# Fitopac 2.1

### Iniciando...

\*\*\* 14/08/2020 21:54:35 \*\*\*

# Fitopac 2.1

<><<<< < Módulo "Params" >>>>>>> Cálculo de Parâmetros Fitossociológicos

Arquivo de dados usado foi : "dados\_3m\_externo.FPD". **REGENERAÇÃO SOB NO ENTORNO DE L. CHINENSIS 3M** 

TANIA GIRAO MANGOLINI Método: Parcelas SP: SAO PAULO

PEC

Latitude: 0°0'0.00"N (0.000) Longitude: 0°0'0.00"W (0.000) Altitude mínimo: 0 Altitude máximo: 0 No. de famílias: 19 No de especies: 26 No. de Amostras: 20 No. de Indivíduos: 135

Arquivo de dados usado foi : "dados\_3m\_externo-Parâmetros Gerais.FPM".

Parâmetros Gerais - REGENERAÇÃO SOB NO ENTORNO DE L. CHINENSIS 3M

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Parâmetros	Valor	Máximo	Mínimo	d.p.	LC95inf	LC95sup	Obs.
No. de indivíduos	135.000	-	-	-	-	-	
No. de Espécies	26.000	-	-	-	-	-	
No. de Famílias	19.000	-	-	-	-	-	
No. de Amostras	20.000	-	-	-	-	-	
Densidade	67500.000	-	-	35670.270	50804.530	84195.470	
Freqüência total	390.000	-	-	-	-	-	
Freqüência total das famílias	350.000	-	-	-	-	-	
Área Basal total	0.022	-	-	-	-	-	
Dominância Absoluta	10.885	-	-	-	-	-	
Volume total	4.503	-	-	-	-	-	
Área total da amostra	0.002	-	-	-	-	-	
Diâmetro - média	0.939	6.870	0.145	1.086	0.755	1.124	
Altura - média	77.904	600.000	5.000	84.020	63.601	92.206	
Volume - média	0.033	1.108	0.000	0.126	0.012	0.055	
Razão Variância/Média + "p"	1.885	0.011	-	-	-	-	
chi quadrado. Variância/Média	35.815	-	-	-	8.890	32.854	Distr. agregada
Qui quadrado + "p"	15.592	0.076	-	-	-	-	*
Idelta de Morisita	1.125	-	-	-	0.925	1.103	Dist. agregada!
Morisita estandardizado (Ip)	0.501	-	-	-	-	-	Dist. agregada!
Índice Shannon-Wiener	2.408	-	-	0.033	2.395	2.422	

Equiv. de Shannon em espécies	11.117	-	-	-	-	-	
Equabilidade	0.739	-	-	-	-	-	
ACE	46.260	-	-	-	-	-	
Shannon sem vies	2.576	-	-	-	-	-	
Shannon sem vies equiv. em esp.	13.146	-	-	-	-	-	
Índice Simpson	0.146	-	-	-	-	-	
1/D	6.857	-	-	-	-	-	
1 - D	0.854	-	-	-	-	-	

Arquivo de dados usado foi : "dados\_3m\_externo-Parâmetros para Espécies.FPM".

