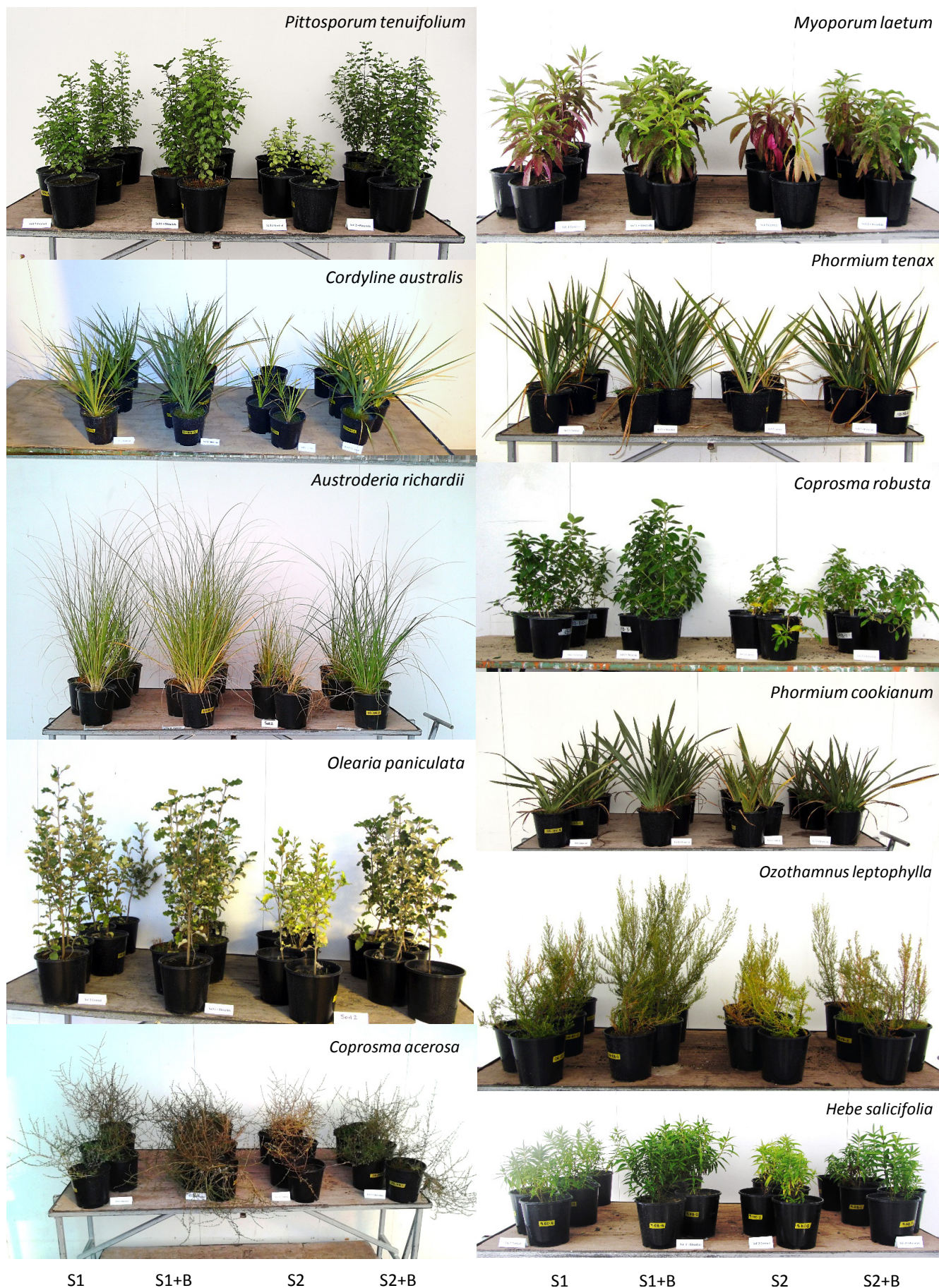


Supplemental Information

Supplemental Fig. S1. Picture of the NZ's native plants in the end of the experiment



Supplemental Table S1. Nutrient concentration (average \pm standard error, n=5) in leaves of plants growing in both soils with and without biosolids. Different letters in each column of each species indicate significant differences at 95 % of probability. When no letters are shown, there are not significant differences between treatments.

