MONITORING REPORT OF PRODUCTION AND HARVESTING YEAR 2022

FREDERICO TUPINAMBÁ SIMÕES
CREA: MT-024685
CONFEA 121.050.661-0

SUMMARY

TABLES LIST

1. INTRODUCTION

The first area, the Duas Lagoas project, object of this study is located in the south-central mesoregion of the state and in the micro-region of the Alto Pantanal of the state of Mato Grosso, in the municipality of Cáceres, inserted between the Paraguay River and the Chapada dos Parecis.

According to the RadamBrasil classification, the vegetation of this area is part of the phytogeographic unit of Cerrado without Gallery Forest. The climate is classified as tropical semi-humid, with an average annual temperature of 26°C, with two well-defined seasons, one rainy, between October and April, and the other dry, from May to September. The average temperatures decrease between May and July. The soil was classified by EMBRAPA as Red-Yellow Argissolo.

The second area, the Paiolandia project, object of this study is located in the region geographically known as Baixada Cuiabana, in the central region of the state of Mato Grosso, in the municipality of Barra do Bugres, inserted in the Alto Paraguai watershed.

According to the RadamBrasil classification, the vegetation of this area is part of the phytogeographic unit of Cerrado with Gallery Forest. The climate is classified as Tropical Central Brazil, with predominant temperatures higher than 18°C, semi-humid, with 4 to 5 months of drought throughout the year. The soil was classified by EMBRAPA as Red-Yellow Argissolo.

Currently, Duas Lagoas and Paiolandia project stands are in the harvesting phase, in which the trees are cut down and sectioned according to customer demand. Next, the logs are cubed, labeled, classified according to their diameter, and finally grouped into lots according to their destination.

In this context, the objective of this study is to present the results obtained from the year 2022, in the Paiolandia and Duas Lagoas project, by presenting volumetrics collected by the company, as well as to determine the accuracy of the surveys carried out in the year.

2. GENERAL INFORMATION

2.1. Owner Identification

Company Name:	Floresteca S/A
Address:	Rodovia BR-163, (Fazenda Aliança), Rosário Oeste – MT
CNPJ:	74.301.482/0007-41
I.E.:	13.262.092-8
Contact:	Cassiano Sasaki
E-mail:	cassiano.sasaki@floresteca.com.br

2.2. Identification of Applicant

Company Name:	Floresteca S/A
Address:	Av. Marechal Castelo Branco, 272, sala 01, Bairro São Miguel, Cáceres – MT.
CNPJ:	74.301.482/0001-56
I.E.:	13.323.808-3

2.3. Technical Responsible

Name:	Frederico Tupinambá Simões
Address:	Rua Batista das Neves, 585 – Centro – Ed. TopGeo – Sala 5 - Cuiabá – MT – CEP: 78.005-190
ID:	012.665.256-29
Qualification:	Forester
CREA n.º:	121050661-0
Phone:	+55(65)98157-4874
E-mail:	fredericotupinamba@hotmail.com

2.4. Field manager

Name:	Augusto Cesar Braga Louzada
Address:	Rua Batista das Neves, 585 – Centro – Ed. TopGeo – Sala 5 – Cuiabá – MT – CEP: 78.005-190
ID:	028.067.691-32
Qualification:	Forester
CREA n.º:	121263227-3
Phone:	+55(65) 98116-5924
E-mail:	gutolouzada@hotmail.com

2.5. Property Identification

Name:	Duas Lagoas
City:	Cáceres - MT
Location:	The Project area is located in the municipality of Cáceres-MT, to the right of the BR-070 highway, approximately 70 km from the municipal seat of Cáceres – MT, Figure 1.