# Parâmetros para Espécies : REGENERAÇÃO SOB NO ENTORNO DE L. CHINENSIS 3M

Espécies	NInd	dpNIn d	AbsDe	RelDe	NAm	AbsFr	RelFr	AbsDo
Cupania oblongifolia	38	1.210	19000.0	28.15	18	90.00	23.08	1.49
Coffea arabica	31	2.762	15500.0	22.96	9	45.00	11.54	3.04
Psychotria suterella	11	0.605	5500.0	8.15	10	50.00	12.82	3.38
Euterpe edulis	10	0.761	5000.0	7.41	7	35.00	8.97	0.37
Guarea macrophylla	4	0.410	2000.0	2.96	4	20.00	5.13	0.53
Archontophoenix cunninghamiana	7	0.988	3500.0	5.19	3	15.00	3.85	0.30
Nectandra barbellata	2	0.447	1000.0	1.48	1	5.00	1.28	0.94
Myrcia tijucensis	5	0.550	2500.0	3.70	4	20.00	5.13	0.11
Mollinedia uleana	4	0.523	2000.0	2.96	3	15.00	3.85	0.12
Guapira opposita	2	0.308	1000.0	1.48	2	10.00	2.56	0.36
Myrciaria floribunda	2	0.308	1000.0	1.48	2	10.00	2.56	0.03
Sorocea bonplandii	3	0.671	1500.0	2.22	1	5.00	1.28	0.00
Eugenia brasiliensis	2	0.447	1000.0	1.48	1	5.00	1.28	0.03
Indeterminada 5	2	0.447	1000.0	1.48	1	5.00	1.28	0.01
Indeterminada 1	1	0.224	500.0	0.74	1	5.00	1.28	0.03
Mollinedia schottiana	1	0.224	500.0	0.74	1	5.00	1.28	0.03
Cestrum schlechtendalii	1	0.224	500.0	0.74	1	5.00	1.28	0.02
Mollinedia clavigera	1	0.224	500.0	0.74	1	5.00	1.28	0.02
Indeterminada 2	1	0.224	500.0	0.74	1	5.00	1.28	0.02
Pittosporum undulatum	1	0.224	500.0	0.74	1	5.00	1.28	0.01
Indeterminada 3	1	0.224	500.0	0.74	1	5.00	1.28	0.01
Myrsine umbellata	1	0.224	500.0	0.74	1	5.00	1.28	0.01
Cordia sellowiana	1	0.224	500.0	0.74	1	5.00	1.28	0.01
Machaerium stipitatum	1	0.224	500.0	0.74	1	5.00	1.28	0.01
Leandra dasytricha	1	0.224	500.0	0.74	1	5.00	1.28	0.01
Allophylus edulis	1	0.224	500.0	0.74	1	5.00	1.28	0.00

Espécies	RelDo	MinAlt	MaxAlt	MédAlt	dpAlt	MinDia	MaxDi a	MédDi a	dpDia
Cupania oblongifolia	13.72	20.00	350.00	71.53	74.16	0.26	3.09	0.78	0.64
Coffea arabica	27.92	5.00	300.00	84.68	69.19	0.21	6.87	0.92	1.31
Psychotria suterella	31.01	20.00	300.00	117.09	102.39	0.17	4.97	2.09	1.94
Euterpe edulis	3.40	20.00	190.00	61.00	59.20	0.24	1.88	0.78	0.61
Guarea macrophylla	4.91	20.00	300.00	95.75	136.38	0.43	3.49	1.37	1.43
Archontophoenix cunninghamiana	2.75	20.00	102.00	54.43	27.75	0.50	1.79	0.95	0.45
Nectandra barbellata	8.64	67.00	600.00	333.50	376.89	0.66	4.85	2.76	2.96
Myrcia tijucensis	0.97	20.00	119.00	56.00	42.26	0.20	1.10	0.64	0.40

Mollinedia uleana	1.10	45.00	83.00	59.25	17.86	0.22	1.22	0.77	0.47
Guapira opposita	3.35	52.00	300.00	176.00	175.36	0.72	2.96	1.84	1.58
Myrciaria floribunda	0.29	32.00	79.00	55.50	33.23	0.23	0.87	0.55	0.45
Sorocea bonplandii	0.03	20.00	21.00	20.33	0.58	0.14	0.21	0.17	0.04
Eugenia brasiliensis	0.25	42.00	48.00	45.00	4.24	0.57	0.61	0.59	0.03
Indeterminada 5	0.12	20.00	35.00	27.50	10.61	0.30	0.48	0.39	0.13
Indeterminada 1	0.27	24.00	24.00	24.00	-	0.87	0.87	0.87	-
Mollinedia schottiana	0.23	59.00	59.00	59.00	-	0.80	0.80	0.80	-
Cestrum schlechtendalii	0.22	69.00	69.00	69.00	-	0.78	0.78	0.78	-
Mollinedia clavigera	0.19	50.00	50.00	50.00	-	0.72	0.72	0.72	-
Indeterminada 2	0.15	43.00	43.00	43.00	-	0.65	0.65	0.65	-
Pittosporum undulatum	0.11	65.00	65.00	65.00	-	0.55	0.55	0.55	-
Indeterminada 3	0.08	80.00	80.00	80.00	-	0.48	0.48	0.48	-
Myrsine umbellata	0.07	35.00	35.00	35.00	-	0.45	0.45	0.45	-
Cordia sellowiana	0.07	37.00	37.00	37.00	-	0.43	0.43	0.43	-
Machaerium stipitatum	0.06	27.00	27.00	27.00	-	0.42	0.42	0.42	-
Leandra dasytricha	0.05	150.00	150.00	150.00	-	0.38	0.38	0.38	-
Allophylus edulis	0.03	20.00	20.00	20.00	-	0.27	0.27	0.27	-