Treat.	N (%)		S (g kg ⁻¹)		P (g kg ⁻¹)		Ca (%)		K (%)		Mg (g kg ⁻¹)		Na (g kg ⁻¹)	
<i>Zea mays</i>														
S1	3.1 ± 0.15	d	1.6 ± 0.07	c	1.1 ± 0.11	b	0.53 ± 0.25	c	4.05 ± 0.21	d	4.08 ± 0.19	b	0.31 ± 0.13	b
S1+B	1.8 ± 0.18	c	1.6 ± 0.15	c	1.1 ± 0.18	ab	0.48 ± 0.04	b	1.88 ± 0.32	b	2.79 ± 0.15	a	0.12 ± 0.04	a
S2	0.64 ± 0.02	a	0.70 ± 0.03	a	0.95 ± 0.04	a	0.38 ± 0.04	a	3.22 ± 0.10	c	2.64 ± 0.11	a	0.24 ± 0.02	b
S2+B	1.1 ± 0.29	b	1.3 ± 0.31	b	1.1 ± 0.12	ab	0.40 ± 0.05	a	1.08 ± 0.07	a	2.79 ± 0.39	a	0.10 ± 0.06	a
<i>Pittosporum tenuifolium</i>														
S1	0.92 ± 0.09	b	0.98 ± 0.09	a	1.1 ± 0.09	b	1.53 ± 0.08	a	1.16 ± 0.05	b	4.28 ± 0.26	b	1.98 ± 0.78	bc
S1+B	1.0 ± 0.15	b	1.3 ± 0.18	b	1.9 ± 0.31	c	1.87 ± 0.24	b	1.07 ± 0.06	b	4.46 ± 0.95	b	1.33 ± 0.34	a
S2	0.55 ± 0.02	a	0.86 ± 0.10	a	0.72 ± 0.10	a	1.46 ± 0.24	a	1.09 ± 0.11	b	3.15 ± 0.25	a	2.22 ± 0.23	c
S2+B	1.4 ± 0.2	c	1.5 ± 0.16	c	1.9 ± 0.40	c	1.99 ± 0.27	b	0.93 ± 0.10	a	4.84 ± 0.83	b	1.50 ± 0.25	ab
<i>Myoporum laetum</i>														
S1	1.0 ± 0.12	b	2.2 ± 0.50	a	0.90 ± 0.09	a	1.17 ± 0.14	a	1.40 ± 0.15	b	2.84 ± 0.50	ab	8.20 ± 1.49	
S1+B	1.4 ± 0.17	d	3.6 ± 2.0	b	1.8 ± 0.46	b	1.30 ± 0.31	a	1.22 ± 0.09	ab	2.84 ± 0.31	ab	7.39 ± 1.54	
S2	0.75 ± 0.08	a	2.4 ± 0.530	a	1.0 ± 0.09	a	1.66 ± 0.23	b	1.12 ± 0.19	a	3.20 ± 0.39	b	9.15 ± 2.11	
S2+B	1.2 ± 0.06	c	4.1 ± 0.60	b	1.9 ± 0.39	b	1.70 ± 0.33	b	1.17 ± 0.13	a	2.52 ± 0.28	a	7.83 ± 1.64	
<i>Coprosma robusta</i>														
S1	1.3 ± 0.11	b	1.2 ± 0.07	b	0.99 ± 0.20	a	1.81 ± 0.15	a	1.14 ± 0.10	b	3.59 ± 0.13	ab	0.28 ± 0.09	a
S1+B	1.7 ± 0.17	c	2.2 ± 0.52	d	1.8 ± 0.26	c	2.07 ± 0.15	b	1.04 ± 0.03	b	3.18 ± 0.57	a	0.27 ± 0.11	a
S2	0.88 ± 0.09	a	0.93 ± 0.04	a	0.91 ± 0.14	a	2.01 ± 0.24	ab	1.16 ± 0.13	b	3.89 ± 0.54	b	0.74 ± 0.15	b
S2+B	1.3 ± 0.14	b	1.6 ± 0.18	c	1.4 ± 0.35	b	2.17 ± 0.11	b	0.87 ± 0.09	a	3.37 ± 0.16	ab	0.84 ± 0.23	b
<i>Austroderia richardii</i>														
S1	0.79 ± 0.3	a	1.0 ± 0.25	a	0.78 ± 0.18	a	0.21 ± 0.07	a	1.08 ± 0.18	b	1.25 ± 0.15	a	1.09 ± 0.35	a
S1+B	0.59 ± 0.03	a	1.2 ± 0.14	a	1.5 ± 0.21	b	0.32 ± 0.03	b	0.88 ± 0.03	a	1.35 ± 0.13	a	1.74 ± 0.30	b
