

Supplementary material

Table S1. Monthly dynamic of nutrients return to soil (kg ha⁻¹) of *Pinus taeda* plantation and native forest in Southern Brazil.

Nutrient	Fraction	Forest	Month											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
N	Leaves/needles	<i>Pinus taeda</i>	3.12*	3.77	3.02	5.32	6.53	5.93	4.08	3.06	2.84	2.98	3.09	2.94
		Native Forest	5.04	6.79	6.03	10.47	6.41	6.80	10.11	17.64	15.45	9.97	10.02	6.77
	Twigs	<i>Pinus taeda</i>	0.08	0.22	0.09	0.11	0.04	0.06	0.10	0.13	0.22	0.24	0.18	0.14
		Native Forest	0.86	1.06	0.55	1.19	1.42	1.46	1.40	2.04	2.00	2.07	2.04	1.32
	Miscellaneous	<i>Pinus taeda</i>	0.12	0.10	0.14	0.12	0.19	0.22	0.15	0.18	0.42	0.17	0.23	0.20
		Native Forest	1.11	0.91	0.56	0.75	0.72	0.82	1.59	2.43	2.29	2.39	2.91	1.79
P	Leaves/needles	<i>Pinus taeda</i>	0.18	0.20	0.16	0.25	0.28	0.69	0.18	0.18	0.16	0.18	0.18	0.15
		Native Forest	0.73	1.05	0.95	1.67	0.78	1.35	1.71	3.66	2.91	1.59	1.78	0.92
	Twigs	<i>Pinus taeda</i>	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
		Native Forest	0.12	0.11	0.06	0.17	0.16	0.18	0.16	0.22	0.23	0.23	0.24	0.15
	Miscellaneous	<i>Pinus taeda</i>	0.01	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.01	0.01	0.01
		Native Forest	0.10	0.12	0.07	0.08	0.07	0.10	0.20	0.32	0.28	0.29	0.36	0.27
K	Leaves/needles	<i>Pinus taeda</i>	0.94	1.09	0.90	1.70	1.76	2.29	1.00	0.79	0.61	0.66	0.66	0.92
		Native Forest	1.67	1.76	2.11	2.93	1.23	3.95	3.68	10.25	6.78	2.90	3.75	2.09
	Twigs	<i>Pinus taeda</i>	0.02	0.02	0.01	0.01	0.00	0.01	0.02	0.02	0.04	0.03	0.03	0.02
		Native Forest	0.22	0.22	0.13	0.27	0.25	0.36	0.32	0.42	0.51	0.39	0.42	0.35
	Miscellaneous	<i>Pinus taeda</i>	0.03	0.02	0.04	0.02	0.03	0.04	0.03	0.06	0.06	0.02	0.03	0.03
		Native Forest	0.16	0.18	0.16	0.14	0.13	0.27	0.41	0.90	0.65	0.64	0.82	0.37
Ca	Leaves/needles	<i>Pinus taeda</i>	1.82	2.16	1.65	3.74	4.66	4.43	3.15	2.09	1.59	1.70	1.48	1.51
		Native Forest	5.81	8.30	8.17	13.85	8.13	9.45	14.77	27.74	23.85	13.38	12.18	7.64
	Twigs	<i>Pinus taeda</i>	0.05	0.13	0.04	0.05	0.03	0.04	0.08	0.08	0.13	0.17	0.08	0.07
		Native Forest	1.18	1.01	0.73	1.63	2.19	2.35	2.10	3.48	3.03	3.15	3.11	1.89
	Miscellaneous	<i>Pinus taeda</i>	0.06	0.05	0.06	0.04	0.08	0.08	0.05	0.05	0.11	0.07	0.09	0.08
		Native Forest	0.96	0.80	0.53	0.73	0.82	0.65	1.11	2.41	1.58	1.76	2.50	1.66
Mg	Leaves/needles	<i>Pinus taeda</i>	0.53	0.86	0.58	1.10	1.17	1.41	0.74	0.57	0.46	0.47	0.43	0.44
		Native Forest	1.52	2.30	1.92	2.91	1.47	2.20	2.55	4.72	4.01	2.36	2.67	1.83
	Twigs	<i>Pinus taeda</i>	0.01	0.02	0.01	0.02	0.00	0.01	0.01	0.02	0.03	0.03	0.02	0.01
		Native Forest	0.15	0.15	0.08	0.18	0.21	0.29	0.22	0.31	0.36	0.35	0.34	0.21
	Miscellaneous	<i>Pinus taeda</i>	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.04	0.02	0.02	0.02
		Native Forest	0.14	0.14	0.07	0.11	0.09	0.10	0.18	0.33	0.32	0.32	0.38	0.27

*The values are presented as mean (n = 4).

Table S2. Monthly dynamic of nutrient concentration (g kg⁻¹) in litterfall fractions of *Pinus taeda* plantation and native forest in Southern Brazil.

