Supplementary Material

Tab. S1 - Chemical characteristics of the soil used in the study: electrical conductivity (EC), total organic carbon (C), Kjeldahl nitrogen (N), extractable phosphorus (eP), exchangeable calcium (Ca), exchangeable magnesium (Mg), exchangeable potassium (K), exchangeable sodium (Na), cation exchange capacity (CEC), and total phosphorus (TP).

Characteristic	Value
CE (dS m $^{-1}$)	0.75
C (g kg $^{-1}$)	71
N (g kg^{-1})	5.28
Pe (mg kg^{-1})	103.4
Ca (cmol kg^{-1})	27.32
Mg (cmol kg^{-1})	9.5
K (cmol kg^{-1})	3.2
Na (cmol kg^{-1})	0.9
CIC (cmol kg^{-1})	36.9
PT (mg kg^{-1})	921

Tab. S2 - Summary of variables measured in the experiment. The abbreviation of each variable is reported with its units, the sampling moment when it was measured, and the description of every variable.

Variable	Sampling	Description
$TOTAL_{dw}$(g)	summer & winter	Total dry weight
$STEM_{dw}$ (g)	summer & winter	Stem dry weight
$LEAF_{dw}$ (g)	summer & winter	Leaf dry weight
$ROOT_{dw}$ (g)	summer & winter	Root dry weight
$STEM_{dw}/ROOT_{dw}$	summer & winter	Stem-roots relation
Lsize (cm^2)	summer	Leaf mean size
Ldays (days)		Time between bud burst and foliar abscission
LA (cm^2)	summer	Total leaf area
SLA (cm^2 g^{-1})	summer	Specific leaf area
LAD (m^2 day)		Leaf area duration
Asat (µmol m^{-2} s^{-1})	summer	Light-saturated photosynthetic rate
gs (mmol m^{-2} s^{-1})	summer	Stomatal conductance
WUEi	summer	Intrinsic water-use efficiency
WC (kg)		Accumulated water consumption
WUEb	winter	Bulk water-use efficiency
$STEM_{dw}$/WC (g kg^{-1})	winter	Water-use efficiency for producing stem growth
$WC/ROOT_{dw}$ (kg g^{-1})	winter	Root efficiency for up taking water
kh (g cm s^{-1} MPa^{-1})	summer & winter	Stem hydraulic conductivity
ks (g cm^{-1} s^{-1} MPa^{-1})	summer & winter	Specific hydraulic conductivity
kl (g cm^{-1} s^{-1} MPa^{-1})	summer	Foliar specific conductivity
Pc (g)	summer & winter	Phosphorus total content
Nc (g)	summer & winter	Nitrogen total content
Ns (%)	summer & winter	Nitrogen stem concentration
Nl (%)	summer & winter	Nitrogen leaf concentration
Nr (%)	summer & winter	Nitrogen root concentration
Ps (ppm)	summer & winter	Phosphorus stem concentration
Pl (ppm)	summer & winter	Phosphorus leaf concentration
Pr (ppm)	summer & winter	Phosphorus root concentration
NUE	winter	Nitrogen use efficiency
PUE	winter	Phosphorus use efficiency
Nspe	winter	Nitrogen stem production efficiency
Pspe	winter	Phosphorus stem production efficiency

Tab. S3 - Total height (H, m) and collar diameter (CD, mm) at both samplings. Numbers among parentheses are standard deviations. Different letters indicate significant differences ($p < 0.05$) between clones for the same sampling.