S2	0.75 ± 0.2	a	1.3 ± 0.40	a	0.90 ± 0.20	a	0.38 ± 0.08	bc	1.18 ± 0.11	b	1.36 ± 0.31	a	1.16 ± 0.09	a
S2+B	1.4 ± 0.36	b	2.0 ± 0.38	b	1.8 ± 0.80	b	0.45 ± 0.12	c	1.21 ± 0.11	b	1.77 ± 0.20	b	2.55 ± 0.27	c
<i>Phormium cookianum</i>														
S1	1.0 ± 0.22	b	0.86 ± 0.25	ab	1.1 ± 0.27	ab	0.51 ± 0.07		0.85 ± 0.06	b	1.61 ± 0.27	b	1.71 ± 0.34	
S1+B	1.1 ± 0.14	b	1.0 ± 0.21	b	1.6 ± 0.76	b	0.52 ± 0.10		0.78 ± 0.08	b	1.15 ± 0.35	a	1.41 ± 0.47	
S2	0.53 ± 0.17	a	0.52 ± 0.14	a	0.92 ± 0.21	a	0.53 ± 0.13		0.61 ± 0.04	a	1.42 ± 0.30	ab	1.56 ± 0.41	
S2+B	1.1 ± 0.14	b	1.1 ± 0.40	b	1.4 ± 0.32	ab	0.63 ± 0.10		0.76 ± 0.10	b	1.25 ± 0.34	ab	1.67 ± 0.49	
<i>Ozothamnus leptophyllus</i>														
S1	1.3 ± 0.32	b	1.2 ± 0.37	b	1.3 ± 0.33	a	0.60 ± 0.11	a	0.98 ± 0.09	b	2.90 ± 0.27		0.76 ± 0.29	ab
S1+B	1.5 ± 0.2	b	1.9 ± 0.30	c	2.5 ± 0.21	b	0.77 ± 0.08	bc	1.02 ± 0.07	b	2.76 ± 0.38		0.57 ± 0.25	a
S2	0.68 ± 0.07	a	0.64 ± 0.07	a	1.2 ± 0.36	a	0.62 ± 0.06	ab	0.84 ± 0.10	a	2.88 ± 0.24		1.01 ± 0.24	b
S2+B	1.2 ± 0.32	b	2.8 ± 1.0	d	1.5 ± 0.50	a	0.84 ± 0.17	c	1.03 ± 0.09	b	2.98 ± 0.27		1.00 ± 0.40	b
<i>Coprosma acerosa</i> - Leaves														
S1	1.3 ± 0.23	b	1.4 ± 0.39	b	1.3 ± 0.47	a	1.71 ± 0.38		0.77 ± 0.09	b	2.66 ± 0.49	ab	0.65 ± 0.14	ab
S1+B	1.6 ± 0.07	c	2.6 ± 0.66	c	2.0 ± 0.45	b	1.53 ± 0.20		0.83 ± 0.13	b	2.81 ± 0.32	ab	0.56 ± 0.13	a
S2	0.84 ± 0.02	a	0.75 ± 0.08	a	0.86 ± 0.07	a	1.85 ± 0.48		0.59 ± 0.10	a	2.34 ± 0.38	a	0.84 ± 0.19	b
S2+B	1.6 ± 0.46	c	2.4 ± 0.95	c	1.7 ± 0.52	b	1.75 ± 0.24		0.74 ± 0.14	b	2.94 ± 0.27	b	0.67 ± 0.25	a
<i>Coprosma acerosa</i> - Fruits														
S1	1.2 ± 0.04		1.1 ± 0.08	a	2.0 ± 0.17		0.57 ± 0.02	ab	0.74 ± 0.04		1.48 ± 0.04	ab	0.93 ± 0.16	ab
S1+B	1.4 ± 0.21		1.3 ± 0.13	b	2.3 ± 0.29		0.43 ± 0.07	a	0.73 ± 0.02		1.20 ± 0.08	a	0.64 ± 0.01	a
S2	1.4 ± 0.27		1.14 ± 0.06	ab	2.2 ± 0.20		0.72 ± 0.15	b	0.69 ± 0.05		1.54 ± 0.19	b	1.10 ± 0.31	ab
S2+B	1.4 ± 0.09		1.7 ± 0.02	c	2.3 ± 0.02		0.63 ± 0.01	ab	0.72 ± 0.05		1.50 ± 0.04	ab	1.34 ± 0.40	b
<i>Hebe salicifolia</i>														