Fantaina	\	A l>/- I	D-D/-I	N4:>/1	N4	NA		T\/T	T) (C
Espécies	Vol	AbsVol	RelVol	_	MaxVol		•	IVI	IVC
Cupania oblongifolia	0.63	314.10	13.95	0.000	0.26	0.017	0.055	64.94	41.87
Coffea arabica	0.64	321.57	14.28	0.000	0.46	0.021	0.083	62.43	50.89
Psychotria suterella	1.42	709.57	31.52	0.000	0.55	0.129	0.198	51.98	39.16
Euterpe edulis	0.10	49.71	2.21	0.000	0.05	0.010	0.019	19.78	10.81
Guarea macrophylla	0.29	145.19	6.45	0.000	0.29	0.073	0.143	13.00	7.87
Archontophoenix cunninghamiana	0.04	21.65	0.96	0.001	0.03	0.006	0.009	11.78	7.93
Nectandra barbellata	1.11	555.38	24.67	0.002	1.11	0.555	0.782	11.41	10.13
Myrcia tijucensis	0.02	9.40	0.42	0.000	0.01	0.004	0.005	9.81	4.68
Mollinedia uleana	0.02	7.69	0.34	0.000	0.01	0.004	0.004	7.91	4.06
Guapira opposita	0.21	104.28	4.63	0.002	0.21	0.104	0.144	7.39	4.83
Myrciaria floribunda	0.00	2.41	0.11	0.000	0.00	0.002	0.003	4.34	1.77
Sorocea bonplandii	0.00	0.07	0.00	0.000	0.00	0.000	0.000	3.54	2.25
Eugenia brasiliensis	0.00	1.24	0.05	0.001	0.00	0.001	0.000	3.01	1.73
Indeterminada 5	0.00	0.39	0.02	0.000	0.00	0.000	0.000	2.88	1.60
Indeterminada 1	0.00	0.71	0.03	0.001	0.00	0.001	-	2.30	1.01
Mollinedia schottiana	0.00	1.48	0.07	0.003	0.00	0.003	-	2.25	0.97
Cestrum schlechtendalii	0.00	1.65	0.07	0.003	0.00	0.003	-	2.24	0.96
Mollinedia clavigera	0.00	1.02	0.05	0.002	0.00	0.002	-	2.21	0.93
Indeterminada 2	0.00	0.71	0.03	0.001	0.00	0.001	-	2.17	0.89
Pittosporum undulatum	0.00	0.77	0.03	0.002	0.00	0.002	-	2.13	0.85
Indeterminada 3	0.00	0.74	0.03	0.001	0.00	0.001	-	2.11	0.83
Myrsine umbellata	0.00	0.28	0.01	0.001	0.00	0.001	-	2.10	0.81
Cordia sellowiana	0.00	0.27	0.01	0.001	0.00	0.001	-	2.09	0.81
Machaerium stipitatum	0.00	0.19	0.01	0.000	0.00	0.000	-	2.09	0.80
Leandra dasytricha	0.00	0.83	0.04	0.002	0.00	0.002	-	2.07	0.79
Allophylus edulis	0.00	0.06	0.00	0.000	0.00	0.000	-	2.05	0.77

Arquivo de dados usado foi : "dados\_3m\_externo-Parâmetros para Famílias.FPM".