Clone	Summer		Winter	
	CD (mm)	H (m)	CD (mm)	H (m)
A129	14.03 ± 0.33 ^{cd}	1.90 ± 0.04 ^{e}	20.90 ± 0.51 ^{b}	2.73 ± 0.06 ^{d}
CAR	12.24 ± 0.33 ^{ab}	1.52 ± 0.04 ^{ab}	18.18 ± 0.51 ^{a}	2.45 ± 0.06 ^{bc}
GUA	12.82 ± 0.33 ^{abcd}	1.78 ± 0.04 ^{cde}	17.85 ± 0.51 ^{a}	2.38 ± 0.06 ^{bc}
HOV	12.57 ± 0.33 ^{abcd}	1.39 ± 0.04 ^{ab}	18.80 ± 0.51 ^{ab}	2.06 ± 0.06 ^{a}
NAN	12.06 ± 0.33 ^{a}	1.42 ± 0.04 ^{ab}	17.86 ± 0.53 ^{a}	1.88 ± 0.06 ^{a}
ÑAC	13.76 ± 0.33 ^{bcd}	1.68 ± 0.04 ^{bcd}	17.64 ± 0.51 ^{a}	2.05 ± 0.06 ^{a}
PAY	13.05 ± 0.33 ^{abcd}	1.63 ± 0.04 ^{bcd}	17.50 ± 0.51 ^{a}	2.01 ± 0.06 ^{a}
PYT	13.14 ± 0.33 ^{abcd}	1.41 ± 0.04 ^{a}	18.16 ± 0.53 ^{a}	2.00 ± 0.06 ^{a}
R22	12.93 ± 0.33 ^{abcd}	1.84 ± 0.04 ^{de}	18.72 ± 0.51 ^{ab}	2.68 ± 0.06 ^{cd}
TRI	14.22 ± 0.33 ^{d}	1.72 ± 0.04 ^{cde}	17.06 ± 0.51 ^{a}	2.01 ± 0.06 ^{a}
F	4.73	20.41	4.34	25.36
Prob	0.0001	<0.0001	0.0001	<0.0001

Fig. S1 - Leaf area (LA, cm^2) during the growing season for each clone. The number between parentheses represent the area under the curve that correspond to the mean leaf area duration for each clone (LAD, m^2 day).

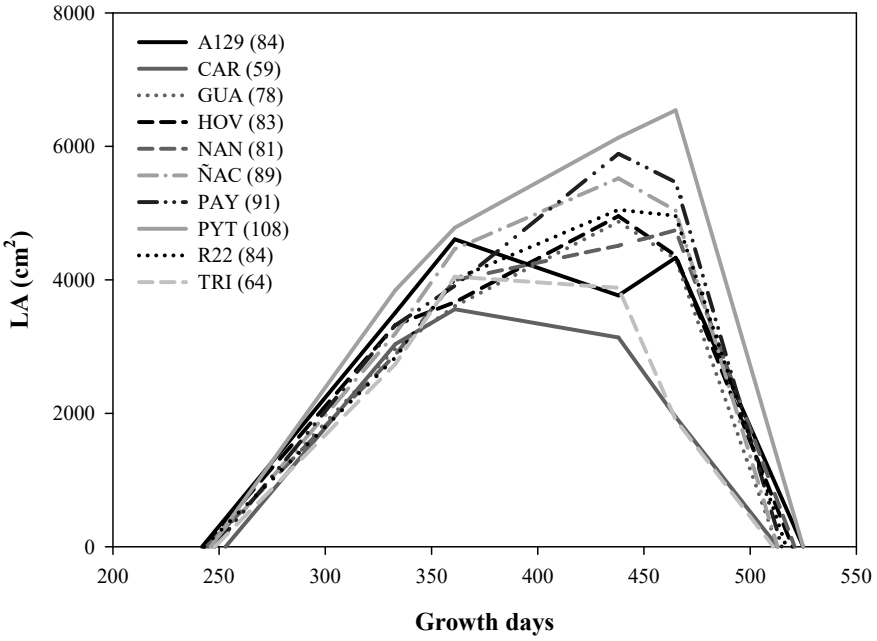
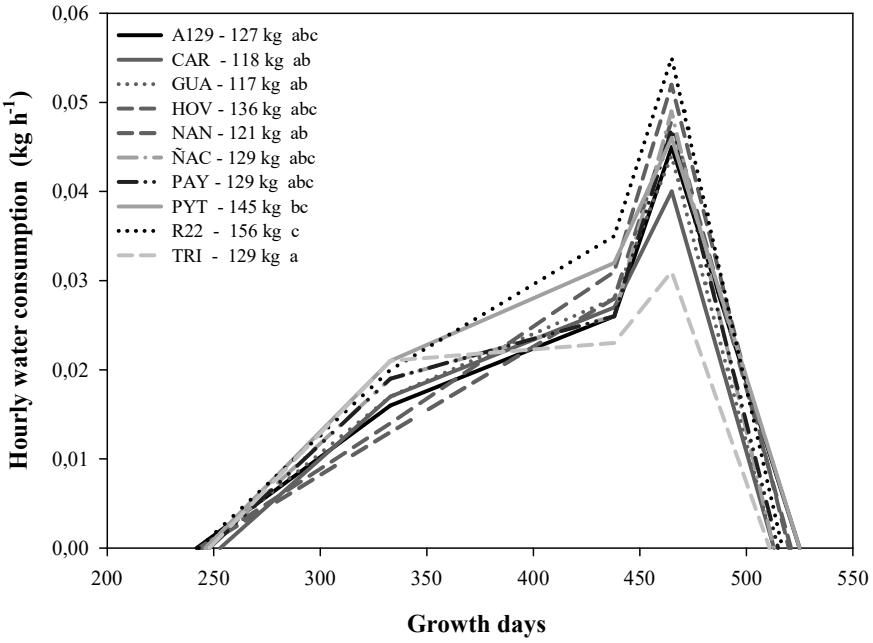