S1	1.3 ± 0.45	b	1.5 ± 0.61	a	1.1 ± 0.27	a	0.92 ± 0.23	a	0.81 ± 0.15	b	3.46 ± 0.71	b	1.39 ± 0.72	
S1+B	1.8 ± 0.31	c	3.2 ± 0.56	c	2.0 ± 0.35	b	1.49 ± 0.19	b	0.85 ± 0.13	b	3.64 ± 0.24	b	0.88 ± 0.44	
S2	0.67 ± 0.08	a	1.1 ± 0.24	a	1.2 ± 0.20	a	0.62 ± 0.12	a	0.62 ± 0.05	a	2.35 ± 0.22	a	1.47 ± 0.46	
S2+B	1.5 ± 0.21	bc	2.3 ± 0.56	b	2.3 ± 0.20	b	1.50 ± 0.33	b	0.76 ± 0.05	b	3.25 ± 0.40	b	1.11 ± 0.48	
<i>Cordyline australis</i>														
S1	0.65 ± 0.19		0.81 ± 0.20	ab	1.2 ± 0.16	a	0.65 ± 0.07	a	1.15 ± 0.12	b	1.91 ± 0.29	a	0.56 ± 0.21	a
S1+B	0.83 ± 0.14		1.1 ± 0.12	bc	1.9 ± 0.34	bc	0.63 ± 0.12	a	1.01 ± 0.08	a	1.74 ± 0.25	a	1.03 ± 0.41	ab
S2	0.77 ± 0.23		1.1 ± 0.72	a	1.8 ± 0.52	ab	1.35 ± 0.28	c	1.25 ± 0.19	c	2.51 ± 0.27	b	0.98 ± 0.78	a
S2+B	0.84 ± 0.23		1.5 ± 0.55	c	2.3 ± 0.44	c	0.91 ± 0.11	b	0.95 ± 0.12	a	1.96 ± 0.21	a	1.42 ± 0.56	b
<i>Phormium tenax</i>														
S1	0.98 ± 0.24	b	0.82 ± 0.16	a	1.3 ± 0.20	b	0.62 ± 0.11		0.98 ± 0.11	bc	1.96 ± 0.31		1.44 ± 0.30	a
S1+B	1.3 ± 0.22	c	1.2 ± 0.23	b	2.0 ± 0.18	c	0.61 ± 0.08		1.09 ± 0.08	c	1.61 ± 0.19		1.79 ± 0.45	ab
S2	0.55 ± 0.15	a	0.58 ± 0.18	a	0.84 ± 0.20	a	0.77 ± 0.16		0.66 ± 0.09	a	2.10 ± 0.63		2.01 ± 0.35	b
S2+B	1.3 ± 0.17	c	1.2 ± 0.14	b	2.3 ± 0.42	c	0.71 ± 0.13		0.93 ± 0.11	b	1.62 ± 0.09		1.99 ± 0.37	b
<i>Olearia paniculata</i>														
S1	0.79 ± 0.13	b	0.59 ± 0.09	b	0.87 ± 0.08	a	0.73 ± 0.09	ab	1.33 ± 0.09	c	2.86 ± 0.22		2.17 ± 0.68	a
S1+B	1.1 ± 0.12	c	0.96 ± 0.14	c	1.2 ± 0.19	bc	0.83 ± 0.15	b	1.25 ± 0.06	bc	2.88 ± 0.56		2.82 ± 0.45	ab
S2	0.49 ± 0.02	a	0.40 ± 0.05	a	0.92 ± 0.12	ab	0.61 ± 0.07	a	1.11 ± 0.14	ab	2.56 ± 0.28		4.24 ± 0.63	bc
S2+B	1.2 ± 0.2	c	1.0 ± 0.16	c	1.3 ± 0.40	c	0.79 ± 0.05	b	1.10 ± 0.12	a	2.93 ± 0.24		3.76 ± 1.35	c

Supplemental Table S2. Trace element concentration (average \pm standard error, $n=5$, mg kg^{-1}) in leaves of plants growing in both soils with and without biosolids. Different letters in each column of each species indicate significant differences at 95 % of probability. When no letters are shown, there are not significant differences between treatments.