Parâmetros para Famílias : REGENERAÇÃO SOB NO ENTORNO DE L. CHINENSIS 3M

Famílias	NInd	AbsDe	RelDe	NAm	AbsFr	RelFr	AbsDo	RelDo
Rubiaceae	42	21000.0	31.11	14	70.00	20.00	6.41	58.93
Sapindaceae	39	19500.0	28.89	18	90.00	25.71	1.50	13.74
Arecaceae	17	8500.0	12.59	9	45.00	12.86	0.67	6.15
Myrtaceae	9	4500.0	6.67	7	35.00	10.00	0.17	1.52
Meliaceae	4	2000.0	2.96	4	20.00	5.71	0.53	4.91
Monimiaceae	6	3000.0	4.44	4	20.00	5.71	0.17	1.52
Lauraceae	2	1000.0	1.48	1	5.00	1.43	0.94	8.64
Nyctaginaceae	2	1000.0	1.48	2	10.00	2.86	0.36	3.35
Moraceae	3	1500.0	2.22	1	5.00	1.43	0.00	0.03
Indeterminada 5	2	1000.0	1.48	1	5.00	1.43	0.01	0.12
Indeterminada 1	1	500.0	0.74	1	5.00	1.43	0.03	0.27
Solanaceae	1	500.0	0.74	1	5.00	1.43	0.02	0.22
Indeterminada 2	1	500.0	0.74	1	5.00	1.43	0.02	0.15
Pittosporaceae	1	500.0	0.74	1	5.00	1.43	0.01	0.11
Indeterminada 3	1	500.0	0.74	1	5.00	1.43	0.01	0.08
Primulaceae	1	500.0	0.74	1	5.00	1.43	0.01	0.07
Boraginaceae	1	500.0	0.74	1	5.00	1.43	0.01	0.07
Fabaceae	1	500.0	0.74	1	5.00	1.43	0.01	0.06
Melastomataceae	1	500.0	0.74	1	5.00	1.43	0.01	0.05

Famílias	MinAlt	MaxAlt	MédAlt	dpAlt	MinDia	MaxDi	MédDi	dpDia	Vol
						а	а		
Rubiaceae	5.00	300.00	93.17	79.17	0.17	6.87	1.22	1.56	2.06
Sapindaceae	20.00	350.00	70.21	73.65	0.26	3.09	0.77	0.63	0.63
Arecaceae	20.00	190.00	58.29	47.66	0.24	1.88	0.85	0.54	0.14
Myrtaceae	20.00	119.00	53.44	32.50	0.20	1.10	0.61	0.33	0.03
Meliaceae	20.00	300.00	95.75	136.38	0.43	3.49	1.37	1.43	0.29
Monimiaceae	45.00	83.00	57.67	14.33	0.22	1.22	0.77	0.36	0.02
Lauraceae	67.00	600.00	333.50	376.89	0.66	4.85	2.76	2.96	1.11
Nyctaginaceae	52.00	300.00	176.00	175.36	0.72	2.96	1.84	1.58	0.21
Moraceae	20.00	21.00	20.33	0.58	0.14	0.21	0.17	0.04	0.00
Indeterminada 5	20.00	35.00	27.50	10.61	0.30	0.48	0.39	0.13	0.00
Indeterminada 1	24.00	24.00	24.00	-	0.87	0.87	0.87	-	0.00
Solanaceae	69.00	69.00	69.00	-	0.78	0.78	0.78	-	0.00
Indeterminada 2	43.00	43.00	43.00	-	0.65	0.65	0.65	-	0.00
Pittosporaceae	65.00	65.00	65.00	-	0.55	0.55	0.55	-	0.00
Indeterminada 3	80.00	80.00	80.00	-	0.48	0.48	0.48	-	0.00
Primulaceae	35.00	35.00	35.00	-	0.45	0.45	0.45	-	0.00
Boraginaceae	37.00	37.00	37.00	-	0.43	0.43	0.43	-	0.00
Fabaceae	27.00	27.00	27.00	-	0.42	0.42	0.42	-	0.00
Melastomataceae	150.00	150.00	150.00	-	0.38	0.38	0.38	-	0.00

