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A Review

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Micro propagation of gerbera

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Abstract **:** Micro propagation is the most common application of plant biotechnology which offers not only for the mass propagation but also conserve elite or rare plants. Gerbera is one of the most highly ranked flowers due to its beauty, wide variety of colours and ability to rehydrate after long transportation. Propagation through division is too slow and impractical. *In vitro* propagation is now commonly used to quickly increase cultivar selections for both cut and flowering potted plants. For commercialization of this crop and to meet the growing demands for planting material, tissue and organ culture techniques are being used as alternative methods for propagation. In this review, the scattered information on clonal multiplication of gerbera through micro propagation worldwide are being tried to put together. This could eventually be helpful in drawing the attention of the researchers and scientists to work on it, besides would be benefitted by utilizing the knowledge reviewed in this paper.

Key words **:** Acclimatization, Cultures establishment, Explant, Gerbera, Surface sterilization, Shoot multiplication, *In vitro* rooting

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Plant tissue culture as a useful facet of biotechnology has found its most practical and commercial application in micro propagation, particularly of ornamental plants. Production of high quality and uniform planting material on a year-round basis under disease-free conditions anywhere irrespective of the season and weather is the main advantage of tissue culture technology. Gerbera is most commonly used worldwide as a cut flower; however, dwarf hybrid lines exists which are suited for potted plants or bedding plant (Rogers and Tjia, 1990). Gerbera commonly known as Transvaal Daisy, Barberton Daisy or African daisy (Baley, 1963; Dole and Welkins, 1999) is cultivated throughout the world under wide range of climatic conditions for its attractive colors (Sheela, 2006). The genus of around 40 perennial species (Baley, 1963; Das and Singh, 1989; Dole and Wilkins, 1999) is from Africa, Madagascar and Asia. Linnaeus named the genus to honour a German naturalist Traugott Gerber. The first official description of South African species, *Gerbera jamesonii*, was made by J.D.Hooker in 1889 in Curts Botanical Magazine (Sheela, 2006). These are stem less herbs with radical, etiolated leaves, which are entire or sometimes lobed. The foliage in some species is entire and have lighter under surface. Flower heads are solitary, multi-flowered with conspicuous ray florets in 1 or 2 rows. The disc flowers may be numerous to almost absent. Disc florets can be yellow, the same colour as the rays, or vividly contrasting black. Bicolours also exist (Tourfee *et al*., 1994). Based on the flower heads, they may be grouped into single, semi-double and double cultivars (Loeson, 1986).The showy flower heads, in almost every colour except blue and purple are carried on bare stems 18 inch (45centimeter (cm) long. The major importance of gerbera in the international flower market is as cut flower and it suits a wide range of floral arrangements. Gerbera ranks 6th among the ornamental flowers in the world from commercial point of view (Barooah and Talukdar, 2009). During the Dutch flower auctions in 2008, the annual sale of quality cut flower gerbera was 1, 142 million with an average price of 0.217 Euros/stem (Evans, 2009). *Gerbera* can be propagated by both sexual and asexual methods. Most of the commercially grown cultivars are propagated through vegetative means, to maintain uniformity