Species Datasheet

Datasheet No. A-140.028.001
(family.genus.species)

DBT- Network Programme

1.Taxon:

Species:*Lensculinaris*Medik.
Subspecies:
Variety:
Cultivar:
Hybrid:

Image file

2. Synonyms:*Ervum lens* L., *Ervum lens* Wall.,*Lens culinaris* subsp. *culinaris*, *Lensesculenta*Moench,*Lens lens*Huth, *Vicia lens* (L.) Coss.& Germ.

3.Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperms
- Clade: Eudicots
- Clade: Rosids
- Order: FabalesBromhead
- Family: FabaceaeLindl.
- Genus:*Lens*Mill.
- Species: *L.culinaris*Medik.

Bentham and Hooker (1862)

Kingdom: Plantae
Division:Phanerogamia
Class: Dicotyledons
Subclass: Polypetalae
Series: Calyciflorae
Cohors: RosalesBercht. & J. Presl
Ordo: Leguminosae Juss.
Subordo: PapilionaceaeGiseke
Genus: *Lens*Mill.
Species: *L.culinaris*Medik.

4.Distribution:

Global: Afghanistan, Agalega, Albania, Algeria, Argentina, Austria, Azores, Balearic Is, Bangladesh, Bulgaria, California, Chile, China, Colombia, Corsica, Crete, Cyprus, Czech Republic & Slovakia, East Aegean Is, Ecuador, Ethiopia, Fiji, former Yugoslavia, France, Germany, Greece, Guatemala, Hungary, Idaho, India, Indonesia, Iran, Iraq, Israel, Italy, Java, Jordan, Kenya, Lebanon, Libya Madagascar, Mauritius, Mauritius, Mayotte, Morocco, Nepal, New York, New Zealand (North), New Zealand (South), Northern Marianas, Pakistan, Papua New Guinea, Portugal, Reunion, Rodrigues, Romania, Sardinia, Saudi Arabia, Sicily, South Africa, Spain, Sri Lanka, Switzerland,Syria, Tanzania, Tunisia, Turkey in Asia, United States, Vietnam,Washington, Yemen, Zimbabwe

India: Arunachal Pradesh, Assam, Bihar, Delhi, Goa, Haryana, Himachal Pradesh, Jammu-Kashmir, Madhya Pradesh, Maharashtra, Manipur, Orissa, Punjab, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal

5.Indigenous/Exotic/Endemic;Cultivated/Wild: Exotic; Cultivated

6.Threat Status:

IUCN:

BSI:

7.Habit and Habitat: Slender herb or twining vine. Height ~ 45 cm. Temperate, subtropical and tropical at higher elevations

8.Life Form: Chamaephytes

9.Economic Importance: Edible pulse crop. High inprotein and B-vitamin.Best preceding cropof non-pulse crops due to high efficiency of nitrogen fixation.They are considered to be useful in the treatment of constipation and other intestinal affections. The plant can be used as a green manure. The seeds are a source of starch for the textile and printing industries

10.Probable Progenitor of:

11.DNA

C-value	**Methodology**
2C(8.42 pg) [1]	Flow Cytometry
2C(8.76-9.99pg)[2,3]	Feulgen Microdensitometer

12.Basic chromosome number(s):x=7[4,5,6, 7]

13. Zygotic chromosome number(s):2n=14[8 -14, 16, 18 – 27]

14. Gametic chromosome number(s):n= 7[7,11,16,18,19,25]

15.Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene chromosomes/Neocentric chromosomes):
Image file

16.Ploidy level: Diploid[7,8,11,16,18,19,25,28]
Image file

17.Agametoploidy:

18.Nature of polyploidy (auto, segmental, allo, autoallo):

19.Genomic formula:

20.Aberrant chromosome number(s)(aneuploidy, aneusomaty, polysomaty):

21.Somatic chromosomes:3,7,8,16,18,29 – 37

Karyotype Majority metacentric/submetacentricchromosomes
Chromosome size Medium
NOR chromosome(s)2-4
Degree of asymmetry Symmetrical
Image file

22.Banding pattern(s):N banding[36], C banding[13]
Image file

23.Physical mapping of chromosomes:

In situ hybridization
Image file

Fluorescent in situ hybridization:18S-5.8S-25Sand 5Sribosomal gene families[29, 37, 38, 40]
pLc30 and pLc7 repeated DNA sequences[39]

Image file

24.Genomic in situ hybridization:
Image file

25.Linkage map:[52,53,54,64,68,72,74]
Image file

26.Chromosome associations:

Female meiosis
Male meiosis7II [7,11,18,25,28]
Image file

27.Chromosome distribution at anaphase I:7:7 [7,11,18,25,28]

28.Genetic diversity:

Chromosomal level:[13,14,25,33]
Image file

DNA level:[41 - 79]

29.Any other information (Apomixis; Inversion; Male sterility;Pollen grain mitosis; Pollen stainability;Translocationsetc.): Pollen stainability (%): 91 - 98% [25,28]