Fig. S2 - Curves of water consumption along the growing season. Values in the graph represent accumulated water consumption (WC) (area under the curve) for each clone. Different letters indicate significant differences ($p < 0.05$) between clones.



Tab. S4 - Mean values of stem hydraulic conductivity (kh), specific hydraulic conductivity (ks) and leaf hydraulic conductivity (kl) for 10 evaluated clones. Kh and ks was measured at summer and winter; kl was measured at summer. Standard deviations are reported between parentheses. Different letters indicate significant differences ($p < 0.05$) between clones for the same sampling.

	kh ($g\ cm^{-1}\ s^{-1}\ Mpa^{-1}$)				ks ($g\ cm^{-1}\ s^{-1}\ Mpa^{-1}$)				kl ($g\ cm^{-1}\ s^{-1}\ Mpa^{-1}$)
Clone	**summer**	**winter**	**F**	**Prob**	**summer**	**winter**	**F**	**Prob**	**summer**
A129	44 ± 8.6 ^{ab}	27.2 ± 10.3 ^{ab}	13.13	0.0021	50 ± 9.8 ^{a}	14.4 ± 6.4 ^{ab}	92.29	<0.0001	0.0098 ± 0.0011 ^{ab}
CAR	56.7 ± 19.7 ^{abc}	35.6 ± 19.5 ^{abc}	5.14	0.0367	78.0 ± 16.5 ^{ab}	21.8 ± 12.6 ^{ab}	70.31	<0.0001	0.0155 ± 0.0029 ^{abcde}
GUA	60.5 ± 19.2 ^{abc}	55.0 ± 15.5 ^{cde}	0.47	0.5029	81.9 ± 24.2 ^{ab}	36.0 ± 9.0 ^{cd}	35.9	<0.0001	0.0166 ± 0.0043 ^{cde}
HOV	62.6 ± 13.4 ^{abc}	45.0 ± 18.9 ^{bcd}	5.18	0.0353	93.7 ± 18.3 ^{b}	28.2 ± 12.7 ^{bc}	90.07	<0.0001	0.0174 ± 0.0044 ^{de}
NAN	37.9 ± 9.4 ^{a}	26.4 ± 12.2 ^{ab}	4.44	0.0513	59.4 ± 19.9 ^{ab}	20.1 ± 8.8 ^{ab}	33.49	<0.0001	0.0095 ± 0.0014 ^{a}
ÑAC	73.0 ± 18.3 ^{bc}	70.8 ± 24.3 ^{ef}	0.04	0.8396	87.9 ± 19.3 ^{b}	51.3 ± 14.3 ^{e}	21.31	0.0003	0.0163 ± 0.0034 ^{bcde}
PAY	57.9 ± 14.0 ^{abc}	59.8 ± 17.8 ^{de}	0.06	0.8172	81.4 ± 25.6 ^{ab}	46.9 ± 10.1 ^{de}	17.79	0.0006	0.0156 ± 0.0051 ^{abcde}
PYT	53.4 ± 11.8 ^{abc}	31.8 ± 11.6 ^{ab}	14.62	0.0015	71.6 ± 16.9 ^{ab}	21.1 ± 7.8 ^{ab}	75.01	<0.0001	0.0115 ± 0.0021 ^{abcd}
R22	41.4 ± 8.8 ^{a}	20.2 ± 7.4 ^{a}	28.08	0.0001	58.5 ± 15.1 ^{ab}	13.1 ± 5.6 ^{a}	82.43	<0.0001	0.0108 ± 0.0024 ^{abc}
TRI	82.6 ± 31.1 ^{c}	86.3 ± 20.5 ^{f}	0.1	0.7574	89.8 ± 28.5 ^{b}	66.2 ± 13.3 ^{f}	6.17	0.0237	0.0204 ± 0.0058 ^{e}
F	4.71	19.68			3.82	33.22			6.88
Prob	0.0001	<0.0001			0.0007	<0.0001			<0.0001

