Vignesh Muthusamy

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Development of Î²-Carotene Rich Maize Hybrids through Marker-Assisted Introgression of Î²-carotene hydroxylase Allele. PLoS ONE, 2014, 9, e113583.	2.5	154
2	Molecular Breeding for Nutritionally Enriched Maize: Status and Prospects. Frontiers in Genetics, 2019, 10, 1392.	2.3	131
3	Development of Biofortified Maize Hybrids through Marker-Assisted Stacking of Î²-Carotene Hydroxylase, Lycopene-Îµ-Cyclase and Opaque2 Genes. Frontiers in Plant Science, 2018, 9, 178.	3.6	105
4	Marker-assisted introgression of opaque2 allele for rapid conversion of elite hybrids into quality protein maize. Journal of Genetics, 2018, 97, 287-298.	0.7	88
5	Biofortification of maize: An Indian perspective. Indian Journal of Genetics and Plant Breeding, 2015, 75, 1.	0.5	58
6	Marker-assisted pyramiding of opaque2 and novel opaque16 genes for further enrichment of lysine and tryptophan in sub-tropical maize. Plant Science, 2018, 272, 142-152.	3.6	56
7	Marker-Assisted Selection to Pyramid the Opaque-2 (O2) and Î²-Carotene (crtRB1) Genes in Maize. Frontiers in Genetics, 2019, 10, 859.	2.3	35
8	Influence of rare alleles of Î²<i>â€carotene hydroxylase</i> and <i>lycopene epsilon cyclase</i> genes on accumulation of provitamin A carotenoids in maize kernels. Plant Breeding, 2017, 136, 872-880.	1.9	34
9	Exploration of novel <i>opaque16</i> mutation as a source for high lysine and tryptophan in maize endosperm. Indian Journal of Genetics and Plant Breeding, 2017, 77, 59.	0.5	32
10	Molecular characterization of endosperm and amino acids modifications among quality protein maize inbreds. Plant Breeding, 2016, 135, 47-54.	1.9	31
11	Biofortification of sweet corn hybrids for provitamin-A, lysine and tryptophan using molecular breeding. Journal of Cereal Science, 2020, 96, 103093.	3.7	28
12	Markerâ€assisted introgression of rare allele of <i>Î²â€carotene hydroxylase</i> (<i>crtRB1</i>) gene into elite quality protein maize inbred for combining high lysine, tryptophan and provitamin A in maize. Plant Breeding, 2019, 138, 174-183.	1.9	27
13	Development of multinutrient-rich biofortified sweet corn hybrids through genomics-assisted selection of shrunken2, opaque2, lcyE and crtRB1 genes. Journal of Applied Genetics, 2021, 62, 419-429.	1.9	27
14	Allelic variations for lycopene-Îµ-cyclase and Î²-carotene hydroxylase genes in maize inbreds and their utilization in Î²-carotene enrichment programme. Cogent Food and Agriculture, 2015, 1, 1033141.	1.4	26
15	Microsatellite-based genetic diversity analyses of sugary1-, shrunken2- and double mutant- sweet corn inbreds for their utilization in breeding programme. Physiology and Molecular Biology of Plants, 2017, 23, 411-420.	3.1	26
16	Sequence variation in 3â€²UTR region of crtRB1 gene and its effect on Î²-carotene accumulation in maize kernel. Journal of Plant Biochemistry and Biotechnology, 2013, 22, 401-408.	1.7	24
17	Genetic variability and inter-relationship of kernel carotenoids among indigenous and exotic maize (Zea maysL.) inbreds. Cereal Research Communications, 2015, 43, 567-578.	1.6	24
18	Development of sub-tropically adapted diverse provitamin-A rich maize inbreds through marker-assisted pedigree selection, their characterization and utilization in hybrid breeding. PLoS ONE, 2021, 16, e0245497.	2.5	24

#	Article	IF	Citations
19	Marker-assisted introgression of opaque2 allele for rapid conversion of elite hybrids into quality protein maize. Journal of Genetics, 2018, 97, 287-298.	0.7	24
20	Microsatellite marker-based characterization of waxy maize inbreds for their utilization in hybrid breeding. 3 Biotech, 2017, 7, 316.	2.2	23
