Istvan Rajcan

List of Publications by Year
in descending order

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81 papers	3,356 citations	172207 29 h-index	155451 55 g-index
86 all docs	86 docs citations	86 times ranked	2669 citing authors

#	Article	IF	Citations
1	Biplot Analysis of Test Sites and Trait Relations of Soybean in Ontario. Crop Science, 2002, 42, 11-20.	0.8	553
2	Identification of loci governing eight agronomic traits using a <scp>GBS</scp>â€<scp>GWAS</scp> approach and validation by <scp>QTL</scp> mapping in soya bean. Plant Biotechnology Journal, 2015, 13, 211-221.	4.1	340
3	Seed and agronomic QTL in low linolenic acid, lipoxygenase-free soybean (Glycine max (L.) Merrill) germplasm. Genome, 2006, 49, 1510-1527.	0.9	194
4	Biplot Analysis of Test Sites and Trait Relations of Soybean in Ontario. Crop Science, 2002, 42, 11.	0.8	169
5	Mapping QTL for Individual and Total Isoflavone Content in Soybean Seeds. Crop Science, 2005, 45, 2454-2464.	0.8	105
6	Potassium Fertilization Effects on Isoflavone Concentrations in Soybean [Glycine max(L.) Merr.]. Journal of Agricultural and Food Chemistry, 2002, 50, 3501-3506.	2.4	104
7	Genetic control of soybean seed oil: II. QTL and genes that increase oil concentration without decreasing protein or with increased seed yield. Theoretical and Applied Genetics, 2013, 126, 1677-1687.	1.8	93
8	Genotype Ã— Environment Interactions, Stability, and Agronomic Performance of Soybean with Altered Fatty Acid Profiles. Crop Science, 2002, 42, 37-44.	0.8	87
9	QTL associated with horizontal resistance to soybean cyst nematode in Glycine soja PI464925B. Theoretical and Applied Genetics, 2007, 114, 461-472.	1.8	67
10	Environmental effects on fatty acid levels in soybean seed oil. JAOCS, Journal of the American Oil Chemists' Society, 2006, 83, 759-763.	0.8	63
11	Genetic control of soybean seed oil: I. QTL and genes associated with seed oil concentration in RIL populations derived from crossing moderately high-oil parents. Theoretical and Applied Genetics, 2013, 126, 483-495.	1.8	63
12	QTL in mega-environments: II. Agronomic trait QTL co-localized with seed yield QTL detected in a population derived from a cross of high-yielding adaptedÂÃ—Âhigh-yielding exotic soybean lines. Theoretical and Applied Genetics, 2009, 119, 429-436.	1.8	60
13	Specific flavonoids as interconnecting signals in the tripartite symbiosis formed by arbuscular mycorrhizal fungi, Bradyrhizobium japonicum (Kirchner) Jordan and soybean (Glycine max (L.) Merr.). Soil Biology and Biochemistry, 2006, 38, 533-543.	4.2	57
14	Accumulation of specific flavonoids in soybean (Glycine max (L.) Merr.) as a function of the early tripartite symbiosis with arbuscular mycorrhizal fungi and Bradyrhizobium japonicum (Kirchner) Jordan. Soil Biology and Biochemistry, 2006, 38, 1234-1242.	4.2	57
15	Tracking isoflavones: From soybean to soy flour, soy protein isolates to functional soy bread. Journal of Functional Foods, 2009, 1, 119-127.	1.6	57
16	Genetic basis of soybean adaptation to North American vs. Asian mega-environments in two independent populations from CanadianÂÃ—ÂChinese crosses. Theoretical and Applied Genetics, 2013, 126, 1809-1823.	1.8	55
17	Multiple allelic forms of acetohydroxyacid synthase are responsible for herbicide resistance in Setaria viridis. Theoretical and Applied Genetics, 2009, 119, 577-585.	1.8	50
18	Genotype Ã— Environment Interaction and Stability for Isoflavone Content in Soybean. Crop Science, 2009, 49, 1313-1321.	0.8	48

