

1 TABLE S.1: Total dry weight (means  $\pm$  s.e.) in eight organs and the whole plant of *T. gesneriana* ‘Paul Richter’ at planting and twenty harvest dates.

DAP*	Organs								Whole plant
	Root	Basal plate	Scales	Daughter bulbs	H-Bulb	Leaves	Scape	Flower	
Total dry weight (g per plant)									
0	0 $\pm$ 0	0.358 $\pm$ 0.001	7.617 $\pm$ 0.078	0.065 $\pm$ 0.007	0.201 $\pm$ 0.063	0.200 $\pm$ 0.003	0.045 $\pm$ 0.003	0.029 $\pm$ 0.000	8.515 $\pm$ 0.011
8	0 $\pm$ 0	0.403 $\pm$ 0.008	8.546 $\pm$ 0.216	0.104 $\pm$ 0.008	0.183 $\pm$ 0.018	0.234 $\pm$ 0.017	0.053 $\pm$ 0.003	0.046 $\pm$ 0.000	9.569 $\pm$ 0.235
17	0.074 $\pm$ 0.012	0.376 $\pm$ 0.026	8.498 $\pm$ 0.307	0.068 $\pm$ 0.002	0.187 $\pm$ 0.034	0.220 $\pm$ 0.001	0.064 $\pm$ 0.001	0.041 $\pm$ 0.001	9.528 $\pm$ 0.376
24	0.163 $\pm$ 0.011	0.287 $\pm$ 0.021	7.987 $\pm$ 0.300	0.072 $\pm$ 0.008	0.198 $\pm$ 0.026	0.252 $\pm$ 0.008	0.074 $\pm$ 0.004	0.045 $\pm$ 0.001	9.078 $\pm$ 0.257
34	0.222 $\pm$ 0.002	0.396 $\pm$ 0.019	7.397 $\pm$ 0.238	0.086 $\pm$ 0.003	0.189 $\pm$ 0.030	0.266 $\pm$ 0.008	0.072 $\pm$ 0.003	0.046 $\pm$ 0.002	8.673 $\pm$ 0.294
43	0.320 $\pm$ 0.021	0.370 $\pm$ 0.024	7.169 $\pm$ 0.211	0.093 $\pm$ 0.012	0.145 $\pm$ 0.025	0.311 $\pm$ 0.007	0.103 $\pm$ 0.006	0.055 $\pm$ 0.001	8.568 $\pm$ 0.220
56	0.288 $\pm$ 0.009	0.362 $\pm$ 0.006	6.458 $\pm$ 0.249	0.091 $\pm$ 0.010	0.145 $\pm$ 0.007	0.369 $\pm$ 0.005	0.152 $\pm$ 0.004	0.062 $\pm$ 0.003	7.928 $\pm$ 0.265
65	0.377 $\pm$ 0.024	0.320 $\pm$ 0.025	6.469 $\pm$ 0.206	0.120 $\pm$ 0.019	0.220 $\pm$ 0.011	0.418 $\pm$ 0.018	0.173 $\pm$ 0.017	0.065 $\pm$ 0.004	8.164 $\pm$ 0.245

73	0.374±0.019	0.357±0.038	5.924±0.326	0.094±0.004	0.180±0.019	0.415±0.004	0.203±0.015	0.071±0.001	7.618±0.360
83	0.350±0.010	0.346±0.023	5.921±0.217	0.159±0.023	0.203±0.008	0.453±0.004	0.213±0.018	0.075±0.005	7.721±0.239
94	0.349±0.031	0.273±0.010	5.258±0.312	0.159±0.016	0.200±0.012	0.600±0.029	0.268±0.009	0.087±0.004	7.194±0.370
105	0.352±0.034	0.350±0.005	4.533±0.199	0.233±0.008	0.236±0.045	0.934±0.031	0.298±0.008	0.124±0.003	7.061±0.135
115	0.357±0.074	0.301±0.009	3.630±0.049	0.407±0.062	0.331±0.068	1.441±0.110	0.397±0.024	0.188±0.014	7.053±0.207
125	0.367±0.053	0.300±0.015	2.215±0.258	1.435±0.342	0.625±0.130	2.140±0.272	0.866±0.046	0.424±0.018	8.372±0.389
135	0.373±0.136	0.263±0.013	1.585±0.150	3.079±0.172	0.471±0.218	2.554±0.232	1.634±0.148	0.740±0.051	10.700±0.458
147	0.308±0.010	0.242±0.016	1.136±0.020	5.935±0.460	0.777±0.005	3.072±0.212	2.487±0.185	0.314±0.061	14.270±0.119
156	0.507±0.069	0.248±0.009	0.836±0.043	9.552±0.308	1.687±0.266	2.715±0.138	2.427±0.056	0.352±0.066	18.325±0.340
167	0.573±0.053	0.245±0.016	0.556±0.086	13.871±0.381	2.109±0.172	2.614±0.242	2.217±0.154	0.257±0.012	22.440±0.332
177	0.322±0.010	0.247±0.007	0.567±0.060	19.171±0.658	2.385±0.499	2.196±0.061	1.807±0.238	0.215±0.076	26.910±1.171
188	0.371±0.002	0.268±0.021	0.506±0.020	23.847±1.392	2.897±0.356	1.366±0.193	1.461±0.081	0.220±0.031	30.936±1.016

