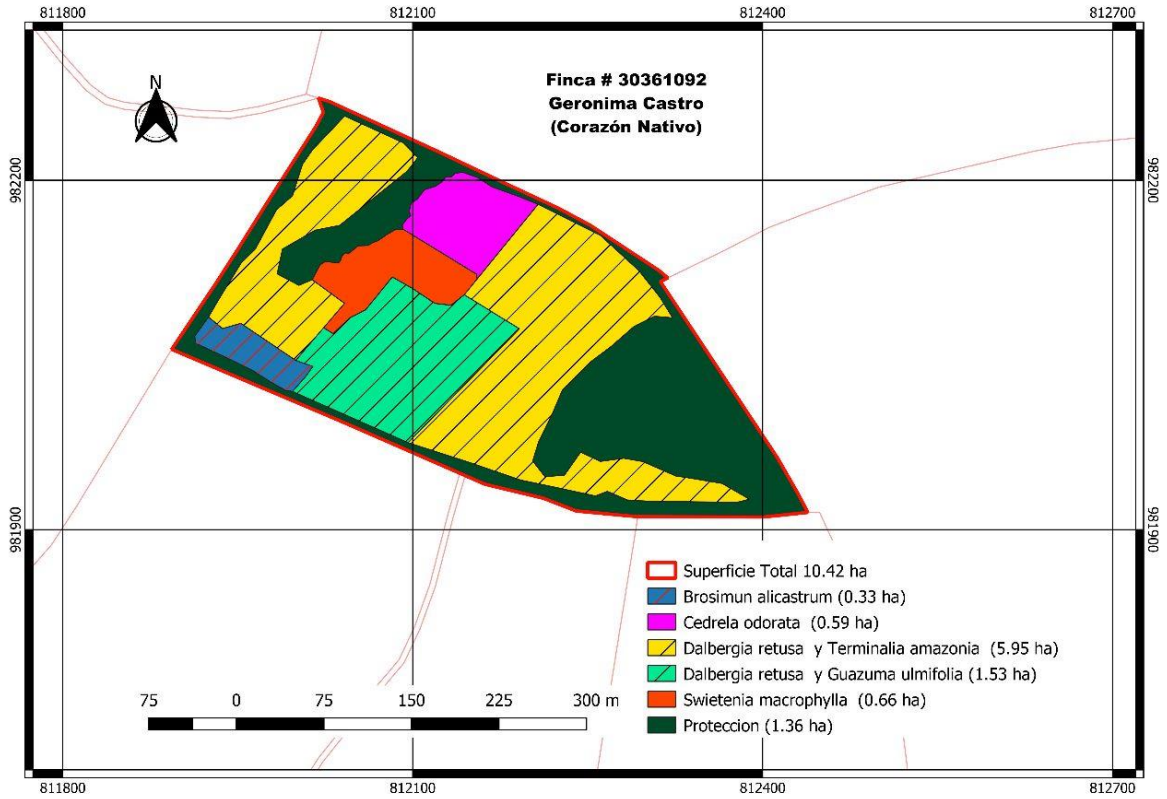


Figure 22: Reforestation map of Geronima Castro.

26.1. POA 2022

Finca Geronima																										
DESCRIPCIÓN	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute
Hoyado manual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	-	-	-	-	-	-	-	-	5	5
Plantado	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110	109	-	-	-	-	-	-	-	-	110	109
Plant distribution	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	8	-	-	-	-	-	-	-	-	10	8
Unforeseen events	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	2	2
Staking	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	2	2
Hoyado mecánico	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	4	4
Trochizado	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	-	-	-	-	-	-	-	-	8	8
Monitoreo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	-	-	3	3	-	-	-	-	12	12
Care discs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45	41	25	28	-	-	70	69
Chemical cuts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	16	10	12	-	-	30	28

Manual -Chapia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	29	30	29		
Total, genera l	-	-	-	-	-	-	-	-	-	-	-	-	-	148	145	-	-	70	62	35	40	30	29	283	276

26.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	% Mortality
Geronima Castro	30361092	Cedar - <i>Cedrela odorata</i>	495	166	34%
		Mahogany - <i>Swietenia macrophylla</i>	553	255	46%
		Cocobolo - <i>Dalbergia retusa</i>	3008	268	9%
		Amarillo terminalia amazonia	2580	61	2%
		Guasimo- <i>Guazuma ulmifolia</i>	630	40	6%
		Berba - <i>Brossimum alicastrum</i>	278	102	37%
Total, average			7544	892	12%

This finca, was used for rice cultivation before it was purchased by Waldmensch S.A., leading to the assumption that the high mortality on this finca is due to the residues of agrochemicals used by the previous owners for rice cultivation. In 2023, replanting will take place, and foliar fertilization will be carried out until the plant is fully adapted to the site.

27. Finca Tello # 1

Tello 1								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
3905	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		2.64	2.64	
	Cocobolo	<i>Dalbergia retusa</i>	3x4	833		5.69	5.69	
	Cocobolo/Amarillo	<i>Dalbergia retusa/Terminalia amazonia</i>	3x4	833		3.42	3.42	
	Almond Tree	<i>Dipteryx panamensis</i>	3x4	833		4.39	4.39	
	Almond/Amarillo	<i>Dipteryx panamensis/Terminalia amazonia</i>	3x4	833		3.42	3.42	
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		1.94	1.94	
	Teak	<i>Tectona grandis</i>	5x4	500		7.24	7.24	
	Mixed	<i>Mixed</i>	3x4	833		1.84	1.84	
	Total afforested						30.58	
	Area to be planted							
	Protected area						2.65	
	Sluices, drainage						3.2	
	Infrastructure						2	
	Total area							38.43

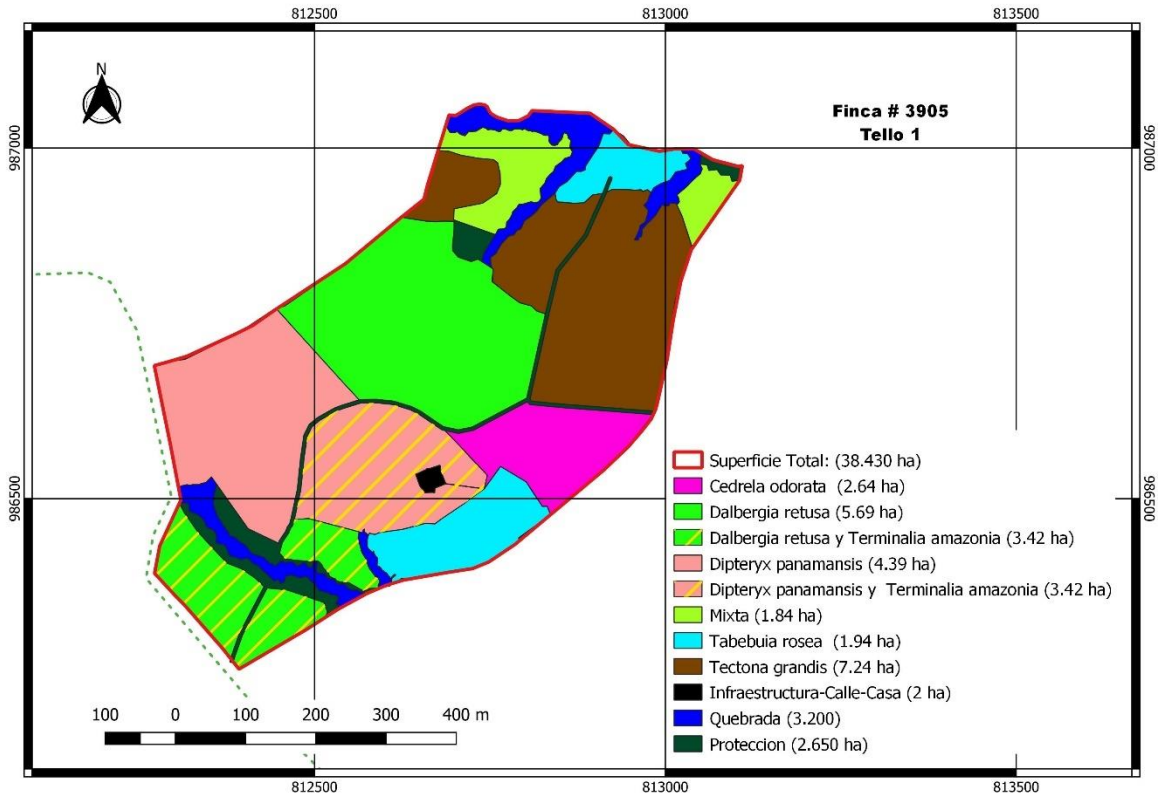


Figure 23: Reforestation map of Finca Tello #1

27.1. POA 2022

Finca TELLO #1																										
DESCR IPTIO N	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute
Hoyad o- manua l		-	25	23		-		-		-		-		-		-		-		-		-		-	25	23
Plante d		-		-		-		-		4	205	164		24		-		-		-		-		-	205	192
(blank)		-		-		-		-		-		-		-		-		-		-		-		-	-	-
Unfore seen events		-		-		-		-		-		-		-		1		-		-		-		-	-	1
Monit oring		-		-		-	16	3	3	35	35	2	2	6	6	4	4		-	5	5	13	19	84	90	
Manua l weed contro l- mainte nance rollers		-		-		-		-		-	23	7	23	9	23	77	23	69	23	18	23	7		-	140	187
Weed contro l, chemi		-		-		-		-		-	70	58	70	5	70	49		8		28	100	95		178	310	421

cal cutting																					
Manual weed control - Chapia	-	-	-	-	-	50	50	-	68	68	31	31	341	-	-	-	490	149			
Fence maintenance	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2			
Cleaning and maintenance of infrastructure	-	-	-	-	-	53	20	-	-	-	-	-	-	-	-	-	53	20			
Phytosanitary control of muleters	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2			
Marking - pile construction	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1			
New planted	-	-	-	-	-	-	2	-	-	-	30	20	-	-	-	-	30	22			
Weed control - chemical	-	-	-	-	-	6	4	-	-	-	-	-	-	-	-	-	6	4			
Plant protection control	-	-	-	-	-	-	-	48	1	-	-	-	-	-	-	-	48	1			

27.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	Mortality in %
Tello #1	3905	Teak - <i>Tectona grandis</i>	3622	365	10%
		Cocobolo - <i>Dalbergia retusa</i>	6162	263	4%
		Amarillo terminalia amazonia	2847	206	7%
		Almond tree <i>Dipteryx panamensis</i>	5084	284	6%
		Savanna Oak - <i>Tabebuia rosea</i>	1614	486	30%
		Cedar - <i>Cedrela odorata</i>	2202	106	5%
		Mixed - <i>Prioria copaifera</i> and <i>Terminalia oblonga</i>	1533	1533	100%
Total, average			23064	3243	14%

The Savanna Oak planted on this finca was bare-rooted, which increased the mortality of the species. The attempt of mixed reforestation with Espave and guayabo de Charco did not work because both species were not adapted to the site.

28. Finca Teófilo Herrera

Teofilo Herrera								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
6087	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		1.35	1.35	
	Cocobolo	<i>Dalbergia retusa</i>	3x4	833		0.3	0.3	
	Cocobolo/Amarillo	<i>Dalbergia retusa</i> / <i>Terminalia amazonia</i>	3x4	833		12.93	12.93	
	Almond Tree	<i>Dipteryx panamensis</i>	3x4	833		5.4	5.4	
	Guayacan Purple	<i>Tabebuia impetiginosa</i>	3x4	833		1.43	1.43	
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		3.78	3.78	
	Teak	<i>Tectona grandis</i>	5x4	500		7.8	7.8	
	Mahogany	<i>Swietenia macrophylla</i>	3x4	833		0.97	0.97	
	Total afforested						33.96	
	Area to be planted							
	Protected area						7.77	
	Gorges and drainage						1.8	
	Infrastructure							
Total area							43.53	

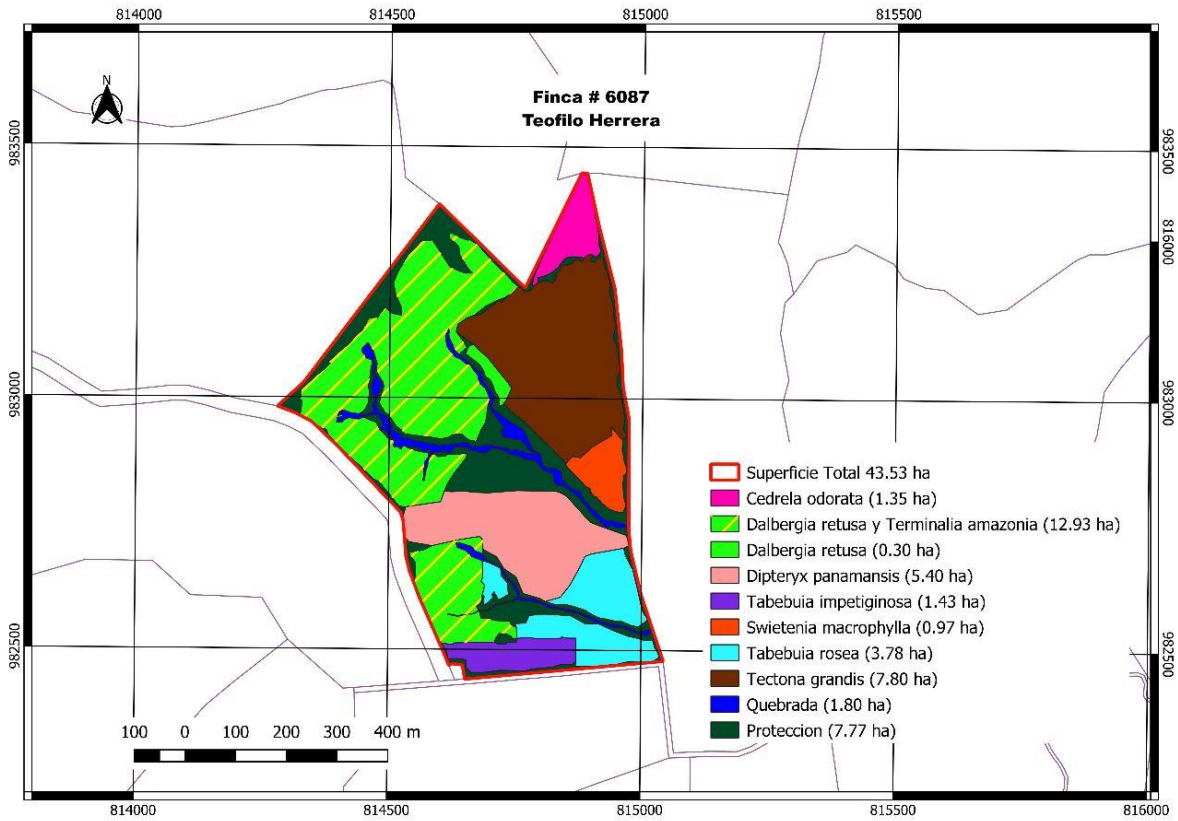


Figure 24: Map of the reforestation of Teófilo Herrera

28.1. POA 2022

Finca Teófilo																												
DESCRIPTION	January		February		March		April		May		June		July		August		September		October		November		December		Totals			
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute		
Hoyado - manual		-		-		-		-		-		-		-		-		2		-		-		-		-	2	
Planted		-		-		-		-		-		-	72	79	7	68	72	15		-		-		-		-	217	162
Unforeseen events		-		-		-		-		-		-		13		-		-		8		-		-		-	21	
Monitoring		-		-		15		12		24		-		13		8		3		9		1		-		-	85	
Manual weed control - maintenance rollers		-		-		-		-		-		-		-		-	109	91	109	131	109	13		-		328	235	
Weed control, chemical cutting		-		-		-		-		-		-		-		-		17		19		17		-		-	53	
Manual weed control - Chapia		-		-		-		-		-		-		-		-		17		-		-		-		-	17	
Weed control - manual weed control		-		-		110		-		-		-		-		-		-		-		-		-		-	110	
Plant protection control		-		-		-		-		-		-		2		1		-		-		-		-		-	3	

- muleters																											
First fertilization	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	6			
Weed control - establishment discs	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-	9			
Plant distribution	-	-	-	-	-	-	-	-	-	-	-	-	64	1	-	-	-	-	-	-	-	64	1				
Manual plant protection control - muleters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	1	-	-	-	25	1				
Total, general	-	-	-	-	-	125	-	12	-	24	-	-	72	107	7	2	92	246	146	109	167	134	32	-	-	634	705

28.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	Mortality in %
Teofilo	6087	Teak - <i>Tectona grandis</i>	3901	353	9%
		Mahogany - <i>Swietenia macrophylla</i>	808	145	18%
		Amarillo terminalia amazonia	5385	63	1%
		Savanna Oak - <i>Tabebuia rosea</i>	3150	894	28%
		Cocobolo - <i>Dalbergia retusa</i>	5636	230	4%
		Cedar - <i>Cedrela odorata</i>	1124	863	77%
		Almond tree <i>Dipteryx panamensis</i>	4500	2264	50%
		Purple guaiac - <i>Tabebuia impetiginosa</i>	1188	14	1%
Total, average			25692	4826	19%

The Cedar planted on this finca was attacked by an insect that targeted the tender part of the plant. The attacks occurred at night, so it could not be determined what kind of insect attacked the plants.