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19	Soybean (Glycine max) Haplotype Map (GmHapMap): a universal resource for soybean translational and functional genomics. Plant Biotechnology Journal, 2021, 19, 324-334.	4.1	48
20	Mapping the sensory perception of apple using descriptive sensory evaluation in a genome wide association study. PLoS ONE, 2017, 12, e0171710.	1.1	47
21	Comprehensive description of genomewide nucleotide and structural variation in shortâ€season soya bean. Plant Biotechnology Journal, 2018, 16, 749-759.	4.1	46
22	QTL in mega-environments: I. Universal and specific seed yield QTL detected in a population derived from a cross of high-yielding adaptedÂÃ—Âhigh-yielding exotic soybean lines. Theoretical and Applied Genetics, 2009, 119, 417-427.	1.8	45
23	Validation of mega-environment universal and specific QTL associated with seed yield and agronomic traits in soybeans. Theoretical and Applied Genetics, 2010, 120, 997-1003.	1.8	41
24	Partial Resistance to White Mold in a Transgenic Soybean Line. Crop Science, 2003, 43, 92.	0.8	39
25	Agronomic Performance and Nitrogen Fixation of Heirloom and Conventional Dry Bean Varieties Under Low-Nitrogen Field Conditions. Frontiers in Plant Science, 2019, 10, 952.	1.7	39
26	Genotype Ã— Environment Interactions, Stability, and Agronomic Performance of Soybean with Altered Fatty Acid Profiles. Crop Science, 2002, 42, 37.	0.8	37
27	Prediction of Cultivar Performance Based on Single- versus Multiple-Year Tests in Soybean. Crop Science, 2003, 43, 549.	0.8	36
28	Agronomic Performance of Recombinant Inbred Line Populations Segregating for Isoflavone Content in Soybean Seeds. Crop Science, 2005, 45, 2203-2211.	0.8	34
29	Advances in Breeding of Seed-Quality Traits in Soybean. Journal of Crop Improvement, 2005, 14, 145-174.	0.9	32
30	Effect of Genotype, Environment, and Genotype Ã— Environment Interaction on Tocopherol Accumulation in Soybean Seed. Crop Science, 2016, 56, 40-50.	0.8	32
31	Inheritance and Interaction of Low Palmitic and Low Linolenic Soybean. Crop Science, 2002, 42, 31-36.	0.8	31
32	Genetic and Environmental Effects on Fatty Acid Composition in Soybeans with Potential Use in the Automotive Industry. Crop Science, 2015, 55, 658-668.	0.8	29
33	New Mutations in a Deltaâ€9â€Stearoylâ€Acyl Carrier Protein Desaturase Gene Associated with Enhanced Stearic Acid Levels in Soybean Seed. Crop Science, 2012, 52, 1736-1742.	0.8	27
34	Identity recognition in response to different levels of genetic relatedness in commercial soya bean. Royal Society Open Science, 2017, 4, 160879.	1.1	27
35	Genome-Wide Association Studies of Soybean Yield-Related Hyperspectral Reflectance Bands Using Machine Learning-Mediated Data Integration Methods. Frontiers in Plant Science, 2021, 12, 777028.	1.7	26
36	Using the candidate gene approach for detecting genes underlying seed oil concentration and yield in soybean. Theoretical and Applied Genetics, 2013, 126, 1839-1850.	1.8	25

