

Supplementary Materials

Table S1. Presentation of the plantations studied. ID: plantation identifier; Es: *Eucalyptus saligna*; Gr: *Grevillea robusta*; Alt.: altitude; Topo: topographical situation; Temp.: temperature; Af: equatorial climate; Am: tropical monsoon climate.

ID	Site / station	Planting date	Area (ha)	Spacing at planting (m)	Success rate (SR, %)	Geographical coordinates (°)		Alt. (m)	Topo (code)*	Slope (°)	Climate [41]			Observations on maintenance and silvicultural operations between 2018 and 2020
						Longitude	Latitude				Temp. (°C)	Rainfall (mm/an)	Type	
Es_01	Sake /Kimoka	November 2011	0.88	3×3	70.2	29.05523	-1.54132	1571	0	0	19.9	2716	Am	Weed control, cutting of some stems by robbers
Es_02	Sake /Kimoka	October 2011	0.66	3×3	46.8	29.05120	-1.54108	1608	5	34	19.9	2716	Am	Weed control, voluntary cutting of some stems in September 2020
Es_03	Sake /Kimoka	October 2014	0.58	3×3	64.8	29.05807	-1.55118	1592	5	15	19.9	2716	Am	No silvicultural treatment, clear cutting in May 2020
Es_04	Sake /Kimoka	March 2014	1.17	3×3	54.0	29.05341	-1.55151	1611	5	20	19.9	2716	Am	No silvicultural treatment, cutting of some stems by robbers
Es_05	Sake /Kimoka	March 2013	0.49	3×3	52.2	29.05731	-1.54679	1572	0	0	19.9	2716	Am	Amaranth cultivation, voluntary cutting of some stems in February 2020
Es_06	Sake /Kimoka	March 2014	1.19	3×3	43.2	29.05865	-1.55336	1560	0	1	19.9	2716	Am	Bean crop, voluntary cutting of some stems between 2019 and 2020
Es_07	Sake /Kimoka	October 2014	0.77	3×3	64.8	29.05279	-1.55211	1611	5	24	19.9	2716	Am	No silvicultural treatment, cutting of some stems by robbers
Es_08	Sake /Kimoka	October 2014	1.83	3×3	48.6	29.05769	-1.55168	1565	7	26	19.9	2716	Am	No silvicultural treatment, clear cutting in June 2020
Es_09	Sake /Mubambiro	March 2011	0.89	2.5×2.5	30.0	29.06884	-1.57363	1499	6	5	19.9	2716	Am	Weed control, no silvicultural treatment, fire in August 2020
Es_10	Sake /Mubambiro	March 2015	0.61	2 × 2	66.4	29.06883	-1.57234	1520	5	18	19.9	2716	Am	No silvicultural treatment, cutting of some stems by robbers
Es_11	Sake /Mubambiro	November 2015	1.98	2 × 2	41.6	29.06949	-1.57216	1520	5	7	19.9	2716	Am	No silvicultural treatment, cutting of some stems by robbers
Es_12	Sake /Kasoko	March 2011	0.59	3×3	41.4	29.04918	-1.56200	1529	5	39	19.9	2716	Am	Weed control, voluntary cutting of some stems between March-May 2020
Es_13	Kirumba /Kaseghe	February 2010	0.77	3×3	73.8	29.17815	-0.46261	2154	4	17	18.4	3750	Af	No silvicultural treatment
Es_14	Kirumba /Kaseghe	February 2010	0.94	3×3	97.2	29.15591	-0.46925	2000	8	6	18.4	3750	Af	Thinning of 60% of the stems between November-December 2019
Es_15	Kirumba /Kaseghe	February 2013	0.71	3×3	54.0	29.15922	-0.47639	2052	5	24	18.4	3750	Af	Weed control, clear cutting between June-July 2020
Es_16	Kirumba /Kaseghe	October 2013	1.80	3×3	68.4	29.17374	-0.48001	2179	5	16	18.4	3750	Af	Weed control, thinning between May-June 2020
Es_17	Kirumba /Kaseghe	October 2013	1.91	3×3	52.2	29.17629	-0.48064	2163	5	14	18.4	3750	Af	Weed control, cassava cultivation, cutting of some stems by robbers
Es_18	Kirumba /Kaseghe	March 2015	0.49	3×3	90.0	29.19934	-0.49337	2177	4	17	18.4	3750	Af	No silvicultural treatment, passing of fire in June 2019
Es_19	Kirumba /Bulotwa	November 2016	0.71	3×3	100.0	29.15817	-0.58515	1655	6	4	18.4	3750	Af	Weed control, no silvicultural treatment
Es_20	Kirumba /Bulotwa	November 2016	2.65	3×3	61.2	29.17159	-0.58689	1754	4	6	18.4	3750	Af	Weed control, no silvicultural treatment
Gr_01	Sake /Kirotshe	October 2010	0.68	3×3	34.2	29.03588	-1.60799	1472	0	1	19.9	2716	Am	Pruning, amaranth and bean cultivation

