Hendrik Poorter

List of Publications by Year in Descending Order

120 papers	31,562 citations	63 h-index	127 g-index
127 ext. papers	37,499 ext. citations	8.1 avg, IF	6.87 L-index

#	Paper	IF	Citations
120	A starting guide to root ecology: strengthening ecological concepts and standardising root classification, sampling, processing and trait measurements. *New Phytologist*, **2021**, 232, 973-1122	9.8	31
119	A meta-analysis of responses of C plants to atmospheric CO : dose-response curves for 85 traits ranging from the molecular to the whole-plant level. *New Phytologist*, **2021**,	9.8	4
118	A reporting format for leaf-level gas exchange data and metadata. *Ecological Informatics*, **2021**, 61, 101232	4.2	11
117	Root traits explain plant species distributions along climatic gradients yet challenge the nature of ecological trade-offs. *Nature Ecology and Evolution*, **2021**, 5, 1123-1134	12.3	11
116	Root traits as drivers of plant and ecosystem functioning: current understanding, pitfalls and future research needs. *New Phytologist*, **2021**, 232, 1123-1158	9.8	69
115	Global patterns of biomass allocation in woody species with different tolerances of shade and drought: evidence for multiple strategies. *New Phytologist*, **2021**, 229, 308-322	9.8	11
114	Dividing the pie: A quantitative review on plant density responses. *Plant, Cell and Environment*, **2021**, 44, 1072-1094	8.4	16
113	Global root traits (GRooT) database. *Global Ecology and Biogeography*, **2021**, 30, 25-37	6.1	28
112	Applying the economic concept of profitability to leaves. *Scientific Reports*, **2021**, 11, 49	4.9	4
111	An integrated framework of plant form and function: the belowground perspective. *New Phytologist*, **2021**, 232, 42-59	9.8	16
110	Enabling reusability of plant phenomic datasets with MIAPPE 1.1. *New Phytologist*, **2020**, 227, 260-273	9.8	42
109	TRY plant trait database - enhanced coverage and open access. *Global Change Biology*, **2020**, 26, 119-188	11.4	399
108	The analysis of plant root responses to nutrient concentration, soil volume and neighbour presence: Different statistical approaches reflect different underlying basic questions. *Functional Ecology*, **2020**, 34, 2210-2217	5.6	6
107	A meta-analysis of plant responses to light intensity for 70 traits ranging from molecules to whole plant performance. *New Phytologist*, **2019**, 223, 1073-1105	9.8	137
106	Association of Shoot and Root Responses to Water Deficit in Young Faba Bean () Plants. *Frontiers in Plant Science*, **2019**, 10, 1063	6.2	8
105	How Does Water Availability Affect the Allocation to Bark in a Mediterranean Conifer?. *Frontiers in Plant Science*, **2019**, 10, 607	6.2	6
104	Root traits of herbaceous crops: Pre-adaptation to cultivation or evolution under domestication?. *Functional Ecology*, **2019**, 33, 273-285	5.6	8