29. Finca Tello # 3

Tello 3							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2021	2022	
3123	Cocobolo/Amarillo	<i>Dalbergia retusa/Terminalia amazonia</i>	3x4	833		4.59	4.59
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		2.32	2.32
	Teak	<i>Tectona grandis</i>	5x4	500		5.66	5.66
	Mahogany	<i>Swietenia macrophylla</i>	3x4	833		1.08	1.08
	Total afforested					13.65	
	Area to be planted						
	Protected area					2.14	
	Gorges, drainage					1	
	See					0.5	
	Low lying area					2	
	Total area						19.29

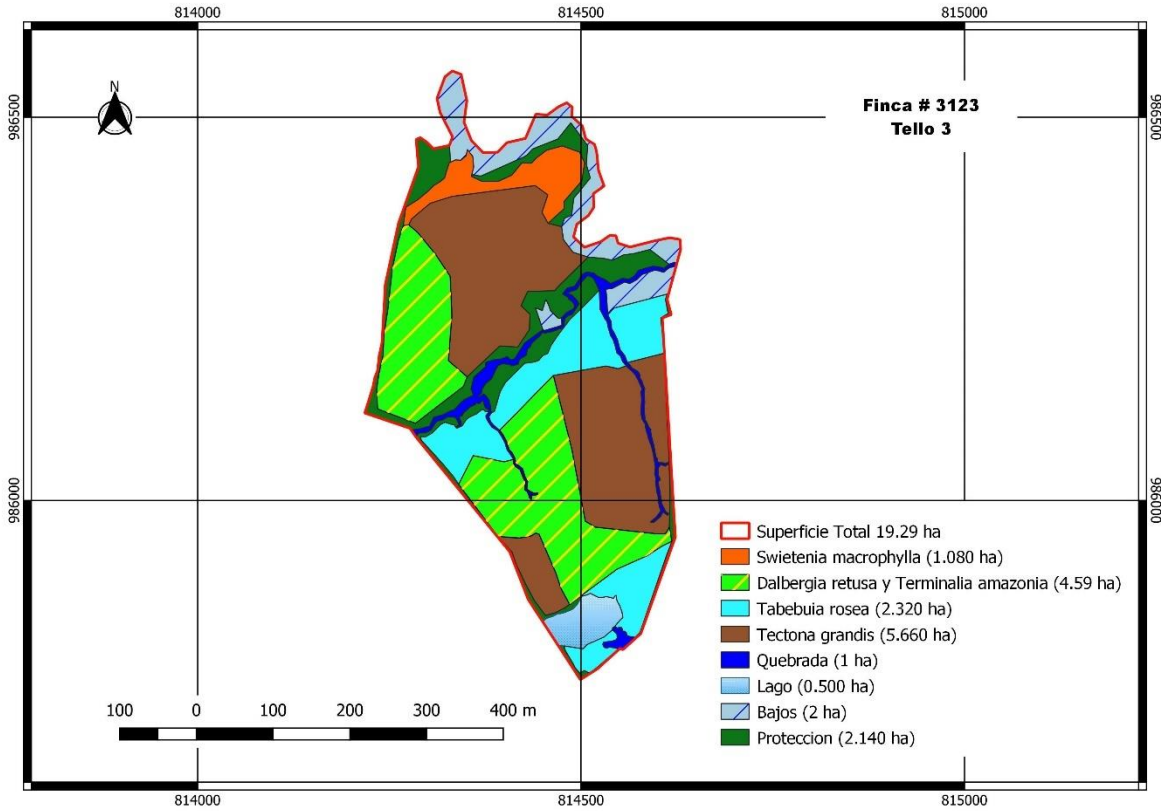


Figure 25: Reforestation map of Tello #3

29.1. POA 2022

Finca Tello 3																											
DESCRIPTION	January		February		March		April		May		June		July		August		September		October		November		December		Totals		
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	
Hoyado - manual		-		19		-		-		-		-		-		-		-		-		-		-	-	19	
Planted		-		-		-		-		-		-	215	166		-		-		-		-		-		215	166
Monitoring		-		-		-		-		-		-	16	10		-	14	31	4	12	16	3		9	50	65	
Manual weed control - maintenance rollers		-		-		-		-		-		-		-		-		-	70	79	70	29		-	140	108	
Weed control, chemical cutting		-		-		-		-		-		-		-		-		-		-		-	20	26	20	26	
Manual weed control - Chapia		-		-		-		-		-		-		-		-		-		-	16	47		-	16	47	
First fertilization		-		-		-		-		-		-	2			-		-		-		-		-	-	2	
Manual plant protection control - muleters		-		-		-		-		-		-		-		-		-		-		-	10	1	10	1	
Tractor driver		-		-		-		-		-		-		-		-		-		-		-		1	-	1	

Chemical weed control - FUMIGATION of plots.	-	-	-	19	-	-	-	-	-	-	-	-	231	178	-	-	14	31	74	91	102	79	126	99	547	497
Total, general	-	-	-	19	-	-	-	-	-	-	-	-	231	178	-	-	14	31	74	91	102	79	126	99	547	497

29.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	% Mortality
Tello #3	3123	Teak - <i>Tectona grandis</i>	2831	424	15%
		Cocobolo - <i>Dalbergia retusa</i>	1944	106	5%
		Amarillo terminalia amazonia	1879	61	3%
		Savanna Oak - <i>Tabebuia rosea</i>	1930	424	22%
		Mahogany - <i>Swietenia macrophylla</i>	900	151	15%
Total, average			9484	1166	12%

The Savanna Oak was attacked by a worm that fed on its foliage, which increased the mortality of this species. The Mahogany was planted in an area near a ravine, and due to heavy rains, the stream's water level rose higher than expected, causing some trees to be inundated by the floodwaters. The planting of Mahogany adhered to the regulations of the Ministry of Environment, which require a minimum distance of 10 meters from the edge of a stream. For Teakwood, the cause of high mortality was soil oversaturation with water, attributed to the type of soil (very clayey) in the Darien province.

30. Finca La Esperanza

30.1. Finca Dalys García (La Esperanza)

Dalys Garcia								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
30359853	Cocobolo/Amarillo	<i>Dalbergia retusa / Terminalia amazonia</i>	3x4	833		6.93	6.93	
	Mahogany	<i>Swietenia macrophylla</i>	3x5	834		1.15	1.15	
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		5.46	5.46	
	Total afforested						13.54	
	Area to be planted						1	
	Protected area						0.37	
	Gorges, drainages						1.2	
	Infrastructure						0.16	
	Total area							16.27

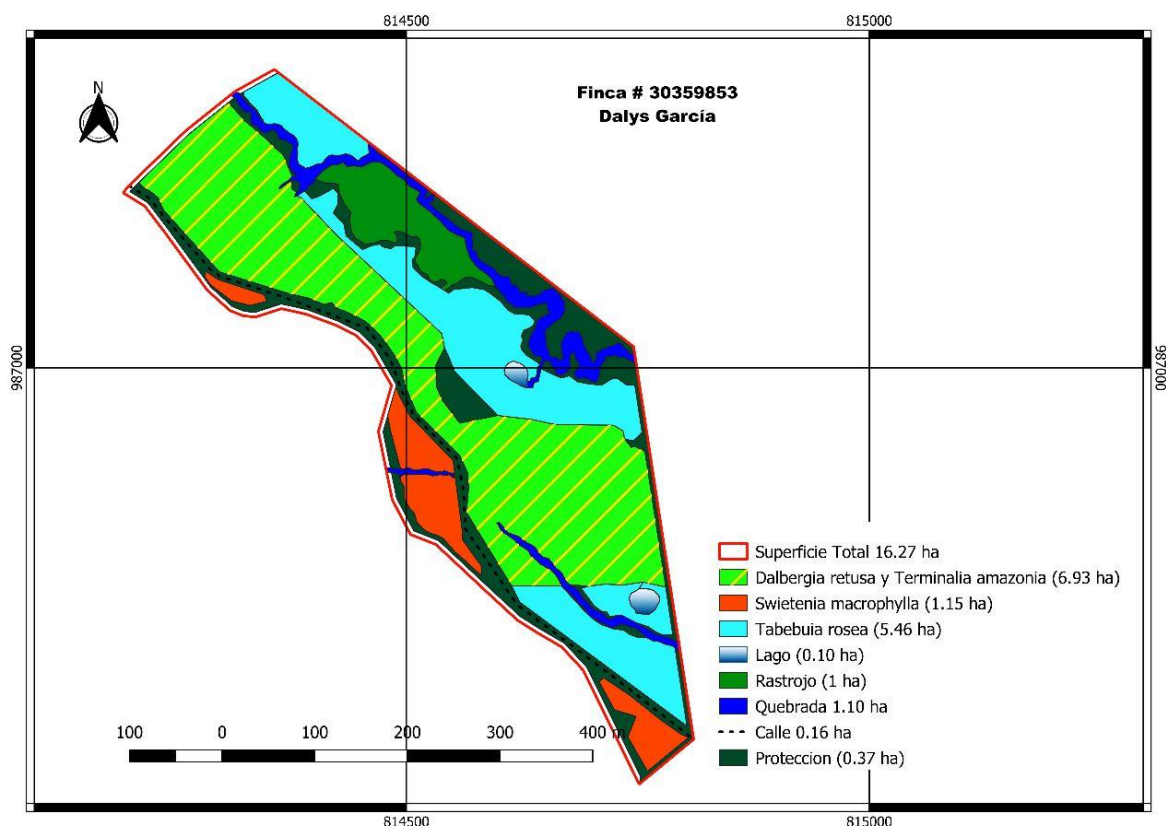


Figure 26: Map of the Dalys Garcia reforestation.

30.2. Finca Cati García (La Esperanza)

Cati García								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
30359842	Teak	<i>Tectona grandis</i>	3x4	833		2.43	2.43	
	Cativo/ Espave	<i>Prioria coipeifera/Anacardium excelsum</i>	3x5	834		0.16	0.16	
	Cocobolo/Amarillo	<i>Dalbergia retusa / Terminalia amazonia</i>	3x4	833		1.24	1.24	
	Cocobolo	<i>Dalbergia retusa</i>	3x4	833		1.84	1.84	
	Savanna Oak/Cativo	<i>Tabebuia rosea/ Prioria coipeifera</i>	3x4	833		2.27	2.27	
	Total afforested						7.94	
	Area to be planted						2.5	
	Protected area						4.42	
	Gorges, drainage						1.62	
	Infrastructure							
Total area							16.48	

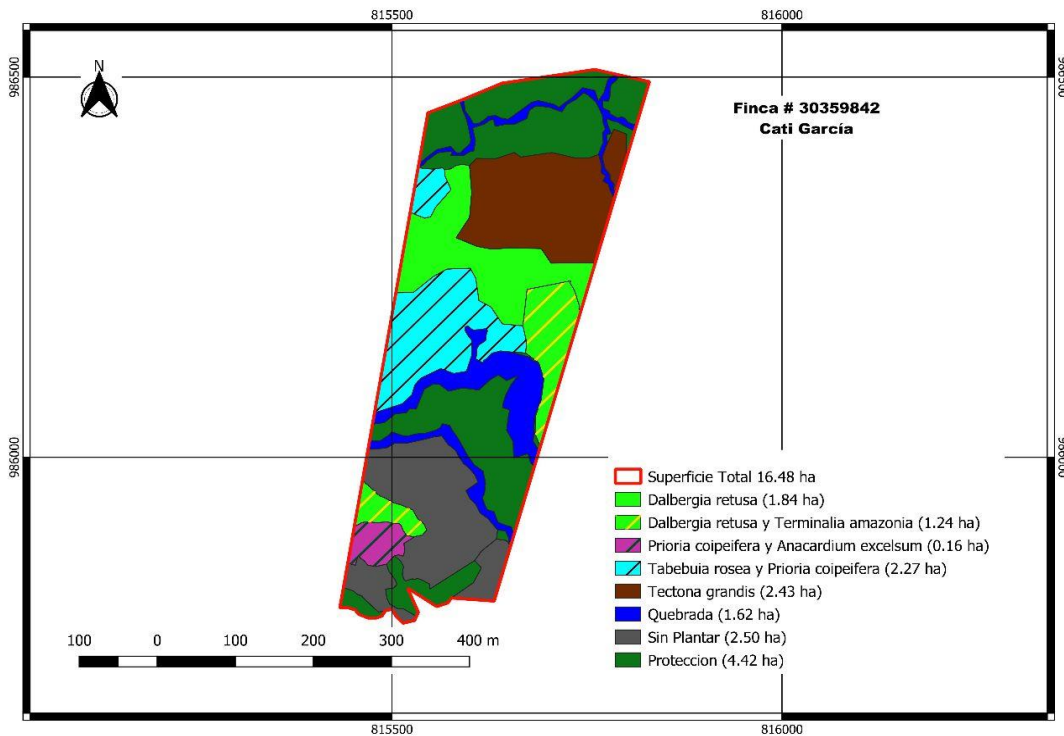


Figure 27: Reforestation map of Cati García

30.3. Finca Maite García (La Esperanza)

Maite García								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
30358742	Cocobolo	<i>Dalbergia retusa</i>	3x4	833		1.84	1.84	
	Cocobolo/Laurel	<i>Dalbergia retusa/Cordia alliodora</i>	3x4	833		2.12	2.12	
	Cocobolo/Amarillo	<i>Dalbergia retusa / Terminalia amazonia</i>	3x4	833		1.98	1.98	
	Cativo	<i>Prioria coipeifera</i>	3x4	833		0.38	0.38	
	Mahogany	<i>Swietenia macrophylla</i>	3x4	833		0.83	0.83	
	Teak	<i>Tectona grandis</i>	4x5	500		4	4	
	Total afforested						11.15	
	Area to be planted						0.81	
	Protected area						3.48	
	Gorges, drainage						1	
	Infrastructure							
Total area							16.44	

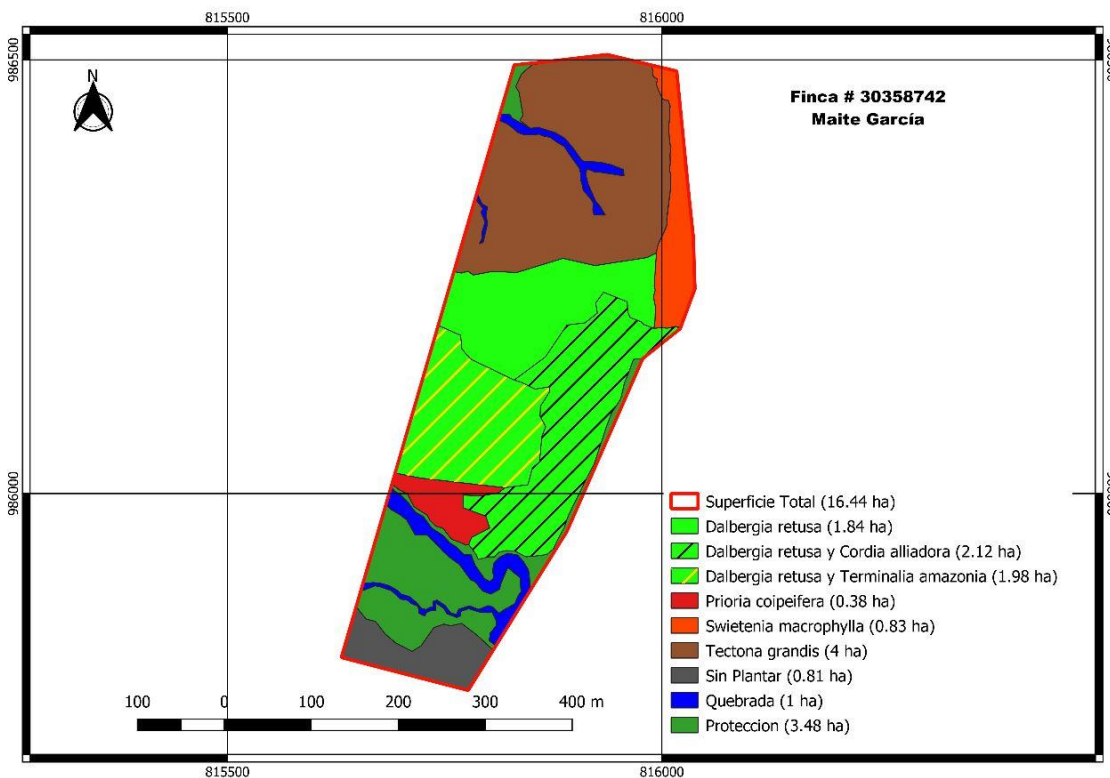


Figure 28: Reforestation map of the Finca Maite García

30.4. Finca Miguel García (La Esperanza)

Miguel Garcia								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
1962	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		2.12	2.12	
	Almond Tree	<i>Dipteryx panamensis</i>	3x4	833		6.09	6.09	
	Mahogany	<i>Swietenia macrophylla</i>	3x4	833		1.66	1.66	
	Guayacan Purple	<i>Tabebuia impetiginosa</i>	3x4	833		0.7	0.7	
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		1.2	1.2	
	Teak	<i>Tectona grandis</i>	4x5	500		21.08	21.08	
	Total afforested						32.85	
	Area to be planted						2	
	Protected area						13.93	
	Gorges, drainage						2.4	
	Bass range						1.65	
	Infrastructure							
	Total area							52.83