Famílias	AbsVol	RelVol	MinVol	MaxVol	MédVol	dpVol	IVI	IVC
Rubiaceae	1031.14	45.80	0.000	0.55	0.049	0.130	110.05	90.05
Sapindaceae	314.15	13.95	0.000	0.26	0.016	0.054	68.35	42.63
Arecaceae	71.36	3.17	0.000	0.05	0.008	0.015	31.60	18.74
Myrtaceae	13.06	0.58	0.000	0.01	0.003	0.004	18.18	8.18
Meliaceae	145.19	6.45	0.000	0.29	0.073	0.143	13.58	7.87
Monimiaceae	10.19	0.45	0.000	0.01	0.003	0.003	11.68	5.96
Lauraceae	555.38	24.67	0.002	1.11	0.555	0.782	11.55	10.13
Nyctaginaceae	104.28	4.63	0.002	0.21	0.104	0.144	7.69	4.83
Moraceae	0.07	0.00	0.000	0.00	0.000	0.000	3.68	2.25
Indeterminada 5	0.39	0.02	0.000	0.00	0.000	0.000	3.03	1.60

Indeterminada 1	0.71	0.03	0.001	0.00	0.001	-	2.44	1.01
Solanaceae	1.65	0.07	0.003	0.00	0.003	-	2.39	0.96
Indeterminada 2	0.71	0.03	0.001	0.00	0.001	-	2.32	0.89
Pittosporaceae	0.77	0.03	0.002	0.00	0.002	-	2.28	0.85
Indeterminada 3	0.74	0.03	0.001	0.00	0.001	-	2.25	0.83
Primulaceae	0.28	0.01	0.001	0.00	0.001	-	2.24	0.81
Boraginaceae	0.27	0.01	0.001	0.00	0.001	-	2.24	0.81
Fabaceae	0.19	0.01	0.000	0.00	0.000	-	2.23	0.80
Melastomataceae	0.83	0.04	0.002	0.00	0.002	-	2.22	0.79

Famílias	NSpp	%Spp
Rubiaceae	2	7.69
Sapindaceae	2	7.69
Arecaceae	2	7.69
Myrtaceae	3	11.54
Meliaceae	1	3.85
Monimiaceae	3	11.54
Lauraceae	1	3.85
Nyctaginaceae	1	3.85
Moraceae	1	3.85
Indeterminada 5	1	3.85
Indeterminada 1	1	3.85
Solanaceae	1	3.85
Indeterminada 2	1	3.85
Pittosporaceae	1	3.85
Indeterminada 3	1	3.85
Primulaceae	1	3.85
Boraginaceae	1	3.85
Fabaceae	1	3.85
Melastomataceae	1	3.85

Arquivo de dados usado foi : "dados\_3m\_externo-Parâmetros para Amostras.FPM".

