Henk W Hilhorst

List of Publications by Year
in descending order

132 papers	8,498 citations	66234 42 h-index	60497 81 g-index
144 all docs	144 docs citations	144 times ranked	7799 citing authors

#	Article	IF	Citations
1	Seed dormancy and germination. Current Opinion in Plant Biology, 2002, 5, 33-36.	3.5	793
2	Seeds. , 2013, , .		745
3	Phylogenomics reveals multiple losses of nitrogen-fixing root nodule symbiosis. Science, 2018, 361, .	6.0	339
4	Gene expression profiles of Arabidopsis Cvi seeds during dormancy cycling indicate a common underlying dormancy control mechanism. Plant Journal, 2006, 46, 805-822.	2.8	337
5	In Vivo Inhibition of Seed Development and Reserve Protein Accumulation in Recombinants of Abscisic Acid Biosynthesis and Responsiveness Mutants in Arabidopsis thaliana. Plant Physiology, 1989, 90, 463-469.	2.3	324
6	Learning from Co-expression Networks: Possibilities and Challenges. Frontiers in Plant Science, 2016, 7, 444.	1.7	268
7	A critical update on seed dormancy. I. Primary dormancy. Seed Science Research, 1995, 5, 61-73.	0.8	263
8	Seed dormancy release in Arabidopsis Cvi by dry after-ripening, low temperature, nitrate and light shows common quantitative patterns of gene expression directed by environmentally specific sensing. Plant Journal, 2007, 51, 60-78.	2.8	259
9	<scp>germinator</scp>: a software package for high-throughput scoring and curve fitting of Arabidopsis seed germination. Plant Journal, 2010, 62, 148-159.	2.8	238
10	Identification of Reference Genes for RTâ€“qPCR Expression Analysis in Arabidopsis and Tomato Seeds. Plant and Cell Physiology, 2012, 53, 28-37.	1.5	223
11	Interaction between parental environment and genotype affects plant and seed performance in Arabidopsis. Journal of Experimental Botany, 2014, 65, 6603-6615.	2.4	152
12	Desiccation Tolerance: Avoiding Cellular Damage During Drying and Rehydration. Annual Review of Plant Biology, 2020, 71, 435-460.	8.6	149
13	The Arabidopsis <scp>DELAY OF GERMINATION</scp> 1 gene affects <scp>ABSCISIC ACID INSENSITIVE</scp> 5 (<scp>ABI</scp>5) expression and genetically interacts with <scp>ABI</scp>3 during Arabidopsis seed development. Plant Journal, 2016, 85, 451-465.	2.8	143
14	Cell Division and Subsequent Radicle Protrusion in Tomato Seeds Are Inhibited by Osmotic Stress But DNA Synthesis and Formation of Microtubular Cytoskeleton Are Not. Plant Physiology, 2000, 122, 327-336.	2.3	129
15	A footprint of desiccation tolerance in the genome of Xerophyta viscosa. Nature Plants, 2017, 3, 17038.	4.7	123
16	Dual Effect of Light on the Gibberellin- and Nitrate-Stimulated Seed Germination of Sisymbrium officinale and Arabidopsis thaliana. Plant Physiology, 1988, 86, 591-597.	2.3	117
17	Abscisic acid (<scp>ABA</scp>) sensitivity regulates desiccation tolerance in germinated <scp>A</scp>rabidopsis seeds. New Phytologist, 2014, 203, 81-93.	3.5	111
18	The regulation of secondary dormancy. The membrane hypothesis revisite. Seed Science Research, 1998, 8, 77-90.	0.8	107