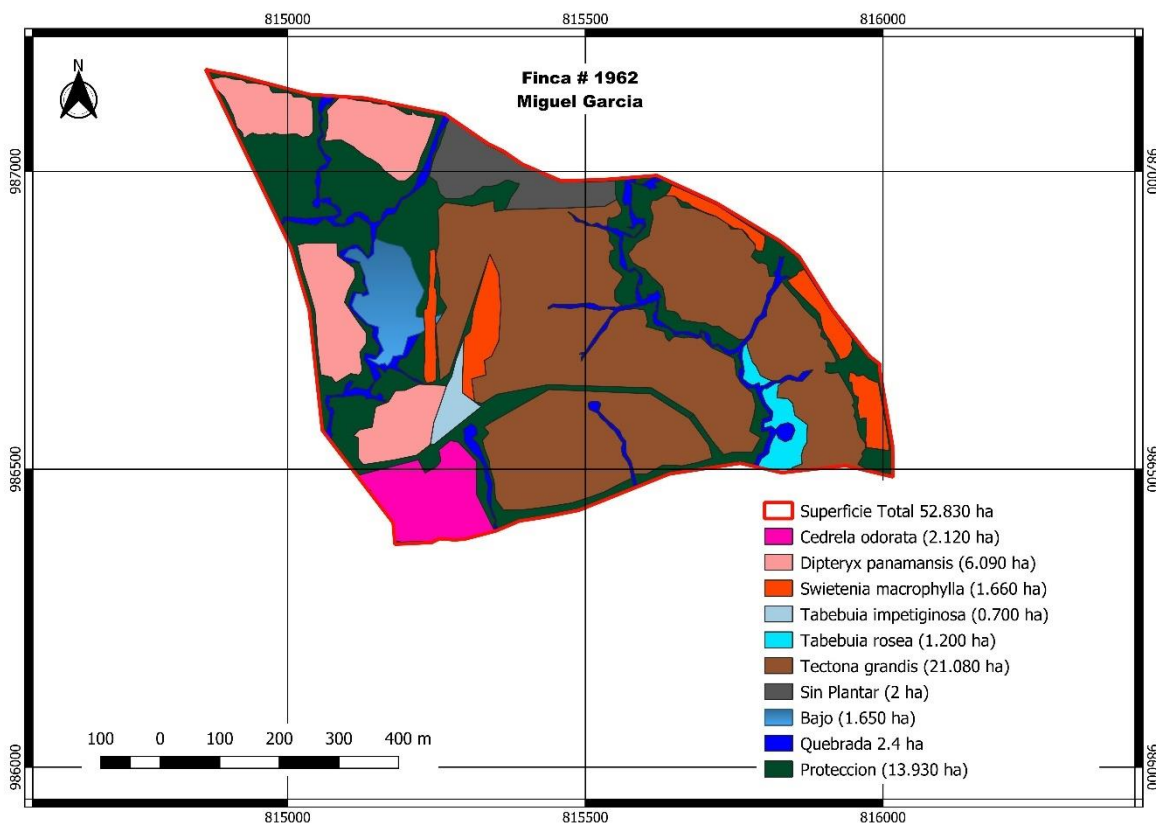


Figure 29: Reforestation map of Miguel Garcia

30.5. Finca Edilberta García (La Esperanza)

Edilberta Garcia								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
30359110	Cativo	<i>Prioria coipeifera/Anacardium excelsum</i>	3x4	833		1.18	1.18	
	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		0.4	0.4	
	Cocobolo/ Amarillo	<i>Dalbergia retusa / Terminalia amazonia</i>	3x4	833		3.71	3.71	
	Cocobolo	<i>Dalbergia retusa</i>	3x4	833		0.15	0.15	
	Savanna Oak/Cativo	<i>Tabebuia rosea/ Prioria coipeifera</i>	3x4	833		6.07	6.07	
	Total afforested						11.51	
	Area to be planted						0.5	
	Protected area						3.28	
	Gorges, drainage						1.2	
	Infrastructure							
Total area							16.49	

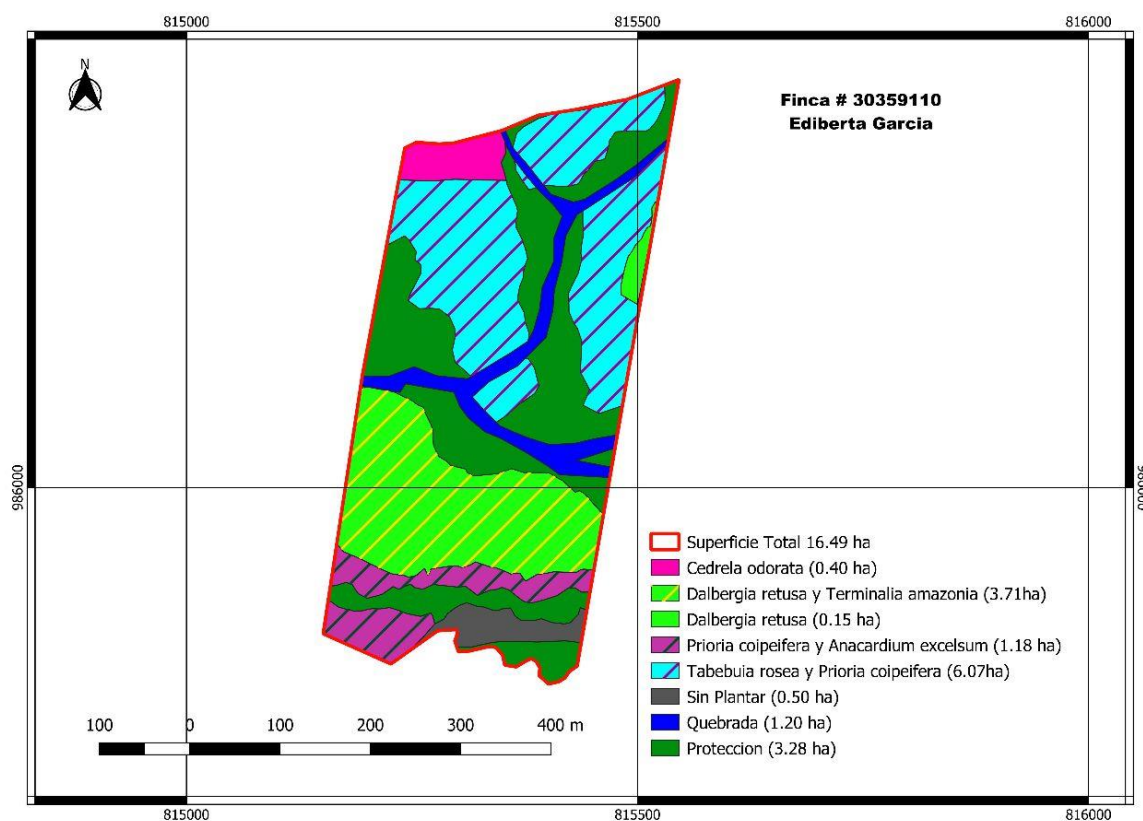


Figure 30: Reforestation map of Edilberta García

30.6. Finca Maite García (La Esperanza)

Maite Garcia								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
30358613	Espave	<i>Anacardium excelsum</i>	3x4	833		2.32	2.32	
	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		0.4	0.4	
	Mahogany	<i>Swietenia macrophylla</i>	3x4	833		0.18	0.18	
	Cocobolo/Amarillo	<i>Dalbergia retusa/Terminalia amazonia</i>	3x4	833		1.91	1.91	
	Guayacan Purple	<i>Tabebuia Impetiginosa</i>	3x4	833		2.24	2.24	
	Cativo/Savanna Oak	<i>Prioria coipeifera/Tabebuia rosea</i>	3x4	833		2.52	2.52	
	Cativo	<i>Prioria coipeifera</i>	3x4	833		1.32	1.32	
	Cativo/Spave	<i>Prioria coipeifera/Anacardium excelsum</i>	3x4	833		0.4	0.4	
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		0.8	0.8	
	Total afforested						12.09	
	Area to be planted							
	Protected area						2.16	
	Gorges, drainage						1.5	
	See						0.07	
Infrastructure						0.56		
Total area							16.38	

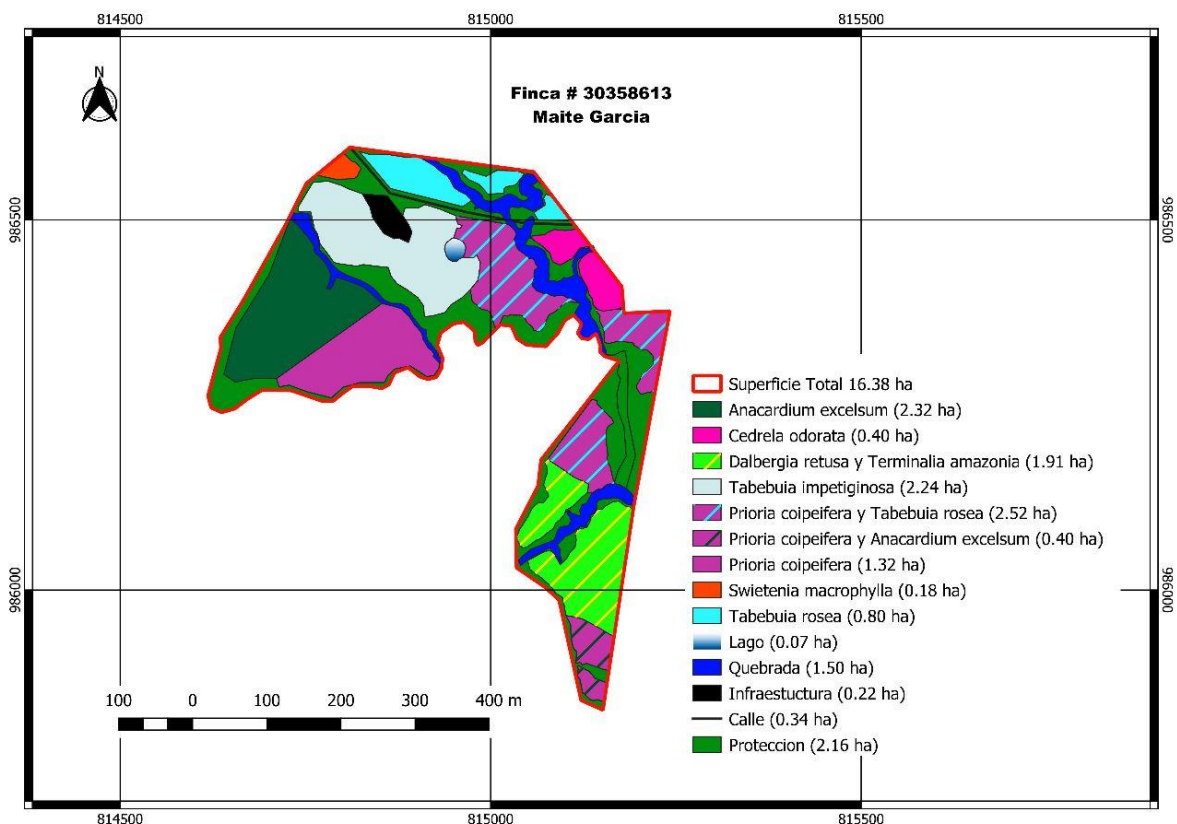


Figure 31: Reforestation map of the Finca Maite García

30.7. Finca Bélgica García (La Esperanza)

Belgium Garcia							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2021	2022	
30359029	Cocobolo/Amarillo	<i>Dalbergia retusa/Terminalia amazonia</i>	3x4	833		4.31	4.31
	Cocobolo/Laurel	<i>Dalbergia retusa/Cordia alliodora</i>	3x4	833		3.16	3.16
	Laure	<i>Cordia alliodora</i>	3x4	833		0.45	0.45
	Total afforested					7.92	
	Area to be planted					6.9	
	Protected area					1.27	
	Gorges, drainage					0.5	
	Infrastructure						
Total area						16.59	

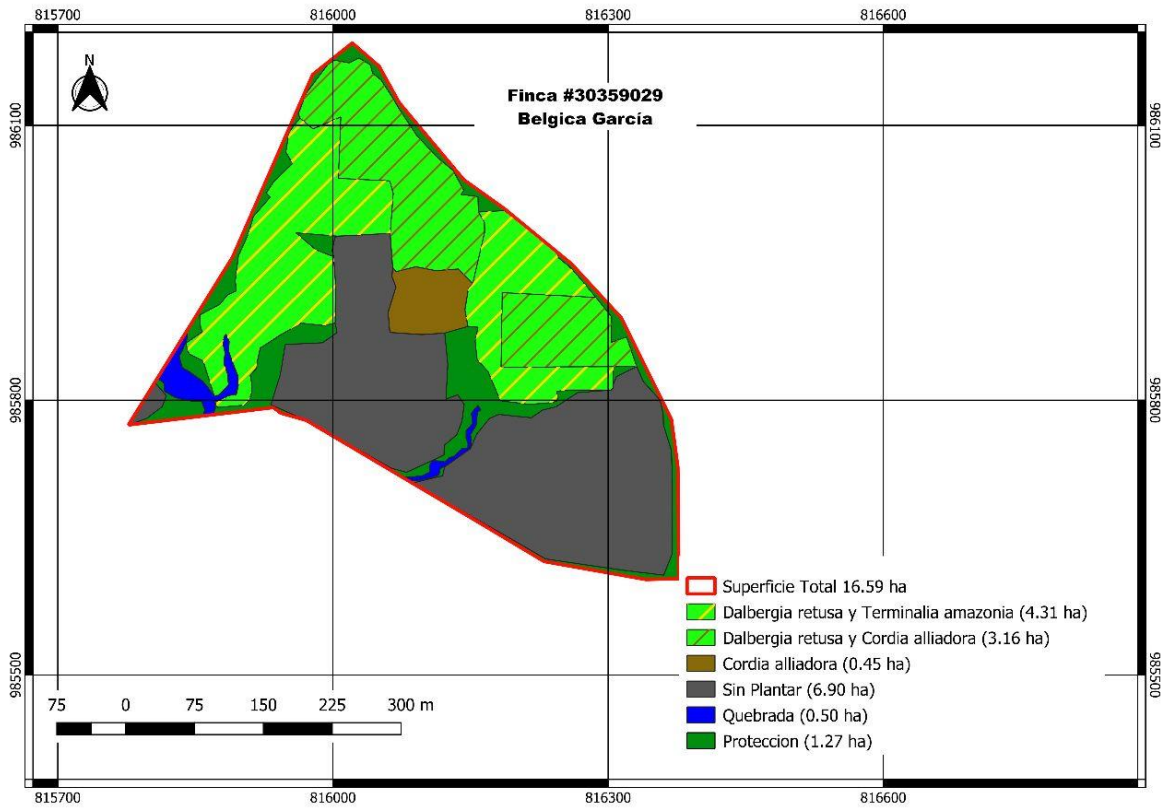


Figure 32: Reforestation map of Belgium Garcia

30.8. POA 2022

FINCA LA ESPERANZA																										
DESCRIPTION	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute
Hoyado - manual		-		-	20	14		-		-		-		-		-	8	7		-		-		-	28	21
Planted		-		-		-		-		-	15	15	560	555	180	175	170	163		-		-		-	925	908
Monitoring		-		-	15	12	3	3	20	15	15	18	50	44	20	19	35	32	15	12	10	10	4	4	187	169
Manual weed control - maintenance rollers		-		-		-		-	10	11		-		-	90	89	160	177	180	174	165	164	1	1	606	616
Weed control, chemical cutting		-		-		-		-		-		-		-		-	15	16		-	1	1	11	11	27	28
Manual weed control - Chapia		-		-		-		-		-		-		-	20	15	15	16		-		-	186	185	221	216
First fertilization		-		-		-		-		-		-	2	2		-		-		-		-		-	2	2
Manual plant protection control - muleteers		-		-		-		-		-		-		-	1	1		-		-	1	1		-	2	2
Chemical weed control - FUMIGATION of plots.		-		-		-		-		-		-		-		-		-		-	5	5		-	5	5
Weed control - manual weed control		-		-	100	91		-		-		-		-		-		-		-		-		-	100	91
Chainsaw guide		-		-	5	3		-		-		-		-		-		-		-		-		-	5	3

