

Species Datasheet

Datasheet No. A-086.001.002
(family.genus.species)

DBT- Network Programme

1. Taxon:

Species: *Canna indica* L.

Subspecies

Variety

Cultivar

Hybrid

Image file

2. Synonyms: *Canna achiras* Gill., *C. achiras* Gillies ex D.Don, *C. altensteinii* Bouché, *C. amabilis* T.Koyama & Nob.Tanaka, *C. ascendens* Ciciar., *C. aurantiaca* Roscoe, *C. aureovittata* Lodd., *C. barbatica* Bouché, *C. bidentata* Bertol., *C. bifida* Roem & Schult., *C. brasiliensis* Roscoe ex Spreng., *C. carnea* Roscoe, *C. cearensis* Huber, *C. chinensis* Willd., *C. cinnabarina* Bouché, *C. coccinea* f. *flaviflora* Chodat & Hassl., *C. coccinea* Mill., *C. coccinea* var. *bicolor* Kraenzl., *C. coccinea* var. *concolor* Regel, *C. coccinea* var. *floribunda* (Bouché) Regel, *C. coccinea* var. *limbata* Regel, *C. commutata* Bouché, *C. compacta* Roscoe, *C. concinna* Bouché, *C. crocea* Lag. ex Rchb., *C. crocea* Roem & Schult., *C. densiflora* Bouché, *C. densifolia* Bouché, *C. demudata* var. *grandis* Petersen, *C. discolor* Lindl., *C. discolor* var. *rubripunctata* Nob.Tanaka, *C. discolor* var. *viridifolia* Nob.Tanaka, *C. edulis* Ker Gawl., *C. ehrenbergii* Bouché, *C. elegans* Raf., *C. ellipticifolia* Stokes, *C. ellipticifolia* var. *coccinea* (Mill.) Stokes, *C. ellipticifolia* var. *lutea* (Mill.) Stokes, *C. ellipticifolia* var. *patens* (Aiton) Stokes, *C. ellipticifolia* var. *rubra* Stokes, *C. esculenta* Loudon, *C. exigua* Bouché, *C. eximia* Bouché ex Horan, *C. flavescens* Link, *C. floribunda* Bouché, *C. formosa* Bouché, *C. fuchsina* Ciciar., *C. fulgida* Bouché, *C. heliconiifolia* Bouché, *C. heliconiifolia* var. *xalapensis* (Bouché) Kraenzl., *C. humilis* Bouché, *C. indica* f. *rubroaurantiaca* Makino, *C. indica* subsp. *orientalis* Baker, *C. indica* var. *coccinea* (Mill.) Aiton, *C. indica* var. *coccinea* Willd., *C. indica* var. *edwardsii* Regel, *C. indica* var. *flava* (Roscoe) Baker, *C. indica* var. *indica*, *C. indica* var. *karsteniana* Regel, *C. indica* var. *limbata* (Regel) Petersen, *C. indica* var. *lutea* (Mill.) Aiton, *C. indica* var. *maculata* Hook., *C. indica* var. *nepalensis* (Bouché) Baker, *C. indica* var. *patens* Aiton, *C. indica* var. *rubra* Aiton, *C. indica* var. *sanctae-rosae* (Kraenzl.) Nob.Tanaka, *C. indica* var. *variegata* Regel, *C. indica* var. *warszewiczii* Nob.Tanaka, *C. juncea* Retz., *C. laeta* Bouché, *C. lagunensis* Lindl., *C. lambertii* Lindl. ex Ker Gawl., *C. lanuginosa* Roscoe, *C. leptochila* Bouché, *C. limbata* Roscoe, *C. lutea* Larrañaga, *C. lutea* Mill., *C. lutea* var. *aurantiaca* (Roscoe) Regel, *C. lutea* var. *maculata* (Hook.) Regel, *C. lutea* var. *pallida* (Roscoe) Regel, *C. macrophylla* Horan., *C. maculata* (Hook.) Link, *C. maxima* Lodd. ex Roscoe, *C. montana* Blume, *C. moritziana* Bouché, *C. nepalensis* Bouché, *C. nepalensis* D. Dietr., *C. occidentalis* Ker Gawl., *C. orientalis* Bouché, *C. orientalis* Roscoe, *C. orientalis* var. *flava* Roscoe, *C. pallida* Roscoe, *C. pallida* var. *maculata* (Hook.) Roscoe, *C. patens* (Aiton) Roscoe, *C. patens* var. *limbata* (Regel) Baker, *C. pentaphylla* D.Dietr., *C. platyphylla* Nees & Mart., *C. plurituberosa* T.Koyama & Nob.Tanaka, *C. poeppigii* Bouché, *C. polyclada* Wawra, *C. polymorpha* Bouché, *C. portoricensis* Bouché, *C. pruinosa* Hoffmanns., *C. pulchra* Bouché ex Horan, *C. pulchra* Hassk., *C. recurvata* Bouché, *C. roscoeana* Bouché, *C. rotundifolia* André, *C. rubra* Willd., *C. rubricaulis* Link, *C. sanctae-rosae* Kraenzl., *C. sanguinea* Bouché, *C. sanguinea* Warsz. ex Otto & A.Dietr., *C. saturate-rubra* Bouché ex K.Koch, *C. schubertii* Horan, *C. seleriana* Kraenzl., *C. sellowii* Bouché, *C. speciosa* Hegetschw., *C. speciosa* Roscoe ex Sims, *C. spectabilis* Bouché, *C. sulphurea* Bouché, *C. surinamensis* Bouché, *C. tenuiflora* Bouché ex A.Dietr., *C. texensis* Regel, *C. textoria* Noronha, *C. thyrsiflora* Hegetschw., *C. tinei* Tod., *C. variabilis* Willd., *C. variegata* Besser, *C. variegata* Bouché, *C. variegatifolia* Ciciar., *C. ventricosa* Bouché, *C. warszewiczii* A.Dietr., *C. warszewiczii* var. *flameus* Ram.Goyena, *C. xalapensis* Bouché, *Cannacorus indicus* (L.) Medik., *C. ovatus* Moench, *Distemon brasiliensis* (Roscoe ex Spreng.) Bouché, *D. grandis* Horan., *Xyphostylis lutea* (Mill.) Raf.

3. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperm
- Clade: Monocots
- Clade: Commelinids
- Order: Zingiberales Griseb.
- Family: Cannaceae Juss.
- Genus: *Canna* L.
- Species: *C. indica* L.

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Epigynae
Ordo: Scitamineae
Genus: *Canna* L.
Species: *C. indica* L.

4. Distribution:

Global: Andaman Island, Angola, Antigua-Barbuda, Argentina, Ascension, Australia, Azores, Bahamas, Belize, Benin, Bismarck Archipelago, Bolivia, Borneo, Brazil, Burma, Cambodia, Canary Island, Caribbean, Cape Verde, Caroline Island, Central African Republic, China, Colombia, Cook Island, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Equatorial Guinea, Ethiopia, Fiji, French Guiana, Gabon, Gambia, The Gilbert Island, Guatemala, Guinea, Gulf of Guinea Island, Guyana, Hainan, Haiti, Hawaii, Honduras, India, Jamaica, Japan, Jawa, Juan Fernández Island, Kenya, Laos, Leeward Island, Louisiana, Madagascar, Madeira, Malawi, Malaya, Mexico, Mozambique, Myanmar, Nepal, Nicaragua, Nigeria, Ogasawara-shoto, Panamá, Paraguay, Philippines, Portugal, Puerto Rico, Queensland, Santa Cruz Island, Senegal, Society Island, South Carolina, Southwest Caribbean, Spain, Sri Lanka, St.Helena, St.Kitt Nevis, Suriname, Taiwan, Tanzania, Thailand, Togo, Tonga, Trinidad-Tobago, U.S.A., Uganda, Uruguay, Venezuela, Vietnam, Wallis-Futuna Island, Windward Island, Zaire, Zambia, Zimbabwe

India: Throughout India

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

6. Threat Status:

IUCN:

BSI:

7. Habit and Habitat: Herb. Widespread in areas of high rainfall in disturbed places, roadsides, outskirts of villages

8. Life Form: Rhizomatous geophyte

9. Economic Importance: Ornamental plant

10. Probable Progenitor of:

11. DNA

C- value

$$4C = (2.88 \pm 0.20 \text{pg})^1$$

Methodology

Feulgen microdensitometry¹

12. Basic chromosome number(s):

13. Zygotic chromosome number(s): $2n=18^{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20}$

$$2n=27^{2,13,14,19,20,21,22}$$

$$2n=36^{5,8}$$

14. Gametic chromosome number(s): $n=9^{5,6}$

15. Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene chromosomes/Neocentric chromosomes): 1-2 N-type chromosomes (median chromosomes with a secondary constriction in the centromeric region)¹²

Image file

16. Ploidy level: Diploid^{1,2}

Triploid^{2,3,20,21,22}

Image file

17. Agametoploidy

18. Nature of polyploidy (auto, segmental, allo, autoallo): Allopolyploid²⁰

19. Genomic formula:

20. Aberrant chromosome number(s) (aneuploidy, aneusomy, polysomy):

21. Somatic chromosomes:

Karyotype: Majority submetacentric to slightly subtelocentric chromosomes¹², Majority metacentric chromosomes²⁰

Chromosome size: Small¹², very small to small²⁰

NOR chromosome(s): 1NOR²⁰, 2NOR²⁰

Degree of asymmetry: Symmetrical²⁰

Image file

22. Banding pattern(s):

Image file

23. Physical mapping of chromosomes:

In situ hybridization

Image file

Fluorescent in situ hybridization

Image file

24. Genomic in situ hybridization:

Image file

25. Linkage map:

Image file

26. Chromosome associations:

Female meiosis

Male meiosis 9II², 9III²¹

Image file

27. Chromosome distribution at anaphase I:

28. Genetic diversity:

Chromosomal level

Image file

DNA level

29. Any other information (Apomixis; Inversion; Male sterility; Pollen grain mitosis; Pollen stainability; Translocations etc):