

References for *Lens*

Mill.

Genus ID : A-140.028

1. Arumuganathan K, Earle ED . 1991. Nuclear DNA content of some important plant species. *Plant Molecular Biology Reporter*. 9. 208 - 218.
2. Salimuddin, Ramesh B. 1994. Karyotype, nuclear and chromosomal DNA variation in *Lens culinaris*. *Medical Cytologia* . 59. 7 - 15.
3. Ramesh B, Salimuddin. 1992. Inter-varietal variation for chromatin content in lentil. *LENS News Letter*. 19. 3 - 8.
4. Ladizinsky G. 1993. Wild lentils. *Critical Reviews in Plant Sciences* . 12. 169 - 184.
5. Ladizinsky G. 1997. A new species of *Lens* from south-east Turkey. *Botanical Journal of the Linnean Society* . 123. 257- 260.
6. Sindhu JS, Slinkard AE, Scoles GJ. 1983. Studies on variation in *Lens*.1. Karyotype. *LENS News Letter* . 10. 14.
7. Jha TB, Halder M . 2015. Searching chromosomal landmarks in Indian lentils through EMA-based Giemsa staining method. *Protoplasma*. 253. 1223 - 1231.
8. Jha TB, Mahanti A, Ghorai A. 2016. Karyotype analysis of Indian lentils through EMA based Giemsa staining. *Caryologia*. 68. 280 - 288.
9. Ahmad H, Khan IM, Alam M, Khawaja HIT. 1992. Karyotypic studies in *Lens culinaris*. *Pakphyton*. 4. 181 - 189.
10. Bhattacharjee SK. 1951. Karyotype analysis of *Lens esculenta*Moench var. *microsperma*. *Science and Culture* . 16. 426 - 427.
11. Bhattacharjee SK. 1953. Cytogenetics of *Lens esculenta*Moench. *Caryologia*. 5. 159 - 166.
12. Malaviya DR, Shukla RS. 2000. Evolutionary trend in *Lens culinaris* and allied species: a cytological evidence. *Cytologia*. 65. 305 - 311.
13. GaffarzadehNamazi L, Asghari-Zakaria R, Babaeian N, Kazemi-Tabar K. 2007. Comparative study of chromosome morphology and C-banding patterns in several genotypes of *Lens culinaris*. *Pakistan Journal of Biological Sciences* . 10. 1811 - 1816.
14. Ashraf M, Ahmad S, Bokhari FS, Sharif A. 1995. Karyotype analysis of two cultivars of *Lens culinaris* from Pakistan. *Kromosomo*. 2. 2631 - 2635.
15. . .
16. Kumar S, Gupta PK. 1997. Pachytene chromosomes in lentil. *LENS News letter* . 24. 30 - 34.

17. . .
18. Naithani SP, Sarbhoy RK . 1973. Cytological studies in *Lens esculenta*Moench. *Cytologia* . 38. 195 - 203.
19. Sarbhoy RK. 1980. Effect of paradichlorobenzene on the somatic chromosomes and mitosis of *Lens esculenta* L. Moench. *Cytologia*. 45. 381 - 388.
20. Sen NK, Ghosh AK. 1955. . . 247. . Study on karyotype of common pulses. Proceedings 42nd Indian Science Congress. Baroda.
21. Shahla A, Ahmadian P, Sarafi A. 1976. Separation of lentil root tip chromosomes by colchicine. *Iranian Journal of Agriculture Research* . 4. 41 - 43.
22. Sharma AK, Mukhopadhyay S. 1963. Karyotype constancy in different strains of *Lens* as worked out through recent techniques. *Indian Agriculture* . 7. 103 - 111.
23. Sharma PC, Gupta PK . 1982. Karyotypes in some pulse crops. *Nucleus*. 25. 181 - 185.
24. Sinha SSN, Acharia SS. 1972. Karyotype analysis in some varieties of *Lens culinaris*. *Cytologia*. 37. 673 - 683.
25. Sinha SSN, Acharia SS. 1975. Meiotic analysis in some varieties of *Lens culinaris*. *Cytologia* . 40. 269 - 276.
26. Slinkard AE. 1985. Cytology and cytogenetics of lentils. *LENS News Letter* . 12. 1 - 10.
27. Tiwari S, Tiwari DP. 1983. Cytological effects of colchicine, paradichlorobenzene and 8-hydroxy-quinoline on root tips of lentils. *LENS News Letter* . 10. 22 - 24.
28. Garcia VA, Cortoz VA, Cororna TT . 1992. Chromosomal study of 13 cultivars of lentils (*Lens esculenta*Moench.). *Revista-Pitotocnia-Mexicana*. 51. 61- 69.
29. Kumar S, Balyan HS, Ramesh B, Singh SP, Gupta PK . 2001. A study on nucleolar organizers in lentil using FISH and spore quartet analysis. *Cytologia*. 66. 247- 252.
30. Reddy VRK, Annadurai M. 1992. Karyomorphological studies in the genus *Lens*. *New Botany* . 19. 9 - 19.
31. Reddy VRK, Thresiamma PJ. 1992. Karyotypic analysis in some cultivars of *Lens culinaris*Medik. *Advances in Plant Science* . 5. 356 - 368.
32. Raziuddin H, Ahmad H, Altaf CM, Hanan F. 1990. Investigation on the karyotype of lentil. *Sarhad Journal of Agriculture* . 6. 261 - 264.
33. Rehman SU, Altaf CM . 1994. Karyotypic studies in *Lens culinaris* Medic subsp. macro spermav. Laird X Precoz. *Pakistan Journal of Botany*. 26. 347 - 352.