198 0.288±0.044 0.163±0.015 0.346±0.017 23.568±1.978 0.823±0.063 0.824±0.236 1.565±0.164 0.134±0.033 27.711±2.399

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2 \*DAP = days after planting; planting occurred on 17 Nov.; key physiological dates included shoot emergence (94 DAP, 19 Feb.), minimum plant dry matter (115 DAP, 12 Mar.),  
3 peak shoot dry matter (147 DAP, 13 Apr.), and maturity (188 DAP, 24 May).

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5 TABLE S.2: Total N content (means  $\pm$  s.e.) in eight organs and the whole plant of *T. gesneriana* ‘Paul Richter’ at planting and twenty harvest dates.

DAP*	Organs								Whole plant
	Root	Basal plate	Scales	Daughter bulbs	H-Bulb	Leaves	Scape	Flower	
Total nitrogen (mg per plant)									
0	0 $\pm$ 0	8.84 $\pm$ 0.26	83.79 $\pm$ 5.73	2.30 $\pm$ 0.33	5.49 $\pm$ 1.67	8.75 $\pm$ 0.36	1.96 $\pm$ 0.03	1.27 $\pm$ 0.06	112.39 $\pm$ 8.39
8	0 $\pm$ 0	10.46 $\pm$ 0.30	101.99 $\pm$ 7.34	3.35 $\pm$ 0.32	4.83 $\pm$ 0.23	9.36 $\pm$ 1.39	2.54 $\pm$ 0.13	1.69 $\pm$ 0.11	134.21 $\pm$ 8.43
17	2.73 $\pm$ 0.47	8.58 $\pm$ 0.81	85.55 $\pm$ 4.32	1.86 $\pm$ 0.06	4.74 $\pm$ 0.42	8.67 $\pm$ 0.14	2.79 $\pm$ 0.07	1.68 $\pm$ 0.05	116.60 $\pm$ 4.181
24	6.21 $\pm$ 1.09	5.66 $\pm$ 0.68	100.64 $\pm$ 3.26	2.21 $\pm$ 0.42	4.45 $\pm$ 0.57	10.33 $\pm$ 0.45	2.75 $\pm$ 0.04	1.87 $\pm$ 0.03	134.12 $\pm$ 4.84
34	9.49 $\pm$ 0.26	8.35 $\pm$ 0.66	90.00 $\pm$ 8.51	2.98 $\pm$ 0.14	5.17 $\pm$ 0.56	12.00 $\pm$ 0.32	3.32 $\pm$ 0.08	1.75 $\pm$ 0.12	133.05 $\pm$ 9.29
43	14.50 $\pm$ 0.99	8.13 $\pm$ 0.66	77.67 $\pm$ 1.75	2.84 $\pm$ 0.27	3.58 $\pm$ 0.48	13.29 $\pm$ 0.32	4.66 $\pm$ 0.52	2.02 $\pm$ 0.06	126.70 $\pm$ 3.30
56	14.50 $\pm$ 0.42	8.50 $\pm$ 0.14	78.36 $\pm$ 7.22	3.22 $\pm$ 0.39	4.60 $\pm$ 0.27	15.89 $\pm$ 0.34	6.43 $\pm$ 0.25	2.52 $\pm$ 0.11	134.02 $\pm$ 7.54
65	19.80 $\pm$ 1.09	8.13 $\pm$ 0.63	71.59 $\pm$ 5.34	4.27 $\pm$ 0.76	6.71 $\pm$ 0.59	19.03 $\pm$ 0.20	7.03 $\pm$ 0.66	2.64 $\pm$ 0.25	139.19 $\pm$ 6.36