GPS measurement	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	1	1
Cleaning and maintenance of infrastructure	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	2	2
Phytosanitary control of muleteers	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	2	2
Plant protection control - trellis formation	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	3	3
Marking stakeout	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	2	2
Plant distribution	-	-	-	-	-	-	-	30	28	-	-	-	-	-	-	-	-	30	28
Weed control - establishment discs	-	-	-	-	-	-	-	75	76	-	-	-	-	-	-	-	-	75	76
Foliar fertilization	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	2	2
Weed control - manual-chapia	-	-	-	-	-	-	-	13	13	-	35	36	-	-	-	-	-	48	49
Unforeseen events	-	-	-	-	-	-	-	7	7	10	10	10	10	1	1	-	-	28	28
Weed control - establishment discs	-	-	-	-	-	-	-	-	-	15	16	-	-	-	-	-	-	15	16
Plant distribution	-	-	-	-	-	-	-	-	-	15	16	-	-	-	-	-	-	15	13

Hoyado - mechanic	-	-	-	-	-	-	-	-	-	-	-	7	8	-	-	-	-	-	-	7	8					
Trochado - cutting beacons	-	-	-	-	-	-	-	-	-	-	-	15	14	-	-	-	-	-	-	15	14					
Trochado	-	-	-	-	-	-	-	-	-	-	-	30	31	25	27	-	-	-	-	55	58					
Stands dismantling	-	-	-	-	-	-	-	-	-	-	-	6	6	-	-	-	-	-	-	6	6					
New planted	-	-	-	-	-	-	-	-	-	-	-	-	-	80	81	-	-	-	-	80	81					
Input transfer	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	4	4					
Conservation of the soil	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	2	2					
Tree clearing	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	2	2					
Total, general	-	-	-	-	140	120	3	3	33	29	32	35	744	732	409	397	561	573	196	187	182	181	202	201	2,502	2,458

30.9. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	% Mortality
La Esperanza	1962/30359110/ 30358742/30359029/ 30359853/30358613/ 30359842	Teak - <i>Tectona grandis</i>	13756	582	4%
		Almond tree <i>Dipteryx panamensis</i>	5020	787	16%
		Amarillo terminalia amazonia	8341	68	1%
		Savanna Oak - <i>Tabebuia rosea</i>	12334	736	6%
		Cocobolo - <i>Dalbergia retusa</i>	12539	77	1%
		Cedar - <i>Cedrela odorata</i>	2384	249	10%
		Espave - <i>Anacardium excelsum</i>	2584	2584	100%
		Mahogany - <i>Swietenia macrophylla</i>	3129	118	4%
		Cativo- <i>Prioria coGuayacán Mora doifera</i>	6565	499	8%
		Purple guaiac - <i>Tabebuia impetiginosa</i>	2402	126	5%
		Laurel- <i>Cordia alliadora</i>	2586	14	1%
Total, average			71640	5840	8%

From experience with bare-root planting of Espave in the 2022 planting, it was learned that Espave should be planted in pellets or substrate because bare-root trees are not very adaptable. It also appears that the Almond tree is somewhat more tolerant when planted bare-root, but that its mortality rate will always be outside expected limits.

31. Finca David Fernández

David Fernández								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
190400-190401-190371	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		2.26	2.26	
	Berba	<i>Brossimun alicastrum</i>	3x4	833		0.37	0.37	
	Almond Tree	<i>Dipteryx panamensis</i>	3x4	833		1.21	1.21	
	Balm	<i>Miroxylum Balsamo</i>	3x4	833		1.57	1.57	
	Cativo	<i>Prioria coipeifera</i>	3x4	833		1	1	
	Mahogany	<i>Swietenia macrophylla</i>	3x4	833		2.26	2.26	
	Cocobolo	<i>Dalbergia retusa</i>	3x4	833		7.11	7.11	
	Total afforested						15.78	
	Area to be planted							
	Protected area						9.79	
	Gorges, drainage						0.21	
Infrastructure						2.84		
Total area							28.62	

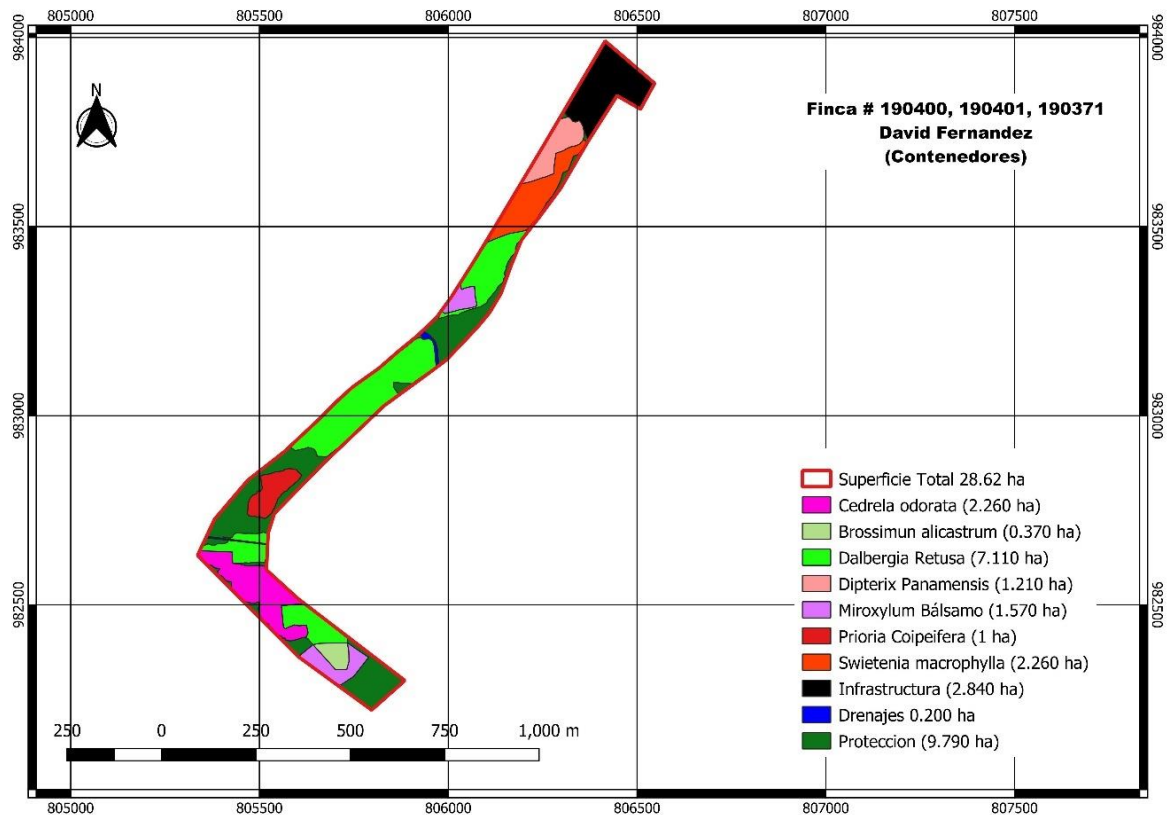


Figure 33: Reforestation map of Finca David Fernández

31.1. POA 2022

POA 2022 FINCA David Fernández																										
DESCRIPCIÓN	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute
Monitoring		-		-		-		-		-		-		-	20	19		1		1	10	8		-	30	29
Hoyado - manual		-		-		-		-		-		-		-		-		7		-		-		-	-	7
Manual weed control - maintenance rollers		-		-		-		-		-		-		-		-		-		-		2		-	-	2
Planted		-		-		-		-		-		-		-	100	91		8		-		-		-	100	99
Plant distribution		-		-		-		-		-		-		-	4	2		2		-		-		-	4	4
Trocha do		-		-		-		-		-		-		-	125	116		14		-		-		-	125	130
Chemical weed control - spraying plots of land		-		-		-		-		-		-		-		-		-		-	10	13		-	10	13
Weed control - establishment discs		-		-		-		-		-		-		-		-		-		-		-		-	-	-

Weed control - manual - chapia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	-	-	-	10	10				
Input transfer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	4	-	-	-	5	4				
Unforeseen events	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	2	2				
Release	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	51	68	83	100	114	-	233	248		
Manual weed control - Chapia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	-	-	-	30	30		
Weed control, chemical cutting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	29	-	-	30	29		
Manual plant protection control - muleters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	1		
Granular fertilization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	-	-	-	32		
Total, general	-	-	-	-	-	-	-	-	-	-	-	-	-	-	249	228	82	99	129	114	120	199	-	580	640

31.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	Mortality in %
David Fernandez (container)	190400/190401/190371	Cedar - <i>Cedrela odorata</i>	1882	203	11%
		Mahogany - <i>Swietenia macrophylla</i>	1879	123	7%
		Cocobolo - <i>Dalbergia retusa</i>	5923	345	6%
		Almond tree <i>Dipteryx panamensis</i>	1009	200	20%
		Balsamum - <i>Myroxylon Balsamum</i>	1308	97	7%
		Berba- <i>Brossimun alicastrum</i>	314	250	80%
		Cativo- <i>Prioria coGuayacán</i> <i>Mora doifera</i>	833	265	32%
Total, average			13148	1483	11%

Despite the fact that this farm was planted using rows because the farm consists almost entirely of stubble, the Almond trees did not adapt well to the site since they were planted with bare-roots. In the case of Berba, which is a new species being introduced, its requirements are being examined, and in this case, it is observed that excessive shade reduces the adaptation process of this species.

32. Finca Lastenia #1 (Gilberto Samaniego)

LASTENIA 1 (Gilberto Samaniego)								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
1284	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		3.34	3.34	
	Cocobolo / Amarillo	<i>Dalbergia retusa/Terminalia amazonia</i>	3x4	833		17	17	
	Savanna Oak	<i>Tabebuia Rosea</i>	3x4	833		1.6	1.6	
	Teak	<i>Tectona grandis</i>	4x5	500		1.2	1.2	
	Total afforested						23.14	
	Area to be planted						10.23	
	Protected area						5.96	
	Bass range						8.3	
	Gorges, drainage						2	
	Infrastructure							
Total area							49.63	

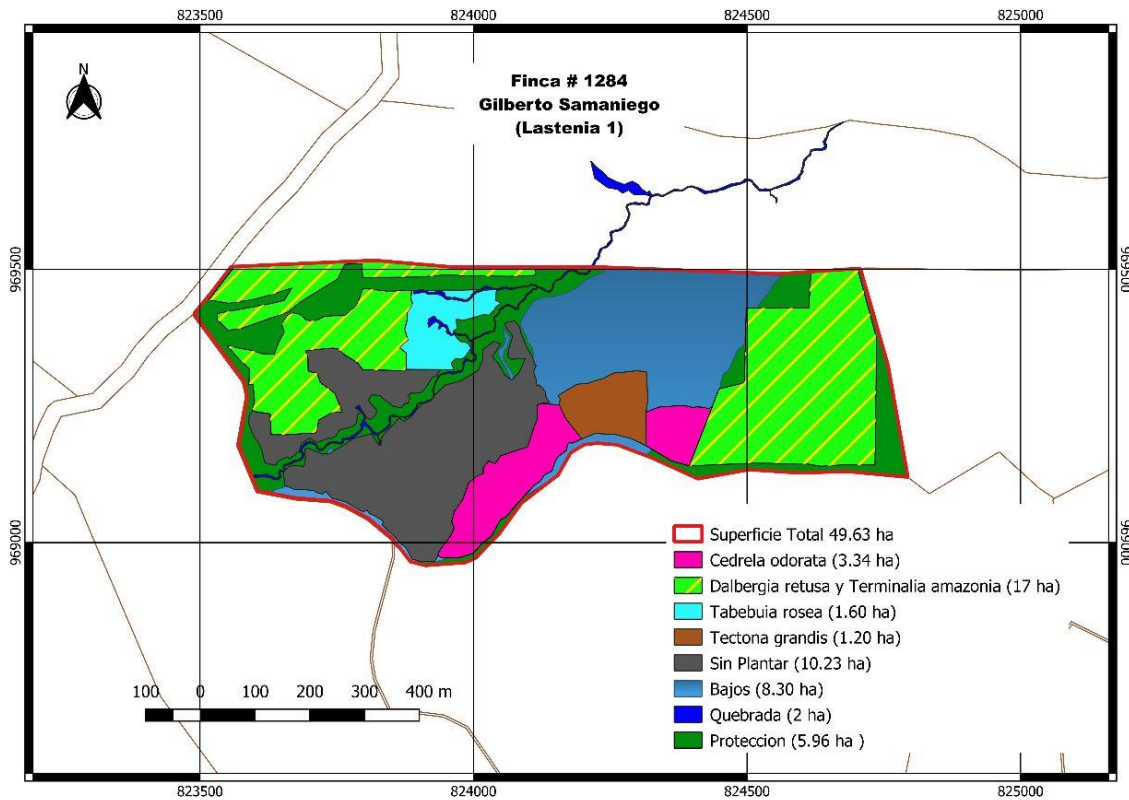


Figure 34: Reforestation map of Finca Lastenia 1 (G. Samaniego), Finca 1284.

LASTENIA 1 (Gilberto Samaniego)							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2021	2022	
2453	Cocobolo / Amarillo	<i>Dalbergia retusa</i> / <i>Terminalia amazonia</i>	3x4	833		2.7	2.7
	Almond Tree	<i>Dipteryx panamensis</i>	3x4	833		0.87	0.87
	Total afforested					3.57	
	Area to be planted					28	
	Protected area					1.48	
	Lowlands					14.43	
	Gorges, drainage					2	
	Infrastructure						
	Total area						49.48

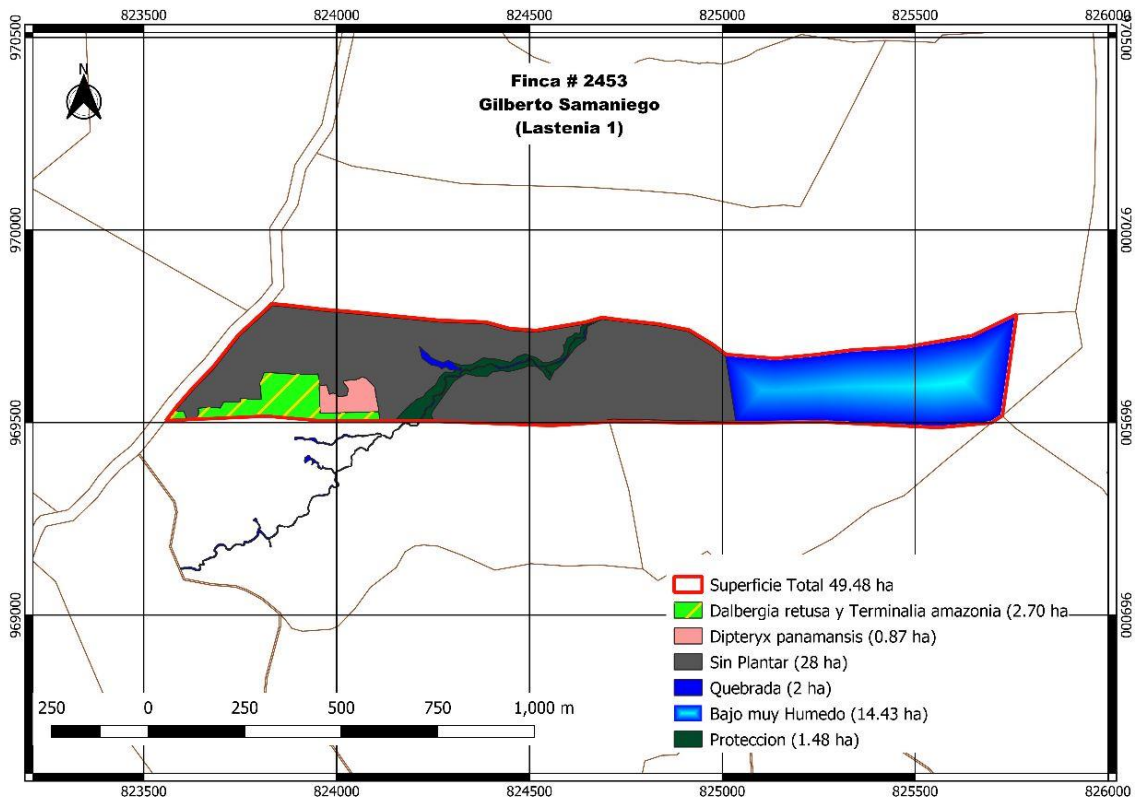


Figure 35: Reforestation map of Finca Lastenia 1 (G. Samaniego), Finca 2453.