34. Sindhu JS, Slinkard AE, Scoles GJ . 1984. Karyotypic analysis of *Lens orientalis* (Boiss.) Handle-Mazetti. *Cytologia*. 49. 151 - 155.
35. Sinha SSN, Singh VK . 1982. Karyotype analysis in some varieties of lentil. *Genetica Iberica* . 34. 15 - 35.
36. Mehra RC, Butler MG, Beckman T . 1986. N-banding and karyotype analysis of *Lens culinaris*. *Journal of Heredity* . 77. 473 - 474.
37. Balyan HS, Houben A, Ahne R. 2002. Karyotype analysis and physical mapping of 18S-5.8S-25S and 5S ribosomal RNA loci in species of genus *Lens* Miller (Fabaceae). *Caryologia*. 55. 121 - 128.
38. Abbo S, Miller TE, Reader SM, Dunford RP, King IP. 1994. Detection of ribosomal DNA sites in lentil and chickpea by fluorescent in situ hybridization. *Genome*. 37. 713 - 716.
39. Galasso I, Schmidt T, Pignone D. 2001. Identification of *Lens culinaris* subsp. Culinarischromosomes by physical mapping of repetitive DNA sequences. *Chromosome Research* . 9. 199 - 209.
40. Fernandez M, Ruiz ML, Linares C, Fominaya A, Perez de la Vega M. 2005. 5S rDNA genome regions of *Lens* species. *Genome*. 48. 937 - 942.
41. Alo F, Furman BJ, Akhunov E, Dvorak J, Gepts P. 2011. Leveraging genomic resources of model species for the assessment of diversity and phylogeny in wild and domesticated lentil. *Journal of Heredity* . 102. 315 - 329.
42. Hamwieh A, Udupa S, Sarker A, Jung C, Baum M. 2009. Development of new microsatellite markers and their application in the analysis of genetic diversity in lentils. *Breeding Science*. 59. 77 - 86.
43. Aldemir SB, Sever T, Ates D, Yagmur B, Kaya HB, Temel HY. 2014. . . . 3360. . QTL mapping of genes controlling Fe uptake in lentil (*Lens culinaris* L.) seed using recombinant inbred lines. *Proceedings of the Plant and Animal Genome Conference XXII*. San Diego, USA.
44. Duran Y, Fratini R, Garcia P, Perez de la Vega M. 2004. An intersubspecific genetic map of *Lens*. *Theoretical and Applied Genetics* . 108. 1265 - 1273.
45. El-Nahas AI, El-Shazly HH, Ahmed SM, Omran AAA. 2011. Molecular and biochemical markers in some lentil (*Lens culinaris* Medik.) genotypes. *Annals of Agricultural Sciences* . 56. 105 - 112.
46. Eujayl I, Baum M, Erskine W, Pehu E, Muehlbauer FJ. 1997. The use of RAPD markers for lentil genetic mapping and the evaluation of distorted F2 segregation. *Euphytica*. 96. 405 - 412.
47. Eujayl I, Baum M, Powell W, Erskine W, Pehu E . 1998. A genetic linkage map of lentil (*Lens* sp.) based on RAPD and AFLP markers using recombinant inbred lines. *Theoretical and Applied Genetics*. 97. 83 - 89.
48. Fedoruk MJ, Vandenberg A, Bett KE. 2013. Quantitative trait loci analysis of seed quality characteristics in lentil using single nucleotide polymorphism markers. *Plant Genome*. 6. 37 - 39.

