

APPENDIX 6: DATA TABLES

Table A6.1 Mean seedling performance for 15 species native to the Caledonian Forest at final harvest (18 weeks). Dry mass and increment were log (ln) transformed prior to ANOVA to correct for heterogeneity of variance. Leaf number were squared rooted (SQRT) for counts. Calculated means include estimated values for missing values. LSD = least significant difference of means at $p < 0.05$.

PAR %	2.5	14	33	100	LSD
<i>U. glabra</i>					
SQRT mean number of leaves	7.739	9.977	10.010	10.572	2.054
ln mean stem height increment	0.538	1.173	1.064	0.752	0.141
ln mean basal diameter increment	0.212	0.897	1.146	1.055	0.114
Leaf area (m ² /g)	0.089	0.288	0.260	0.160	0.036
ln mean leaf mass	0.399	1.967	2.318	2.287	0.439
ln mean stem mass	0.779	2.753	3.110	2.913	0.245
ln mean root mass	0.330	2.004	2.947	2.995	0.311
ln mean total plant mass	1.625	3.416	3.952	3.886	0.248
<i>C. avellana</i>					
SQRT mean number of leaves	5.430	6.726	7.428	7.086	2.054
ln mean stem height increment	0.412	0.927	0.944	0.646	0.141
ln mean basal diameter increment	0.062	0.633	0.801	0.814	0.114
Leaf area (m ² /g)	0.078	0.350	0.310	0.164	0.036
ln mean leaf mass	0.255	1.912	2.337	2.212	0.439
ln mean stem mass	0.833	2.468	2.902	2.752	0.245
ln mean root mass	0.500	1.687	2.397	2.557	0.311
ln mean total plant mass	1.662	3.182	3.685	3.636	0.248
<i>A. glutinosa</i>					
SQRT mean number of leaves	2.935	7.122	8.718	9.008	2.054
ln mean stem height increment	0.203	0.630	0.789	0.634	0.141
ln mean basal diameter increment	0.053	0.675	0.956	1.082	0.114
Leaf area (m ² /g)	0.011	0.117	0.195	0.157	0.036
ln mean leaf mass	-1.559	1.055	1.796	1.894	0.439
ln mean stem mass	0.028	1.761	2.527	2.881	0.245
ln mean root mass	-0.685	0.759	1.714	2.481	0.311
ln mean total plant mass	0.584	2.388	3.189	3.606	0.248
<i>F. excelsior</i>					
SQRT mean number of leaves*	4.867	14.187	15.209	16.903	2.054
ln mean stem height increment	0.315	0.336	0.612	0.372	0.141
ln mean basal diameter increment	-0.010	0.215	0.512	0.630	0.114
Leaf area (m ² /g)*	0.021	0.087	0.106	0.092	0.036
ln mean leaf mass	-1.745	0.827	1.485	1.680	0.439
ln mean stem mass	1.001	1.866	2.608	2.614	0.245
ln mean root mass	1.030	1.602	2.287	2.651	0.311
ln mean total plant mass	1.781	2.624	3.331	3.506	0.248
<i>P. padus</i>					
SQRT mean number of leaves	6.129	7.605	8.467	10.238	2.054
ln mean stem height increment	0.487	0.986	1.124	0.827	0.141
ln mean basal diameter increment	0.072	0.529	0.803	0.819	0.114
Leaf area (m ² /g)	0.050	0.182	0.214	0.168	0.036
ln mean leaf mass	0.062	1.505	2.159	2.315	0.439
ln mean stem mass	0.915	2.461	3.308	3.204	0.245
ln mean root mass	0.515	1.591	2.647	2.906	0.311
ln mean total plant mass	1.658	3.058	3.920	3.981	0.248

