Gerbera Cultivars

Him Saumya
Him Gaurav
Him Aabha
Him Apoorva
Him Keerti

सीएसआईआर–हिमालय जैवसंपदा प्रौद्योगिकी संस्थान
CSIR-Institute of Himalayan Bioresource Technology
पालमपुर–हिमाचल प्रदेश
Palampur-Himachal Pradesh

Gerbera jamesonii cultivars

Him Saumya, Him Gaurav, Him Aabha, Him Apoorva and Him Keerti

The cultivars Him Saumya (CSIR-IHBT-Gr-11-6), Him Gaurav (CSIR-IHBT-Gr-13-1), Him Aabha (CSIR-IHBT-Gr-24-6), Him Apoorva (CSIR-IHBT-Gr-29-1) and Him Keerti (CSIR-IHBT-Gr-Y-1) of *Gerbera jamesonii* have been developed by CSIR-Institute of Himalayan Bioresource Technology, Palampur through hybridization and selection programme. Using characterized parental lines, a controlled hybridization programme was carried out, followed by selection of promising hybrid genotypes which were superior to the parents for morphological and floral attributes. The criteria for selections were unique flower shapes and bright colors. These selections were evaluated for agronomic performance for two years under protected cultivation. The cultivars having good tissue culture response, nursery performance, vigorous growth and suitable for protected cultivation were finally selected.

Him Saumya (CSIR-IHBT-Gr-11-6)

Parentage

CSIR-IHBT-Gr-1

X

CSIR-IHBT-Gr-3

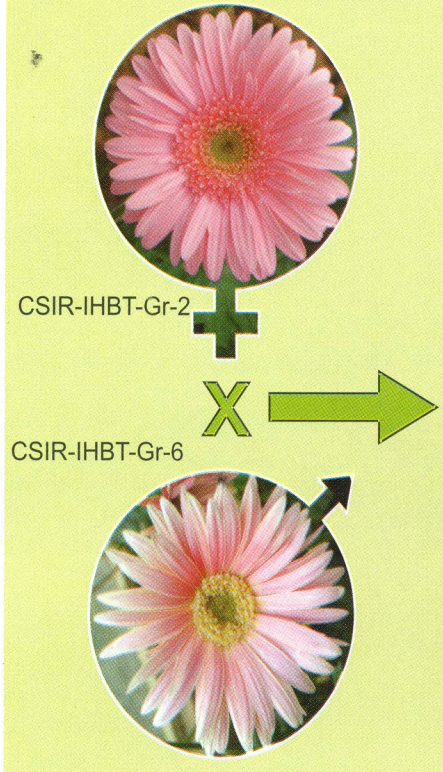
Salient features of the cultivar Him Saumya

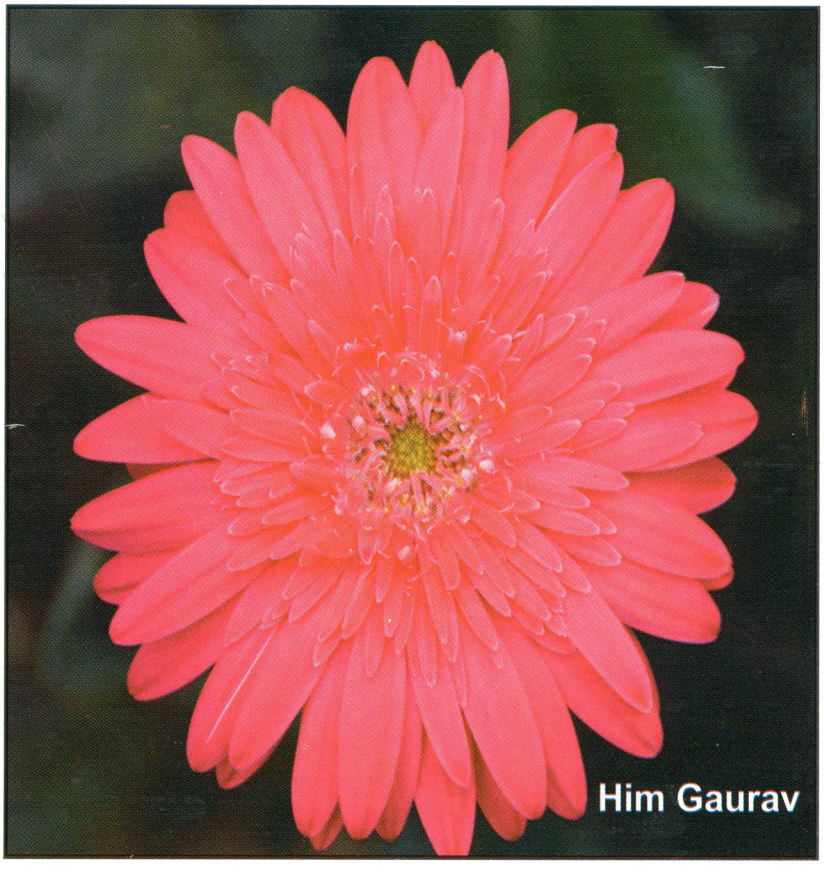
Stem length (cm)	43.0 (38.0-47.0)*
Flower head type	Double
Flower diameter (cm)	10.2 (9.0-11.0)*
Number of flowers per plant in a year	18.8 (16.0-23.0)*
Color of leaves	Green
Outer color of petals	Light yellow
Inner color of petals	Light yellow
Disc color	Green
Diameter of inner ray florets (cm)	4.5 (3.7-4.8)*
Flower type	Standard