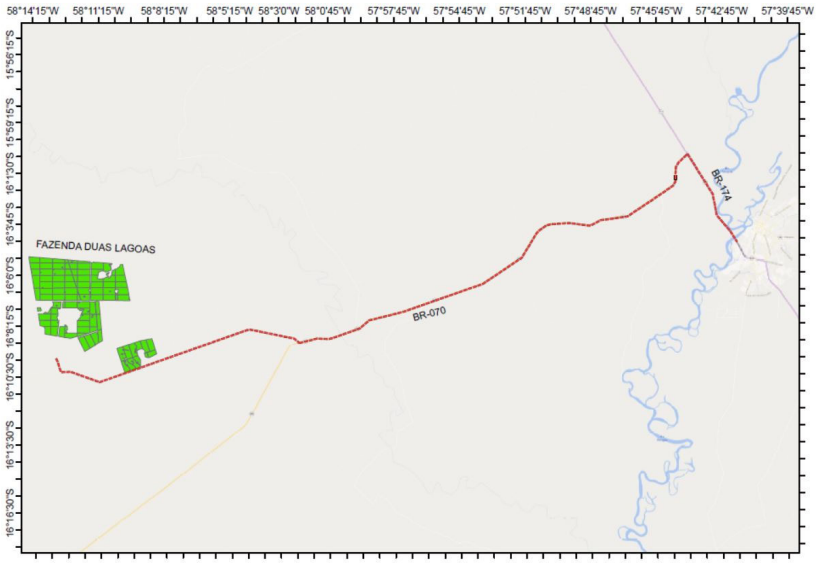


Figure 1. Location of the Duas Lagoas project, municipality of Caceres MT.

Name: Paiolandia
City: Rosário Oeste
Location: The Project area is located in the municipality of Rosário Oeste-MT, on the margin of the MT 246 highway, approximately 37 km from the municipal city center of Jangada - MT, according to the access sketch shown in Figure 2.

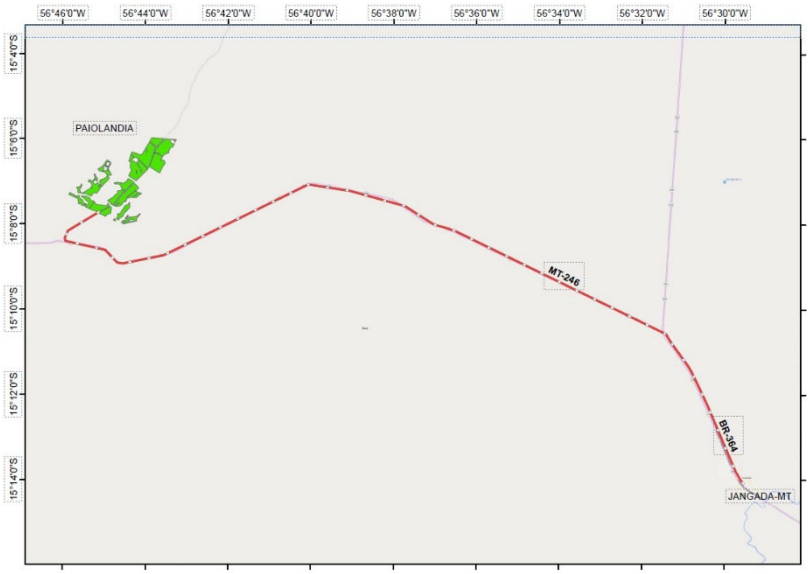


Figure 2. Location of the Paiolandia Project, municipality of Rosário Oeste MT.

2.6. UTM Coordinates of the Evaluated Stands

Table 1 – Central Coordinates of Evaluated Fields.

Project	Stand	East (x)	North (y)	Zone
Paiolandia	4	527806	8328589 UTM	21
Duas Lagoas	12A	370599	8218809 UTM	21
Duas Lagoas	12B	371088	8218981 UTM	21
Duas Lagoas	13A	370685	8218319 UTM	21
Duas Lagoas	13B	371153	8218562 UTM	21
Duas Lagoas	19	369717	8219828 UTM	21
Duas Lagoas	39	372823	8220386 UTM	21
Duas Lagoas	50	374688	8219976 UTM	21

2.1. Logs Evaluated

Table 2 - Logs evaluated at 2022.

Project	Stand	Area (ha)	Number of logs evaluated
Paiolandia	4	17,01	171
Duas Lagoas	12A	42,45	181
Duas Lagoas	12B	6,69	-
Duas Lagoas	13A	52,47	67
Duas Lagoas	13B	0,33	-
Duas Lagoas	19	48,88	500
Duas Lagoas	39	53,15	155
Duas Lagoas	50	48,41	204

3. METHODOLOGY

3.1. Collection of data

The process for collecting the information was based on the following steps:

- **Planning:**

In 2022, 8 stands were audited, of which 1 are from the Paiolandia project, and 7 from the Duas Lagoas project.

- **Measurements:**

For the wood sent to sawmills that did not form lots, we monitored the measurement of the wood piles of these stands on the esplanades and in some trucks with the Floresteca team, on the days that our team was on the project. For the wood intended for export, 1,278 logs were randomly selected in the field to be measured for length and circumference. (Photos Annex I).

Table 3 - Class name and number of logs.

Class	N° of Logs
25-30	429
30-35	414
35-40	350
>40	85
TOTAL	**1,278**

3.2. DATES OF VISITS

Listed below are the dates for the technical inspection periods indicative of reports due for the 2022 report.