103	How are nitrogen availability, fine-root mass, and nitrogen uptake related empirically? Implications for models and theory. *Global Change Biology*, **2019**, 25, 885-899	11.4	10
102	Computational aspects underlying genome to phenome analysis in plants. *Plant Journal*, **2019**, 97, 182-188	6.9	33
101	Coming Late for Dinner: Localized Digestate Depot Fertilization for Extensive Cultivation of Marginal Soil With. *Frontiers in Plant Science*, **2018**, 9, 1095	6.2	11
100	Plant functional trait change across a warming tundra biome. *Nature*, **2018**, 562, 57-62	50.4	264
99	Physiological and structural tradeoffs underlying the leaf economics spectrum. *New Phytologist*, **2017**, 214, 1447-1463	9.8	222
98	The anatomical and compositional basis of leaf mass per area. *Ecology Letters*, **2017**, 20, 412-425	10	87
97	Photosynthesis: ancient, essential, complex, diverse and in need of improvement in a changing world. *New Phytologist*, **2017**, 213, 43-47	9.8	21
96	Building a better foundation: improving root-trait measurements to understand and model plant and ecosystem processes. *New Phytologist*, **2017**, 215, 27-37	9.8	105
95	Effects of digestate fertilization on Sida hermaphrodita : Boosting biomass yields on marginal soils by increasing soil fertility. *Biomass and Bioenergy*, **2017**, 107, 207-213	5.3	32
94	Growth and Growth-Related Traits for a Range of Quercus Species Grown as Seedlings Under Controlled Conditions and for Adult Plants from the Field. *Tree Physiology*, **2017**, 393-417		4
93	Towards a thesaurus of plant characteristics: an ecological contribution. *Journal of Ecology*, **2017**, 105, 298-309	6	75
92	Morphological Plant Modeling: Unleashing Geometric and Topological Potential within the Plant Sciences. *Frontiers in Plant Science*, **2017**, 8, 900	6.2	41
91	Pampered inside, pestered outside? Differences and similarities between plants growing in controlled conditions and in the field. *New Phytologist*, **2016**, 212, 838-855	9.8	242
90	Energizing marginal soils The establishment of the energy crop Sida hermaphrodita as dependent on digestate fertilization, NPK, and legume intercropping. *Biomass and Bioenergy*, **2016**, 87, 9-16	5.3	51
89	Plant functional traits have globally consistent effects on competition. *Nature*, **2016**, 529, 204-7	50.4	453
88	The global spectrum of plant form and function. *Nature*, **2016**, 529, 167-71	50.4	1191
87	The Importance of Being First: Exploring Priority and Diversity Effects in a Grassland Field Experiment. *Frontiers in Plant Science*, **2016**, 7, 2008	6.2	25
86	Leaf Mass per Area (LMA) and Its Relationship with Leaf Structure and Anatomy in 34 Mediterranean Woody Species along a Water Availability Gradient. *PLoS ONE*, **2016**, 11, e0148788	3.7	110

85	Measures for interoperability of phenotypic data: minimum information requirements and formatting. *Plant Methods*, **2016**, 12, 44	5.8	83
84	The limits to leaf and root plasticity: what is so special about specific root length?. *New Phytologist*, **2015**, 206, 1188-90	9.8	45
83	Corrections for rooting volume and plant size reveal negative effects of neighbour presence on root allocation in pea. *Functional Ecology*, **2015**, 29, 1383-1391	5.6	29
82	How does biomass distribution change with size and differ among species? An analysis for 1200 plant species from five continents. *New Phytologist*, **2015**, 208, 736-49	9.8	153
81	The effects of phenotypic plasticity and local adaptation on forecasts of species range shifts under climate change. *Ecology Letters*, **2014**, 17, 1351-64	10	583
80	Leaf mass per area is independent of vein length per area: avoiding pitfalls when modelling phenotypic integration (reply to Blonder et al. 2014). *Journal of Experimental Botany*, **2014**, 65, 5115-23	7	21
79	The effect of irradiance on the carbon balance and tissue characteristics of five herbaceous species differing in shade-tolerance. *Frontiers in Plant Science*, **2014**, 5, 12	6.2	16
78	Temperature drives global patterns in forest biomass distribution in leaves, stems, and roots. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 13721-6	11.5	187
77	Trait correlation networks: a whole-plant perspective on the recently criticized leaf economic spectrum. *New Phytologist*, **2014**, 201, 378-382	9.8	93
76	Variation in biomass expansion factors for China□ forests in relation to forest type, climate, and stand development. *Annals of Forest Science*, **2013**, 70, 589-599	3.1	18
75	Physiological mechanisms in plant growth models: do we need a supra-cellular systems biology approach?. *Plant, Cell and Environment*, **2013**, 36, 1673-90	8.4	63
74	Exploring variation in leaf mass per area (LMA) from leaf to cell: an anatomical analysis of 26 woody species. *American Journal of Botany*, **2013**, 100, 1969-80	2.7	69
73	New handbook for standardised measurement of plant functional traits worldwide. *Australian Journal of Botany*, **2013**, 61, 167	1.2	1983
72	How do leaf veins influence the worldwide leaf economic spectrum? Review and synthesis. *Journal of Experimental Botany*, **2013**, 64, 4053-80	7	130
71	Connecting the Green and Brown Worlds: Allometric and Stoichiometric Predictability of Above- and Below-Ground Networks. *Advances in Ecological Research*, **2013**, 49, 69-175	4.6	74
70	Plasticity as a plastic response: how submergence-induced leaf elongation in Rumex palustris depends on light and nutrient availability in its early life stage. *New Phytologist*, **2012**, 194, 572-582	9.8	39
69	The art of growing plants for experimental purposes: a practical guide for the plant biologist. *Functional Plant Biology*, **2012**, 39, 821-838	2.7	144
68	Phenotyping plants: genes, phenes and machines. *Functional Plant Biology*, **2012**, 39, 813-820	2.7	76