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19	Abscisic acid controls embryo growth potential and endosperm cap weakening during coffee (Coffea) Tj ETQq1 1 0.784314 rgBT /Ove	1.6	104
20	Dissecting the Genomic Diversification of Late Embryogenesis Abundant (LEA) Protein Gene Families in Plants. Genome Biology and Evolution, 2019, 11, 459-471.	1.1	102
21	The Re-Establishment of Desiccation Tolerance in Germinated Arabidopsis thaliana Seeds and Its Associated Transcriptome. PLoS ONE, 2011, 6, e29123.	1.1	100
22	Metabolite profiling, antioxidant and antibacterial activities of Brazilian propolis: Use of correlation and multivariate analyses to identify potential bioactive compounds. Food Research International, 2015, 76, 449-457.	2.9	98
23	Changes in DNA and microtubules during loss and re-establishment of desiccation tolerance in germinating Medicago truncatula seeds. Journal of Experimental Botany, 2005, 56, 2119-2130.	2.4	94
24	Acquisition and loss of desiccation tolerance in seeds: from experimental model to biological relevance. Planta, 2015, 241, 563-577.	1.6	91
25	A new assay for quantifying endo-Î²-d-mannanase activity using congo red dye. Phytochemistry, 1994, 36, 829-835.	1.4	90
26	Altitudinal and climatic associations of seed dormancy and flowering traits evidence adaptation of annual life cycle timing in Arabidopsis thaliana. Plant, Cell and Environment, 2016, 39, 1737-1748.	2.8	90
27	Germination. , 2013, , 133-181.		88
28	Coffee seed physiology. Brazilian Journal of Plant Physiology, 2006, 18, 149-163.	0.5	84
29	A Predictive Coexpression Network Identifies Novel Genes Controlling the Seed-to-Seedling Phase Transition in Arabidopsis thaliana. Plant Physiology, 2016, 170, 2218-2231.	2.3	83
30	Galactinol as marker for seed longevity. Plant Science, 2016, 246, 112-118.	1.7	78
31	The second step of the biphasic endosperm cap weakening that mediates tomato (Lycopersicon) Tj ETQq1 1 0.784314 rgBT /Overloc 1371-1379.	2.4	75
32	Endo-?-mannanase isoforms are present in the endosperm and embryo of tomato seeds, but are not essentially linked to the completion of germination. Planta, 1996, 200, 153.	1.6	74
33	Nitrate Reductase Independent Stimulation of Seed Germination in Sisymbrium officinale L. (Hedge) Tj ETQq1 1 0.784314 rgBT /Overl	1.4	70
34	A gene co-expression network predicts functional genes controlling the re-establishment of desiccation tolerance in germinated Arabidopsis thaliana seeds. Planta, 2015, 242, 435-449.	1.6	65
35	Exploring the Natural Variation for Seedling Traits and Their Link with Seed Dimensions in Tomato. PLoS ONE, 2012, 7, e43991.	1.1	63
36	Identifying Genotype-by-Environment Interactions in the Metabolism of Germinating Arabidopsis Seeds Using Generalized Genetical Genomics Â Â Â. Plant Physiology, 2013, 162, 553-566.	2.3	61

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37	ABA Inhibits Embryo Cell Expansion and Early Cell Division Events During Coffee (Coffea arabica â€˜Rubiâ€™) Seed Germination. Annals of Botany, 2008, 102, 425-433.	1.4	60
38	Physiological and biochemical responses of Ricinus communis seedlings to different temperatures: a metabolomics approach. BMC Plant Biology, 2014, 14, 223.	1.6	59
39	Visualizing the Genetic Landscape of Arabidopsis Seed Performance Â Â. Plant Physiology, 2012, 158, 570-589.	2.3	58
40	Review on Dormancy, Germinability, and Germination in Crop and Weed Seeds. Advances in Agronomy, 1997, , 111-165.	2.4	57
41	Primary dormancy in tomato (Lycopersicon esculentumcv. Moneymaker): studies with thesitiensmutant. Journal of Experimental Botany, 1996, 47, 89-97.	2.4	56
42	Definitions and Hypotheses of Seed Dormancy. , 0, , 50-71.		53
43	Metabolite profiling and associated gene expression reveal two metabolic shifts during the seed-to-seedling transition in Arabidopsis thaliana. Plant Molecular Biology, 2017, 95, 481-496.	2.0	51
44	Dose-Response Analysis of Factors Involved in Germination and Secondary Dormancy of Seeds of Sisymbrium officinale. Plant Physiology, 1990, 94, 1096-1102.	2.3	50
45	Metabolite profiling of the oilseed crop Ricinus communis during early seed imbibition reveals a specific metabolic signature in response to temperature. Industrial Crops and Products, 2015, 67, 305-309.	2.5	48
46	Exogenous gibberellins inhibit coffee (Coffea arabica cv. Rubi) seed germination and cause cell death in the embryo. Journal of Experimental Botany, 2005, 56, 1029-1038.	2.4	47
47	Nuclear replication activities during imbibition of abscisic acid- and gibberellin-deficient tomato (Lycopersicon esculentum Mill.) seeds. Planta, 1994, 194, 368-373.	1.6	41
48	Germination Ecophysiology of Annona crassiflora Seeds. Annals of Botany, 2007, 99, 823-830.	1.4	41
49	Key genes involved in desiccation tolerance and dormancy across life forms. Plant Science, 2016, 251, 162-168.	1.7	40
50	Intertwined signatures of desiccation and drought tolerance in grasses. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 10079-10088.	3.3	40
51	Desiccation sensitivity and cell cycle aspects in seeds of Inga vera subsp. affinis. Seed Science Research, 2004, 14, 165-178.	0.8	39
52	Differentially expressed genes associated with dormancy or germination of Arabidopsis thaliana seeds. Planta, 2005, 221, 637-647.	1.6	39
53	Tulipa gesneriana and Lilium longiflorum PEBP Genes and Their Putative Roles in Flowering Time Control. Plant and Cell Physiology, 2018, 59, 90-106.	1.5	39
54	Orthodox Seeds and Resurrection Plants: Two of a Kind?. Plant Physiology, 2017, 175, 589-599.	2.3	38