Nutrient	Fraction	Forest	Month											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
N	Leaves/needles	<i>Pinus taeda</i>	7.84*	7.65	7.13	6.70	6.08	5.52	6.41	7.39	8.74	9.36	10.09	9.19
		Native Forest	20.46	20.16	18.55	19.34	21.44	19.16	19.23	17.95	18.37	19.41	19.93	21.37
	Twigs	<i>Pinus taeda</i>	4.68	6.06	4.59	7.17	5.66	4.42	6.25	7.02	5.59	6.90	7.94	7.57
		Native Forest	14.31	17.05	15.08	15.13	15.07	14.68	13.68	14.78	14.61	14.86	14.76	15.45
	Miscellaneous	<i>Pinus taeda</i>	5.78	5.27	6.39	11.49	10.70	12.94	12.01	8.28	9.15	7.01	8.16	8.12
		Native Forest	21.77	20.98	21.74	20.65	21.08	20.81	23.56	21.30	22.26	23.28	21.31	23.31
P	Leaves/needles	<i>Pinus taeda</i>	0.45	0.40	0.39	0.31	0.27	0.54	0.29	0.41	0.51	0.57	0.59	0.48
		Native Forest	2.96	3.11	3.08	3.00	2.70	3.54	3.26	3.73	3.33	3.27	3.47	2.84
	Twigs	<i>Pinus taeda</i>	0.20	0.23	0.47	0.28	0.22	0.27	0.27	0.31	0.32	0.42	0.44	0.32
		Native Forest	1.98	1.88	1.74	2.04	1.69	1.74	1.66	1.55	1.69	1.67	1.85	1.87
	Miscellaneous	<i>Pinus taeda</i>	0.27	0.24	0.25	0.68	0.56	0.89	0.87	0.81	1.06	0.39	0.42	0.36
		Native Forest	2.13	2.23	2.61	2.18	2.04	2.52	2.86	2.73	2.69	2.59	2.82	2.34
K	Leaves/needles	<i>Pinus taeda</i>	2.33	2.12	2.18	2.03	1.68	1.86	1.63	1.71	1.93	2.02	2.28	2.55
		Native Forest	6.72	5.17	7.70	5.25	4.39	9.25	6.51	10.53	7.36	6.06	7.17	6.49
	Twigs	<i>Pinus taeda</i>	0.77	0.51	0.57	0.79	0.45	0.54	1.24	1.13	1.22	0.85	1.21	1.06
		Native Forest	3.90	3.68	4.16	3.97	3.01	3.79	3.66	4.28	3.59	3.06	3.78	4.72
	Miscellaneous	<i>Pinus taeda</i>	1.52	0.89	1.63	1.68	1.68	2.53	2.03	3.14	1.88	0.97	1.11	1.25
		Native Forest	4.56	4.16	6.19	3.89	4.08	6.69	5.72	7.69	6.09	5.28	6.87	5.23
Ca	Leaves/needles	<i>Pinus taeda</i>	4.43	4.30	3.90	4.46	4.37	4.25	4.90	4.94	5.01	5.22	4.76	4.63
		Native Forest	22.60	24.24	26.29	24.23	26.72	26.04	28.18	28.12	27.79	25.83	23.92	23.37
	Twigs	<i>Pinus taeda</i>	2.90	3.49	2.40	3.60	4.50	3.60	4.22	3.51	3.66	4.20	3.55	3.67
		Native Forest	19.94	17.53	18.35	19.49	22.63	21.17	21.63	23.28	22.52	21.92	21.25	22.03
	Miscellaneous	<i>Pinus taeda</i>	3.03	2.35	2.83	4.69	4.40	5.35	4.19	2.51	3.18	3.01	3.15	3.29
		Native Forest	22.03	17.59	21.51	19.10	24.23	17.74	18.38	19.22	15.89	17.08	19.91	20.02
Mg	Leaves/needles	<i>Pinus taeda</i>	1.28	1.58	1.40	1.40	1.08	1.20	1.15	1.34	1.47	1.48	1.43	1.33
		Native Forest	6.02	6.64	6.13	4.97	4.87	5.48	4.86	4.79	4.79	4.70	5.23	5.73
	Twigs	<i>Pinus taeda</i>	0.51	0.65	0.55	1.05	0.68	0.70	0.86	0.83	0.87	0.90	0.80	0.82
		Native Forest	2.49	2.57	2.25	2.39	2.41	2.41	2.26	2.29	2.61	2.57	2.56	2.54
	Miscellaneous	<i>Pinus taeda</i>	0.75	0.61	0.54	1.20	1.10	1.22	1.17	0.94	0.98	0.87	0.83	0.89
		Native Forest	2.96	2.93	2.87	2.86	2.74	2.64	2.83	2.87	3.07	3.01	2.94	2.97

*The values are presented as mean (n = 4).