32.1. POA 2022

FINCA LASTENIA # 1 (G. Samaniego)																												
DESCRIPTION	January		February		March		April		May		June		July		August		September		October		November		December		Totals			
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute		
Hoyad o - manual		-		16		-		-		-		-		-		10		-		-		-		-		-	26	
Planted		-		-		-		-		-		-		-	716	48		-		-		-		-		-	716	48
Monitoring		-		-		-	30	42		2		-		-		4		12		1		-		4	30	65		
Manual weed control - maintenance rollers		-		-		5		-		-		-		-		8		10		34		-		-		1,584	57	
					396										396		396		396									
Manual weed control - Chapia		-		-		8		-		13		-		-		13		-		46		64		14		-	158	
Manual plant protection control - muleters	5	-	5	-	5	-	5	-	5	-	5	-	5	-	5	-	5	-	5	-	5	-	5	-	5	-	64	-
Cleaning and maintenance of		-		-		-		-		14		-		-		-		-		-		-		-		-	14	

32.2. *Mortality planting*

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	Mortality in %
Lastenia # 1 (Gilberto Samaniego)	1284/2453	Teak - <i>Tectona grandis</i>	600	332	55%
		Cocobolo - <i>Dalbergia retusa</i>	8334	431	5%
		Amarillo terminalia amazonia	8078	652	8%
		Almond tree <i>Dipteryx panamensis</i>	723	266	37%
		Savanna Oak - <i>Tabebuia rosea</i>	1330	221	17%
		Cedar - <i>Cedrela odorata</i>	2783	250	9%
Total, average			21848	2152	10%

Plant dieback on this finca is due to oversaturation of the soil caused by the finca's soil conditions (soil improvement work is planned for 2023).

33. Finca Lastenia # 2 (Gilberto Samaniego)

LASTENIA 2 (Gilberto Samaniego)								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
6159	Cocobolo / Amarillo	<i>Dalbergia retusa</i> / <i>Terminalia amazonia</i>	3x4	833		3.5	3.5	
	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		3.5	3.5	
	Teak	<i>Tectona grandis</i>	4x5	500		5.88	5.88	
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		6.33	6.33	
	Almond Tree	<i>Dipteryx panamensis</i>	3x4	833		2.7	2.7	
	Total afforested						21.91	
	Area to be planted						10.3	
	Protected area						4.27	
	Stubble						9.1	
	Gorges, drainage						0.77	
	Infrastructure							
Total area							46.35	

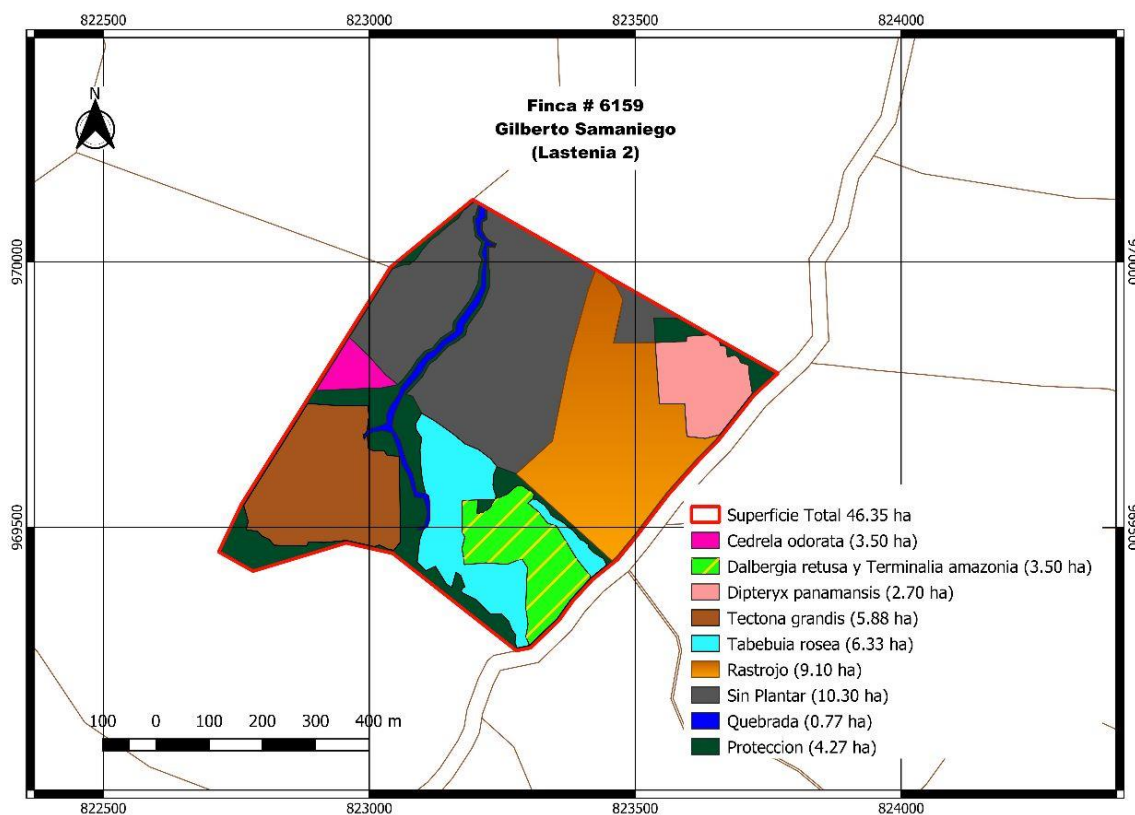


Figure 36: Reforestation map of Finca Lastenia #2 (Gilberto Samaniego).

33.1. POA 2022

FINCA LASTENIA # 2 (Gilberto Samaniego)																												
DESCRIP TION	January		February		March		April		May		June		July		August		September		October		November		December		Totals			
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute		
Hoyado - manual		-		-		28		-		-		-		-		12		9		-		-		-		-	49	
Planted		-		-		-		-		-		-		-		483	186		-		-		-		-		483	186
Monitoring		-		-	1.5	7	1.5	1		-		-		-		1.5	6	1.5	3	1.5	8		-	1.5	10	9	35	
Manual weed control - mainten ance rollers		-		-		2		-		-		-		-		63		16		34		-		-		100	115	
Manual weed control - Chapia		-		-		22		-		9		-		-		98		-		19		-		-		-	148	
Manual plant protecti on control - muletee rs		-		-		-		-		-		-		-		20	4		-		-		-		-		20	4
Weed control - establis hment discs		-		-		-		-		-		-		-		8	72		-		8		-		-		8	80
Plant distrib ution		-		-		-		-		-		-		-		8		4		-		-		-		-	12	
Trochad o		-		-		-		-		-		-		-		55		-		-		-		-		-	55	
Input transfer		-		-		-		-		-		-		-		240	2		-		-		-		-		240	2

Tree clearing	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	20
Marking of the Esaquilla do	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Building fences	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Fence maintenance	-	-	-	-	15	18	15	4	-	-	-	-	-	-	-	30	22
Personnel transfer	-	-	-	-	-	5	-	-	-	17	-	-	-	-	-	-	22
Trochador - balizado	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	3
Tractor driver	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	3
House building	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
Transfer to place of work	-	-	-	-	-	-	-	-	-	-	41	-	-	-	-	-	41
Cleaning and shrinkage of the belt	-	-	-	-	-	-	-	-	-	-	-	-	-	92	37	-	129
Release	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Marking - Stakeout	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2
Maintenance of internal roads	-	-	-	-	-	-	-	-	15	2	-	-	-	-	-	15	2
Cleaning and maintenance of	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

33.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	Mortality in %
Lastenia # 2 (Gilberto Samaniego)	6159	Teak - <i>Tectona grandis</i>	2940	224	8%
		Cocobolo - <i>Dalbergia retusa</i>	1458	56	4%
		Amarillo terminalia amazonia	1458	35	2%
		Almond tree <i>Dipteryx panamensis</i>	2250	698	31%
		Savanna Oak - <i>Tabebuia rosea</i>	5272	700	13%
		Cedar - <i>Cedrela odorata</i>	2916	266	9%
Total, average			16294	1979	12%

Almonds and Cedars were planted bare-root, which increased mortality on this finca.

34. Finca Lastenia #3 (Hermenegildo Espinosa)

(Hermenegildo Espinosa)							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2021	2022	
342926	Cocobolo / Amarillo	<i>Dalbergia retusa</i> / <i>Terminalia amazonia</i>	3x4	833		14.45	14.45
	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		1.99	1.99
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		2.71	2.71
	Total afforested					19.15	
	Area to be planted					10.00	
	Protected area					5.75	
	Stubble					5.03	
	Gorges, drainage					0.5	
	Lowlands					8.38	
	Total area						48.81

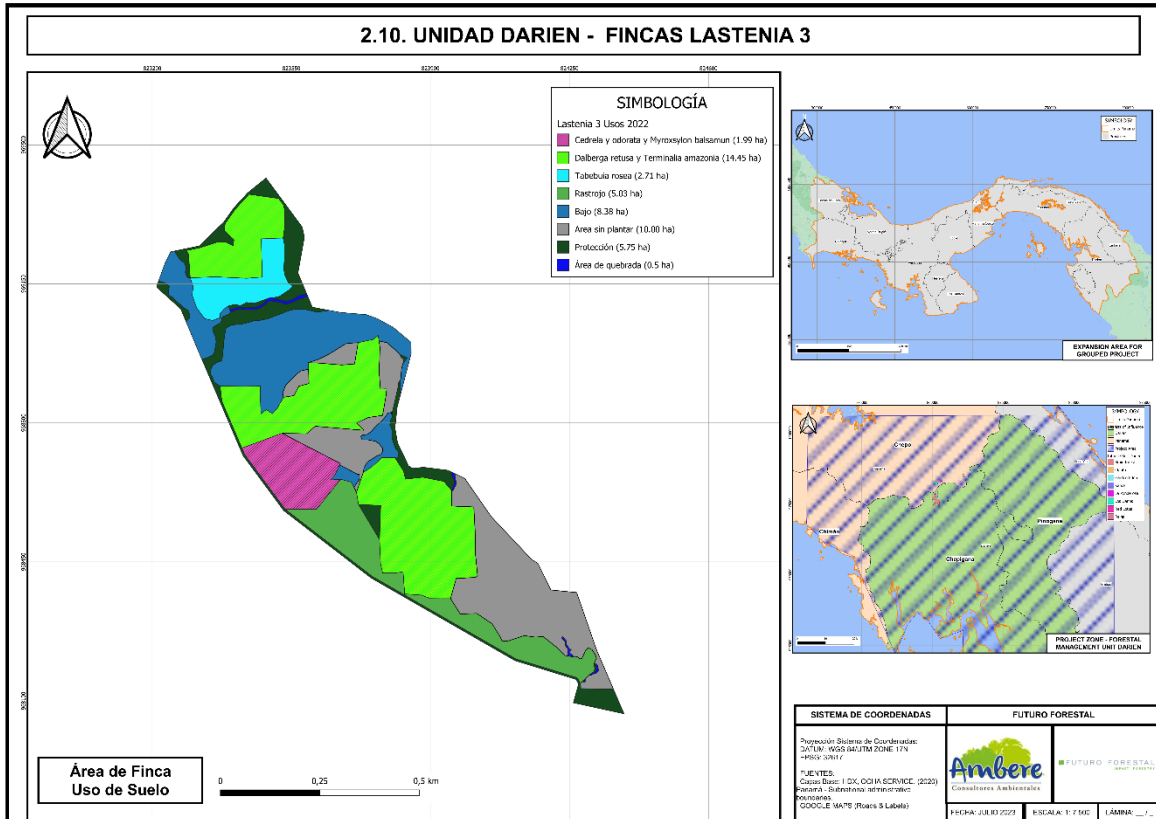


Figure 37: Reforestation map of Lastenia #3 (Hermenegildo Espinosa).

34.1. POA 2022

FINCA LASTENIA # 3 (Hermenegildo Espinosa)																										
DESCRIPCIÓN	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute
Hoyado - manual		-		-		-		-		-		-		-	63	2	63	33		-		-		-	125	35
Monitoring		-		-	26.667	18		-		-		-		-		-	26.667	7	26.667	4		-		1	80	30
Manual weed control - maintenance rollers		-		-		-		-		-		-		-		-	24	24	16	16	216	-		-	256	40
Weed control - manual weed control		-		-		164		-		18		109		-		24		-		16		-		-	380	331
Weed control - establishment discs		-		-		-		-		-		-		-		-		-		42		-		-	-	42
Plant distribution		-		-		-		-		-		-		-		-		20		-		-		-	-	20
Trocha do		-		-		-		-		-		-		-		-		10		-		-		-	-	10
Tree clearing		-		-		-		-		-		-		-		-		-		-		-		-	-	-

Fence maintenance	-	-	-	-	-	20	40	17	-	-	-	-	-	20	57
Personnel transfer	-	-	-	-	7	-	-	-	-	2	-	-	-	-	9
Trochodolization	-	-	-	-	-	-	-	-	-	15	-	-	-	-	15
Transfer to place of work	-	-	-	-	-	-	-	-	-	86	-	-	-	-	86
Maintenance of internal roads	-	-	-	-	-	-	-	15	4	-	-	-	-	15	4
Cleaning and maintenance of infrastructure	-	-	-	-	-	-	-	-	-	2	-	2	-	-	4
Granular fertilization	-	-	-	-	-	-	-	-	8	-	-	18	11	-	37
First fertilization	-	-	-	-	-	-	-	-	-	52	-	-	-	-	52
New planted	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
Weed control - chemical	-	-	-	-	-	-	-	-	-	6	-	-	-	-	6
Sign installation	-	-	-	-	-	-	-	-	-	2	-	-	-	-	2

34.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	% Mortality
Lastenia # 3 (Hermenegildo Espinosa)	342926	Cocobolo - <i>Dalbergia retusa</i>	6018	528	9%
		Amarillo terminalia amazonia	6022	117	2%
		Savanna Oak - <i>Tabebuia rosea</i>	2253	593	26%
Total, average			14293	1238	9%

The Savanna Oak planted on this finca was planted bare-rooted, which increased mortality of the species.