73	17.76±1.07	8.75±1.04	75.04±7.36	3.45±0.03	5.36±0.42	18.49±1.30	7.27±0.03	2.86±0.10	138.97±6.64
83	16.51±1.65	8.43±0.45	60.59±2.46	5.38±0.77	6.66±0.18	19.45±0.88	8.33±0.25	2.91±0.14	128.26±3.23
94	16.41±1.05	8.31±0.32	51.18±6.40	5.43±0.34	6.76±0.35	26.81±1.22	10.64±0.55	3.80±0.27	129.33±7.18
105	16.99±2.90	7.97±0.73	43.52±4.51	8.33±0.42	9.16±1.72	45.91±4.09	13.52±0.62	5.14±0.17	150.54±10.16
115	13.41±1.64	6.67±0.25	31.46±2.97	11.83±1.61	11.30±2.38	66.01±5.82	17.65±2.21	6.65±0.84	164.98±9.95
125	13.13±1.40	6.18±0.36	16.54±1.70	36.58±5.91	18.61±4.54	90.59±16.29	29.75±4.75	14.96±1.13	226.36±22.10
135	13.33±2.90	5.66±0.17	12.79±0.81	58.19±4.62	10.89±6.43	106.86±14.64	36.99±4.84	23.52±2.69	268.22±29.28
147	7.85±1.65	4.50±0.27	9.92±0.46	79.33±3.65	11.42±1.06	100.14±15.45	42.03±4.31	10.05±2.24	265.23±25.52
156	9.01±0.98	4.92±0.45	9.08±1.08	130.87±7.62	28.51±1.42	97.47±7.05	46.44±5.18	10.66±2.31	336.96±20.06
167	8.11±1.11	4.57±0.50	7.11±0.78	161.36±14.32	25.66±3.66	74.49±12.55	26.67±5.99	6.16±0.75	314.14±37.83
177	4.66±0.29	5.17±0.29	6.03±1.41	254.34±12.10	28.94±5.04	55.86±1.35	21.62±3.02	3.63±1.27	380.25±17.00
188	2.67±0.26	3.30±0.41	5.10±0.12	266.30±13.10	33.99±6.61	11.74±2.13	5.45±0.81	3.45±0.96	332.00±19.15

198    2.01±0.05        1.60±0.22        3.64±0.43        351.95±45.35        11.90±2.04        5.82±2.44        6.16±1.12        2.23±0.56    385.32±49.36

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6    \*DAP = days after planting; planting occurred on 17 Nov.; key physiological dates included shoot emergence (94 DAP, 19 Feb.), minimum plant dry matter (115 DAP, 12 Mar.),  
7    peak shoot dry matter (147 DAP, 13 Apr.), and maturity (188 DAP, 24 May).

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10 TABLE S.3: Total P content (means  $\pm$  s.e.) in eight organs and the whole plant of *T. gesneriana* ‘Paul Richter’ at planting and twenty harvest dates.

DAP*	Organs								Whole plant
	Root	Basal plate	Scales	Daughter bulbs	H-Bulb	Leaves	Scape	Flower	
Total phosphorus (mg per plant)									
0	0 $\pm$ 0	1.48 $\pm$ 0.02	9.39 $\pm$ 0.57	0.44 $\pm$ 0.05	1.02 $\pm$ 0.26	1.44 $\pm$ 0.08	0.35 $\pm$ 0.02	0.26 $\pm$ 0.00	14.38 $\pm$ 0.97
8	0 $\pm$ 0	1.65 $\pm$ 0.04	11.11 $\pm$ 0.28	0.67 $\pm$ 0.05	0.85 $\pm$ 0.09	1.67 $\pm$ 0.12	0.41 $\pm$ 0.03	0.37 $\pm$ 0.00	16.74 $\pm$ 0.42
17	0.40 $\pm$ 0.04	1.32 $\pm$ 0.09	10.20 $\pm$ 0.45	0.34 $\pm$ 0.01	0.64 $\pm$ 0.070	1.35 $\pm$ 0.03	0.44 $\pm$ 0.00	0.29 $\pm$ 0.02	14.99 $\pm$ 0.37
24	0.96 $\pm$ 0.10	0.90 $\pm$ 0.09	10.92 $\pm$ 0.43	0.44 $\pm$ 0.04	0.74 $\pm$ 0.10	1.70 $\pm$ 0.04	0.52 $\pm$ 0.03	0.37 $\pm$ 0.01	16.54 $\pm$ 0.76
34	1.38 $\pm$ 0.11	1.37 $\pm$ 0.03	9.12 $\pm$ 0.54	0.51 $\pm$ 0.01	0.84 $\pm$ 0.09	1.76 $\pm$ 0.08	0.48 $\pm$ 0.03	0.37 $\pm$ 0.03	15.85 $\pm$ 0.73
43	2.39 $\pm$ 0.02	1.30 $\pm$ 0.03	8.60 $\pm$ 1.10	0.55 $\pm$ 0.05	0.70 $\pm$ 0.08	2.05 $\pm$ 0.03	0.63 $\pm$ 0.02	0.42 $\pm$ 0.02	16.65 $\pm$ 1.23
56	2.31 $\pm$ 0.06	1.52 $\pm$ 0.04	7.32 $\pm$ 0.62	0.59 $\pm$ 0.08	0.79 $\pm$ 0.05	2.34 $\pm$ 0.04	1.01 $\pm$ 0.03	0.47 $\pm$ 0.02	16.34 $\pm$ 0.67
65	2.54 $\pm$ 0.34	1.38 $\pm$ 0.06	8.41 $\pm$ 1.42	0.73 $\pm$ 0.11	0.95 $\pm$ 0.07	2.48 $\pm$ 0.08	0.98 $\pm$ 0.07	0.43 $\pm$ 0.02	17.89 $\pm$ 1.26

