Genus Datasheet

DatasheetNo. A-073.003 **DBT- N**
Programme
(Family.Genus)

1. Genus: *Crinum* L.

2. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperms
- Clade: Monocots
- Order: Asparagales Link
- Family: Amaryllidaceae J. St.-Hil.
- Genus: *Crinum* L.

Bentham and Hooker(1862)
Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Epigynae
Ordo: Amaryllideae Dumort.
Genus: *Crinum* L.

3. Species:

Global:113

India:16

4. Taxonomic riddles:

5. Distribution:

Global: Africa, America, Asia and Australia

India: Throughout India

6. Habit and Habitat: Herb. Grows in seasonally dry places, ephemeral pools, rainforests, coastal areas and river banks, hill slopes

7. Economic Importance: Use as an ornamental, pharmaceutical and in perfume industries, traditional as well as modern medicines.

8. DNA content range: **Methodology:**

2C(50.5-51.6 pg) [32] Flow cytometry[32]
4C(47.15 pg) [17] Feulgen cytophotometry[17]

4C (101.0 -103.2 pg)[32]

9. Basic chromosome number(s):x=11[1, 2, 3, 6, 7, 8, 9, 10, 12, 18, 33,34]
x=12[6,7]
x=15 [27]

10.Zygotic chromosome number(s):2n = 19-36 [18]
2n = 19-60 [17,22]
2n = 22[1,2,3,4,5,6,7,8,9,10,11,12,17,18,19,20,24,25, 27,28,29,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52, 53,55]
2n = 33[2, 3, 5, 7, 9, 27, 29, 30, 31]
2n = 44 [6, 26, 27, 30, 49]

11. Gametic chromosome number(s): n = 11 [2, 10, 12, 29,31]
n=13[2]
n=14 [2]
n=15 [2,27]
n=17 [2]
n=18 [2]
n=23[2]

12. Specialized chromosomes (B chromosomes/Sex chromosomes/Polytenechromosomes/ Neocentric chromosomes):B chromosomes (1)[22]

13. Ploidy level: Diploid[2, 9, 10, 27, 29]
Triploid[2, 3, 7, 9, 27, 31]
Tetraploid [6, 26]

14. Nature of polyploidy (auto, segmental, allo, autoallo): Allotriploidal or segmental triploid[3] Autotriploid [5]
Allotetraploid [6]
Allopolyploid [2,31]

15. Aberrantchromosomenumber(s) (aneuploidy,aneusomaty, polysomaty): Variant chromosome numbers showing2n =21[9],2n=20[9] 16[28],2n=20[28],2n=23 [28],Aneuploidy[9, 18, 28], Endoduplication[18]

16.Karyograms: [6, 13, 18, 27 , 29] **Meiosis:**[2,9,10]

17. Banding pattern(s): CMA bands [3,19] ,DAPI bands[3,19],Q bands [13]

18. Physical mapping of chromosomes: **GISH:**

19.Phylogenetic relationship atChromosomal; DNA level: DNA level[14, 15, 16]

20. Cytogenetic mechanism(s) underlying evolution: While retaining a basic karyotype,the various taxa differ in the extent of l marker chromosomes like long and nucleolar pairs.Hybridization may have been responsible for part of the karyotypic heteromo polyploid levels.The mechanism responsible for detectable and undetectable chromosomal repatterning are unequal segmental inter and paracentric inversions and misdivision.[2]

21. Linkage map:

22. Any other information: Pollen grain mitosis [2], Pollen fertility- 1%[31], 11%[9], Pollen stainability 95.8% [10]