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55	Dose-Response Analysis of Factors Involved in Germination and Secondary Dormancy of Seeds of Sisymbrium officinale. Plant Physiology, 1990, 94, 1090-1095.	2.3	37
56	Effects of osmotic priming on dormancy and storability of tomato (Lycopersicon) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 702 Td (escul	0.8	37
57	Effects of Parental Temperature and Nitrate on Seed Performance are Reflected by Partly Overlapping Genetic and Metabolic Pathways. Plant and Cell Physiology, 2016, 57, 473-487.	1.5	37
58	Molecular Regulation of Temperature-Dependent Floral Induction in Tulipa gesneriana. Plant Physiology, 2017, 173, 1904-1919.	2.3	37
59	Evolutionary ecophysiology of seed desiccation sensitivity. Functional Plant Biology, 2018, 45, 1083.	1.1	37
60	Metabolomic analysis of tomato seed germination. Metabolomics, 2017, 13, 145.	1.4	36
61	Endosperm cap weakening and endo-Î²-mannanase activity during priming of tomato (Lycopersicon) Tj ETQq1 1 0.784314 rgBT /Ov Science Research, 1998, 8, 483-492.	0.8	34
62	Mechanism and Control of Solanum lycocarpum Seed Germination. Annals of Botany, 2007, 100, 1175-1187.	1.4	33
63	Gene expression profiling of the green seed problem in Soybean. BMC Plant Biology, 2016, 16, 37.	1.6	33
64	Endo-beta-mannanase activity during dormancy alleviation and germination of white spruce (Picea) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	2.6	31
65	Complex genetics controls natural variation among seed quality phenotypes in a recombinant inbred population of an interspecific cross between Solanum lycopersicumâ€ƒÃ—â€ƒSolanum pimpinellifolium. Plant, Cell and Environment, 2012, 35, 929-951.	2.8	31
66	Dormancy in Plant Seeds. Topics in Current Genetics, 2010, , 43-67.	0.7	30
67	Dormancy and the Control of Germination. , 2013, , 247-297.		28
68	Differentially expressed genes during the imbibition of dormant and after-ripened seeds â€“ a reverse genetics approach. BMC Plant Biology, 2017, 17, 151.	1.6	26
69	NADP-MALIC ENZYME 1 Affects Germination after Seed Storage in Arabidopsis thaliana. Plant and Cell Physiology, 2019, 60, 318-328.	1.5	25
70	Ara<scp>QTL</scp> â€“ workbench and archive for systems genetics in Arabidopsis thaliana. Plant Journal, 2017, 89, 1225-1235.	2.8	24
71	Effect of osmopriming on germination and initial growth of Physalis angulata L. under salt stress and on expression of associated genes. Anais Da Academia Brasileira De Ciencias, 2016, 88, 503-516.	0.3	23
72	Structural Plasticity of Intrinsically Disordered LEA Proteins from Xerophyta schlechteri Provides Protection In Vitro and In Vivo. Frontiers in Plant Science, 2019, 10, 1272.	1.7	23