Tab. S5 - Mean nitrogen concentration in leaves, stem and roots for the 10 clones at both samplings. Numbers between parentheses are standard deviations. Different letters indicate significant differences ($p < 0.05$) among clones for the same sampling.

Clone	Leaf Nitrogen Concentration (%)				Stem Nitrogen Concentration (%)				Root Nitrogen Concentration (%)			
	Summer	Winter	F	Prob	Summer	Winter	F	Prob	Summer	Winter	F	Prob
A129	1.73 ± 0.07 ^{c}	1.3 ± 0.11 ^{ab}	24.78	0.0156	0.57 ± 0.02	1.25 ± 0.16	53.96	0.0018	1.09 ± 0.13	0.98 ± 0.05 ^{abc}	2.14	0.2173
CAR	2.05 ± 0.16 ^{abc}	1.47 ± 0.21 ^{b}	14.56	0.0189	0.55 ± 0.06	1.14 ± 0.19	25.57	0.0072	1.14 ± 0.09	1.28 ± 0.14 ^{c}	2.04	0.2268
GUA	2.23 ± 0.11 ^{ab}	1.13 ± 0.09 ^{ab}	184.05	0.0002	0.57 ± 0.07	1.06 ± 0.12	38.8	0.0034	1.18 ± 0.06	1.08 ± 0.18 ^{abc}	0.77	0.4295
HOV	2.14 ± 0.12 ^{abc}	1.15 ± 0.07 ^{ab}	143.69	0.0003	0.69 ± 0.01	1.18 ± 0.34	6.13	0.0686	1.11 ± 0.05	0.87 ± 0.01 ^{a}	74	0.001
NAN	1.78 ± 0.06 ^{c}	1 ± 0.04 ^{a}	325.79	0.0001	0.52 ± 0.21	1.05 ± 0.04	18.34	0.0128	1.23 ± 0.01	1.01 ± 0.13 ^{abc}	8.35	0.0446
ÑAC	1.90 ± 0.12 ^{abc}	1.05 ± 0.05 ^{a}	134.54	0.0003	0.5 ± 0.10	1.05 ± 0.10	47.41	0.0023	1.06 ± 0.09	1.03 ± 0.10 ^{abc}	0.07	0.7993
PAY	1.93 ± 0.20 ^{abc}	1.04 ± 0.05 ^{a}	52.94	0.0019	0.47 ± 0.02	1.04 ± 0.23	18.29	0.0129	1.29 ± 0.09	0.91 ± 0.03 ^{ab}	56.17	0.0017
PYT	1.80 ± 0.07 ^{bc}	1.04 ± 0.13 ^{a}	77.85	0.0009	0.49 ± 0.06	1.24 ± 0.37	12.41	0.0244	1.12 ± 0.08	0.91 ± 0.10 ^{ab}	8.61	0.0427
R22	2.31 ± 0.21 ^{a}	1.34 ± 0.12 ^{ab}	47.19	0.0024	0.49 ± 0.05	1.09 ± 0.05	241.61	0.0001	1.19 ± 0.11	1.02 ± 0.14 ^{abc}	2.85	0.1665
TRI	1.89 ± 0.14 ^{abc}	1.08 ± 0.19 ^{a}	37.36	0.0036	0.46 ± 0.02	1.05 ± 0.28	13.02	0.0226	1.17 ± 0.16	1.21 ± 0.11 ^{bc}	0.16	0.7096
F	5.57	5.2			1.93	0.41			1.49	4.29		
Prob	0.0008	0.001			0.106	0.9132			0.2199	0.0032		

Tab. S6 - Mean phosphorus concentration in leaves, stem and roots for the 10 clones at both samplings. Numbers between parentheses are standard deviation. Different letters indicate significant differences ($p < 0.05$) among clones for the same sampling moment.