Parâmetros para Amostras : REGENERAÇÃO SOB NO ENTORNO DE L. CHINENSIS 3M

Amostras	NInd	AbsDe	RelDe	AbsDo	MinAlt	MaxAlt	MédAlt	dpAlt	MinDia	MaxDi	MédDi
										а	а
Externo311	3	30000.0	2.22	1.14	49.00	87.00	65.00	19.70	0.48	0.80	0.68
Externo312	10	100000.0	7.41	2.66	32.00	116.00	60.40	26.55	0.25	1.21	0.51
Externo313	6	60000.0	4.44	2.11	20.00	89.00	54.67	29.74	0.20	0.99	0.60
Externo314	3	30000.0	2.22	4.03	47.00	137.00	79.67	49.81	0.92	1.80	1.25
Externo321	3	30000.0	2.22	27.52	42.00	77.00	65.00	19.92	0.82	4.16	3.04
Externo322	4	40000.0	2.96	1.44	32.00	81.00	60.50	23.70	0.41	0.95	0.64
Externo323	4	40000.0	2.96	35.04	35.00	300.00	233.75	132.50	0.50	4.84	2.95
Externo324	4	40000.0	2.96	1.72	5.00	57.00	30.00	22.49	0.43	1.02	0.69
Externo331	9	90000.0	6.67	4.35	20.00	119.00	57.22	32.46	0.28	1.22	0.72
Externo332	3	30000.0	2.22	1.14	20.00	69.00	37.67	27.21	0.29	0.87	0.65
Externo333	4	40000.0	2.96	1.23	42.00	66.00	52.00	10.20	0.57	0.72	0.62
Externo334	6	60000.0	4.44	4.10	24.00	147.00	67.83	45.89	0.32	1.36	0.81
Externo341	7	70000.0	5.19	1.41	20.00	150.00	57.14	45.91	0.27	0.87	0.47
Externo342	8	80000.0	5.93	4.45	24.00	102.00	56.88	26.53	0.22	1.79	0.66

Externo343	9	90000.0	6.67	47.09	23.00	600.00	157.89	197.17	0.35	4.97	1.82
Externo344	13	130000.0	9.63	2.15	20.00	86.00	39.15	18.58	0.23	0.70	0.44
Externo351	6	60000.0	4.44	9.68	33.00	350.00	117.67	116.92	0.33	2.85	1.13
Externo352	13	130000.0	9.63	43.42	20.00	300.00	117.92	95.47	0.21	6.87	1.21
Externo353	14	140000.0	10.37	5.93	20.00	165.00	49.00	40.33	0.14	1.44	0.61
Externo354	6	60000.0	4.44	17.11	33.00	300.00	117.67	108.13	0.26	3.79	1.46

Amostras	dpDia	Vol	AbsVol	RelVol	MinVol	MaxVol	MédVol	dpVol	NSpp	AreaBa s
Externo311	0.17	0.01	77.99	0.17	0.001	0.00	0.003	0.002	3	0.00
Externo312	0.30	0.02	207.16	0.46	0.000	0.01	0.002	0.003	2	0.00
Externo313	0.32	0.02	155.78	0.35	0.000	0.01	0.003	0.003	3	0.00
Externo314	0.48	0.04	423.59	0.94	0.004	0.03	0.014	0.018	2	0.00
Externo321	1.92	0.16	1642.52	3.65	0.004	0.10	0.055	0.050	3	0.00
Externo322	0.24	0.01	102.63	0.23	0.000	0.01	0.003	0.002	2	0.00
Externo323	1.81	1.05	10460.70	23.23	0.001	0.55	0.262	0.228	4	0.00
Externo324	0.31	0.00	38.38	0.09	0.000	0.00	0.001	0.001	4	0.00
Externo331	0.32	0.03	331.32	0.74	0.000	0.01	0.004	0.004	7	0.00
Externo332	0.31	0.00	48.56	0.11	0.000	0.00	0.002	0.002	3	0.00
Externo333	0.07	0.01	63.96	0.14	0.001	0.00	0.002	0.000	3	0.00
Externo334	0.50	0.04	404.55	0.90	0.000	0.02	0.007	0.009	5	0.00
Externo341	0.21	0.01	92.97	0.21	0.000	0.00	0.001	0.002	4	0.00
Externo342	0.56	0.04	379.51	0.84	0.000	0.03	0.005	0.009	5	0.00
Externo343	1.95	1.76	17592.20	39.07	0.000	1.11	0.195	0.370	7	0.00
Externo344	0.15	0.01	104.53	0.23	0.000	0.00	0.001	0.001	5	0.00
Externo351	0.96	0.26	2560.94	5.69	0.000	0.22	0.043	0.089	3	0.00
Externo352	1.74	0.56	5617.89	12.48	0.000	0.46	0.043	0.127	4	0.00
Externo353	0.43	0.05	521.60	1.16	0.000	0.03	0.004	0.007	6	0.00
Externo354	1.34	0.42	4200.49	9.33	0.000	0.34	0.070	0.133	3	0.00