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73	The interaction between genotype and maternal nutritional environments affects tomato seed and seedling quality. Journal of Experimental Botany, 2019, 70, 2905-2918.	2.4	23
74	Overexpression of Ricinus communis L. malate synthase enhances seed tolerance to abiotic stress during germination. Industrial Crops and Products, 2020, 145, 112110.	2.5	23
75	Post-embryonic Hourglass Patterns Mark Ontogenetic Transitions in Plant Development. Molecular Biology and Evolution, 2016, 33, 1158-1163.	3.5	22
76	Weedy adaptation in Setaria spp. IV. Changes in the germinative capacity of S. faberii (poaceae) embryos with development from anthesis to after abscission. , 1996, 83, 979.		22
77	Cucumber (Cucumis sativusL.) seed performance as influenced by ovary and ovule position. Seed Science Research, 2000, 10, 435-445.	0.8	21
78	Characterization of and genetic variation for tomato seed thermo-inhibition and thermo-dormancy. BMC Plant Biology, 2018, 18, 229.	1.6	21
79	Induction of desiccation tolerance in desiccation sensitive Citrus limon seeds. Journal of Integrative Plant Biology, 2019, 61, 624-638.	4.1	20
80	Standardizing Seed Dormancy Research. Methods in Molecular Biology, 2011, 773, 43-52.	0.4	19
81	Depth of dormancy in tomato (Lycopersicon esculentum Mill.) seeds is related to the progression of the cell cycle prior to the induction of dormancy. Seed Science Research, 2001, 11, 45-54.	0.8	18
82	Identification of reference genes for gene expression studies during seed germination and seedling establishment in Ricinus communis L.. Seed Science Research, 2014, 24, 341-352.	0.8	18
83	Weedy adaptation in Setaria spp. IV. Changes in the germinative capacity of S. faberii (poaceae) embryos with development from anthesis to after abscission. American Journal of Botany, 1996, 83, 979-991.	0.8	17
84	Metabolite profiling of Ricinus communis germination at different temperatures provides new insights into thermo-mediated requirements for successful seedling establishment. Plant Science, 2015, 239, 180-191.	1.7	17
85	Role of Tulipa gesneriana TEOSINTE BRANCHED1 (TgTB1) in the control of axillary bud outgrowth in bulbs. Plant Reproduction, 2018, 31, 145-157.	1.3	17
86	Detection of <scp>QTLs</scp> for genotype Ã— environment interactions in tomato seeds and seedlings. Plant, Cell and Environment, 2020, 43, 1973-1988.	2.8	17
87	Magic angle spinning carbon-13 NMR of tobacco mosaic virus. An application of the high-resolution solid-state NMR spectroscopy to very large biological systems. Biophysical Journal, 1981, 35, 463-470.	0.2	16
88	Hormonal control of seed development in GA- and ABA-deficient tomato (Lycopersicon esculentum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	1.7	16
89	Elucidating and mining the Tulipa and Lilium transcriptomes. Plant Molecular Biology, 2016, 92, 249-261.	2.0	16
90	What is dry? Exploring metabolism and molecular mobility at extremely low water contents. Journal of Experimental Botany, 2021, 72, 1507-1510.	2.4	16

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91	Î²-Tubulin accumulation and DNA synthesis are sequentially resumed in embryo organs of cucumber (Cucumis sativus L.) seeds during germination. Protoplasma, 1999, 208, 230-239.	1.0	15
92	Expression studies in the embryo and in the micropylar endosperm of germinating coffee (Coffea) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.8	15
93	Construction of a High-Density Genetic Map from RNA-Seq Data for an Arabidopsis Bay-0 Ã— Shahdara RIL Population. Frontiers in Genetics, 2017, 8, 201.	1.1	15
94	Genome-level responses to the environment: plant desiccation tolerance. Emerging Topics in Life Sciences, 2019, 3, 153-163.	1.1	15
95	Structure-activity Studies with ABA Analogs on Germination and Endo-Î²-Mannanase Activity in Tomato and Lettuce Seeds. Journal of Plant Physiology, 1999, 154, 679-685.	1.6	14
96	Water relations of GA- and ABA-deficient tomato mutants during seed and fruit development and their influence on germination. Physiologia Plantarum, 1996, 96, 425-432.	2.6	13
97	Development and Maturation. , 2013, , 27-83.		13
98	Expression profiles of genes related to carbohydrate metabolism provide new insights into carbohydrate accumulation in seeds and seedlings of Ricinus communis in response to temperature. Plant Physiology and Biochemistry, 2015, 95, 103-112.	2.8	13
99	Editorial: Unifying Insights into the Desiccation Tolerance Mechanisms of Resurrection Plants and Seeds. Frontiers in Plant Science, 2020, 11, 1089.	1.7	13
100	The Role of Light and Nitrate in Seed Germination. , 1989, , 191-205.		13
101	Detection of Î²-tubulin in tomato seeds: Optimization of extraction and immunodetection. Phytochemistry, 1998, 47, 689-694.	1.4	12
102	Effect of temperature on biomass allocation in seedlings of two contrasting genotypes of the oilseed crop Ricinus communis. Journal of Plant Physiology, 2015, 185, 31-39.	1.6	12
103	Viability of recalcitrant Araucaria angustifolia seeds in storage and in a soil seed bank. Journal of Forestry Research, 2020, 31, 2413-2422.	1.7	12
104	Crops for dry environments. Current Opinion in Biotechnology, 2022, 74, 84-91.	3.3	12
105	The distribution of ATP within tomato (Lycopersicon esculentumMill.) embryos correlates with germination whereas total ATP concentration does not. Seed Science Research, 2002, 12, 231-238.	0.8	11
106	Visualization of molecular processes associated with seed dormancy and germination using MapMan. Seed Science Research, 2011, 21, 143-152.	0.8	11
107	Mechanism and control of Genipa americana seed germination. Physiologia Plantarum, 2012, 144, 263-276.	2.6	11
108	Sequence analysis of Ricinus communis small heat-shock protein (sHSP) subfamily and its role in abiotic stress responses. Industrial Crops and Products, 2020, 152, 112541.	2.5	11