35. Finca Lastenia #4 (Alfonzo Valdés)

LASTENIA 4 (Alfonso Valdés)								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
30163457	Espave	<i>Anacardium excelsum</i>	3x4	833		1.45	1.45	
	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		1.53	1.53	
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		0.76	0.76	
	Mahogany	<i>Swietenia macrophylla</i>	3x4	833		1.04	1.04	
	Guayacan Purple	<i>Tabebuia impetiginosa</i>	3x4	833		0.52	0.52	
	Teak	<i>Tectona grandis</i>	4x5	500		4.89	4.89	
	Cocobolo / Amarillo	<i>Dalbergia retusa</i> / <i>Terminalia amazonia</i>	3x4	833		3.95	3.95	
	Total afforested						14.14	
	Area to be planted						6.78	
	Protected area						2.92	
	See						0.2	
	Gorges, drainage						2	
	Infrastructure						1.24	
Total area							27.28	

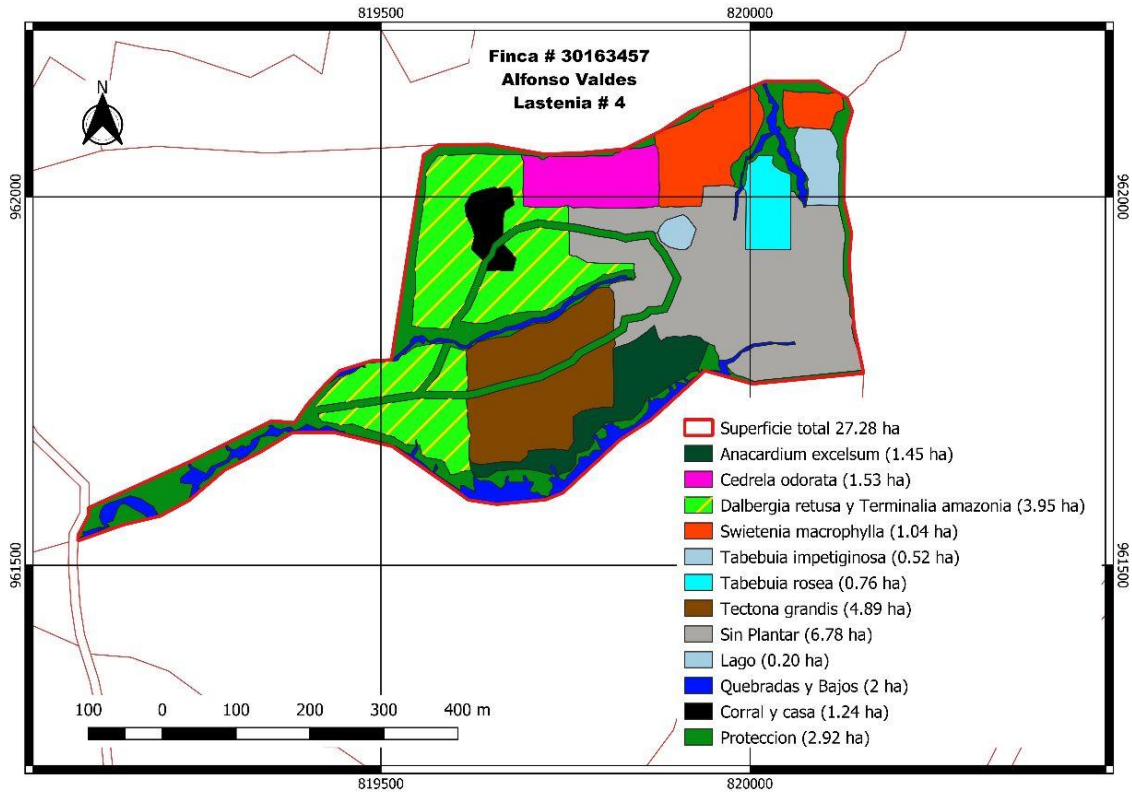


Figure 38: Reforestation Map of Lastenia #4 (Alfonzo Valdés)

35.1. POA 2022

Finca LASTENIA # 4 (Alfonzo Valdés)																											
DESCRIPTION	January		February		March		April		May		June		July		August		September		October		November		December		Totals		
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	
Hoyado - manual		-		-		-		-		-		-		-		6		9		-		-		-		-	15
Monitoring		-		-		-	10		5		20		-		-		2		6		-		11		-	54	
Manual weed control - maintenance rollers		-		-		-		-		-		-		-	34	41	34	32	34	33	34	24	34	34		168	164
Manual weed control - Chapia		-		-		-	60		24	34	38	4		-		-		-		35		-		-		122	73
Plant distribution		-		-		-		-		-		-		-		-		5		-		-		-		-	5
Tree clearing		-		-		-		-		-		-		58		-		-		-		-		-		-	58
Fence maintenance		-		-		-		-	24	26	23	26		4		-		4		-		-		-		47	60
Transfer to place of work		-		-		-		-		-		-		-		-		3		-		-		-		-	3
Cleaning and maintenance of		-		-		-		-		-		-		3		1		10		-		-		-		-	14

infrastr ucture																			
Granula r fertiliza tion	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	8	
First fertiliza tion	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	6	
Unfores een events	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	
Bounda ry marking - clearan ce for surveyo rs	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	4	
GPS measur ement	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	
Weed control - establis hment discs	-	-	-	-	-	-	12	-	-	-	-	6	-	-	-	-	-	18	
Cleanin g and mainte nance of infrastr ucture	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	10	
Planted	-	-	-	-	-	-	-	-	197	22	197	2	-	-	-	-	393	24	
Input transfer	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	2	
Foliar fertiliza tion	-	-	-	-	-	-	-	-	-	5	-	2	-	-	-	-	-	7	

Manual plant protection control - muleters	-	-	-	-	-	-	-	-	-	-	-	-	-	11	4	-	-	-	-	-	-	15			
Data collector - information	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2			
Marking - border clearance for surveys	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	6			
Cleaning and shrinkage of the belt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	6	-	-	34			
Hut construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1			
Release	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1			
Weed control - mechanical	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-	50			
Total, general	-	-	-	-	-	60	10	48	65	61	77	-	65	230	96	230	81	34	86	34	55	34	101	730	636

35.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	Mortality in %
Lastenia # 4 (Alfonzo Valdés)	30163457	Teak - <i>Tectona grandis</i>	2447	485	20%
		Cocobolo - <i>Dalbergia retusa</i>	2216	412	19%
		Mahogany - <i>Swietenia macrophylla</i>	856	200	23%
		Espave - <i>Anacardium excelsum</i>	1212	1212	100%
		Savanna Oak - <i>Tabebuia rosea</i>	630	26	4%
		Cedar - <i>Cedrela odorata</i>	1278	326	26%
		Purple Guyican - <i>Tabebuia impetiginosa</i>	432	13	3%
		Amarillo terminalia amazonia	2239	489	22%
Total, average			11310	3163	28%

The death of the plants on this finca is due to the oversaturation of the soil, which in turn is due to the soil conditions of the finca. The plan is to build a drainage network to improve this aspect.

36. Finca Lastenia # 5 (Rosa Amelia)

# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
2719	Cocobolo	<i>Dalbergia restusa</i>	3x4	833		22.13	22.13	
	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		2.93	2.93	
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		5.47	5.47	
	Mahogany	<i>Swietenia macrophylla</i>	3x4	833		3.34	3.34	
	Teak	<i>Tectona grandis</i>	4x5	500		0.24	0.24	
	Almond Tree	<i>Dipteryx panamensis</i>	3x4	833		13.16	13.16	
	Amarillo	<i>Terminalia amazonia</i>	3x4	833		0.63	0.63	
	Balm	<i>Myroxylum Balsamo</i>	3x4	833		0.84	0.84	
	Cocobolo / Amarillo	<i>Dalbergia retusa/ Terminalia amazonia</i>	3x4	833		1.22	1.22	
	Total afforested						49.96	
	Area to be planted						15	
	Protected area						21.29	
	Water protection area						7.2	
	See						1	
Total area							94.45	

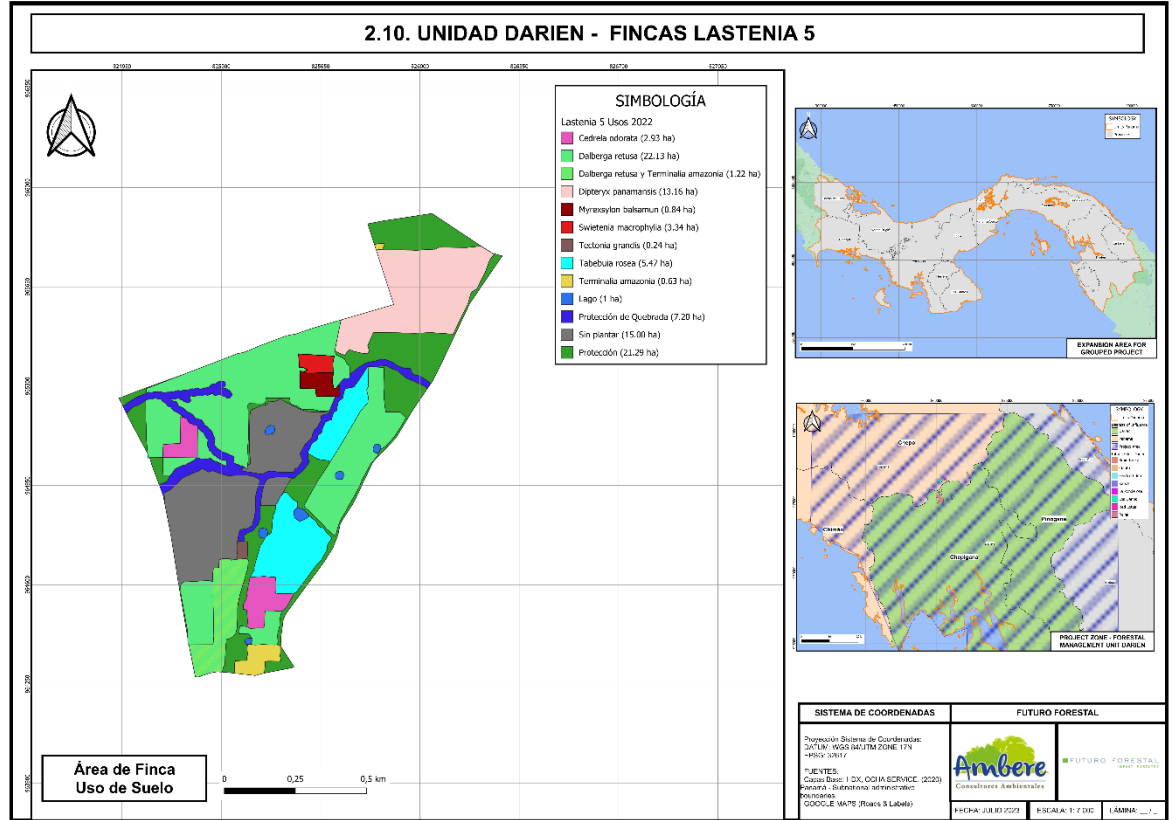


Figure 39: Reforestation map of Lastenia #5 (Rosa Amelia)

36.1. POA 2022

FINCA LASTENIA # 5 (Rosa Amelia)																											
DESCRIPTION	January		February		March		April		May		June		July		August		September		October		November		December		Totals		
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	
Hoyad o-manua l		-		-		-		-		-		-		30		22		-		-		-		-		-	52
Monit oring		-		-		-	17	1	17	6		-	17	4	17	5	17	26	17	16		-	17	7	120	65	
Manua l weed control - mainte nance rollers		-		-		-		-		-		-		-	145	145	128	128	243	243		-	22	9	538	525	
Manua l weed control - Chapia		-		-		-	9	68		-		-		-		-	70	74	160	123	65	82	140	133	444	480	
Weed control - establi shmen t discs		-		-		-		-		-		-		-		-		16		47		-		-		63	
Plant distrib ution		-		-		-		-		-		-	18		8		-		13		-		-		-	39	
Tree clearin g		-		-		-		-		-	8		12		7		-		-		-		-		-	27	
Fence markin g		-		-		-	10	5		-		-		-		-		-		-	10	6		-	20	11	

Transfer to place of work	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Cleaning and maintenance of infrastructure	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Unforeseen events	-	-	-	1	-	9	-	-	46	1	-	-	-	-	-	57
Boundary marking - clearance for surveyors	-	-	-	-	-	19	-	-	-	-	-	-	-	-	-	19
Cleaning and maintenance of infrastructure	-	-	-	-	9	-	2	-	-	-	-	-	-	-	-	11
Planted	-	-	-	-	-	-	132	225	132	73	-	19	-	-	263	317
Input transfer	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	3
Manual plant protection - muleters	-	-	-	-	-	-	-	-	14	11	-	11	-	-	-	36

Cleani ng and shrinka ge of the belt	-	-	-	-	-	-	-	-	-	-	-	-	-	175	58	175	36	350	94
Hut constr uction	-	-	-	-	-	-	-	9	3	-	-	-	-	-	-	-	-	-	12
Releas e	-	-	-	-	-	-	-	-	-	-	-	-	-	117	-	44	-	-	161
Weed control - mecha nical	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	25
Markin g of the Esaquil lado	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Mainte nance of interna l roads	-	-	-	1 6	1	-	-	-	-	-	-	-	-	-	-	-	-	16	1
Person nel transfe r	-	-	-	-	-	3	-	-	-	-	3	-	-	-	-	-	-	-	6
Trocha do- Balizad o	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-	-	-	30
Trainin g	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-	9
Trocha do	-	-	-	-	-	-	200	203	230	199	150	61	5	-	-	-	-	580	468
Fence constr uction	-	-	-	-	-	-	-	-	22	-	-	-	-	-	-	-	-	-	22
House buildin g	-	-	-	-	-	-	-	10	5	-	-	-	-	-	-	-	-	-	15

Weed control - manual-chapia	-	-	-	-	-	-	-	-	-	21	11	-	-	-	-	32										
Weed control - mechanical	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	8										
Tractor driver	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1										
Trocha do - balizado	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	5										
Total, geral	-	-	-	-	-	3	3	4	36	91	200	278	379	532	444	376	215	326	420	462	250	274	354	254	2,331	2,597

On this farm there are stubble areas that had to be cleared to allow sunlight to reach the plants, an activity that was not planned.

36.2. *Mortality planting*

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	% Mortality
Lastenia # 5 (Pink Amelia)	2719	<i>Almond tree - Dipteryx panamensis</i>	10964	5454	50%
		<i>Savanna Oak - Tabebuia rosea</i>	4556	1029	23%
		<i>Balsamum - Myroxylon Balsamum</i>	700	60	9%
		<i>Cocobolo - Dalbergia retusa</i>	18944	1250	7%
		<i>Mahogany - Swietenia macrophylla</i>	550	235	43%
		<i>Cedar - Cedrela odorata</i>	2441	332	14%
		<i>Teak - Tectona grandis</i>	120	100	83%
		<i>Amarillo terminalia amazonia</i>	1026	78	8%
Total, average			39301	8538	21%

This finca has very clayey soils, which increases the water saturation in the soil and reduces the adaptability of the plants. Teak was planted experimentally to test its adaptability in areas with water saturation, which did not work.

37. Finca Nicanor #1 (Dalia Vega)

Nicanor 1								
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)	
	General name	Scientific name			2021	2022		
1182	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		1.1	1.1	
	Amarillo Guayaquil	<i>Centrilobium yavisanum</i>	3x4	833		0.39	0.39	
	Cocobolo / Amarillo	<i>Dalbergia retusa/Terminalia amazonia</i>	3x4	833		9.41	9.41	
	Teak	<i>Tectona grandis</i>	4x5	500		3.08	3.08	
	Cocobolo/Ormosia	<i>Dalbergia retusa/Ormosia</i>	3x4	833		0.34	0.34	
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		1.73	1.73	
	Almond Tree	<i>Dipteryx panamensis</i>	3x4	833		0.33	0.33	
	Mahogany	<i>Swietenia macophylla</i>	3x4	833		0.33	0.33	
	Total afforested						16.71	
	Area to be planted						7.78	
	Protected area						5.7	
	Highest surface						4.41	
	Gorges, drainage						2.5	
	Infrastructure							
Total area							37.1	

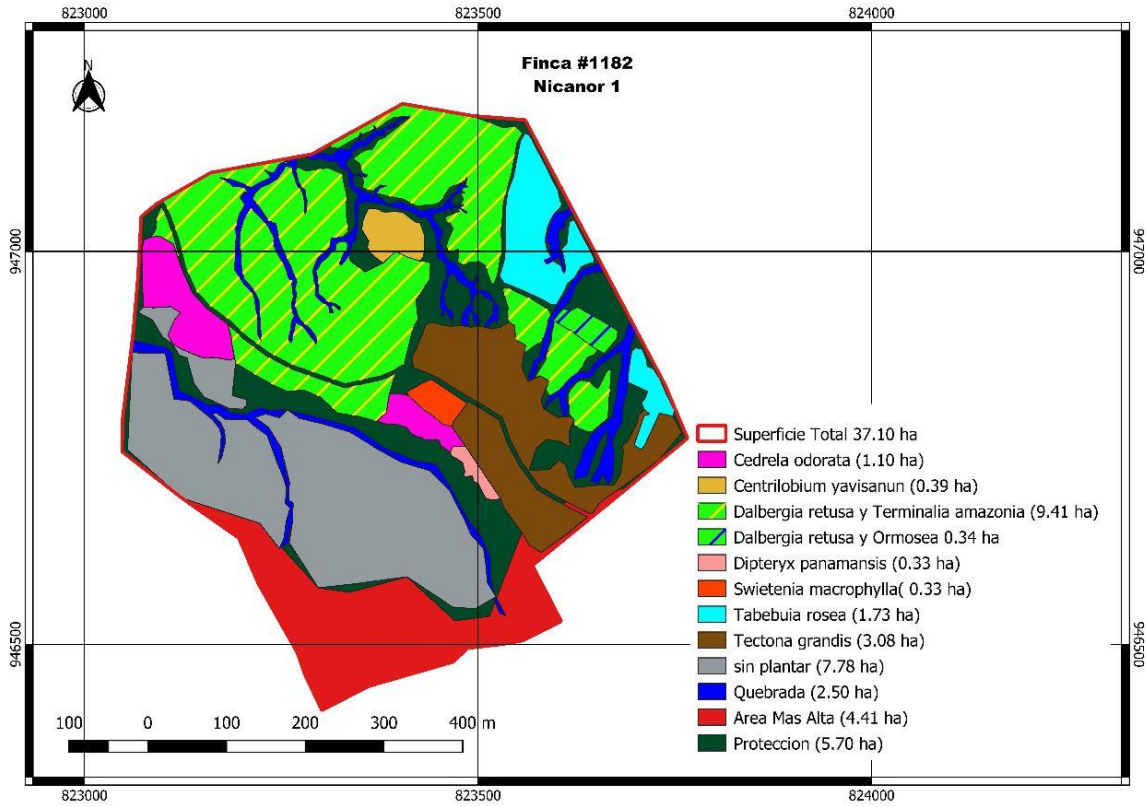


Figure 40: Reforestation map of Finca Nicanor #1 (Dalia Vega)