49. Ferguson ME, Newbury HJ, Maxted N, Ford-Lloyd BV, Robertson LD. 1998. Population genetic structure in *Lens* taxa revealed by isozyme and RAPD analysis. *Genetic Resources and Crop Evolution* . 45. 549 - 559.
50. Kumar H, Dikshit HK, Singh A, Neelu J, Kumari J, Singh AM, Singh D, Sarker A, Prabhu KV. 2014. Characterization of grain iron and zinc in lentil (*Lens culinaris* Medikus subsp *culinaris*) and analysis of their genetic diversity using SSR markers. *Australian Journal of Crop Science* . 8. 1005 - 1012.
51. Dikshit HK, Singh A, Singh D, Aski MS, Prakash P, Jain N, Meena S, Kumar S, Sarker A. 2015. Genetic diversity in *Lens* species revealed by EST and genomic simple sequence repeat analysis. *PLoS One*. 10. doi: 10.1371/journal.pone.0138101.
52. Kahraman A, Demirel U, Ozden M, Muehlbauer FJ. 2010. Mapping of QTLs for leaf area and the association with winter hardiness in fall-sown lentil. *African Journal of Biotechnology* . 9. 8515 - 8519.
53. Kahraman A, Kusmenoglu I, Aydin N, Aydogan A, Erskine W, Muehlbauer FJ . 2004. QTL mapping of winter hardiness genes in lentil . *Crop Science*. 44. 13 - 22.
54. Kaur S, Cogan NI, Stephens A, Noy D, Butsch M, Forster JW, Materne M. 2014. EST-SNP discovery and dense genetic mapping in lentil (*Lens culinaris* Medik.) enable candidate gene selection for boron tolerance. *Theoretical and Applied Genetics* . 127. 703 - 713.
55. Kaur S, Cogan NOI, Pembleton LW, Shinozuka M, Savin KW, Materne M, Forster JW. 2011. Transcriptome sequencing of lentil based on second-generation technology permits large-scale unigene assembly and SSR marker discovery. *BMC Genomics* . 12. doi: 10.1186/1471-2164-12-265.
56. Gupta M, Verma B, Kumar N, Chahota RK, Rathour R, Sharma SK, Bhatia S, Sharma TR. 2012. Construction of intersubspecific molecular genetic map of lentil based on ISSR, RAPD and SSR markers. *Journal of Genetics* . 91. 279 - 87 .
57. Lombardi M, Materne M, Cogan NOI, Rodda M, Daetwyler HD, Slater AT, Forster JW, Kaur S. 2014. Assessment of genetic variation within a global collection of lentil (*Lens culinaris* Medik.) cultivars and landraces using SNP markers. *BMC Genetics* . 15. doi: 10.1186/s12863-014-0150-3.
58. Mayer MS, Soltis PS. 1994. Chloroplast DNA phylogeny of *Lens* (Leguminosae): Origin and diversity of the cultivated lentil. *Theoretical and Applied Genetics* . 87. 773 - 781.
59. Muench DG, Slinkard AE, Scoles GJ . 1991. Determination of genetic variation and taxonomy in lentil (*Lens Miller*) species by chloroplast DNA polymorphism. *Euphytica*. 56. 213 - 218.
60. Patil PB, Vrinten PL, Scoles GJ, Slinkard AE . 1995. Variation in the ribosomal RNA units of the genera *Lens* and *Cicer*. *Euphytica*. 83. 33 - 42.
61. Rajora OP, Mahon JD. 1997. Mitochondrial and nuclear DNA variation, genotype fingerprinting and genetic relationships in lentil (*Lens culinaris* Medik.) . *Canadian Journal of Plant Science* . 77. 515 - 521.