73	2.67±0.26	1.29±0.14	7.90±0.68	0.52±0.07	0.80±0.06	2.36±0.04	1.13±0.05	0.47±0.00	17.14±0.43
83	2.79±0.20	1.34±0.12	6.32±0.15	0.82±0.11	0.97±0.05	2.61±0.02	1.19±0.06	0.50±0.03	16.53±0.18
94	2.85±0.67	1.52±0.11	5.43±0.57	0.87±0.06	1.01±0.01	3.84±0.46	1.61±0.08	0.63±0.04	17.76±1.55
105	3.36±0.39	1.59±0.06	4.38±0.10	1.29±0.02	1.24±0.22	4.70±0.77	2.15±0.12	0.79±0.03	19.49±0.84
115	3.05±0.74	1.33±0.14	3.02±0.27	1.79±0.26	1.58±0.31	6.97±0.64	2.78±0.24	1.02±0.05	21.54±1.81
125	2.50±0.58	1.15±0.08	1.48±0.07	4.83±1.12	2.50±0.56	7.20±0.95	4.67±0.57	1.87±0.15	26.20±3.01
135	2.00±1.35	0.95±0.15	0.95±0.11	8.01±0.55	1.23±0.50	6.90±0.75	5.77±0.79	2.91±0.12	28.71±1.97
147	1.57±0.30	0.63±0.07	0.72±0.09	11.67±1.37	1.63±0.18	6.25±0.78	7.13±1.17	1.26±0.08	30.85±3.25
156	0.74±0.08	0.48±0.09	0.56±0.09	14.01±1.19	2.81±0.34	5.25±0.28	5.42±0.64	1.30±0.21	30.58±2.23
167	1.66±0.73	0.46±0.06	0.33±0.05	19.42±1.79	3.02±0.10	3.92±0.06	3.55±0.07	0.74±0.10	33.10±2.60
177	0.57±0.15	0.40±0.03	0.30±0.07	25.56±2.11	3.34±0.39	2.49±0.10	1.81±0.25	0.34±0.16	34.81±2.85
188	0.37±0.06	0.29±0.04	0.22±0.02	34.18±1.38	4.25±0.71	0.55±0.18	0.44±0.17	0.43±0.08	40.72±0.46



198    0.13±0.01        0.09±0.01        0.17±0.03        40.07±3.36        1.51±0.26        0.19±0.09        0.31±0.03        0.19±0.05        42.66±3.36

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11    \*DAP = days after planting; planting occurred on 17 Nov.; key physiological dates included shoot emergence (94 DAP, 19 Feb.), minimum plant dry matter (115 DAP, 12 Mar.),  
12    peak shoot dry matter (147 DAP, 13 Apr.), and maturity (188 DAP, 24 May).

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15 TABLE S.4: Total K content (means  $\pm$  s.e.) in eight organs and the whole plant of *T. gesneriana* ‘Paul Richter’ at planting and twenty harvest dates.

DAP*	Organs								Whole plant
	Root	Basal plate	Scales	Daughter bulbs	H-Bulb	Leaves	Scape	Flower	
Total potassium (mg per plant)									
0	0 $\pm$ 0	5.02 $\pm$ 0.02	55.86 $\pm$ 0.97	1.14 $\pm$ 0.18	4.43 $\pm$ 1.26	4.91 $\pm$ 0.09	0.90 $\pm$ 0.04	0.83 $\pm$ 0.03	73.10 $\pm$ 2.45
8	0 $\pm$ 0	5.42 $\pm$ 0.19	61.82 $\pm$ 3.71	1.80 $\pm$ 0.17	3.57 $\pm$ 0.34	5.36 $\pm$ 0.29	1.03 $\pm$ 0.05	1.15 $\pm$ 0.01	80.16 $\pm$ 4.10
17	1.23 $\pm$ 0.20	4.65 $\pm$ 0.28	62.04 $\pm$ 3.31	1.26 $\pm$ 0.06	3.57 $\pm$ 0.21	5.04 $\pm$ 0.11	1.31 $\pm$ 0.12	1.01 $\pm$ 0.01	80.11 $\pm$ 3.55
24	3.19 $\pm$ 0.35	3.39 $\pm$ 0.48	63.36 $\pm$ 2.12	1.41 $\pm$ 0.17	3.81 $\pm$ 0.80	5.65 $\pm$ 0.36	1.52 $\pm$ 0.04	1.12 $\pm$ 0.05	83.46 $\pm$ 3.79
34	4.90 $\pm$ 0.30	4.62 $\pm$ 0.27	54.74 $\pm$ 2.50	1.62 $\pm$ 0.09	3.89 $\pm$ 0.46	5.71 $\pm$ 0.28	1.44 $\pm$ 0.04	1.14 $\pm$ 0.07	78.06 $\pm$ 3.37
43	7.36 $\pm$ 0.77	4.25 $\pm$ 0.27	53.05 $\pm$ 5.29	1.88 $\pm$ 0.25	3.15 $\pm$ 0.42	6.75 $\pm$ 0.28	2.12 $\pm$ 0.16	1.40 $\pm$ 0.10	79.96 $\pm$ 6.66
56	6.28 $\pm$ 0.43	4.18 $\pm$ 0.06	46.50 $\pm$ 1.62	1.66 $\pm$ 0.21	3.53 $\pm$ 0.21	7.45 $\pm$ 0.08	3.03 $\pm$ 0.12	1.56 $\pm$ 0.05	74.20 $\pm$ 1.56
65	8.23 $\pm$ 0.50	4.04 $\pm$ 0.18	45.71 $\pm$ 5.66	2.11 $\pm$ 0.45	4.47 $\pm$ 0.33	8.08 $\pm$ 0.31	3.03 $\pm$ 0.35	1.57 $\pm$ 0.01	77.24 $\pm$ 5.56