37.1. POA year 2022

Finca NICANOR # 1 (Dalia Vega)																											
DESCRIPTION	January		February		March		April		May		June		July		August		September		October		November		December		Totals		
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	
Hoyado manual		-		-		-		-		-		-		-	5	5		-		-		-		-	5	5	
Monitoring		-		-		-	2	1	2	0	18		-		-	5	2		-	10	8	10	8	5	6	52	43
Manual weed control - maintenance rollers		-		-		-		-		-		-		-	20	15	25	24	40	36		-		2	85	77	
Manual weed control - Chapia		-		-		-	2		-		-		-		-		-	50	13	10	48		12	60	75		
Weed control - establishment discs		-		-		-		-		-		-		-		-		-	10	15		-		-	10	15	
Plant distribution		-		-		-		-		-		-		-	5	6		-		-		-		-	5	6	
Fence maintenance		-		-		-		-		-		-		-		-		-	1	1		24		-	1	25	
Cleaning and maintenance of		-		-		-		-		-		-		-		-	2	2	2	2	20	15		-	24	19	

infrastr ucture																							
Unfore seen events	-		-		-	1	1	-		-		-		-		-		-		-	1	1	
Cleanin g and mainte nance of infrastr ucture	-		-		-		2	2		-		-		-		-		-		-	2	2	
Plante d	-		-		-		-		-	30	26	2	2		-		-		-		32	28	
Cleanin g and shrinka ge of the belt	-		-		-		-		-		-		-		-	80	75		-		80	75	
Weed control - mecha nical	-		-		-		-		-		-		-		-	5	4		-		5	4	
Mainte nance of interna l roads	-		-		-	4	4	-		-		-		-		-		-		-	4	4	
Fence constr uction	-		-		-		-		-	3	3		-		-		-		-		3	3	
House buildin g	-		-		-		-		-		-	5	5		-		-		-		5	5	
Trocha do - balizad o	-		-		-		-		-		-	1	1		-		-		-		1	1	
Foliar fertiliza tion	-		-		-		-		-	5	3		-		-		-		-		5	3	

Granular fertilization	-	-	-	-	-	-	-	-	-	-	-	-	-	5	4	-	-	-	-	-	-	5	4			
(blank)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Total, general	-	-	-	-	-	-	7	8	2	20	-	-	-	-	78	64	35	34	113	75	125	174	5	20	385	395

37.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	Mortality in %
Nicanor # 1 (Dalia Vega)	1182	Teak - <i>Tectona grandis</i>	1540	52	3%
		Cocobolo - <i>Dalbergia retusa</i>	3665	404	11%
		Amarillo terminalia amazonia	4312	256	6%
		Savanna Oak - <i>Tabebuia rosea</i>	1441	638	44%
		Cedar - <i>Cedrela odorata</i>	918	34	4%
		Ormosia - <i>Ormosia coccinea</i>	141	18	13%
		Almond tree <i>Dipteryx panamensis</i>	277	124	45%
		Mahogany - <i>Swietenia macrophylla</i>	274	231	84%
Total, average			12568	1757	14%

Despite the fact that this finca has good drainage and is not an area where puddles form, the survival rate of bare-root plants was very low, leading to the assumption that the type of soil on the finca (with abundant coarse gravel) was a determining factor in the lack of adaptation of these plants.

38. Finca Nicanor #2 (Jennifer Moreno)

Nicanor 2							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2021	2022	
5553	Berba	<i>Brosimun alicastrum</i>	3x4	833		0.47	0.47
	Cocobolo / Amarillo	<i>Dalbergia retusa/Terminalia amazonia</i>	3x4	833		4.64	4.64
	Teak	<i>Tectona grandis</i>	4x5	500		4.2	4.2
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		0.42	0.42
	Bitter Cedar	<i>Cedrela odorata</i>	3x4	833		1.51	1.51
	Total afforested					11.24	
	Area to be planted					13.32	
	Protected area					8.57	
	Gorges, drainage					2	
	Infrastructure						
Total area						35.13	

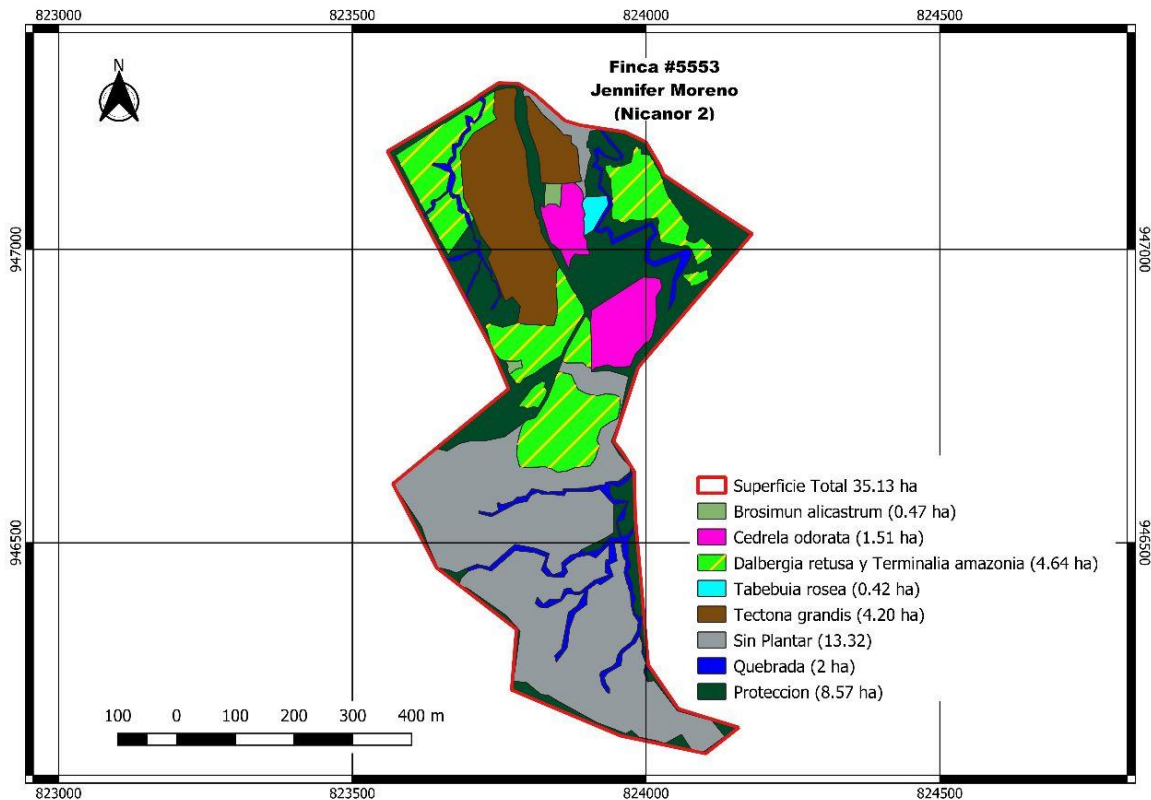


Figure 41: Reforestation map of Nicanor #2 (Jennifer Moreno).

38.1. POA 2022

Finca NICANOR # 2 (Jennifer Moreno)																										
DESCRIPCIÓN	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute
Hoyado - manual		-		-		-		-		-		-		-	20	9		11		-		-		-	20	20
Monitoring		-		-		-	7		-		-		-		7	6	5	3	1	1	10	13	16	14	39	44
Manual Maintenance Boxes		-		-		-		-		-		-		-	5	4	2	2	10	13		-	4	4	21	23
Manual -Chapia		-		-		-		-		-		-		-		-		-	10	11	50	41	80	74	140	126
Slices of the device		-		-		-		-		-		-		-		1		-	15	13		-		-	15	14
Plant distribution		-		-		-		-		-		-		-		2	6	6		-		-		-	6	8
Fence marking		-		-		-	3		-		-		-		1	1		-		-		-		-	1	4
Unforeseen events		-		-		-	3		-		-		-		1	1		-		-		-		-	1	4
Planted		-		-		-		-		-		-		-	30	30		4		-		-		-	30	34
Mechanic		-		-		-		-		-		-		-		-		-		-	25	20		-	25	20

Maintenance of internal roads	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4			
Building fences	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	2	2			
House building	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	3	3			
Granular fertilization	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	-	3	3			
(blank)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Marking of the Esaquillado	-	-	-	7	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	4	11			
Training	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2			
Input transfer	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	1	1			
Weeding	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	1	1			
Transfer to place of work	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	1	1			
New planted	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	3	3			
Total, general	-	-	-	-	-	-	24	-	-	-	-	-	76	68	19	32	36	38	85	74	100	92	316	328

38.2. *Mortality planting*

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	Mortality in %
Nicanor # 2 (Jennifer Moreno)	5553	Teak - <i>Tectona grandis</i>	2099	900	43%
		Cedar - <i>Cedrela odorata</i>	1254	156	12%
		Cocobolo - <i>Dalbergia retusa</i>	1890	72	4%
		Amarillo terminalia amazonia	1973	32	2%
		Berba - <i>Brossimun alicastrum</i>	402	402	100%
		Savanna Oak - <i>Tabebuia rosea</i>	350	350	100%
Total, average			7968	1912	24%

Due to soil compaction and bare-root planting, the adaptation of some plants was very poor, and in some cases, all plants died. By the year 2023, soil improvement through harrowing and subsoiling is planned to break up the soil structure and facilitate the root development of the plants.

39. Finca Nicanor # 3 (Elizabeth Moreno)

Nicanor 3							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2021	2022	
1519	Teak	<i>Tectona grandis</i>	4x5	500		10	10
	Total afforested					10	
	Area to be planted					32.97	
	Gorges, drainage					2	
	Lowlands					2.66	
	Total area						47.63

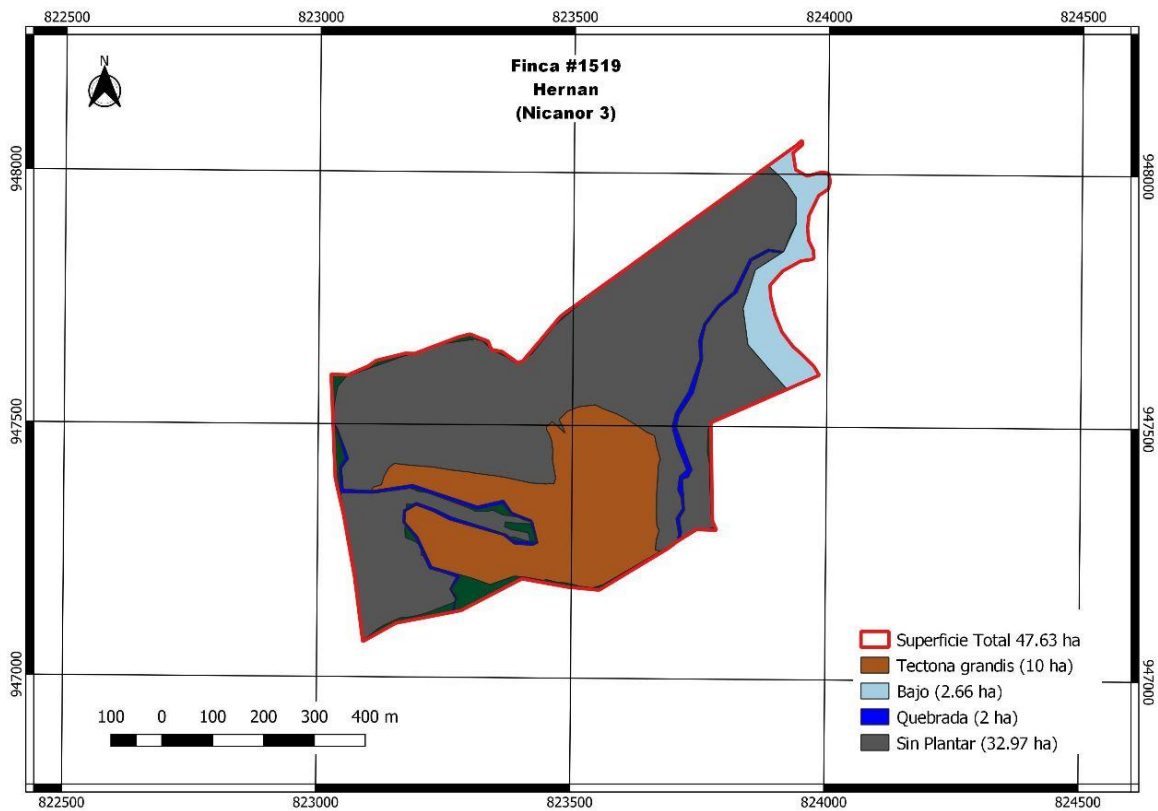


Figure 42: Reforestation map of Finca Nicanor #3 (Elizabeth Moreno).

39.1. POA 2022

Finca NICANOR # 3 (Elizabeth Moreno)																										
DESCR PTION	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
Line labels	Plan	Execut e	Plan	Execut e	Plan	Execut e	Plan	Execut e	Plan	Execut e	Plan	Execut e	Plan	Execut e	Plan	Execut e	Plan	Execut e	Plan	Execut e	Plan	Execut e	Plan	Execut e	Plan	Execut e
Hoyad o - manua l		-		-		-		-		-		-		-		-	10	8		-		-		-	10	8
Monit oring		-		-		-		-		-		-		-	6	7	5	3	4	4		4		5	15	23
Manua l weed control - mainte nance rollers		-		-		-		-		-		-		-	30	25	35	28	50	53		-	60	36	175	142
Manua l weed control - Chapia		-		-		-		-		-		-		-		-		-		-		-		1	-	1
Weed control - establi shmen t discs		-		-		-		-		-		-		-		-		-		9		-	15	-	15	9
Plant distrib ution		-		-		-		-		-		-		-		-	15	8		-		-	15	-	30	8
Fence markin g		-		-		-		-		-		-		-		-		-		1		1		-	-	2

Unforeseen events	-	-	-	-	-	-	-	-	-	-	-	10	10	-	-	-	10	10
Planted	-	-	-	-	-	-	-	-	25	34	15	16	-	-	-	-	40	50
Weed control - mechanical	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	9	15	9
Fence construction	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	3
House building	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	3
Granular fertilization	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Marking - collection of stakes	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	4	4
Trocha do - balizado	-	-	-	-	-	-	-	-	6	6	-	4	-	-	-	-	6	10
Trocha do - cutting beacons	-	-	-	-	-	-	-	-	10	10	-	2	-	-	-	-	10	12
Cleaning and maintenance of	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	2	2

infrast ructur e																									
Cleani ng and shrink age of the belt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	56	-	50	56	-	50	56	-	50	56
Belt fumiga tion - chemic al	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total, genera l	-	-	-	-	-	-	-	-	-	-	-	-	81	87	92	84	54	70	50	61	105	51	382	353	

39.2. Mortality planting

Finca no	Finca	Types	Number of trees planted	Number of dead trees	Mortality in %
1519	Nicanor # 3 (Elizabeth Moreno)	Teak - <i>Tectona grandis</i>	5000	300	6%
Total, average			5000	300	6%

Mortality is within the expected range.