62. Ford RR, Taylor PWJ. 2003. Construction of an intraspecific linkage map of lentil (*Lens culinaris* subsp. *culinaris*). *Theoretical and Applied Genetics* . 107. 910 - 916.
63. Saha GC, Sarker A, Chen WD, Vandemark GJ, Muehlbauer FJ. 2010. Identification of markers associated with genes for rust resistance in *Lens culinaris*Medik. *Euphytica*. 175. 261 - 265.
64. Saha GC, Sarker A, Chen W, Vandemark GJ, Muehlbauer FJ . 2013. Inheritance and linkage map positions of genes conferring agromorphological traits in *Lens culinaris*Medik. *International Journal of Agronomy* . 9. doi: 10.1155/2013/618926.
65. Sever T, Ates D, Aldemir SB, Yagmur B, Kaya HB, Temel HY. 2014. . Identification of QTLs controlling genes to se uptake in lentil seeds. *Proceedings of the Plant and Animal Genome XXII Conference*. San Diego, USA.
66. Sharma SK, Dawson IK, Waugh R. 1995. Relationships among cultivated and wild lentils revealed by RAPD analysis. *Theoretical and Applied Genetics* . 91. 647 - 654.
67. Sharma SK, Knox MR, Ellis THN. 1996. AFLP analysis of the diversity and phylogeny of *Lens* and its comparison with RAPD analysis. *Theoretical and Applied Genetics* . 93. 751 - 758.
68. Sharpe AG, Ramsay L, Sanderson LA, Fedoruk MJ, Clarke WE, Li R, Kagale S, Vijayan P, Vandenberg A, Bett KE. 2013. Ancient orphan crop joins modern era: gene-based SNP discovery and mapping in lentil. *BMC Genomics* . 14. doi: 10.1186/1471-2164-14-192.
69. Sonnante G, Galasso I, Pignone D. 2003. ITS sequence analysis and phylogenetic Inference in the Genus *Lens* Mill. *Annals of Botany* . 91. 49 - 54.
70. Sonnante G, De Paolis A, PignoneD. 2005. Bowman-Birk inhibitors in *Lens*: identification and characterization of two paralogous gene classes in cultivated lentil and wild relatives. *Theoretical and Applied Genetics* . 110. 596 - 604.
71. Tahir M, Muehlbauer FJ. 1994. Gene-mapping in lentil with recombinant inbred lines. *Journal of Heredity* . 85. 306 - 310.
72. Tanyolac B, Ozatay S, Kahraman A, Muehlbauer F . 2010. Linkage mapping of lentil (*Lens culinaris* L.) genome using recombinant inbred lines revealed by AFLP, ISSR, RAPD and some morphologic markers. *Journal of Agricultural Biotechnology and Sustainable Development* . 2. 1 - 6.
73. Taran B, Buchwaldt L, Tullu A, Banniza S, Warkentin TD, Vandenberg A. 2003. Using molecular markers to pyramid genes for resistance to ascochytablight and anthracnose in lentil (*Lens culinaris*Medik.). *Euphytica*. 134. 223 - 230.
74. Temel HY, Gol D, Kahriman A, Tanyolac MB. 2014. Single nucleotide polymorphism discovery through Illumina- based transcriptome sequencing and mapping in lentil. *Turkish Journal of Agriculture and Forestry* . 38. 1 - 19.