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37	Molecular mapping of soybean seed tocopherols in the cross â€˜<scp>OAC</scp> Bayfieldâ€™ÂÃ—Ââ€˜<scp>OAC</scp> Shireâ€™. Plant Breeding, 2017, 136, 83-93.	1.0	25
38	Partial Resistance to White Mold in a Transgenic Soybean Line. Crop Science, 2003, 43, 92.	0.8	23
39	The Interaction of the Soybean Seed High Oleic Acid Oil Trait With Other Fatty Acid Modifications. JAOCS, Journal of the American Oil Chemists' Society, 2018, 95, 39-49.	0.8	22
40	QTL analysis of soft scald in two apple populations. Horticulture Research, 2016, 3, 16043.	2.9	21
41	Target and Nonâ€“target site Mechanisms Confer Resistance to Glyphosate in Canadian Accessions ofConyza canadensis. Weed Science, 2018, 66, 234-245.	0.8	21
42	Genome-wide association analyses reveal the genetic basis of biomass accumulation under symbiotic nitrogen fixation in African soybean. Theoretical and Applied Genetics, 2020, 133, 665-676.	1.8	21
43	Machine-Learning-Based Genome-Wide Association Studies for Uncovering QTL Underlying Soybean Yield and Its Components. International Journal of Molecular Sciences, 2022, 23, 5538.	1.8	20
44	Soybean cyst nematode: Challenges and opportunities. Canadian Journal of Plant Science, 2006, 86, 25-32.	0.3	19
45	Genome-wide genetic diversity is maintained through decades of soybean breeding in Canada. Theoretical and Applied Genetics, 2019, 132, 3089-3100.	1.8	19
46	Inheritance and Interaction of Low Palmitic and Low Linolenic Soybean. Crop Science, 2002, 42, 31.	0.8	18
47	Omics advances and integrative approaches for the simultaneous improvement of seed oil and protein content in soybean (Glycine maxL.). Critical Reviews in Plant Sciences, 2021, 40, 398-421.	2.7	17
48	Effects of type I Diacylglycerol O-acyltransferase (DGAT1) genes on soybean (Glycine max L.) seed composition. Scientific Reports, 2021, 11, 2556.	1.6	16
49	Characterization of the genetic changes in a multi-generational pedigree of an elite Canadian soybean cultivar. Theoretical and Applied Genetics, 2014, 127, 211-229.	1.8	15
50	Trends in Soybean Trait Improvement over Generations of Selective Breeding. Crop Science, 2019, 59, 1870-1879.	0.8	15
51	Soybean. , 2009, , 57-90.		14
52	Identification of quantitative trait loci for seed isoflavone concentration in soybean (Glycine) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 14	1.0	13
53	Oil Crop Breeding and Genetics. , 2009, , 1-30.		12
54	Genotype, environment, and genotype by environment interaction for seed isoflavone concentration in soybean grown in soybean cyst nematode infested and non-Infested environments. Field Crops Research, 2018, 216, 189-196.	2.3	12