40. Finca Nicanor # 4 (Ruben Sanchez)

Nicanor 4							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2021	2022	
1781	Teak	<i>Tectona grandis</i>	4x5	500		4.16	4.16
	Cocobolo/ Amarillo	<i>Dalbergia retusa/ Terminalia amazonia</i>	3x4	833		1.44	1.44
	Total afforested					5.6	
	Area to be planted					31	
	Protected area					5.52	
	Gorges, drainage					6	
	Total area						48.12

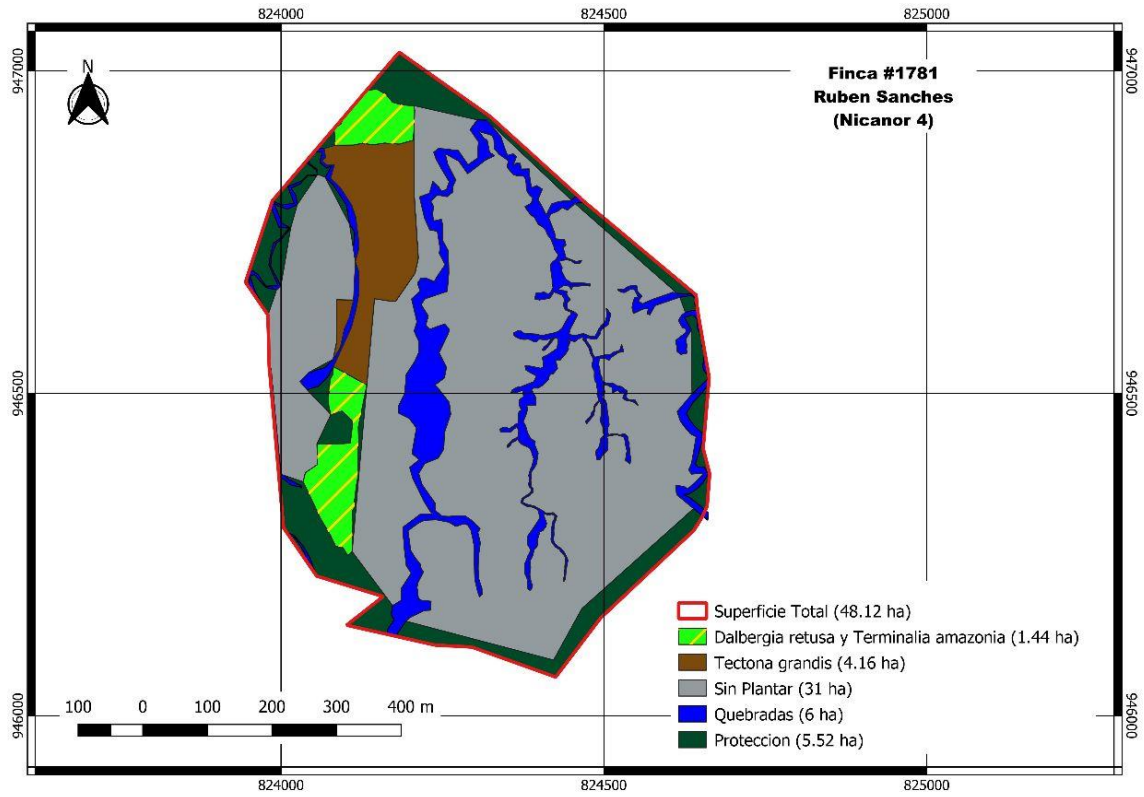


Figure 43: Reforestation map of Finca Nicanor No. 4 (Ruben Sanchez).

40.1. POA 2022

FINCA NICANOR # 4 (Ruben Sanchez)																										
DESCRIPCIÓN	January		February		March		April		May		June		July		August		September		October		November		December		Totals	
Line labels	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute	Plan	Execute
Hoyad o - manual		-		-		-		-		-		-		-		-	16	15		-		-		-	16	15
Monito ring		-		-		-		-		-		-		-		-	1	1	2	2		-	6	6	9	9
Care discs		-		-		-		-		-		-		-		-	25	27	25	22		-		-	50	49
Slices of the device		-		-		-		-		-		-		-		-		-	5	5		-		-	5	5
Plant distrib ution		-		-		-		-		-		-		-		-	5	4		-		-		-	5	4
Unfore seen events		-		-		-		-		-		-		-		-	2	2		-		-		-	2	2
Plante d		-		-		-		-		-		-		-		-	8	8		-		-		-	8	8
Weed control - mecha nical		-		-		-		-		-		-		-		-		-		-		-	20	19	20	19
(blank)		-		-		-		-		-		-		-		-		-		-		-		-	-	-
Cleanin g and shrinka ge of the belt		-		-		-		-		-		-		-		-		-		-	45	59		-	45	59
Total, genera l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	57	57	32	29	45	59	26	25	160	170

40.2. Mortality planting

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	% Mortality
Nicanor # 4 (Ruben Sanchez)	1781	Cocobolo - <i>Dalbergia retusa</i>	630	45	7%
		Amarillo terminalia amazonia	567	23	4%
		Teak - <i>Tectona grandis</i>	2080	165	8%
Total, average			3277	233	7%

Mortality is within the expected range.

41. Finca Avendaño (Altos del Cristo)

Avendaño (Altos del Cristo)							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2021	2022	
1289	Cocobolo/ Amarillo	<i>Dalbergia retusa/ Terminalia amazonia</i>	3x4	833		9.79	9.79
	Savanna Oak	<i>Tabebuia rosea</i>	3x4	833		0.76	
	Total afforested					10.55	
	Area to be planted					25.73	
	Protected area						
	Gorges, drainage					2	
	Total area						37.52

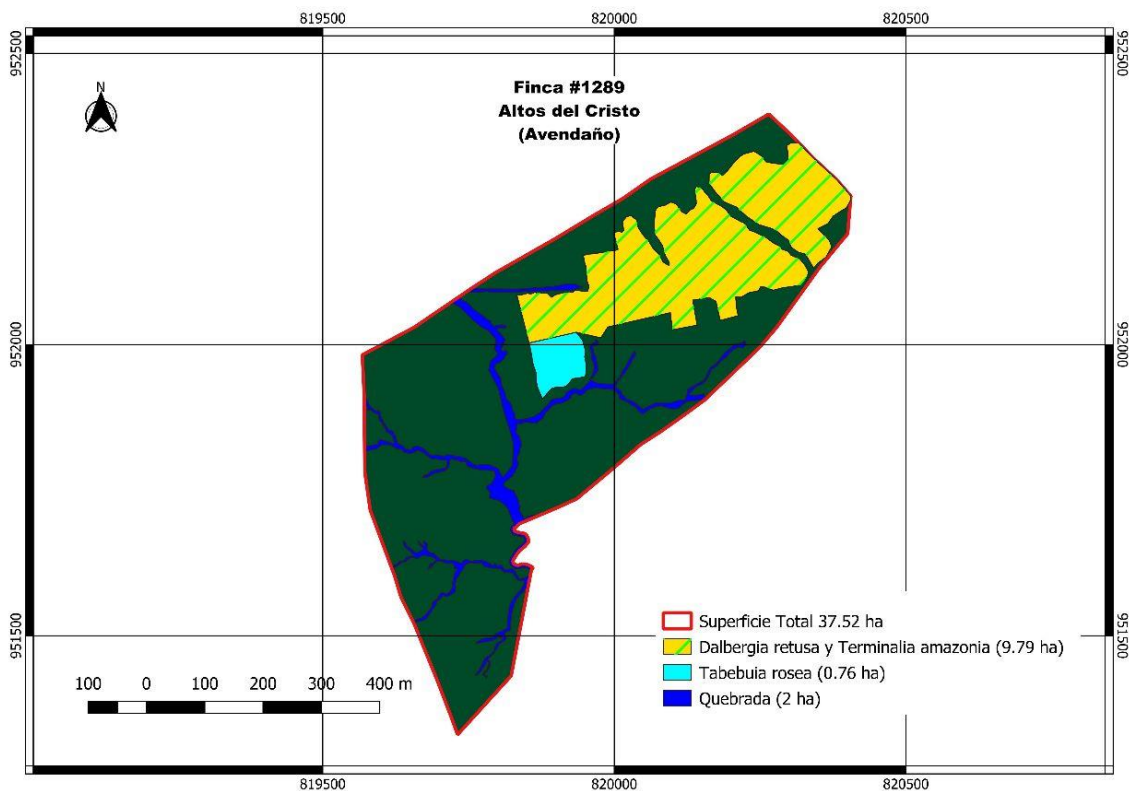


Figure 44: Reforestation map of Finca Avendaño (Altos del Cristo), Finca 1289.

Avenidaño (Altos del Cristo)							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2021	2022	
2162	Cocobolo/ Amarillo	<i>Dalbergia retusa/ Terminalia amazonia</i>	3x4	833		0.47	0.47
	Total afforested					0.47	
	Area to be planted					9.33	
	Protected area						
	Gorges, drainage					1	
Total area							10.8

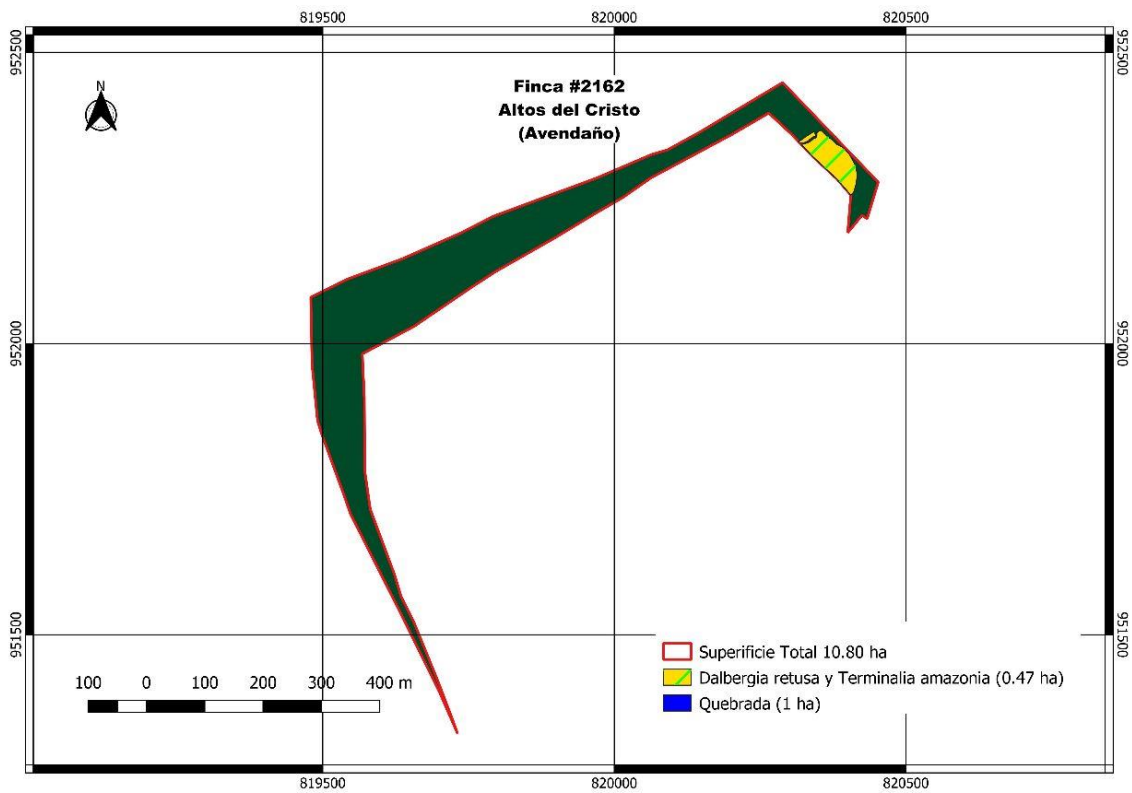


Figure 45: Reforestation map of Finca Avenidaño (Altos del Cristo), Finca 2162.

Avenidaño (Altos del Cristo)							
# from Finca	Types		Original distance (m)	Arb/ha.	Year of planting		Afforested area/species (ha)
	General name	Scientific name			2021	2022	
1663	Cocobolo/ Amarillo	<i>Dalbergia retusa/ Terminalia amazonia</i>	3x4	833		1.80	1.80
	Total afforested					1.80	
	Area to be planted					29.00	
	Inner street					0.73	
	Protected area					4.95	
	Gorges, drainage					1.27	
	Total area						37.75

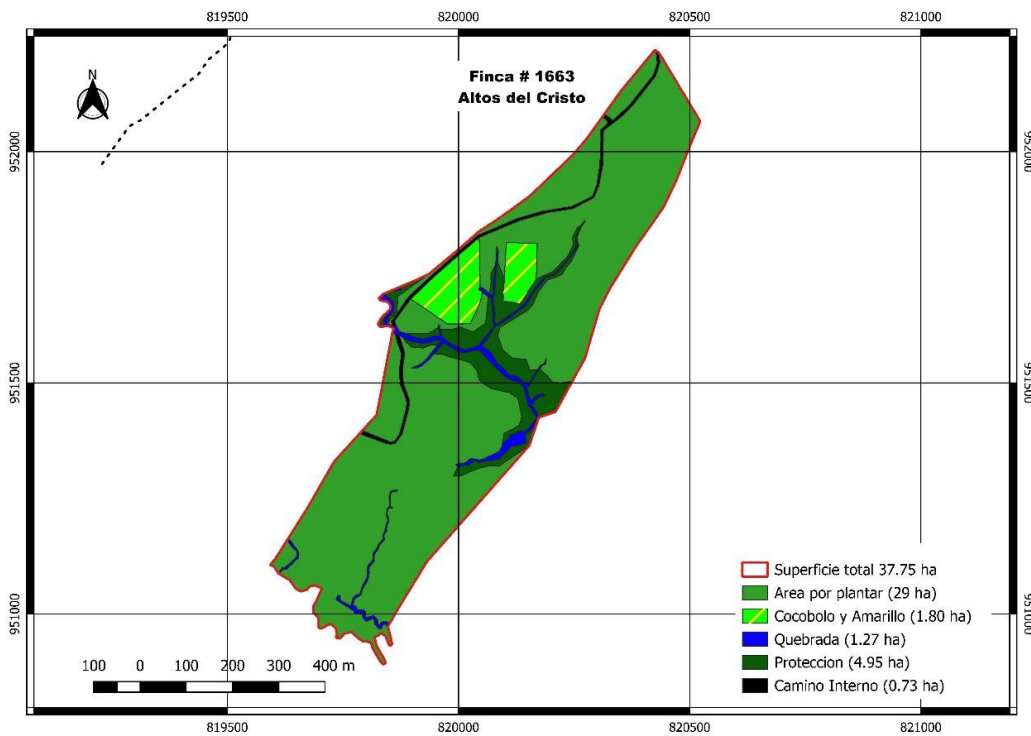


Figure 46: Reforestation map of Finca Avenidaño (Altos del Cristo), Finca 1663.

41.1. Mortality planting.

Finca	Finca no.	Types	Number of trees planted	Number of dead trees	Mortality in %
Avenidaño (Altos del Cristo)	1289 y 2162	Cocobolo - <i>Dalbergia retusa</i>	4367	250	6%
		Amarillo terminalia amazonia	4184	189	5%
		Savanna Oak - <i>Tabebuia rosea</i>	630	113	18%
Total, average			9181	552	6%

42. Roads

Until 2022, roads were built and rehabilitated in different forestry units to facilitate the management and establishment of the fincas of the Waldmensen S.A. Cooperative.

42.1. Table of internal roads consisting of

Table of internal educational paths				
Project area	Finca	Improved km	Ford's	Beneficiary Fincas
Claritas	Tello #1	1.3	1	Tello #1, Tello#2
	La Esperanza	2.0		La Esperanza
	David Fernandez	0.3		David Fernandez
	Raúl Espinoza	0.5	1	Raúl Espinoza
	Sandra Fernández	0.26	1	Sandra Fernández
Lastenia/Nicanor	Lastenia #1	1.3		Lastenia #1
	Dalia Vega	0.5		Dalia Vega
	Jennifer Moreno	0.5		Jennifer Moreno
Total		6.66	3	

42.2. Table of internal roads consisting of

Table of external education paths				
Project area	Finca	Improved km	Ford's	Beneficiary Fincas
Claritas	Entrance from Panamericana to Finca La Esperanza	1.3	1	Tello#1,2,3, La Esperanza, Claritas#1, Claritas#2, Teófilo, Gerónima, El Límite
	Ponderosa	12.3		
	Joaquín Hernández	3.5		Ponderosa, Elia Castillo
	Gindi	1		Joaquín Hernández, Darío Castro, Raúl Castro
			1.6	
Lastenia	Lastenia #1	4.5		Lastenias#1,2,3, and José García
	Panamericana entrance to the last finca of Lastenia #5	12		Lastenias#1,2,3,4,5 and José García
Nicanor	Nicanor	3		Jennifer Moreno, Dalia Vega, Rúben Sánchez, Margarito Banda and Hernán
Total		39.2	1	

42.3. Photos of the road works



Photos: confection of public and internal roads.

43. Phytosanitary pRblems

During a tour of the different fincas, it was observed that a fungus was present in the Savanna Oak plots. The individuals showed the following symptoms: yellowish foliage, holes in the leaves, black spots, especially on the upper side of the leaves. 80% of the individuals on the fincas Tello #3 and Lastenia 5 showed these symptoms.

No measures were taken as the plant responded very quickly to this infestation by producing new leaves that were not affected by this fungus. It is currently being further monitored.



44. Difficulties with planting 2022

The heavy rains of 2022 affected the roads that provide access to the different fincas in the two project areas of Lastenia and Claritas. In addition, there were large floods of streams that further worsened the accessibility to the different areas.



45. Recommendations

More technical staff to achieve better control of on-site activities, such as set-up and maintenance.

Introduction of more automated systems to facilitate faster information flow between field staff and technicians.

Use of environmentally friendly substrates, such as coconut fiber substrate, as they facilitate the mobilization of nutrients and help the plant adapt to the soil more easily.

46. General photos of the project



Photo: planting



Photo: Monitoring the cultivation on the finca



Photo: planted in stubble Lastenia 5



Photo: Planting hole Lastenia 5