73	8.72±1.21	4.45±0.14	44.24±2.59	1.67±0.10	3.95±0.31	8.33±0.07	3.47±0.22	1.57±0.01	76.40±3.16
83	7.78±0.43	3.85±0.51	43.42±2.88	2.86±0.42	4.45±0.40	9.19±0.15	3.85±0.21	1.78±0.13	77.19±3.74
94	7.81±0.87	4.64±0.34	35.93±1.04	2.63±0.18	4.39±0.15	12.23±0.48	4.89±0.22	1.93±0.08	74.45±1.81
105	7.87±1.22	4.06±0.12	29.62±1.56	3.74±0.02	5.15±0.96	19.30±0.90	7.25±0.16	2.38±0.06	79.37±1.13
115	4.55±0.83	3.36±0.22	23.23±2.21	6.19±1.07	7.47±1.48	32.77±2.34	12.12±1.02	3.50±0.19	93.20±6.47
125	4.81±1.21	2.84±0.12	11.59±1.42	21.28±6.01	13.74±3.32	53.86±11.63	25.88±4.63	7.51±0.85	141.51±22.60
135	4.34±1.30	2.15±0.11	9.78±0.87	41.36±2.92	9.30±4.96	74.42±8.42	35.19±2.52	15.83±1.16	192.36±16.84
147	3.19±0.38	1.45±0.06	8.22±0.32	65.28±2.94	10.77±0.70	84.27±7.70	40.04±0.59	6.97±1.21	220.19±5.59
156	4.02±0.27	1.42±0.12	5.85±0.44	92.34±2.89	23.00±1.97	83.71±5.09	37.22±3.02	8.37±1.63	255.94±9.98
167	4.07±0.78	1.29±0.08	2.83±0.39	119.75±1.50	22.85±2.01	82.24±3.52	31.62±1.67	5.42±0.56	270.08±6.00
177	2.38±0.30	1.34±0.06	1.91±0.43	175.73±8.98	27.03±3.27	55.27±5.81	30.00±2.77	4.47±1.75	298.14±10.08
188	1.68±0.25	0.93±0.08	0.73±0.04	232.11±11.74	29.84±5.60	26.58±3.37	14.37±1.91	4.83±0.52	311.07±2.01

198    0.39±0.04        0.26±0.04        0.37±0.06        243.54±17.20        9.52±1.62        7.72±2.54        13.15±2.98        2.41±0.65    277.34±21.97

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16    \*DAP = days after planting; planting occurred on 17 Nov.; key physiological dates included shoot emergence (94 DAP, 19 Feb.), minimum plant dry matter (115 DAP, 12 Mar.),  
17    peak shoot dry matter (147 DAP, 13 Apr.), and maturity (188 DAP, 24 May).

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20 TABLE S.5: Total Ca content (means  $\pm$  s.e.) in eight organs and the whole plant of *T. gesneriana* ‘Paul Richter’ at planting and twenty harvest dates.