21	Opaque16, a high lysine and tryptophan mutant, does not influence the key physico-biochemical characteristics in maize kernel. PLoS ONE, 2018, 13, e0190945.	2.5	21
22	Molecular analysis of mutant granule-bound starch synthase-I (waxy1) gene in diverse waxy maize inbreds. 3 Biotech, 2019, 9, 3.	2.2	21
23	Quality Protein Maize for Nutritional Security. , 2019, , 217-237.		20
24	Priming maize seeds with cyanobacteria enhances seed vigour and plant growth in elite maize inbreds. 3 Biotech, 2020, 10, 154.	2.2	20
25	Molecular Characterization of Exotic and Indigenous Maize Inbreds for Biofortification with Kernel Carotenoids. Food Biotechnology, 2015, 29, 276-295.	1.5	19
26	Genetic analyses of kernel carotenoids in novel maize genotypes possessing rare allele of <i>Î²-carotene hydroxylase</i> gene. Cereal Research Communications, 2016, 44, 669-680.	1.6	19
27	Microsatellite marker-based genetic diversity analyses of novel maize inbreds possessing rare allele of Î²-carotene hydroxylase (crtRB1) for their utilization in Î²-carotene enrichment. Journal of Plant Biochemistry and Biotechnology, 2016, 25, 12-20.	1.7	19
28	Molecular characterization of 5â€² UTR of the lycopene epsilon cyclase (lcyE) gene among exotic and indigenous inbreds for its utilization in maize biofortification. 3 Biotech, 2018, 8, 75.	2.2	19
29	Development of Maize Hybrids With Enhanced Vitamin-E, Vitamin-A, Lysine, and Tryptophan Through Molecular Breeding. Frontiers in Plant Science, 2021, 12, 659381.	3.6	19
30	Characterization of Î²-carotene rich MAS-derived maize inbreds possessing rare genetic variation in<i>Î²-carotene hydroxylase</i>gene. Indian Journal of Genetics and Plant Breeding, 2014, 74, 620.	0.5	18
31	Thermal treatments reduce rancidity and modulate structural and digestive properties of starch in pearl millet flour. International Journal of Biological Macromolecules, 2022, 195, 207-216.	7.5	18
32	Mapping and validation of Anthocyanin1 pigmentation gene for its effectiveness in early selection of shrunken2 gene governing kernel sweetness in maize. Journal of Cereal Science, 2019, 87, 258-265.	3.7	17
33	Composition analysis of lysine, tryptophan and provitamin-A during different stages of kernel development in biofortified sweet corn. Journal of Food Composition and Analysis, 2020, 94, 103625.	3.9	17
34	Analyzing the role of sowing and harvest time as factors for selecting super sweet (âˆ’<i>sh2sh2</i>) corn hybrids. Indian Journal of Genetics and Plant Breeding, 2017, 77, 348.	0.5	17
35	Harnessing Crop Wild Relatives for Crop Improvement. LS International Journal of Life Sciences, 2017, 6, 73.	0.2	17
36	Molecular diversity and genetic variability of kernel tocopherols among maize inbreds possessing favourable haplotypes of Î³-tocopherol methyl transferase (ZmVTE4). Journal of Plant Biochemistry and Biotechnology, 2019, 28, 253-262.	1.7	16

#	Article	IF	Citations
37	Genetic variability-, genotype Ã— environment interactions- and combining ability-analyses of kernel tocopherols among maize genotypes possessing novel allele of Î³-tocopherol methyl transferase (ZmVTE4). Journal of Cereal Science, 2019, 86, 1-8.	3.7	16
38	Development and validation of multiplex-PCR assay for simultaneous detection of rare alleles of crtRB1 and lcyE governing higher accumulation of provitamin A in maize. Journal of Plant Biochemistry and Biotechnology, 2017, 27, 208.	1.7	15
39	Incorporation of<i>opaque-2</i>into â€˜UMI 1200â€™, an elite maize inbred line, through marker-assisted backcross breeding. Biotechnology and Biotechnological Equipment, 2019, 33, 144-153.	1.3	15
40	Development and validation of geneâ€based markers for <i>shrunken2â€Reference</i> allele and their utilization in markerâ€assisted sweet corn (<i>Zea mays</i> <i>Sachharata</i>) breeding programme. Plant Breeding, 2020, 139, 1135-1144.	1.9	14
