

Species Data Sheet

Datasheet No. A-045.001.007
(family.genus.species)

DBT- Network Programme

1. Taxon:

Species: *Dioscorea esculenta* (Lour.) Burkill

Subspecies

Variety

Cultivar

Hybrid

Image file

2. **Synonyms:** *Dioscorea aculeata* Roxb., *D. aculeata* var. *spinosa* (Prain) Roxb. ex Prain & Burkill, *D. esculenta* var. *fasciculata* (Roxb.) Prain & Burkill, *D. esculenta* var. *fulvidotomentosa* R. Knuth, *D. esculenta* var. *spinosa* (Prain) R. Knuth, *D. esculenta* var. *tiliifolia* (Kunth) Fosberg & Sachet, *D. fasciculata* Roxb., *D. fasciculata* var. *spinosa* Prain, *D. papillaris* Blanco, *D. papuana* Warb., *D. spinosa* Roxb. ex Hook. f., *D. tiliifolia* Kunth, *D. tugui* Blanco, *Oncorhiza esculentus* (Lour.) Pers., *Oncusesculentus* Lour.

3. Systematic position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperm
- Clade: Monocot
- Order: Dioscoreales Mart.
- Family: Dioscoreaceae R. Br.
- Genus: *Dioscorea* L.
- Species: *D. esculenta* (Lour.) Burkill

Bentham and Hooker (1862)

- Kingdom: Plantae
- Division: Phanerogams
- Class: Monocotyledons
- Series: Epigynae
- Ordo: [Dioscoreaceae](#) R. Br.
- Genus: *Dioscorea* L.
- Species: *D. esculenta* (Lour.) Burkill

4. Distribution:

Global: Bangladesh, East Himalaya, Nepal, West Himalaya, Cambodia, Myanmar, Thailand, Vietnam, Borneo, Jawa, Lesser Sunda Island, Malaya, Maluku, Philippines, Sulawesi, Sumatera, Bismarck Archipelago, New Guinea

India: Assam

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

6. Threat Status:

IUCN:

BSI:

7. **Habit and Habitat:** Climbing herb. Found in open and cultivated areas near current or former human habitation ranging near sea level–500 m. Cultivated as a food crop, truly “wild” plants probably never encountered.

8. **Life Form:** Tuberous geophyte

9. **Economic Importance:** The tubers are edible

10. **Probable Progenitor of:**

11.DNA

C-value

$2C = 2.10\text{pg}^{22}$

Methodology:

Flow Cytometry²²

12.Basic chromosome number(s): $x=10^6$

13. Zygotic chromosome number(s): $2n=40^{4,8,22}50^{11}60^880^{19}90^{6,8,15,16,21}100^{6,8,16,21}$

14. Gametic chromosome number(s): $n=45^{15}$

15.Specialized chromosomes (B chromosomes/Sex chromosomes/polytene chromosomes/Neocentric chromosomes):

Image file

16.Ploidy level:Tetraploid²²

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:

Karyotype:

Chromosome size:

NOR chromosome(s):

Degree of asymmetry:

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:

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; Translocation etc):