Treatment	Mn		Zn		Cu		Cd	
<i>Zea mays</i>								
S1	240 ± 27	c	51 ± 6.7	b	6.2 ± 0.7	c	0.00 ± 0.00	a
S1+B	230 ± 22	c	310 ± 61	d	5.0 ± 0.3	b	0.2 ± 0.0	c
S2	30 ± 3	a	18 ± 4.1	a	3.7 ± 0.4	a	0.00 ± 0.00	a
S2+B	100 ± 19	b	150 ± 28	c	4.6 ± 0.7	b	0.1 ± 0	b
<i>Pittosporum tenuifolium</i>								
S1	890 ± 120	c	73 ± 8.3	b	3.0 ± 0.5	b	0.05 ± 0.02	a
S1+B	780 ± 130	c	1010 ± 160	d	4.2 ± 1.0	c	2.15 ± 0.21	c
S2	50 ± 14	a	35 ± 3.6	a	1.0 ± 0.2	a	0.00 ± 0.01	a
S2+B	180 ± 58	b	610 ± 112	c	5.4 ± 0.6	d	0.82 ± 0.16	b
<i>Myoporum laetum</i>								
S1	160 ± 23	b	20 ± 11	a	4.6 ± 0.7	a	0.00 ± 0.00	a
S1+B	310 ± 100	c	370 ± 150	c	16 ± 6.4	b	0.34 ± 0.19	b
S2	80 ± 21	a	29 ± 15	a	4.0 ± 1.1	a	0.01 ± 0.01	a
S2+B	130 ± 29	b	130 ± 89	b	15 ± 3.5	b	0.20 ± 0.13	b
<i>Coprosma robusta</i>								
S1	340 ± 45	c	45 ± 3.9	a	2.4 ± 0.6	a	0.06 ± 0.02	a
S1+B	590 ± 42	d	490 ± 89	c	6.3 ± 1.0	c	1.63 ± 0.28	c
S2	80 ± 31	a	37 ± 5.9	a	1.9 ± 0.5	a	0.17 ± 0.25	ab
S2+B	160 ± 33	b	140 ± 30	b	4.7 ± 0.5	b	0.36 ± 0.19	b
<i>Austroderia richardii</i>								
S1	170 ± 140	b	15 ± 3.7	a	2.3 ± 0.6	a	0.00 ± 0.01	a
S1+B	280 ± 23	c	140 ± 14	b	3.5 ± 0.4	b	0.11 ± 0.02	b
S2	30 ± 10	a	24 ± 9.8	a	2.8 ± 0.5	ab	0.01 ± 0.01	a
S2+B	50 ± 12	a	160 ± 69	b	5.6 ± 0.7	c	0.07 ± 0.12	ab
<i>Phormium cookianum</i>								
S1	160 ± 37	b	25 ± 6.0	b	2.6 ± 1.6	ab	0.00 ± 0.00	a
S1+B	300 ± 72	c	140 ± 40	d	4.2 ± 1.5	c	0.62 ± 0.26	b
S2	80 ± 23	a	17 ± 7.9	a	1.1 ± 0.3	a	0.00 ± 0.00	a
S2+B	120 ± 34	ab	42 ± 6.3	c	2.9 ± 0.9	bc	0.15 ± 0.07	a
<i>Ozothamnus leptophyllus</i>								
S1	390 ± 95	b	38 ± 14	a	4.2 ± 3.1	a	0.04 ± 0.03	a