* Range in parenthesis

Him Gaurav (CSIR-IHBT-Gr-13-1)

Parentage





Salient features of the cultivar Him Gaurav

Stem length (cm)	46.5 (42.0-52.0)*
Flower head type	Double
Flower diameter (cm)	10.5 (8.0-13.0)*
Number of flowers per plant in a year	24.4 (21.0-28.0)*
Color of leaves	Dark green
Outer color of petals	Red
Inner color of petals	Red
Disc color	Green
Diameter of inner ray florets (cm)	7.0 (5.9-8.0)*
Flower type	Standard

* Range in parenthesis

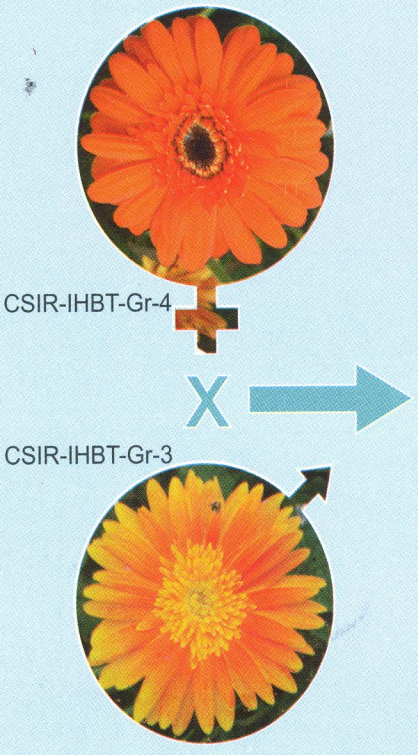
In vitro Mass Multiplication of Gerbera Cultivars