DAP*	Organs								Whole plant
	Root	Basal plate	Scales	Daughter bulbs	H-Bulb	Leaves	Scape	Flower	
	Total calcium (mg per plant)								
0	0 $\pm$ 0	0.36 $\pm$ 0.02	1.52 $\pm$ 0.02	0.11 $\pm$ 0.01	0.30 $\pm$ 0.07	0.22 $\pm$ 0.00	0.05 $\pm$ 0.00	0.09 $\pm$ 0.00	2.65 $\pm$ 0.04
8	0 $\pm$ 0	0.46 $\pm$ 0.04	1.71 $\pm$ 0.04	0.17 $\pm$ 0.01	0.26 $\pm$ 0.02	0.23 $\pm$ 0.00	0.05 $\pm$ 0.01	0.10 $\pm$ 0.00	2.97 $\pm$ 0.08
17	0.14 $\pm$ 0.02	0.56 $\pm$ 0.10	1.70 $\pm$ 0.06	0.12 $\pm$ 0.00	0.30 $\pm$ 0.10	0.22 $\pm$ 0.00	0.07 $\pm$ 0.01	0.09 $\pm$ 0.00	3.20 $\pm$ 0.26
24	0.24 $\pm$ 0.01	0.63 $\pm$ 0.04	1.60 $\pm$ 0.06	0.13 $\pm$ 0.01	0.23 $\pm$ 0.04	0.24 $\pm$ 0.00	0.08 $\pm$ 0.00	0.10 $\pm$ 0.00	3.25 $\pm$ 0.11
34	0.30 $\pm$ 0.03	0.50 $\pm$ 0.04	1.48 $\pm$ 0.05	0.16 $\pm$ 0.01	0.31 $\pm$ 0.02	0.25 $\pm$ 0.01	0.07 $\pm$ 0.00	0.10 $\pm$ 0.01	3.17 $\pm$ 0.05
43	0.56 $\pm$ 0.06	0.54 $\pm$ 0.04	2.39 $\pm$ 0.17	0.19 $\pm$ 0.03	0.27 $\pm$ 0.04	0.29 $\pm$ 0.01	0.10 $\pm$ 0.01	0.11 $\pm$ 0.01	4.44 $\pm$ 0.32
56	0.41 $\pm$ 0.04	0.58 $\pm$ 0.13	1.94 $\pm$ 0.07	0.19 $\pm$ 0.02	0.27 $\pm$ 0.03	0.30 $\pm$ 0.02	0.15 $\pm$ 0.00	0.13 $\pm$ 0.00	3.97 $\pm$ 0.18
65	0.55 $\pm$ 0.02	0.52 $\pm$ 0.12	2.59 $\pm$ 0.30	0.27 $\pm$ 0.06	0.38 $\pm$ 0.06	0.35 $\pm$ 0.01	0.16 $\pm$ 0.02	0.13 $\pm$ 0.00	4.96 $\pm$ 0.34

73	0.50±0.04	0.74±0.11	2.17±0.20	0.19±0.04	0.29±0.03	0.37±0.04	0.20±0.01	0.14±0.01	4.61±0.40
83	0.56±0.05	0.66±0.13	2.37±0.09	0.31±0.03	0.42±0.02	0.42±0.04	0.26±0.02	0.18±0.01	5.18±0.05
94	0.54±0.04	0.70±0.05	2.45±0.21	0.40±0.02	0.44±0.03	0.62±0.01	0.38±0.02	0.22±0.00	5.75±0.28
105	0.55±0.10	0.62±0.02	3.17±0.34	0.52±0.03	0.61±0.09	2.65±0.27	0.54±0.06	0.29±0.02	8.94±0.47
115	0.67±0.20	0.66±0.04	3.51±0.83	0.71±0.08	1.11±0.24	6.39±0.76	0.99±0.11	0.38±0.04	14.42±1.94
125	0.77±0.16	1.03±0.13	4.73±0.58	2.58±0.93	2.25±0.56	16.41±4.84	3.90±0.79	0.51±0.04	32.17±7.19
135	0.70±0.26	0.83±0.07	5.55±0.55	3.18±0.09	1.76±1.14	23.93±4.22	6.26±1.19	0.89±0.09	43.10±6.78
147	0.68±0.09	0.92±0.19	5.64±0.47	3.36±0.57	2.67±0.08	36.04±6.16	9.12±0.79	0.54±0.15	58.97±7.37
156	1.18±0.24	1.06±0.12	5.91±0.45	3.18±0.96	5.06±0.48	40.09±6.83	8.90±1.35	0.62±0.08	66.01±9.63
167	0.95±0.12	1.05±0.09	4.91±0.69	3.70±0.83	3.80±0.41	42.78±4.51	8.50±1.28	0.53±0.15	66.22±6.38
177	1.09±0.08	1.57±0.07	6.10±0.31	16.61±1.19	5.25±0.97	47.59±4.97	11.50±1.66	0.82±0.31	90.55±7.89
188	1.22±0.10	1.75±0.23	6.36±0.26	19.08±2.07	4.06±1.33	35.73±5.00	12.42±1.29	0.61±0.06	81.23±6.86

198      0.81±0.14      1.13±0.05      4.59±0.31      14.14±1.89      0.77±0.06      25.18±9.26      14.04±2.13      0.86±0.26      61.50±13.25

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21 \*DAP = days after planting; planting occurred on 17 Nov.; key physiological dates included shoot emergence (94 DAP, 19 Feb.), minimum plant dry matter (115 DAP, 12 Mar.),  
22 peak shoot dry matter (147 DAP, 13 Apr.), and maturity (188 DAP, 24 May).