Clone	Leaf phosphorus concentration (ppm)				Stem phosphorus concentration (ppm)				Root phosphorus concentration (ppm)			
	Summer	Winter	F	Prob	Summer	Winter	F	Prob	Summer	Winter	F	Prob
A129	1892 ± 117	1554 ± 214 ^{abc}	5.77	0.0742	2087 ± 383	1617 ± 224	3.37	0.1405	1254 ± 138	1545 ± 337 ^{ab}	1.92	0.2382
CAR	2176 ± 475	1832 ± 274 ^{abcd}	1.18	0.3391	2608 ± 360	1345 ± 310	21.26	0.0099	1280 ± 55	1426 ± 208 ^{ab}	1.38	0.3049
GUA	1863 ± 183	1797 ± 183 ^{abcd}	0.19	0.6838	2326 ± 949	1170 ± 121	4.38	0.1046	1413 ± 274	1261 ± 273 ^{a}	0.47	0.5325
HOV	1838 ± 196	1641 ± 219 ^{abc}	0.4	0.563	2045 ± 255	1174 ± 163	24.73	0.0076	1451 ± 41	1691 ± 293 ^{ab}	1.97	0.2332
NAN	2118 ± 412	1335 ± 43 ^{ab}	10.74	0.0306	1864 ± 201	1074 ± 47	44.12	0.0027	1442 ± 43	1549 ± 231 ^{ab}	0.62	0.4737
ÑAC	1659 ± 109	2354 ± 651 ^{cd}	3.33	0.1422	2252 ± 282	1185 ± 156	5.31	0.0825	1361 ± 200	1304 ± 147 ^{a}	0.16	0.7102
PAY	1689 ± 162	1677 ± 245 ^{abc}	0.005	0.9474	2497 ± 489	1120 ± 193	20.63	0.0105	1476 ± 183	1294 ± 295 ^{a}	0.82	0.4156
PYT	2240 ± 221	1195 ± 212 ^{a}	34.95	0.0041	1867 ± 140	1941 ± 1027	0.02	0.9077	1235 ± 161	1432 ± 274 ^{ab}	1.15	0.3439
R22	2438 ± 469	2588 ± 225 ^{d}	0.25	0.6449	2535 ± 447	2050 ± 626	1.19	0.3367	1646 ± 248	2172 ± 334 ^{b}	4.8	0.0937
TRI	1876 ± 401	2177 ± 410 ^{bcd}	0.82	0.4153	2074 ± 159	1099 ± 78	91.02	0.0007	1268 ± 92	1613 ± 286 ^{ab}	3.94	0.118
F	1.66	6.14			0.92	2.32			1.85	2.87		
Prob	0.166	0.0004			0.527	0.0562			0.1212	0.0236		

Tab. S7 - Summary table for every variable measured during both samplings. Mean, standard deviation, minimum and maximum values, ANOVA F and *p-value* are reported for each variable. Variables with no significant differences between clones are marked in red.

Variable	Sampling	N	Mean	S.D.	Min	Max	F	Prob
H (m)	summer	80	13.08	1.13	10.11	16.21	4.73	0.0001
CD (mm)	summer	80	1.63	0.21	1.20	2.09	20.41	<0.0001
$STEM_{dw}$ (g)	summer	80	31.96	7.46	17.49	57.47	5.26	<0.0001
$LEAF_{dw}$ (g)	summer	80	26.77	4.23	18.79	37.42	7.37	<0.0001
$ROOT_{dw}$ (g)	summer	80	13.91	3.86	7.24	25.92	2.68	0.0098
$TOTAL_{dw}$ (g)	summer	80	72.63	12.05	51.75	107.75	3.96	0.0004
Lsize (cm^2)	summer	80	135.82	27.54	69.90	209.50	19.17	<0.0001
SLA ($cm^2\ g^{-1}$)	summer	80	152.13	11.46	124.49	186.86	2.69	0.0097
LA (cm^2)	summer	80	3624.08	598.01	2371.72	5518.19	5.36	<0.0001
kh (g cm s^{-1} Mpa^{-1})	summer	70	57.31	20.52	22.39	127.77	4.71	0.0001
ks (g cm^{-1} s^{-1} Mpa^{-1})	summer	70	75.72	23.56	32.93	133.41	3.82	0.0007
kl (g cm^{-1} s^{-1} Mpa^{-1})	summer	70	0.01	0.01	0.01	0.03	6.88	<0.0001
gs	summer	104	154.28	94.90	24	425	0.81	0.604
Asat	summer	104	11.38	4.68	1.5	22	1.98	0.05
WUEi	summer	104	4.51	1.40	0.74	7.52	1.19	0.3117
Nl (%)	summer	80	1.99	0.22	1.69	2.53	2.69	0.0315
Pl (ppm)	summer	80	1935	434	737	2938	1.66	0.166
Leaf N content (g)	summer	80	0.47	0.08	0.31	0.72	2.29	0.0259
Leaf P content (g)	summer	80	0.05	0.01	0.02	0.08	7.34	<0.0001
Ns (%)	summer	80	0.53	0.10	0.28	0.70	1.93	0.106
Ps (ppm)	summer	80	2221	491	1427	3388	0.96	0.527