	2021
November	29 and 30

	2022
Mês	
May	18 and 19
June	27 and 28
July	20
August	06 and 07
September	13
October	10 and 27
November	16, 29 e 30

4. PRODUCTIVITY EVALUATION

4.1. Harvest Data per Diameter Class

Table 4 shows the results of loaded values by diameter class from the audit stands in 2022 are showed. The diameter class of 25 to 30 centimeters obtained a higher loaded value, followed by 30-35, 35-40, 20-25, and greater than 40 centimeters diameter, totaling a volume of **11,562.23** cubic meters of exported wood.

Table 4 – Harvesting Data per diameter class (Export).

EXPORT				
Project	**Year**	**Area (ha)**	**Diameter class**	**Volume (m³)**
Paiolandia e Duas Lagoas	**1997/2000**	**269.39**	20-25	1,357.280
			25-30	3,961.138
			30-35	2,804,220
			35-40	2,407.230
			> 40	1,032.359
TOTAL				**11,562.23**

For the sawmill, six diameters' classes were obtained, totaling a volume of **7,338.173** cubic meters.

Table 5 **-** Harvesting Data per diameter class (Domestic market).

SAWMILLS				
Project	**Year**	**Area (ha)**	**Diameter Class**	**Volume (m³)**
Paiolandia e Duas Lagoas	**1997/2000**	**269.39**	18-20	1,768.529
			20-25	2,558.031
			25-30	2,314.716
			30-35	604.050
			35-40	23.290
			> 40	69.557
TOTAL				**7,338.173**

5. EVALUATION OF AUDITED VOLUMES

Were compared a total of 1,278 logs, measuring the length and circumference. Table 6 shows the results of the company's volumes and the volumes obtained by the audit.

Table 6 – Comparison of Volumes.

Project	Year	Area (ha)	Class of Diameter	Volume (m³)	
				Company	Audit
Paiolandia e Duas Lagoas	**1997/2000**	**269.39**	25-30	108.270	107.000
			30-35	95.045	94.974
			35-40	99.540	97.950
			> 40	37.429	36.344
TOTAL				**340.282**	**336.264**

5.1. Statistical analysis of data

We selected 1,278 logs to check whether they were being measured correctly for comparison and gauging of the logs' lengths and circumferences.

The analysis of variance and Tukey's test were applied per diameter class to compare the company's volumes with those collected by the auditors.

Table 7 - Statistical analysis of the blocks by diameter class.

Project	Year	Field	Area (ha)	Class of Diameter	F Tabled	F calculated		Coefficient of variation (%)
Paiolandia	1997	04	17.01	25-30	3.930	0.443	ns	8.15
				30-35	3.930	0.375	ns	9.06
				35-40	3.950	0.070	ns	24.10
				25-30	3.930	0.443	ns	25.02
Duas Lagoas	2000	12A	42.45	25-30	3.920	0.823	ns	17.54
				35-40	3.880	3.081	ns	8.38
Duas Lagoas	2000	13A	52.47	25-30	3.910	1.045	ns	16.29

Project	Year	Field	Area (ha)	Class of Diameter	F Tabled	F calculated		Coefficient of variation (%)
Duas Lagoas	2000	19	48.88	25-30	3.870	3.382	ns	6.37
				30-35	3.860	0.130	ns	14.14
				35-40	3.910	0.027	ns	9.94
				> 40	4.960	0.079	ns	15.33
Duas Lagoas	2000	39	53.15	25-30	4.170	0.002	ns	63.40
				30-35	3.960	0.023	ns	48.92
				35-40	3.930	1.673	ns	13.40
				> 40	3.960	0.280	ns	19.93
Duas Lagoas	2000	50	48.41	3.940	0.262	3.940	ns	10.41
				3.900	1.228	3.900	ns	10.46
				3.930	0.867	3.930	ns	12.33
				4.100	1.504	4.100	ns	13.34
				3.940	0.262	3.940	ns	10.41

We can analyze that the calculated F-value in all classes is smaller than the tabulated F-value. Therefore, the numerical differences observed between the means of the volumes in the treatments are statistically insignificant. Thus, the differences in the averages of the company's volumes in the lots are not significant compared to the audited ones.

6. CONCLUSION

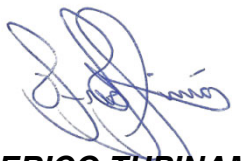
According to the items verified during the audit, it can be seen that the company TRC Agroflorestal LTDA is a company properly structured to control its cutting and harvesting processes.