67	Pot size matters: a meta-analysis of the effects of rooting volume on plant growth. *Functional Plant Biology*, **2012**, 39, 839-850	2.7	428
66	Biomass allocation to leaves, stems and roots: meta-analyses of interspecific variation and environmental control. *New Phytologist*, **2012**, 193, 30-50	9.8	1490
65	Resource limitation, tolerance, and the future of ecological plant classification. *Frontiers in Plant Science*, **2012**, 3, 246	6.2	37
64	Pitfalls and possibilities in the analysis of biomass allocation patterns in plants. *Frontiers in Plant Science*, **2012**, 3, 259	6.2	85
63	Fame, glory and neglect in meta-analyses. *Trends in Ecology and Evolution*, **2011**, 26, 493-4	10.9	29
62	TRY a global database of plant traits. *Global Change Biology*, **2011**, 17, 2905-2935	11.4	1623
61	Using log-log scaling slope analysis for determining the contributions to variability in biological variables such as leaf mass per area: why it works, when it works and how it can be extended. *New Phytologist*, **2011**, 190, 5-8	9.8	17
60	Leaf nitrogen productivity is the major factor behind the growth reduction induced by long-term salt stress. *Tree Physiology*, **2011**, 31, 92-101	4.2	11
59	A method to construct dose-response curves for a wide range of environmental factors and plant traits by means of a meta-analysis of phenotypic data. *Journal of Experimental Botany*, **2010**, 61, 2043-55	7	121
58	Blue light dose-responses of leaf photosynthesis, morphology, and chemical composition of Cucumis sativus grown under different combinations of red and blue light. *Journal of Experimental Botany*, **2010**, 61, 3107-17	7	474
57	Endogenous abscisic acid as a key switch for natural variation in flooding-induced shoot elongation. *Plant Physiology*, **2010**, 154, 969-77	6.6	42
56	Intraspecific variation in the magnitude and pattern of flooding-induced shoot elongation in Rumex palustris. *Annals of Botany*, **2009**, 104, 1057-67	4.1	30
55	Xeml Lab: a tool that supports the design of experiments at a graphical interface and generates computer-readable metadata files, which capture information about genotypes, growth conditions, environmental perturbations and sampling strategy. *Plant, Cell and Environment*, **2009**, 32, 1185-200	8.4	37
54	Interactive effects of water table and precipitation on net CO2 assimilation of three co-occurring Sphagnum mosses differing in distribution above the water table. *Global Change Biology*, **2009**, 15, 680-691	11.4	88
53	Causes and consequences of variation in leaf mass per area (LMA): a meta-analysis. *New Phytologist*, **2009**, 182, 565-588	9.8	1547
52	Carbon balance of the oldest and most-shaded leaves in a vegetation: a litmus test for canopy models. *New Phytologist*, **2009**, 183, 1-3	9.8	10
51	Multilevel genomic analysis of the response of transcripts, enzyme activities and metabolites in Arabidopsis rosettes to a progressive decrease of temperature in the non-freezing range. *Plant, Cell and Environment*, **2008**, 31, 518-47	8.4	162
50	The role of ethylene perception in the control of photosynthesis. *Plant Signaling and Behavior*, **2008** , 3, 108-9	2.5	20