Gr_02	Sake /Kirotshe	March 2011	0.98	3×3	61.2	29.02993	-1.60469	1512	7	5	19.9	2716	Am	Bean and maize cultivation, cutting of some stalks in October 2020
Gr_03	Sake /Kimoka	March 2011	1.83	4×4	51.2	29.05255	-1.55311	1619	5	19	19.9	2716	Am	No silvicultural treatment
Gr_04	Sake /Kimoka	October 2015	1.67	3×3	46.8	29.05589	-1.55324	1552	0	2	19.9	2716	Am	No silvicultural treatment, cutting of some stems by robbers
Gr_05	Sake /Luhonga	March 2016	0.65	3×3	39.6	29.07139	-1.50471	1760	5	23	19.9	2716	Am	No silvicultural treatment, cutting of some stems by robbers
Gr_06	Sake /Luhonga	October 2011	1.08	3×3	27.0	29.07012	-1.50703	1679	7	14	19.9	2716	Am	No silvicultural treatment, cutting of some stems in February 2020
Gr_07	Sake /Luhonga	October 2011	0.96	3×3	18.0	26.45419	-1.50803	1670	7	10	19.9	2716	Am	No silvicultural treatment, cutting of some stems in February 2020
Gr_08	Sake /Kirotshe	October 2010	2.35	3×3	34.2	29.03078	-1.60571	1504	7	4	19.9	2716	Am	Maize crop, cutting of some stems between January - February 2020
Gr_09	Kirumba /Kaseghe	March 2010	1.68	3×3	93.6	29.17904	-0.46394	2145	4	25	18.4	3750	Af	Weed control, no silvicultural treatment
Gr_10	Kirumba /Kaseghe	March 2014	3.00	4×4	57.6	29.15466	-0.47336	2025	5	19	18.4	3750	Af	Pruning, cassava and bean cultivation
Gr_11	Kirumba /Kaseghe	March 2014	2.68	4×4	67.2	29.15544	-0.47242	2042	5	18	18.4	3750	Af	Pruning, sweet potato, maize and potato cultivation
GR_12	Kirumba /Bulotwa	November 2013	1.22	3×3	52.2	29.18741	-0.57444	1734	7	11	18.4	3750	Af	Sweet potato crop, cutting of some stems by robbers

* Topo: Flat land (0), bottom of slope (7), mid-slope (5), top of slope (4), flat (6), open depression (8)

Table S2. Physico-chemical characteristics of soils in the plantations studied. Es: *Eucalyptus saligna*; Gr: *Grevillea robusta*.