S1+B	790 ± 190	c	320 ± 83	c	12 ± 2.3	b	0.53 ± 0.23	c
S2	190 ± 61	a	32 ± 9.2	a	2.0 ± 0.8	a	0.06 ± 0.03	a
S2+B	260 ± 21	ab	93 ± 62	b	5.4 ± 4.2	a	0.18 ± 0.11	b
<i>Coprosma acerosa</i> - Leaves								
S1	780 ± 240	b	77 ± 23	a	3.4 ± 1.6	a	0.07 ± 0.04	a
S1+B	1120 ± 330	c	430 ± 160	c	5.9 ± 1.5	b	1.53 ± 0.49	b
S2	240 ± 21	a	73 ± 20	a	1.7 ± 0.4	a	0.05 ± 0.03	a
S2+B	260 ± 74	a	173 ± 92	b	5.3 ± 2.4	b	0.61 ± 0.48	b
<i>Coprosma acerosa</i> - Fruits								
S1	190 ± 5	c	47 ± 4.4	a	4.9 ± 0.5		0.07 ± 0.03	ab
S1+B	200 ± 16	c	108 ± 4.9	c	5.6 ± 0.5		0.60 ± 0.07	c
S2	50 ± 4	a	45 ± 1.1	a	5.0 ± 1.5		0.05 ± 0.01	a
S2+B	70 ± 11	b	64 ± 5.6	b	6.1 ± 1.4		0.14 ± 0.04	b
<i>Hebe salicifolia</i>								
S1	210 ± 67	a	13 ± 3.7	a	1.5 ± 0.4	b	0.00 ± 0.00	a
S1+B	460 ± 77	b	280 ± 53	c	7.8 ± 1.7	d	1.12 ± 0.21	c
S2	180 ± 17	a	11 ± 2.0	a	0.8 ± 0.2	a	0.00 ± 0.01	a
S2+B	210 ± 31	a	79 ± 32	b	4.9 ± 1.6	c	0.37 ± 0.20	b
<i>Cordyline australis</i>								
S1	390 ± 44	c	36 ± 2.5	a	5.6 ± 1.0	ab	0.04 ± 0.07	a
S1+B	580 ± 180	d	340 ± 82	c	5.6 ± 1.8	ab	1.03 ± 0.18	c
S2	50 ± 35	a	46 ± 14	a	6.3 ± 1.7	a	0.15 ± 0.32	a
S2+B	110 ± 18	b	250 ± 45	b	7.1 ± 1.8	b	0.69 ± 0.11	b
<i>Phormium tenax</i>								
S1	210 ± 38	b	45 ± 5.2	a	2.7 ± 0.7	b	0.05 ± 0.1	a
S1+B	330 ± 89	c	270 ± 24	c	4.6 ± 0.9	c	0.65 ± 0.24	b
S2	90 ± 29	a	44 ± 8.3	a	1.2 ± 0.4	a	0.01 ± 0.01	a
S2+B	90 ± 23	a	110 ± 26	b	4.4 ± 0.5	c	0.12 ± 0.07	a
<i>Olearia paniculata</i>								
S1	140 ± 37	b	21 ± 2.5	a	3.0 ± 0.6	b	0.01 ± 0.01	a
S1+B	280 ± 110	c	280 ± 71	c	11 ± 2.8	c	0.44 ± 0.24	b
S2	60 ± 15	a	20 ± 3.5	a	1.5 ± 0.2	a	0.08 ± 0.15	a
S2+B	60 ± 13	a	72 ± 36	b	8.5 ± 4.1	c	0.09 ± 0.08	a