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55	Identification of the molecular genetic basis of the low palmitic acid seed oil trait in soybean mutant line RG3 and association analysis of molecular markers with elevated seed stearic acid and reduced seed palmitic acid. Molecular Breeding, 2014, 34, 447-455.	1.0	11
56	Identification of candidate domesticationâ€related genes with a systematic survey of lossâ€ofâ€function mutations. Plant Journal, 2018, 96, 1218-1227.	2.8	11
57	Comprehensive Analysis of Cytochrome P450 Monooxygenases Reveals Insight Into Their Role in Partial Resistance Against Phytophthora sojae in Soybean. Frontiers in Plant Science, 2022, 13, 862314.	1.7	11
58	Haplotype diversity underlying quantitative traits in Canadian soybean breeding germplasm. Theoretical and Applied Genetics, 2020, 133, 1967-1976.	1.8	10
59	Genetic analysis of sucrose concentration in soybean seeds using a historical soybean genomic panel. Theoretical and Applied Genetics, 2022, 135, 1375-1383.	1.8	9
60	Genome-Wide Association Study of Soybean Germplasm Derived From Canadian Ã— Chinese Crosses to Mine for Novel Alleles to Improve Seed Yield and Seed Quality Traits. Frontiers in Plant Science, 2022, 13, 866300.	1.7	9
61	Dark-adapted leaf conductance, but not minimum leaf conductance, predicts water use efficiency of soybean (Glycine max L. Merr.). Canadian Journal of Plant Science, 2013, 93, 13-22.	0.3	8
62	Using soybean pedigrees to identify genomic selection signatures associated with long-term breeding for cultivar improvement. Canadian Journal of Plant Science, 2018, 98, 1176-1187.	0.3	7
63	Plot extraction from aerial imagery: A precision agriculture approach. The Plant Phenome Journal, 2020, 3, e20000.	1.0	7
64	Improvement of key agronomical traits in soybean through genomic prediction of superior crosses. Crop Science, 2021, 61, 3908-3918.	0.8	7
65	Testing Whether Pre-Pod-Fill Symbiotic Nitrogen Fixation in Soybean Is Subject to Drift or Selection Over 100 Years of Soybean Breeding. Frontiers in Agronomy, 2021, 3, .	1.5	7
66	Classification of Soybean Pubescence from Multispectral Aerial Imagery. Plant Phenomics, 2021, 2021, 9806201.	2.5	6
67	Correlations between soybean seed quality traits using a genome-wide association study panel grown in Canadian and Ukrainian mega-environments. Canadian Journal of Plant Science, 2022, 102, 1040-1052.	0.3	6
68	Genetics of Resistance to Acetohydroxyacid Synthase Inhibitors in Populations of Eastern Black Nightshade (Solanum Ptychanthum) from Ontario. Weed Science, 2008, 56, 210-215.	0.8	5
69	Single Soybean Seed NMR Calibration for Oil Measurement Using Commercial Cooking Oils. JAOCS, Journal of the American Oil Chemists' Society, 2011, 88, 1795-1798.	0.8	5
70	DNA Marker-Assisted Selection for Improvement of Soybean Oil Concentration and Quality. , 2004, , .		5
71	Genome-wide association study to identify soybean stem pushing resistance and lodging resistance loci. Canadian Journal of Plant Science, 2021, 101, 663-670.	0.3	4
72	Identification of quantitative trait loci associated with seed quality traits between Canadian and Ukrainian mega-environments using genome-wide association study. Theoretical and Applied Genetics, 2022, 135, 2515-2530.	1.8	4

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73	Impact of temperature on the expression of Kennedy Pathway genes in developing soybean seeds. Canadian Journal of Plant Science, 2015, 95, 87-101.	0.3	3
74	Identification of quantitative trait loci associated with soyasaponin I concentration in soybean seed. Theoretical and Applied Genetics, 2018, 131, 2157-2165.	1.8	3
75	Accuracy of genomic prediction for seed oil concentration in highâ€oleic soybean populations using a lowâ€density marker panel. Crop Science, 2021, 61, 4012-4021.	0.8	3
76	Sustainability the food chain over genetic improvement of the quantity and quality of soybean grain. Cereal Research Communications, 2007, 35, 1105-1108.	0.8	2
77	Phenotypic evaluation of Canadian Ã— Chinese elite germplasm in a diversity panel for seed yield and seed quality traits. Canadian Journal of Plant Science, 2022, 102, 1032-1039.	0.3	2
78	SoyMAGIC: An Unprecedented Platform for Genetic Studies and Breeding Activities in Soybean. Frontiers in Plant Science, 0, 13, .	1.7	2
79	SRG extractor: a skinny reference genome approach for reduced-representation sequencing. Bioinformatics, 2019, 35, 3160-3162.	1.8	1
80	Agronomic and seed traits of highâ€oleic soybean lines containing the DPâ€305423â€1 transgene in four backcross populations. Crop Science, 2021, 61, 500-518.	0.8	1
81	The SoyaGen Project: Putting Genomics to Work for Soybean Breeders. Frontiers in Plant Science, 2022, 13, 887553.	1.7	1