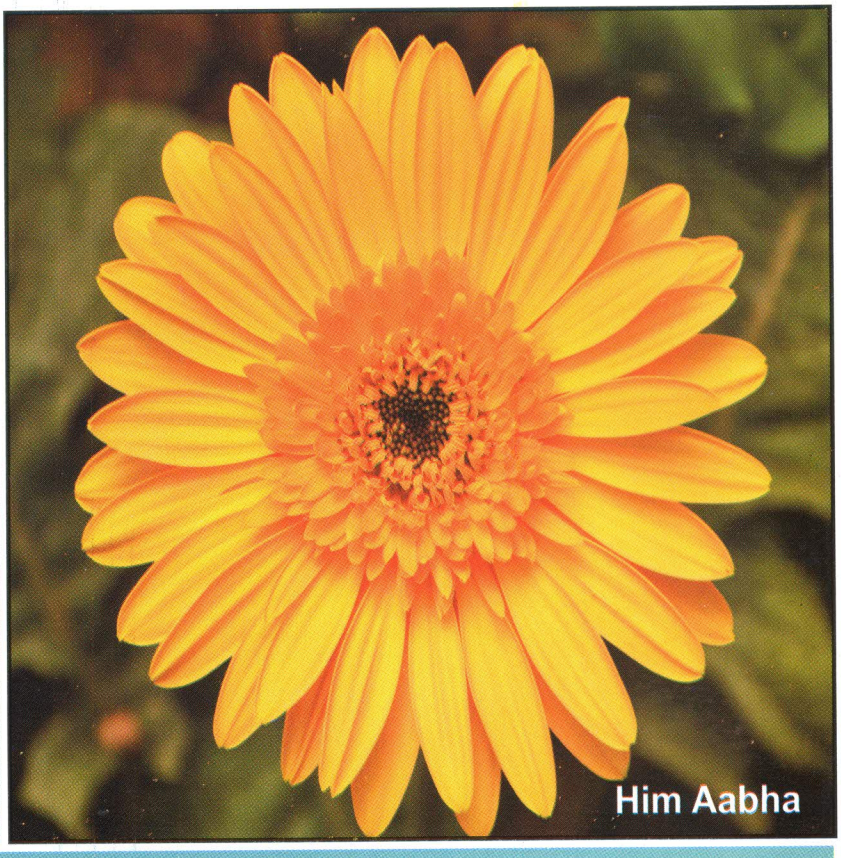
Vegetative propagation in gerbera is possible through division of suckers but the rate of multiplication is too slow to adopt for commercial purpose. *In vitro* propagation is an important tool to produce disease free plants on large scale. The protocol of shoot regeneration, multiplication and root induction have been standardized for mass propagation. The protocol for hardening tissue culture raised plantlets of gerbera has also been standardized for successful transfer of plants under nursery conditions.

In vitro propagation of gerbera cultivars

Him Aabha (CSIR-IHBT-Gr-24-6)

Parentage





Salient features of the cultivar Him Aabha

Stem length (cm)	29.6 (26.0-33.0)*
Flower head type	Semi-double
Flower diameter (cm)	11.7 (10.0-13.0)*
Number of flowers per plant in a year	25.5 (21.0-29.0)*
Color of leaves	Dark green
Outer color of petals	Yellow orange
Inner color of petals	Yellow orange
Disc color	Brown
Diameter of inner ray florets (cm)	5.5 (4.3-5.9)*
Flower type	Standard

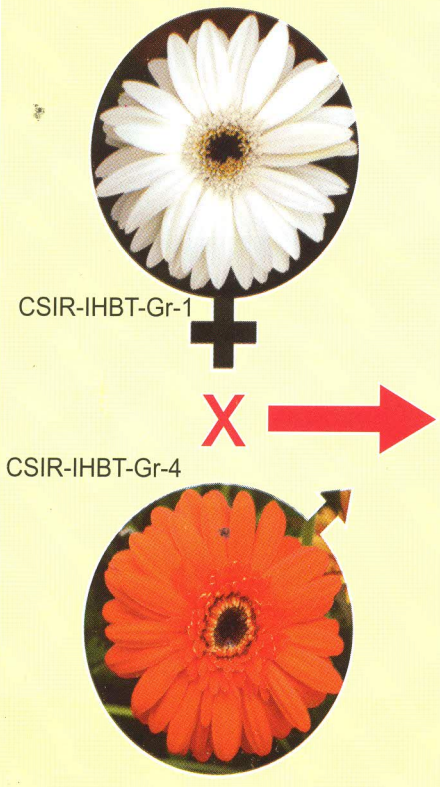
* Range in parenthesis

DNA Fingerprinting of cultivars using RAPD markers

The genetic distinction of cultivars Him Saumya, Him Gaurav, Him Aabha, Him Apoorva and Him Keerti were established using 40 RAPD markers. While developing the fingerprinting parental lines were used for the comparison purpose. Of these, 9 RAPD markers found to be informative, were utilized for molecular characterization and development of fingerprints. In total 47 bands were generated 5.22 bands per RAPD markers. All the 9 RAPD markers evincing 33 reproducible polymorphic loci among the improved selections and parental lines were used for development of fingerprints. Based on the RAPD data consolidated DNA fingerprints were developed with unique marker loci. The genetic diversity ranged from 0.26 to 0.71 with an average of 0.55. Cluster analysis of gerbera genotypes based polymorphic loci grouped in two major groups. Genetic similarity data suggested that improved gerbera selections have captured high level of genetic diversity and can be potentially used as promising parental group for future genetic improvement programme of gerbera.