Site (soil type)	Plantation code	Clay (%)	Silt (%)	Sand (%)	pH- H ₂ O	CEC (cmolc/kg)	Al (µg/g)	Ca (µg/g)	Cu (µg/g)	Fe (µg/g)	K (µg/g)	Mg (µg/g)	Mn (µg/g)	P (µg/g)	Zn (µg/g)
Sake (Haplic ac- risols)	Es_01	0.7	22.7	76.6	6.77	16.34	123.23	3721.28	5.34	149.22	1221.05	386.68	22.20	14.31	2.73
	Es_02	3.4	89.3	7.3	6.56	14.26	171.33	3893.07	6.40	161.05	1000.60	390.39	3.61	13.52	3.60
	Es_03	5.0	81.4	13.6	6.71	13.84	592.29	159.34	1.05	233.04	79.47	51.53	6.80	15.76	0.19
	Es_04	4.6	85.0	10.3	6.82	15.78	210.43	5076.15	8.86	196.24	1406.16	442.65	7.32	16.91	5.15
	Es_05	4.8	66.8	28.4	6.83	20.65	163.52	4462.17	9.04	195.76	1344.34	502.10	27.32	18.11	3.78
	Es_06	3.5	71.5	24.9	6.57	12.37	200.84	3743.62	7.00	188.58	1114.35	380.31	12.54	18.09	2.99
	Es_07	6.8	87.5	5.7	8.09	10.99	153.17	6171.47	9.66	103.45	1105.54	338.26	6.32	9.58	3.62
	Es_08	5.4	85.3	9.3	6.69	13.78	281.15	5245.84	10.40	204.52	1071.04	393.29	5.93	17.34	2.97
	Es_09	2.1	89.1	8.8	6.49	4.04	188.71	2763.36	5.76	321.54	112.74	184.55	8.12	29.15	4.61
	Es_10	2.8	88.4	8.9	7.21	3.46	230.18	1920.77	4.63	301.02	82.86	171.81	5.95	26.39	4.61
	Es_11	4.1	95.8	0.0	6.36	3.01	292.85	1913.61	5.76	358.29	100.28	184.66	8.15	28.40	4.55
	Es_12	3.2	75.2	21.6	6.96	13.52	202.04	6331.14	7.09	283.52	946.01	413.99	5.69	22.26	4.88
Gr_01	7.3	80.4	12.4	6.93	34.66	68.15	7881.45	5.66	120.42	1542.84	731.90	12.70	10.80	4.15	

	Gr_02	7.7	74.7	17.7	6.86	39.49	71.84	7445.91	9.64	107.03	1569.07	505.05	9.33	10.17	2.94
	Gr_03	4.2	86.2	9.6	6.64	9.98	180.15	3993.27	9.59	164.40	704.33	363.25	4.01	15.31	2.32
	Gr_04	6.1	82.5	11.4	7.29	12.46	127.05	4729.45	6.79	122.96	961.76	351.76	9.72	14.68	4.70
	Gr_05	3.6	89.9	6.6	6.49	14.62	209.83	3087.61	7.26	136.54	503.82	340.30	3.37	11.45	1.87
	Gr_06	3.8	85.6	10.6	6.88	15.39	256.07	3265.42	10.46	206.47	535.54	374.25	3.92	15.58	2.33
	Gr_07	1.6	38.2	60.2	6.33	16.57	248.54	3196.88	10.13	160.11	541.54	318.57	3.31	12.27	4.84
	Gr_08	5.7	55.5	38.8	7.19	53.90	50.38	7846.99	8.37	117.08	1690.45	587.02	11.14	11.97	4.75
	Kirumba (Aluandic an- dosols)	Es_13	18.3	72.9	8.8	4.28	4.44	827.51	242.58	1.22	537.02	123.26	90.33	8.36	37.38
Es_14		19.9	65.4	14.7	4.93	6.00	300.76	790.83	2.48	295.75	82.79	138.99	72.48	23.42	3.40
Es_15		7.2	74.7	18.0	4.57	5.37	525.07	329.50	1.48	335.01	144.71	115.63	58.85	25.47	1.45
Es_16		37.7	54.2	8.1	4.31	0.04	617.93	64.39	1.31	395.83	70.01	36.54	7.06	27.73	1.59
Es_17		37.7	54.2	8.1	4.60	3.28	596.00	182.94	1.25	321.64	67.17	48.48	10.39	22.48	1.27
Es_18		62.8	34.3	2.9	4.54	4.51	1541.87	24.07	1.44	330.08	35.02	7.69	1.23	23.36	0.26
Es_19		18.2	63.5	18.3	4.94	1.10	709.30	153.23	2.27	186.69	128.23	61.63	10.39	12.79	0.42
Es_20		59.7	31.6	8.7	4.66	4.77	68.89	7113.16	9.31	103.36	1517.84	483.98	8.84	9.97	2.81
Gr_09		24.9	64.7	10.4	3.65	5.10	787.67	31.06	1.48	383.86	38.23	5.57	6.72	26.50	0.65
Gr_10		34.9	53.3	11.9	5.22	6.98	309.35	918.04	2.81	254.15	197.33	175.03	0.00	22.77	4.45
Gr_11		29.3	70.6	0.1	4.83	1.89	364.46	581.63	2.41	245.36	190.68	149.10	40.19	18.78	1.85
GR_12		29.4	56.6	14.0	4.45	1.21	550.77	142.52	1.13	190.67	73.10	33.49	8.61	13.26	0.40