23

24

25 TABLE S.6: Total Mg content (means  $\pm$  s.e.) in eight organs and the whole plant of *T. gesneriana* 'Paul Richter' at planting and twenty harvest dates.

DAP*	Organs								Whole plant
	Root	Basal plate	Scales	Daughter bulbs	H-Bulb	Leaves	Scape	Flower	
Total magnesium (mg per plant)									
0	0 $\pm$ 0	0.43 $\pm$ 0.00	3.81 $\pm$ 0.04	0.13 $\pm$ 0.01	0.26 $\pm$ 0.08	0.35 $\pm$ 0.01	0.10 $\pm$ 0.00	0.07 $\pm$ 0.00	5.14 $\pm$ 0.06
8	0 $\pm$ 0	0.48 $\pm$ 0.01	3.99 $\pm$ 0.37	0.19 $\pm$ 0.02	0.20 $\pm$ 0.02	0.39 $\pm$ 0.02	0.11 $\pm$ 0.01	0.08 $\pm$ 0.00	5.45 $\pm$ 0.38
17	0.14 $\pm$ 0.02	0.54 $\pm$ 0.03	4.25 $\pm$ 0.15	0.12 $\pm$ 0.00	0.19 $\pm$ 0.02	0.39 $\pm$ 0.00	0.13 $\pm$ 0.02	0.08 $\pm$ 0.00	5.83 $\pm$ 0.17
24	0.30 $\pm$ 0.03	0.38 $\pm$ 0.04	3.99 $\pm$ 0.15	0.14 $\pm$ 0.02	0.20 $\pm$ 0.04	0.45 $\pm$ 0.02	0.14 $\pm$ 0.01	0.08 $\pm$ 0.00	5.69 $\pm$ 0.12
34	0.41 $\pm$ 0.04	0.52 $\pm$ 0.02	3.70 $\pm$ 0.12	0.16 $\pm$ 0.00	0.24 $\pm$ 0.03	0.44 $\pm$ 0.02	0.14 $\pm$ 0.00	0.08 $\pm$ 0.01	5.69 $\pm$ 0.16
43	0.67 $\pm$ 0.06	0.53 $\pm$ 0.01	3.82 $\pm$ 0.14	0.17 $\pm$ 0.01	0.21 $\pm$ 0.03	0.52 $\pm$ 0.00	0.20 $\pm$ 0.02	0.10 $\pm$ 0.01	6.22 $\pm$ 0.24
56	0.52 $\pm$ 0.06	0.60 $\pm$ 0.04	3.23 $\pm$ 0.12	0.20 $\pm$ 0.03	0.24 $\pm$ 0.01	0.60 $\pm$ 0.02	0.31 $\pm$ 0.00	0.11 $\pm$ 0.00	5.81 $\pm$ 0.23
65	0.72 $\pm$ 0.02	0.63 $\pm$ 0.06	3.88 $\pm$ 0.26	0.26 $\pm$ 0.04	0.35 $\pm$ 0.03	0.70 $\pm$ 0.03	0.33 $\pm$ 0.02	0.12 $\pm$ 0.00	6.98 $\pm$ 0.28



73	0.64±0.07	0.64±0.04	3.16±0.34	0.17±0.03	0.27±0.02	0.70±0.03	0.38±0.01	0.12±0.00	6.09±0.33
83	0.62±0.00	0.61±0.08	3.16±0.09	0.30±0.03	0.33±0.01	0.76±0.05	0.39±0.01	0.14±0.01	6.29±0.18
94	0.52±0.08	0.65±0.04	3.16±0.19	0.32±0.02	0.32±0.01	1.06±0.02	0.50±0.03	0.16±0.01	6.69±0.16
105	0.60±0.04	0.61±0.04	2.87±0.27	0.42±0.01	0.43±0.07	1.84±0.13	0.63±0.04	0.20±0.00	7.59±0.14
115	0.48±0.11	0.43±0.05	2.18±0.18	0.54±0.07	0.52±0.11	2.64±0.19	0.77±0.04	0.28±0.02	7.84±0.53
125	0.61±0.13	0.52±0.03	1.77±0.14	1.82±0.46	1.10±0.32	4.92±1.29	2.14±0.43	0.62±0.06	13.51±2.38
135	0.67±0.35	0.53±0.04	2.01±0.22	2.87±0.19	0.69±0.43	6.47±1.10	3.16±0.36	1.13±0.09	17.54±1.92
147	0.54±0.05	0.52±0.02	1.97±0.24	4.35±0.11	0.91±0.06	8.91±1.76	4.81±0.35	0.54±0.08	22.56±2.48
156	0.83±0.17	0.62±0.07	1.95±0.15	7.01±0.17	2.02±0.23	8.42±1.22	4.77±0.60	0.69±0.15	26.31±2.33
167	1.18±0.40	0.60±0.06	1.33±0.30	9.25±0.24	2.04±0.07	7.93±0.72	3.99±0.40	0.52±0.04	26.84±1.62
177	0.87±0.16	0.82±0.03	1.42±0.06	16.61±1.19	2.86±0.60	7.47±0.85	4.28±0.66	0.62±0.15	34.95±3.46
188	0.37±0.04	0.76±0.09	1.27±0.04	20.67±1.90	2.61±0.56	4.46±0.66	3.17±0.38	0.57±0.04	33.87±0.99