Him Apoorva (CSIR-IHBT-Gr-29-1)

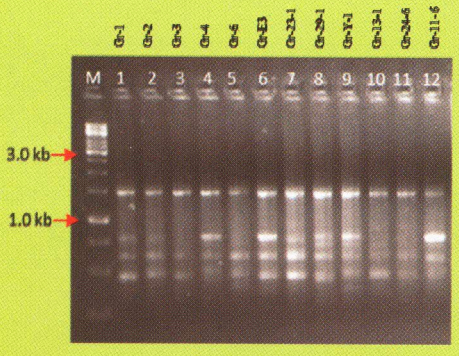
Parentage



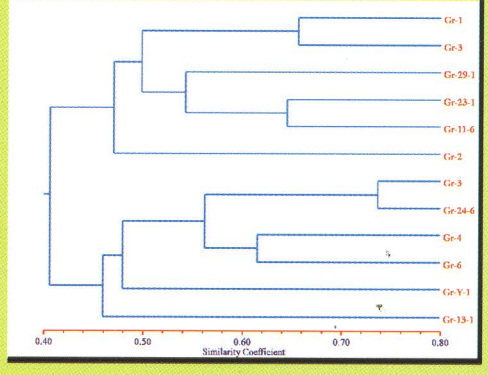
Salient features of the cultivar Him Apoorva

Stem length (cm)	45.8 (44.0-47.0)*
Flower head type	Double
Flower diameter (cm)	10.5 (8.5-12.0)*
Number of flowers per plant in a year	23.3 (21.0-26.0)*
Color of leaves	Dark green
Outer color of petals	Red bicolor
Inner color of petals	Red bicolor
Disc color	Green
Diameter of inner ray florets (cm)	6.0 (4.5-6.8)*
Flower type	Standard

* Range in parenthesis



Representative RAPD profile of gerbera parental genotypes and their hybrid progenies using primer OPA-7 (polymorphic bands are marked with arrows)

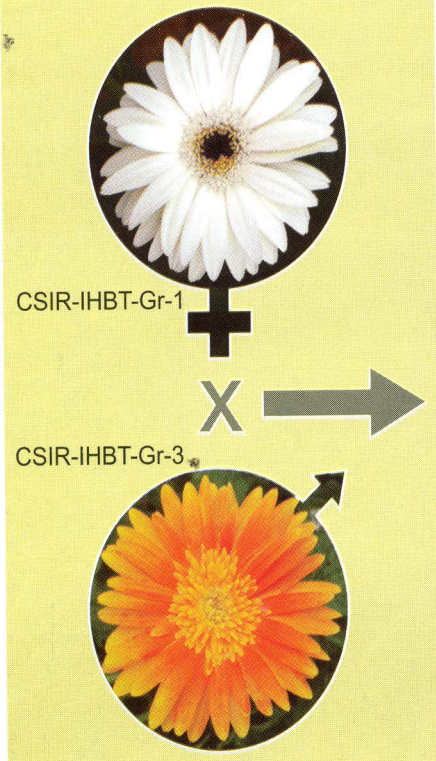


Dendrogram of gerbera genotypes representing genetic diversity among the parents and cultivars (Scale indicates Jaccard's similarity coefficient)

Diagrammatic representation of DNA fingerprints of gerbera cultivars and parents revealed by RAPD markers amplicons

Him Keerti (CSIR-IHBT-Gr-Y-1)

Parentage



Salient features of the cultivar Him Keerti

Stem length (cm)	44.5 (42.0-47.0)*
Flower head type	Double
Flower diameter (cm)	11.5 (9.5-12.5)*
Number of flowers per plant in a year	20.0 (18.0-22.0)*
Color of leaves	Green
Outer color of petals	Yellow
Inner color of petals	Yellow
Disc color	Green
Diameter of inner ray florets (cm)	7.2 (6.3-8.2)*
Flower type	Standard

* Range in parenthesis

Contributors

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September, 2016

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