49	No evidence for substantial aerobic methane emission by terrestrial plants: a 13C-labelling approach. *New Phytologist*, **2007**, 175, 29-35	9.8	139
48	Ethylene insensitivity results in down-regulation of rubisco expression and photosynthetic capacity in tobacco. *Plant Physiology*, **2007**, 144, 1305-15	6.6	57
47	Ecological Significance of Inherent Variation in Relative Growth Rate and Its Components **2007**, 67-100		42
46	Ecological Significance of Inherent Variation in Relative Growth Rate and Its Components. *Books in Soils, Plants, and the Environment*, **2007**,		2
45	Construction costs, chemical composition and payback time of high- and low-irradiance leaves. *Journal of Experimental Botany*, **2006**, 57, 355-71	7	148
44	The Janus face of ethylene: growth inhibition and stimulation. *Trends in Plant Science*, **2006**, 11, 176-83	13.1	336
43	Differences in construction costs and chemical composition between deciduous and evergreen woody species are small as compared to differences among families. *Plant, Cell and Environment*, **2006**, 29, 1629-43	8.4	101
42	Ethylene and Plant Growth **2006**, 35-49		1
41	Specific leaf area and dry matter content estimate thickness in laminar leaves. *Annals of Botany*, **2005**, 96, 1129-36	4.1	299
40	Assessing the generality of global leaf trait relationships. *New Phytologist*, **2005**, 166, 485-96	9.8	1343
39	Modulation of leaf economic traits and trait relationships by climate. *Global Ecology and Biogeography*, **2005**, 14, 411-421	6.1	535
38	A genetic analysis of relative growth rate and underlying components in Hordeum spontaneum. *Oecologia*, **2005**, 142, 360-77	2.9	35
37	Ethylene insensitivity does not increase leaf area or relative growth rate in Arabidopsis, Nicotiana tabacum, and Petunia x hybrida. *Plant Physiology*, **2004**, 134, 1803-12	6.6	60
36	The worldwide leaf economics spectrum. *Nature*, **2004**, 428, 821-7	50.4	4915
35	Inherent Variation in Growth Rate Between Higher Plants: A Search for Physiological Causes and Ecological Consequences. *Advances in Ecological Research*, **2004**, 283-362	4.6	57
34	Plant growth and competition at elevated CO : on winners, losers and functional groups. *New Phytologist*, **2003**, 157, 175-198	9.8	460
33	A handbook of protocols for standardised and easy measurement of plant functional traits worldwide. *Australian Journal of Botany*, **2003**, 51, 335	1.2	2483
32	Plant Growth and Carbon Economy **2002**,		22