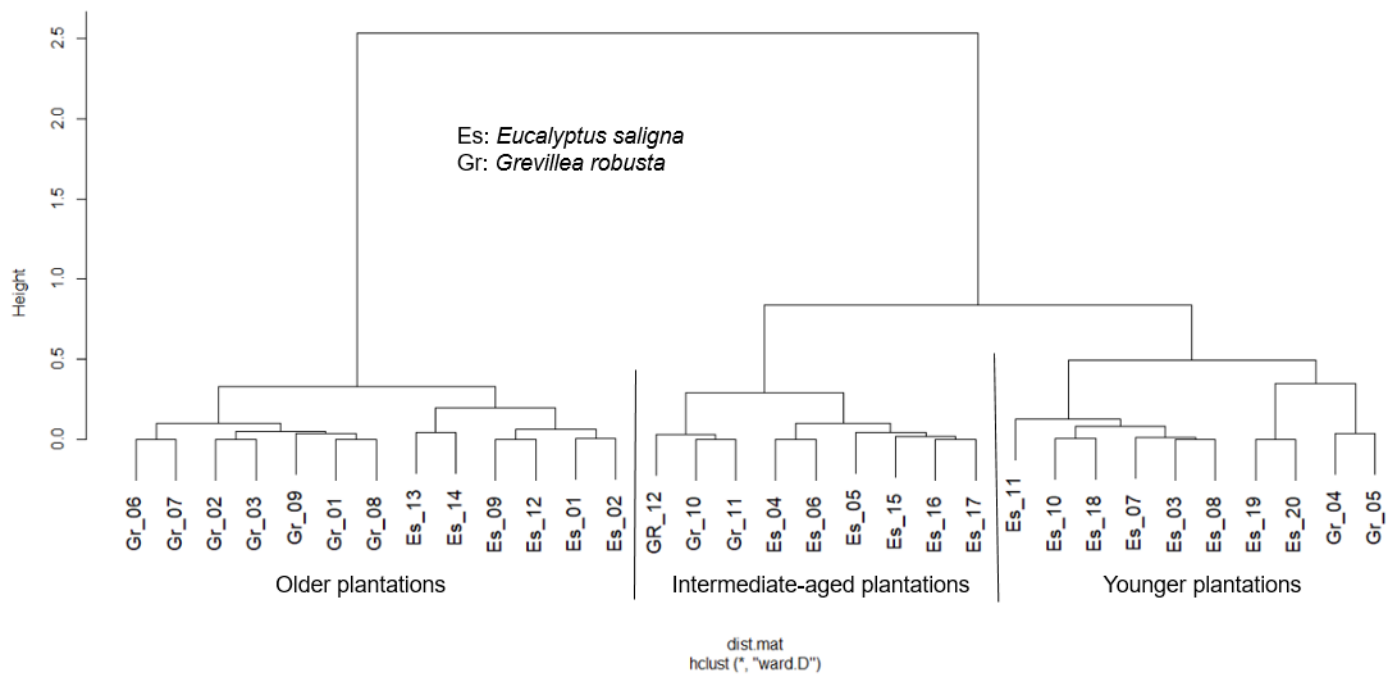


Figure S1. Hierarchical classification of plantations based on average age (in years) and species. The average age was estimated over three years and is equivalent, for each plantation, to the arithmetic mean of the ages calculated in 2018, 2019 and 2020. Es: *Eucalyptus saligna*; Gr: *Grevillea robusta*.