198    0.19±0.00        0.44±0.05        0.69±0.01        18.85±1.58        0.71±0.06        2.11±0.81        2.97±0.59        0.42±0.11        26.40±3.04

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26    \*DAP = days after planting; planting occurred on 17 Nov.; key physiological dates included shoot emergence (94 DAP, 19 Feb.), minimum plant dry matter (115 DAP, 12 Mar.),  
27    peak shoot dry matter (147 DAP, 13 Apr.), and maturity (188 DAP, 24 May).

28

29 TABLE S.7: Percentage distribution of dry matter, N, P, K, Ca, and Mg between the eight organs  
 30 of *T. gesneriana* ‘Paul Richter’ at five stages of growth.

Plant organ	Substance					
	D. wt.	N	P	K	Ca	Mg
<i>(a)</i> Planting (0 DAP, 17 Nov.)*						
Roots	0.0	0.0	0.0	0.0	0.0	0.0
Basal plate	4.2	7.9	10.3	6.9	13.5	8.4
Scales	89.5	74.5	65.3	76.4	57.5	74.1
Daughter-bulbs	0.8	2.0	3.1	1.6	4.3	2.5
H-bulb	2.4	4.9	7.1	6.1	11.4	5.1
Leaves	2.3	7.8	10.0	6.7	8.3	6.7
Scape	0.5	1.7	2.4	1.2	1.8	1.9
Flower	0.3	1.1	1.8	1.1	3.3	1.3
<i>(b)</i> Shoot emergence (94 DAP, 19 Feb.)						
Roots	4.9	12.7	16.1	10.5	9.3	7.8
Basal plate	3.8	6.4	8.5	6.2	12.2	9.8
Scales	73.1	39.6	30.6	48.3	42.7	47.2
Daughter-bulbs	2.2	4.2	4.9	3.5	6.9	4.7
H-bulb	2.8	5.2	5.7	5.9	7.7	4.8
Leaves	8.3	20.7	21.6	16.4	10.8	15.9
Scape	3.7	8.2	9.0	6.6	6.7	7.5
Flower	1.2	2.9	3.5	2.6	3.8	2.3
<i>(c)</i> Minimum plant dry matter (115 DAP, 12 Mar.)						
Roots	5.1	8.1	14.2	4.9	4.6	6.1
Basal plate	4.3	4.0	6.2	3.6	4.6	5.5
Scales	51.5	19.1	14.0	24.9	24.3	27.8
Daughter-bulbs	5.8	7.2	8.3	6.6	4.9	6.9
H-bulb	4.7	6.8	7.3	8.0	7.7	6.6
Leaves	20.4	40.0	32.3	35.2	44.3	33.7
Scape	5.6	10.7	12.9	13.0	6.9	9.8
Flower	2.7	4.0	4.8	3.8	2.6	3.6

(d) Peak shoot dry matter (147 DAP, 13 Apr.)

Roots	2.2	3.0	5.1	1.5	1.1	2.4
Basal plate	1.7	1.7	2.0	0.7	1.6	2.3
Scales	8.0	3.7	2.3	3.7	9.6	8.7
Daughter-bulbs	41.6	29.9	37.8	29.6	5.7	19.3
H-bulb	5.4	4.3	5.3	4.9	4.5	4.0
Leaves	21.5	37.8	20.2	38.3	61.1	39.5
Scape	17.4	15.8	23.1	18.2	15.5	21.3
Flower	2.2	3.8	4.1	3.2	0.9	2.4

(e) Maturity (188 DAP, 24 May)

Roots	1.2	0.8	0.9	0.5	1.5	1.1
Basal plate	0.9	1.0	0.7	0.3	2.2	2.2
Scales	1.6	1.5	0.5	0.2	7.8	3.7
Daughter-bulbs	77.1	80.2	83.9	74.6	23.5	61.0
H-bulb	9.4	10.2	10.4	9.6	5.0	7.7
Leaves	4.4	3.5	1.3	8.5	44.0	13.2
Scape	4.7	1.6	1.1	4.6	15.3	9.3
Flower	0.7	1.0	1.1	1.6	0.7	1.7

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31 \*DAP = days after planting.