41	Development and validation of breeder-friendly functional markers of sugary1 gene encoding starch-debranching enzyme affecting kernel sweetness in maize (Zea mays). Crop and Pasture Science, 2019, 70, 868.	1.5	14
42	Genetic analysis of prolificacy in â€œSikkim Primitiveâ€â€”A prolific maize (<i>Zea mays</i>) landrace of Northâ€Eastern Himalaya. Plant Breeding, 2019, 138, 781-789.	1.9	13
43	Marker-assisted pyramiding of lycopene-Îµ-cyclase, Î²-carotene hydroxylase1 and opaque2 genes for development of biofortified maize hybrids. Scientific Reports, 2021, 11, 12642.	3.3	13
44	Maize. , 2016, , 67-88.		12
45	Marker-Assisted Breeding for Enrichment of Provitamin A in Maize. , 2019, , 139-157.		11
46	Analysis of genetic variability for retention of kernel carotenoids in sub-tropically adapted biofortified maize under different storage conditions. Journal of Cereal Science, 2020, 93, 102987.	3.7	11
47	Popping quality attributes of popcorn hybrids in relation to weevil (Sitophilus oryzae) infestation. Indian Journal of Genetics and Plant Breeding, 2015, 75, 510.	0.5	11
48	Validation of molecular markers linked to low glucosinolate QTLs for marker assisted selection in Indian mustard (<i>Brassica juncea</i>L. Czern & Coss). Indian Journal of Genetics and Plant Breeding, 2016, 76, 64.	0.5	11
49	Combining higher accumulation of amylopectin, lysine and tryptophan in maize hybrids through genomics-assisted stacking of waxy1 and opaque2 genes. Scientific Reports, 2022, 12, 706.	3.3	11
50	Biofortification of Maize for Protein Quality and Provitamin-A Content. Concepts and Strategies in Plant Sciences, 2019, , 115-136.	0.5	10
51	Development and validation of breeder-friendly gene-based markers for lpa1-1 and lpa2-1 genes conferring low phytic acid in maize kernel. 3 Biotech, 2020, 10, 121.	2.2	10
52	Low expression of carotenoids cleavage dioxygenase 1 (ccd1) gene improves the retention of provitamin-A in maize grains during storage. Molecular Genetics and Genomics, 2021, 296, 141-153.	2.1	9
53	Impact of vte4 and crtRB1 genes on composition of vitamin-E and provitamin-A carotenoids during kernel-stages in sweet corn. Journal of Food Composition and Analysis, 2022, 105, 104264.	3.9	9
54	A novel quantitative trait loci governs prolificacy in â€˜Sikkim Primitiveâ€™ â€“ A unique maize (<i>Zea) Tj ETQq0 0 0 rgBT /Overlock 10	1.9	8

#	Article	IF	Citations
55	Development and validation of rapid and cost-effective protocol for estimation of amylose and amylopectin in maize kernels. 3 Biotech, 2022, 12, 62.	2.2	8
56	Allelic Variation in Zmfatb Gene Defines Variability for Fatty Acids Composition Among Diverse Maize Genotypes. Frontiers in Nutrition, 2022, 9, .	3.7	8
57	Genetic variability for kernel tocopherols and haplotype analysis of Î³-tocopherol methyl transferase (vte4) gene among exotic- and indigenous- maize inbreds. Journal of Food Composition and Analysis, 2020, 88, 103446.	3.9	7
58	Interactions of microbial inoculants with soil and plant attributes for enhancing Fe and Zn biofortification in maize genotypes. Rhizosphere, 2021, 19, 100421.	3.0	7
59	Evaluation of specialty corn inbreds for responses to stored grain weevil (<i>Sitophilus oryzae</i>L.) infestation. Indian Journal of Genetics and Plant Breeding, 2014, 74, 564.	0.5	7
60	Composition of lysine and tryptophan among biofortified-maize possessing novel combination of opaque2 and opaque16 genes. Journal of Food Composition and Analysis, 2022, 107, 104376.	3.9	7
61	Development of Î²-carotene, lysine, and tryptophan-rich maize (Zea mays) inbreds through marker-assisted gene pyramiding. Scientific Reports, 2022, 12, .	3.3	7