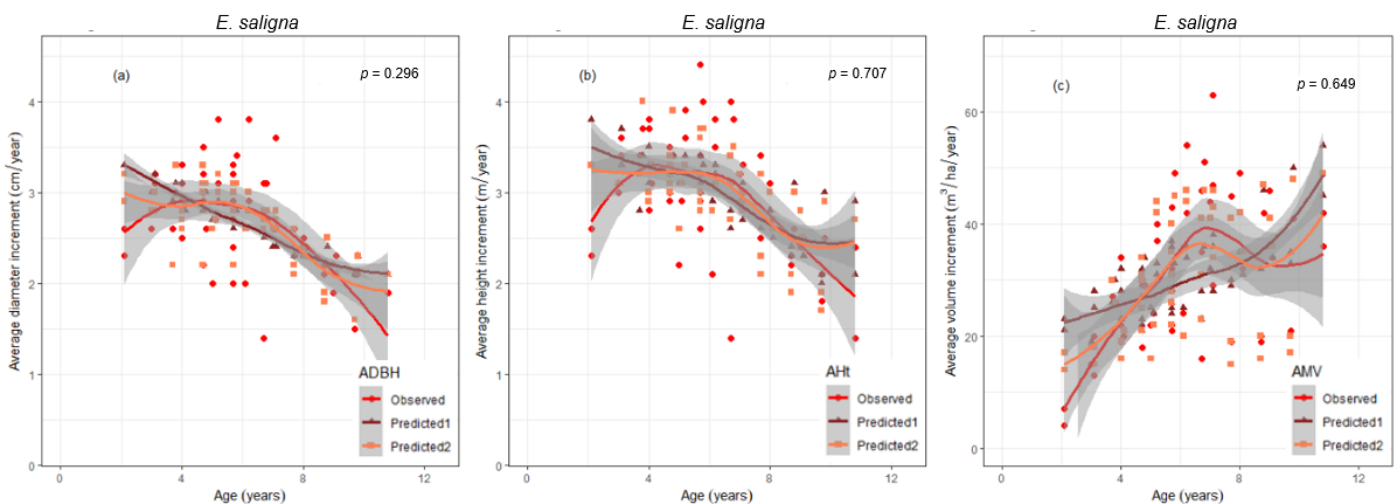


Figure S2. Projection of observed and predicted increases for *E. saligna*. Observed: observed values; Predicted1: predicted values from stand age and density; Predicted2: predicted values by combining biotic and abiotic factors with significant effects. The probability (p) given is that of the Figner and Killen test.

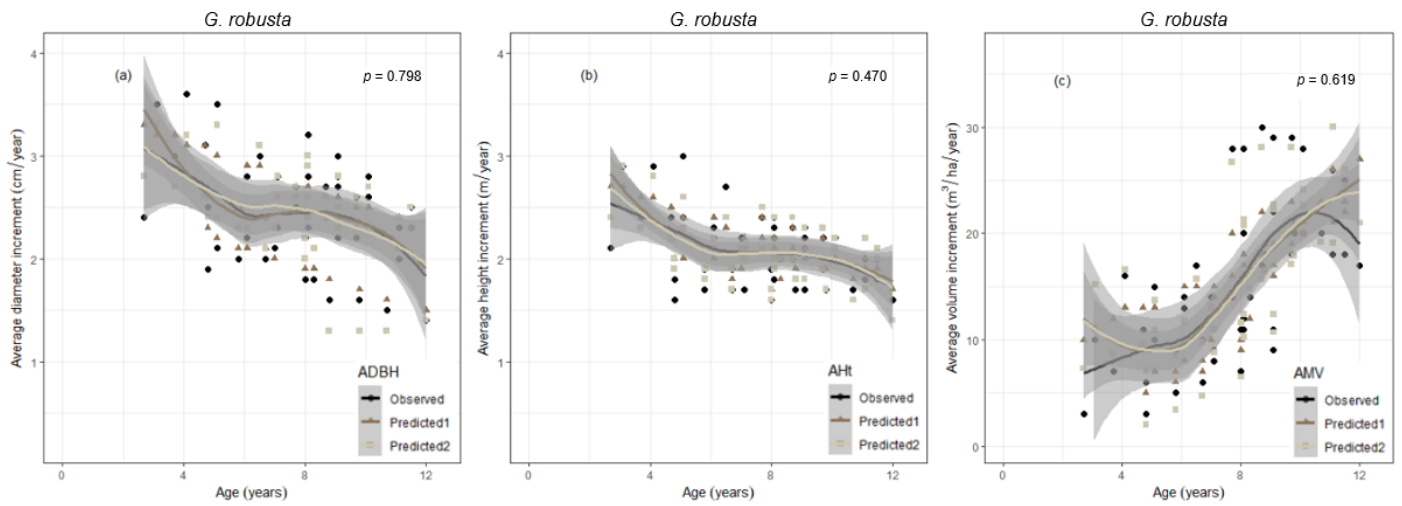


Figure S3. Projection of observed and predicted increments for *G. robusta*. Observed: observed values; Predicted1: predicted values from stand age and density; Predicted2: predicted values from combination of biotic and abiotic factors with significant effects. The probability (p) given is that of the Fligner and Killeen test.