Variable	Sampling	N	Mean	S.D.	Min	Max	F	Prob
Stem N content (g)	summer	80	0.17	0.05	0.06	0.35	3.96	0.0004
Stem P content (g)	summer	80	0.07	0.02	0.03	0.13	5.41	<0.0001
Nr (%)	summer	80	1.15	0.11	0.95	1.38	1.49	0.2199
Pr (ppm)	summer	80	1380	185	1054	1855	1.85	0.1212
Root N content (g)	summer	80	0.16	0.04	0.08	0.28	2.35	0.0221
Root P content (g)	summer	80	0.02	0.01	0.01	0.04	2.95	0.005
Nc (g)	summer	80	0.80	0.13	0.55	1.28	2.09	0.0424
Pc (g)	summer	80	0.14	0.03	0.089	0.199	4.01	0.0004
WC(kg)		40	128.82	17.77	99.05	176.5	4.41	0.001
WCh (kg h^{-1})		130	0.03	0.01	0.01	0.08	0.59	0.8043
WUEb		40	1.30E-03	2.70E-04	8.80E-04	2.00E-03	1.29	0.281
H (m)	winter	118	18.27	1.99	13.55	26	4.34	0.0001
CD (mm)	winter	118	2.23	0.36	1.34	3.38	25.36	<0.0001
$STEM_{dw}$ (g)	winter	116	89.68	26.70	40.70	186.90	16.80	<0.0001
$ROOT_{dw}$ (g)	winter	116	78.14	23.40	25.70	175.40	9.64	<0.0001
$TOTAL_{dw}$ (g)	winter	116	167.82	36.32	89.30	283.90	9.76	<0.0001
kh (g cm s^{-1} Mpa^{-1})	winter	116	46.10	26.06	5.13	125.64	19.68	<0.0001
ks (g cm^{-1} s^{-1} Mpa^{-1})	winter	116	32.08	19.69	3.22	90.24	33.22	<0.0001
Nl (%)	winter	30	1.16	0.18	0.87	1.63	5.20	0.001
Pl (ppm)	winter	30	1815	497	1033	3105	6.14	0.0004
Ns (%)	winter	30	1.11	0.20	0.73	1.66	0.41	0.9132

Variable	Sampling	N	Mean	S.D.	Min	Max	F	Prob
Ps (ppm)	winter	30	1377	490	1007	3078	2.32	0.0562
Stem N content (g)	winter	116	1.01	0.39	0.34	2.56	18.32	<0.0001
Stem P content (g)	winter	116	0.13	0.07	0.04	0.41	21.25	<0.0001
Nr (%)	winter	30	1.03	0.16	0.79	1.41	4.29	0.0032
Pr (ppm)	winter	30	1529	344	1011	2554	2.87	0.0236
Root N content (g)	winter	115	0.79	0.20	0.33	1.52	2.75	0.0064
Root P content (g)	winter	115	0.12	0.05	0.03	0.29	11.49	<0.0001
Nc (g)	winter	116	1.79	0.45	0.90	3.49	9.60	<0.0001
Pc (g)	winter	116	0.25	0.09	0.13	0.61	19.62	<0.0001
NUE	winter	116	95.31	13.46	74.77	183.39	3.72	0.0004
PUE	winter	116	714.11	131.42	374.22	952.66	18.53	<0.0001
LAD (cm^2 día)		10	81.84	13.67	58.68	107.53	-	-
Ldays		117	271.44	9.98	222	289	33.77	<0.0001