62	Genetics of resistance to stored grain weevil (<i>Sitophilus oryzae</i> L.) in maize. Cogent Food and Agriculture, 2015, 1, 1075934.	1.4	6
63	Identification of SNP and InDel variations in the promoter and 5â€² untranslated regions of Î³-tocopherol methyl transferase (ZmVTE4) affecting higher accumulation of Î±-tocopherol in maize kernel. Crop Journal, 2019, 7, 469-479.	5.2	6
64	Marker aided introgression of opaque 2 (o2) allele improving lysine and tryptophan in maize (Zea mays) Tj ETQq0 0 0 rgBT /Overlock 10	3.1	6
65	Molecular characterization of teosinte branched1 gene governing branching architecture in cultivated maize and wild relatives. 3 Biotech, 2020, 10, 77.	2.2	6
66	Analyses of genetic variability and genotype x cyanobacteria interactions in biofortified maize (Zea) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 Agronomy, 2021, 130, 126343.	4.1	6
67	Genetic and molecular characterisation of subtropically adapted low-phytate genotypes for		

#	Article	IF	Citations
73	Molecular characterization of elite maize (Zea mays L.) inbreds using markers associated with iron and zinc transporter genes. Genetic Resources and Crop Evolution, 2021, 68, 1545-1556.	1.6	5
74	Allelic variation in sugary1 gene affecting kernel sweetness among diverse-mutant and -wild-type maize inbreds. Molecular Genetics and Genomics, 2021, 296, 1085-1102.	2.1	5
75	Expression analysis of Î²-carotene hydroxylase1 and opaque2 genes governing accumulation of provitamin-A, lysine and tryptophan during kernel development in biofortified sweet corn. 3 Biotech, 2021, 11, 325.	2.2	5
76	Influence of T-, C- and S- cytoplasms on male sterility and their utilisation in baby corn hybrid breeding. Euphytica, 2020, 216, 1.	1.2	4
77	Microsatellite marker-based genetic diversity among quality protein maize (QPM) inbreds differing for kernel iron and zinc. Molecular Plant Breeding, 0, , .	0.0	4
78	Inheritance of low erucic acid in Indian mustard [<i>Brassica juncea</i>(L.) Czern. and Coss.]. Indian Journal of Genetics and Plant Breeding, 2015, 75, 264.	0.5	4
79	Enrichment of amylopectin in sub-tropically adapted maize hybrids through genomics-assisted introgression of waxy1 gene encoding granule-bound starch synthase (GBSS). Journal of Cereal Science, 2022, 105, 103443.	3.7	4
80	Expression analysis of opaque2, crtRB1 and shrunken2 genes during different stages of kernel development in biofortified sweet corn. Journal of Cereal Science, 2022, 105, 103466.	3.7	4
81	Maize Breeding. , 2022, , 221-258.		4
82	Cyanobacterial inoculation as resource conserving options for improving the soil nutrient availability and growth of maize genotypes. Archives of Microbiology, 2021, 203, 2393-2409.	2.2	3
83	Genetic variation for grain phytate and molecular characterization of <i>low phytic acidâ€2</i> (<i>lpa2</i>) geneâ€based maize (<scp><i>Zea mays</i></scp>) inbreds. Plant Breeding, 2022, 141, 212-222.	1.9	3
84	Deciphering the Genetic Inheritance of Tocopherols in Indian Mustard (Brassica juncea L. Czern and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	3.5	3
85	Development and validation of multiplex-PCR assay to simultaneously detect favourable alleles of shrunken2, opaque2, crtRB1 and lcyE genes in marker-assisted selection for maize biofortification. Journal of Plant Biochemistry and Biotechnology, 2021, 30, 265-274.	1.7	2
86	Molecular breeding for increasing nutrition quality in maize: recent progress.. , 2021, , 360-379.		2
87	Genetic variability of popping quality traits and microsatellite-based characterization of popcorn inbreds for utilization in breeding programme. Indian Journal of Genetics and Plant Breeding, 2020, 80, .	0.5	0