Appendix 6

Table A6.1 continued

PAR %	2.5	14	33	100	LSD
<i>Q. petraea</i>					
SQRT mean number of leaves	4.484	7.168	9.468	11.008	2.054
ln mean stem height increment	0.283	0.673	0.755	0.660	0.141
ln mean basal diameter increment	0.021	0.289	1.397	0.494	0.114
Leaf area (m ² /g)	0.035	0.099	0.131	0.143	0.036
ln mean leaf mass	0.033	1.172	1.673	1.954	0.439
ln mean stem mass	0.643	1.319	1.956	2.255	0.245
ln mean root mass	0.899	1.270	1.869	2.382	0.311
ln mean total plant mass	1.692	2.359	2.956	3.323	0.248
<i>S. aucuparia</i>					
SQRT mean number of leaves*	15.737	18.460	23.336	24.252	2.054
ln mean stem height increment	0.323	1.089	1.151	0.861	0.141
ln mean basal diameter increment	0.048	0.529	0.813	0.876	0.114
Leaf area (m ² /g)*	0.051	0.182	0.193	0.189	0.036
ln mean leaf mass	-0.421	1.536	1.934	2.167	0.439
ln mean stem mass	1.008	2.764	3.289	3.190	0.245
ln mean root mass	0.289	1.474	2.294	2.617	0.311
ln mean total plant mass	1.584	3.225	3.787	3.849	0.248
<i>P. tremula</i>					
SQRT mean number of leaves	5.830	8.476	9.235	10.069	2.054
ln mean stem height increment	0.183	0.593	0.644	0.720	0.141
ln mean basal diameter increment	0.046	0.341	0.645	0.839	0.114
Leaf area (m ² /g)	0.012	0.057	0.083	0.079	0.036
ln mean leaf mass	-1.400	0.458	1.064	1.371	0.439
ln mean stem mass	0.044	1.367	1.907	2.432	0.245
ln mean root mass	-0.133	0.771	1.498	2.083	0.311
ln mean total plant mass	0.790	2.042	2.651	3.166	0.248
<i>B. pubescens</i>					
SQRT mean number of leaves	5.808	12.238	12.794	16.392	2.054
ln mean stem height increment	0.476	1.152	1.209	1.036	0.141
ln mean basal diameter increment	0.042	0.802	1.064	1.081	0.114
Leaf area (m ² /g)	0.026	0.185	0.178	0.145	0.036
ln mean leaf mass	-0.986	1.427	1.793	1.974	0.439
ln mean stem mass	0.308	2.432	3.113	3.187	0.245
ln mean root mass	-0.219	1.099	2.062	2.551	0.311
ln mean total plant mass	0.950	2.932	3.599	3.801	0.248
<i>B. pendula</i>					
SQRT mean number of leaves	4.658	8.678	11.378	11.935	2.054
ln mean stem height increment	0.279	0.786	1.127	0.862	0.141
ln mean basal diameter increment	0.039	0.643	1.049	1.115	0.114
Leaf area (m ² /g)	0.019	0.097	0.160	0.124	0.036
ln mean leaf mass	-1.180	0.829	1.645	1.766	0.439
ln mean stem mass	0.184	1.889	2.811	2.863	0.245
ln mean root mass	-0.434	0.722	1.858	2.429	0.311
ln mean total plant mass	0.784	2.402	3.355	3.560	0.248

Table A6.1 continued

PAR % ($\mu\text{mol m}^{-2} \text{s}^{-1}$)	2.5	14	33	100	LSD
<i>S. caprea</i>					
SQRT mean number of leaves	5.979	10.721	12.500	11.569	2.054
ln mean stem height increment	0.716	1.010	1.010	0.793	0.141
ln mean basal diameter increment	0.146	0.780	0.956	1.002	0.114
Leaf area (m^2/g)	0.056	0.191	0.205	0.167	0.036
ln mean leaf mass	-0.239	1.417	1.894	1.941	0.439
ln mean stem mass	0.692	2.396	2.785	2.855	0.245
ln mean root mass	0.656	1.683	2.543	3.002	0.311
ln mean total plant mass	1.580	3.034	3.592	3.810	0.248
<i>S. cinerea</i>					
SQRT mean number of leaves	5.919	10.799	15.265	14.839	2.054
ln mean stem height increment	0.511	1.072	0.903	0.860	0.141
ln mean basal diameter increment	0.102	0.713	0.942	1.033	0.114
Leaf area (m^2/g)	0.027	0.113	0.126	0.124	0.036
ln mean leaf mass	-1.398	0.680	1.412	1.915	0.439
ln mean stem mass	0.356	2.196	2.819	3.046	0.245
ln mean root mass	0.046	1.295	2.300	2.961	0.311
ln mean total plant mass	1.053	2.720	3.445	3.859	0.248
<i>I. aquifolium</i>					
SQRT mean number of leaves	7.289	8.455	10.256	11.648	2.054
ln mean stem height increment	0.399	0.499	0.584	0.603	0.141
ln mean basal diameter increment	0.067	0.416	0.623	0.898	0.114
Leaf area (m^2/g)	0.046	0.075	0.086	0.088	0.036
ln mean leaf mass	1.390	1.885	2.173	2.520	0.439
ln mean stem mass	0.988	1.715	2.177	2.607	0.245
ln mean root mass	0.017	0.749	1.188	1.777	0.311
ln mean total plant mass	2.047	2.660	3.045	3.468	0.248
<i>J. communis</i>					
SQRT mean number of leaves†	-	-	-	-	-
ln mean stem height increment	0.276	0.531	0.799	0.925	0.141
ln mean basal diameter increment	0.024	0.268	0.578	0.847	0.114
Leaf area (m^2/g)†	-	-	-	-	-
ln mean leaf mass	-0.203	0.524	1.206	1.981	0.439
ln mean stem mass	-1.314	-0.453	0.360	1.135	0.245
ln mean root mass	-0.682	-0.239	0.120	1.060	0.311
ln mean total plant mass	0.470	1.148	1.779	2.604	0.248
<i>P. sylvestris</i>					
SQRT mean number of leaves†	-	-	-	-	-
ln mean stem height increment	0.198	0.740	0.838	0.865	0.141
ln mean basal diameter increment	-0.015	0.290	0.666	0.919	0.114
Lamina area (m^2/g)	0.005	0.010	0.019	0.033	0.036
ln mean leaf mass	-0.517	0.448	1.155	1.821	0.439
ln mean stem mass	-1.325	-0.092	0.584	1.222	0.245
ln mean root mass	-0.482	-0.054	0.211	1.048	0.311
ln mean total plant mass	0.402	1.236	1.829	2.539	0.248

*Leaf number and lamina area correspond to leaflets of compound leaves.

†Conifer needles were not counted due to impracticality. *J. communis* needle area was not calculated due to difficulty of needle removal.