75. Tewari K, Dikshit HK, Jain N, Kumari J, Singh D . 2012. Genetic differentiation of wild and cultivated Lens based on molecular markers. *Journal of Plant Biochemistry and Biotechnology*. 21. 198 - 204.
76. Tullu A, Buchwaldt L, Warkentin T, Taran B, Vandenberg A. 2003. Genetics of resistance to anthracnose and identification of AFLP and RAPD markers linked to the resistance gene in PI 320937 germplasm of lentil (*Lens culinaris*Medikus). *Theoretical and Applied Genetics* . 106. 428 - 434.
77. Verma P, Sharma TR, Srivastava PS, Abdin MZ, Bhatia S . 2014. Exploring genetic variability within lentil (*Lens culinaris* Medik.) and across related legumes using a newly developed set of microsatellite markers. *Molecular Biology Reports* . 41. 5607 - 5625.
78. Wong MM, Gujaria-Verma N, Ramsay L, Yuan HY, Caron C, Diapari M, Vandenberg A, Bett KE. 2015. Classification and characterization of species within the genus *Lens* using genotyping-by-sequencing (GBS). *PLoSOne*. 10. e0122025.
79. Zavodna M, Kraic J, Paglia G, Gregova E, Morgante M. 2000. Differentiation between closely related lentil (*Lens culinaris*Medik.) cultivars using DNA markers. *Seed Science and Technology* . 28. 217 - 219.
80. Galasso I. 2003. Distribution of highly repeated DNA sequences in species of the genus *Lens* Miller. *Genome*. 46. 1118 - 1124.
81. Abo-elwafa A, Murai K, Shimada T. 1995. Intra- and Inter-specific variations in *Lens* revealed by RAPD markers. *Theoretical and Applied Genetics* . 90. 335 - 340.
82. Ahmad M, McNeil DL. 1996. Comparison of crossability, RAPD, SDS-PAGE and morphological markers for revealing genetic relationships within and among *Lens* species. *Theoretical and Applied Genetics*. 93. 788 - 793.
83. Mekonnen F, Mekbib F, Kumar S, Ahmed S, Chahota RK, Sharma TR, Sarvajeet S, Kaur R, Kumar G. 2014. Identification of molecular markers associated with rust resistance genes in lentil (*Lens culinaris* subsp. *culinaris*). *Canadian Journal of Plant Protection* . 2. 27 - 36.
84. Datta S, Tiwari S, Kaashyap M, Gupta PP, Choudhury PR, Kumari J, Kumar S. 2010. Genetic similarity analysis in lentil using cross-genera legume sequence tagged microsatellite site markers.. *Crop Science* . 51. 2412 - 2422.
85. Van Oss H, Aron Y, Ladizinsky G . 1997. Chloroplast DNA variation and evolution in the genus *Lens* Mill. *Theoretical and Applied Genetics* . 94. 452 - 457.
86. Havey MJ, Muehlbauer FJ. 1989. Variability for restriction fragment lengths and phylogenies in lentil. *Theoretical and Applied Genetics* . 77. 839 - 843.
87. Williams JT, Sanchez AMC, Jackson MT . 1974. Studies on lentils and their variation. 1. The taxonomy of the species. *Soc. Adv. Breed. Res in Asia and Oceania J* . 6. 133 - 145.
88. Ladizinsky G. 1979. The origin of lentil and its wild gene pool. *Euphytica*. 28. 179 - 187.

89. Zohary D . 1972. The wild progenitor and the place of origin of the cultivated lentil : *Lens culinaris*. Economic Botany . 26. 326 - 332.
90. Phan HT, Ellwood SR, Hane JK, Ford R, Materne M, Oliver RP. 2007. Extensive macrosynteny between *Medicago truncatula* and *Lens culinaris* subsp. *culinaris*. Theoretical and Applied Genetics. 114. 549 - 558.
91. Buruchin F, Ladizinsky G. 1983. Centromere orientation at metaphase I of a translocation heterozygote in lentil. Canadian Journal of Genetics and Cytology . 25. 547 - 553.
92. Sindhu JS, Slinkard AE, Scoles GJ. 1983. Karyotypic analysis of *Lens ervoides* Brign. Crop Science. 23. 534 - 536.
93. Sinha SSN, Acharia SS. 1974. Cytological studies in *Lens nigricans*: A case of translocation heterozygote. Cytologia. 39. 57 - 62.
94. Ahmad M, Mc Neil DL, Sedcole JR. 1997. Phylogenetic relationships in *Lens* species and their interspecific hybrids as measured by morphological characters. Euphytica. 94. 101 - 111.
95. Hoffman DL, Soltis DE, Muehlbauer FJ, Ladizinsky G . 1986. Isozyme Polymorphism in *Lens* (Leguminosae). Systematic Botany . 11. 392 - 402.
96. Ferguson ME, Maxted N, Slangeren HV, Robertson LD. 2000. A reassessment of the taxonomy of *Lens* Mill.(Leguminosae, Papilionoidae,Vicieae). Botanical Journal of Linnean Society. 133. 41 - 59.
97. Ladizinsky G, Sarkar D. 1982. Morphological and cytogenetical characterization of *Vicia montbretii* Fisch. & Mey/Synonym: *Lens montbretii*(Fisch. & Mey.)Davis & Plitmann). Botanical Journal of Linnean Society . 85. 209 - 212.
98. Ladizinsky G, Braun D, Goshen D, Muhelbauer. 1984. The biological species of the genus *Lens* L.. Botanical Gazette . 145. 253 - 261.