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109	Water relations of GA- and ABA-deficient tomato mutants during seed and fruit development and their influence on germination. Physiologia Plantarum, 1996, 96, 425-432.	2.6	10
110	Seed dormancy. Seed Science Research, 1997, 7, 221-223.	0.8	10
111	Seed Vigor, Aging, and Osmopriming Affect Anion and Sugar Leakage during Imbibition of Maize (Zea) Tj ETQq1 1 0.784314 rgBT /Overl	0.6	10
112	Transcriptome profiling of Ricinus communis L. provides new insights underlying the mechanisms towards thermotolerance during seed imbibition and germination. Industrial Crops and Products, 2018, 126, 380-393.	2.5	10
113	Physiological and cytological aspects of Inga vera subsp. affinis embryos during storage. Brazilian Journal of Plant Physiology, 2006, 18, 503-513.	0.5	10
114	Unravelling the complex trait of seed quality: using natural variation through a combination of physiology, genetics and -omics technologies. Seed Science Research, 2012, 22, S45-S52.	0.8	9
115	Estimation of metabolite networks with regard to a specific covariable: applications to plant and human data. Metabolomics, 2017, 13, 129.	1.4	9
116	Desiccation tolerance and longevity of germinated Sesbania virgata (Cav.) Pers.seeds. Journal of Seed Science, 2016, 38, 50-56.	0.7	8
117	High-Throughput Scoring of Seed Germination. Methods in Molecular Biology, 2017, 1497, 57-72.	0.4	8
118	A Footprint of Plant Desiccation Tolerance. Does It Exist?. Molecular Plant, 2018, 11, 1003-1005.	3.9	7
119	Network Analysis Prioritizes DEWAX and ICE1 as the Candidate Genes for Major eQTL Hotspots in Seed Germination of Arabidopsis thaliana. G3: Genes, Genomes, Genetics, 2020, 10, 4215-4226.	0.8	6
120	Arabidopsis in the Wildâ€"The Effect of Seasons on Seed Performance. Plants, 2020, 9, 576.	1.6	6
121	Synthesis of Storage Reserves. , 2013, , 85-131.		5
122	Time-series analysis of the transcriptome of the re-establishment of desiccation tolerance by ABA in germinated Arabidopsis thaliana seeds. Genomics Data, 2015, 5, 154-156.	1.3	4
123	Modulation of NF-YB genes in Ricinus communis L. in response to different temperatures and developmental stages and functional characterization of RcNF-YB8 as an important regulator of flowering time in Arabidopsis thaliana. Plant Physiology and Biochemistry, 2021, 166, 20-30.	2.8	3
124	CyLineUp: A Cytoscape app for visualizing data in network small multiples. F1000Research, 2016, 5, 635.	0.8	3
125	An EPR study of the kinetics of encapsidation of spin-labeled polyadenylic acid by TMV protein. FEBS Letters, 1982, 142, 301-304.	1.3	2
126	The second step of the biphasic endosperm cap weakening that mediates tomato (Lycopersicon) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 1371-1379.	2.4	2

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127	Sleeping Beauties, dormancy and resistance in harsh environments: molecular, proteomic and metabolomic aspects â€“ Berlin, Germany, 18â€“20 May 2008. Seed Science Research, 2008, 18, 185-187.	0.8	2
128	Osmopriming-associated genes in Poincianella pyramidalis. Environmental and Experimental Botany, 2021, 183, 104345.	2.0	2
129	Endo-ss-mannanase activity during dormancy alleviation and germination of white spruce (Picea) Tj ETQq1 1 0.784314 rgBT /Overlock	2.6	1
130	Clues on an intraspecific communication system in seedâ€seedling transition. Physiologia Plantarum, 2021, 172, 1609-1618.	2.6	1
131	Loss of viability during dehydration of Araucaria angustifolia (Bertol.) Kuntze seeds is associated with specific changes in gene expression. Trees - Structure and Function, 0, , 1.	0.9	1
132	Root architecture system of oilseed species from the Jatropha genus during seed development and germination. Industrial Crops and Products, 2019, 139, 111514.	2.5	0