After the gauging work on the lots during 2022, it was found that the numerical differences between the average volumes in the treatments are not significant. Thus, it can be seen that the company's employees have been doing an adequate job in terms of accuracy concerning measurements of length, circumference, and batch formation for export.

In the classes destined for sawing, all the freight list were analyzed and checked for validation of the total volume.

With the data obtained from the audit, in comparison with the data provided by the company, all timber collected and loaded of the year 2022 from the stands analyzed were correctly measured in volume and quality, as this audit could verify.

Cuiabá, December 19th 2022.



FREDERICO TUPINAMBÁ SIMÕES
CREA: MT-024685
CONFEA 121.050.661-0

ATTACHMENT I – PHOTOGRAPHIC REPORT


East Elevation
268°W (M) 16°6'22"S, 58°12'22"W ±8m ▲162m
19 May 2022, 06:57:08


East Elevation
266°W (M) 16°6'51"S, 58°12'30"W ±3m ▲182m
18 May 2022, 15:07:05


East Elevation
275°W (M) 16°6'51"S, 58°12'29"W ±3m ▲173m
18 May 2022, 15:08:10


South East Elevation
319°NW (M) 16°6'51"S, 58°12'30"W ±27m ▲192m
18 May 2022, 15:06:59


North West Elevation
128°SE (M) 16°6'50"S, 58°12'27"W ±4m ▲156m
18 May 2022, 14:38:50


South West Elevation
40°NE (M) 16°6'50"S, 58°12'27"W ±5m ▲183m


South West Elevation
39°NE (M) 16°6'50"S, 58°12'27"W ±4m ▲159m
18 May 2022, 14:31:49


North Elevation
173°S (M) 16°6'51"S, 58°12'26"W ±4m ▲148m
18 May 2022, 14:04:37

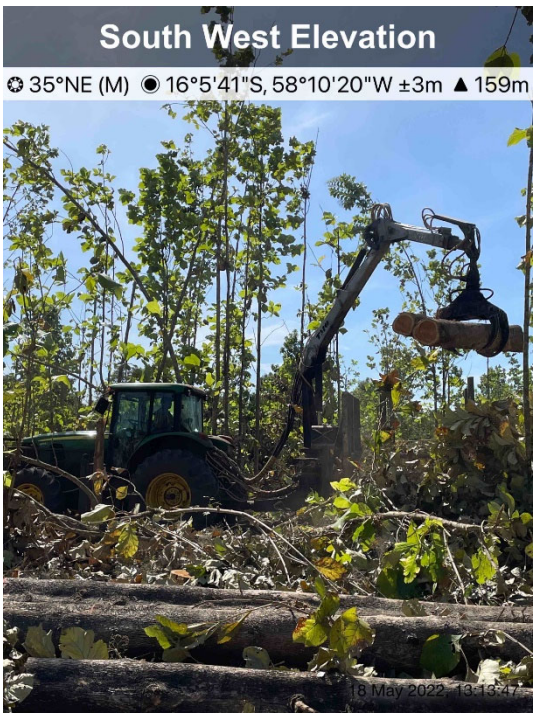

W NW N
270 300 330 0 30
334°NW (T) 16°5'59"S, 58°12'56"W ±12m 160m
30 Nov 2021, 07:50:44 GMT-4


NW N NE
300 330 0 30
346°N (T) 0°0'0"N, 0°0'0"E 0m
29 Nov 2021, 15:23:39 GMT-4


SE S SW
120 150 180 210
160°S (T) 16°5'44"S, 58°12'54"W ±12m 154m
30 Nov 2021, 08:53:39 GMT-4


NW N NE
300 330 0 30 60
3°N (T) 0°0'0"N, 0°0'0"E 0m
29 Nov 2021, 14:16:45 GMT-4


West Elevation
110°E (M) 16°5'42"S, 58°10'18"W ±7m ▲147m
19 May 2022, 10:20:26


South West Elevation
35°NE (M) 16°5'41"S, 58°10'20"W ±3m ▲159m
18 May 2022, 13:13:47


North West Elevation
134°SE (M) 16°5'41"S, 58°10'18"W ±4m ▲139m
18 May 2022, 13:34:18


North West Elevation
133°SE (M) 16°5'41"S, 58°10'21"W ±3m ▲164m

South East Elevation

335°NW (M) 15°7'6"S, 56°44'28"W ±3m ▲276m

South West Elevation

49°NE (M) 15°7'8"S, 56°44'24"W ±3m ▲270m

South East Elevation

335°NW (M) 15°7'6"S, 56°44'28"W ±3m ▲276m

West Elevation

95°E (M) 15°7'8"S, 56°44'24"W ±4m ▲269m