31	Avoiding bias in calculations of relative growth rate. *Annals of Botany*, **2002**, 90, 37-42	4.1	354
30	The growth response of plants to elevated CO under non-optimal environmental conditions. *Oecologia*, **2001**, 129, 1-20	2.9	162
29	Photosynthetic acclimation of plants to growth irradiance: the relative importance of specific leaf area and nitrogen partitioning in maximizing carbon gain. *Plant, Cell and Environment*, **2001**, 24, 755-767	8.4	717
28	Growth characteristics in Hordeum spontaneum populations from different habitats. *New Phytologist*, **2000**, 146, 471-481	9.8	34
27	The role of biomass allocation in the growth response of plants to different levels of light, CO2, nutrients and water: a quantitative review. *Functional Plant Biology*, **2000**, 27, 595	2.7	160
26	The role of biomass allocation in the growth response of plants to different levels of light, CO2, nutrients and water: a quantitative review. *Functional Plant Biology*, **2000**, 27, 1191	2.7	524
25	A comparison of specific leaf area, chemical composition and leaf construction costs of field plants from 15 habitats differing in productivity. *New Phytologist*, **1999**, 143, 163-176	9.8	263
24	Carbon gain in a multispecies canopy: the role of specific leaf area and photosynthetic nitrogen-use efficiency in the tragedy of the commons. *New Phytologist*, **1999**, 143, 201-211	9.8	127
23	Photosynthetic nitrogen-use efficiency of species that differ inherently in specific leaf area. *Oecologia*, **1998**, 116, 26-37	2.9	405
22	Interactive effects of growth-limiting N supply and elevated atmospheric CO2 concentration on growth and carbon balance of Plantago major. *Physiologia Plantarum*, **1998**, 103, 451-460	4.6	16
21	Do slow-growing species and nutrient-stressed plants respond relatively strongly to elevated CO2?. *Global Change Biology*, **1998**, 4, 693-697	11.4	95
20	The Fate of Acquired Carbon in Plants: Chemical Composition and Construction Costs **1997**, 39-72		124
19	Plant growth analysis: an evaluation of experimental design and computational methods. *Journal of Experimental Botany*, **1996**, 47, 1343-1351	7	62
18	Interspecific Variation in the Growth Response of Plants to Elevated CO2: A Search for Functional Types **1996**, 375-412		108
17	Growth and carbon economy of a fast-growing and a slow-growing grass species as dependent on nitrate supply. *Plant and Soil*, **1995**, 171, 217-227	4.2	77
16	Differential chemical allocation and plant adaptation: A Py-MS Study of 24 species differing in relative growth rate. *Plant and Soil*, **1995**, 175, 275-289	4.2	16
15	Interspecific variation in the growth response of plants to an elevated ambient CO2 concentration. *Plant Ecology*, **1993**, 104-105, 77-97		541
14	Interspecific variation in the growth response of plants to an elevated ambient CO2 concentration **1993**, 77-98		25

13	Inherent Variation in Growth Rate Between Higher Plants: A Search for Physiological Causes and Ecological Consequences. *Advances in Ecological Research*, **1992**, 187-261	4.6	844
12	Differences in relative growth rate in 11 grasses correlate with differences in chemical composition as determined by pyrolysis mass spectrometry. *Oecologia*, **1992**, 89, 567-573	2.9	62
11	Growth and carbon economy of a fast-growing and a slow-growing grass species as dependent on ontogeny. *New Phytologist*, **1992**, 120, 159-166	9.8	82
10	Is Interspecific Variation in Relative Growth Rate Positively Correlated with Biomass Allocation to the Leaves?. *American Naturalist*, **1991**, 138, 1264-1268	3.7	33
9	Respiratory energy requirements of roots vary with the potential growth rate of a plant species. *Physiologia Plantarum*, **1991**, 83, 469-475	4.6	160
8	Leaf area ratio and net assimilation rate of 24 wild species differing in relative growth rate. *Oecologia*, **1990**, 83, 553-559	2.9	775
7	Carbon and nitrogen economy of 24 wild species differing in relative growth rate. *Plant Physiology*, **1990**, 94, 621-7	6.6	488
6	Plant growth analysis: towards a synthesis of the classical and the functional approach. *Physiologia Plantarum*, **1989**, 75, 237-244	4.6	125
5	The effect of an elevated atmospheric CO2 concentration on growth, photosynthesis and respiration of Plantago major. *Physiologia Plantarum*, **1988**, 73, 553-559	4.6	129
4	Growth and competitive ability of a highly plastic and a marginally plastic genotype of Plantago major in a fluctuating environment. *Physiologia Plantarum*, **1986**, 67, 217-222	4.6	40
3	Testing differences in relative growth rate: A method avoiding curve fitting and pairing. *Physiologia Plantarum*, **1986**, 67, 223-226	4.6	118
2	Growth and root nodule nitrogenase activity of Pisum sativum as influenced by transpiration. *Physiologia Plantarum*, **1984**, 61, 637-642	4.6	14
1	Global Root Traits (GRooT) Database		2