

Blooms Beyond the Ordinary: Embracing Diversity with Underutilized Flower Crops

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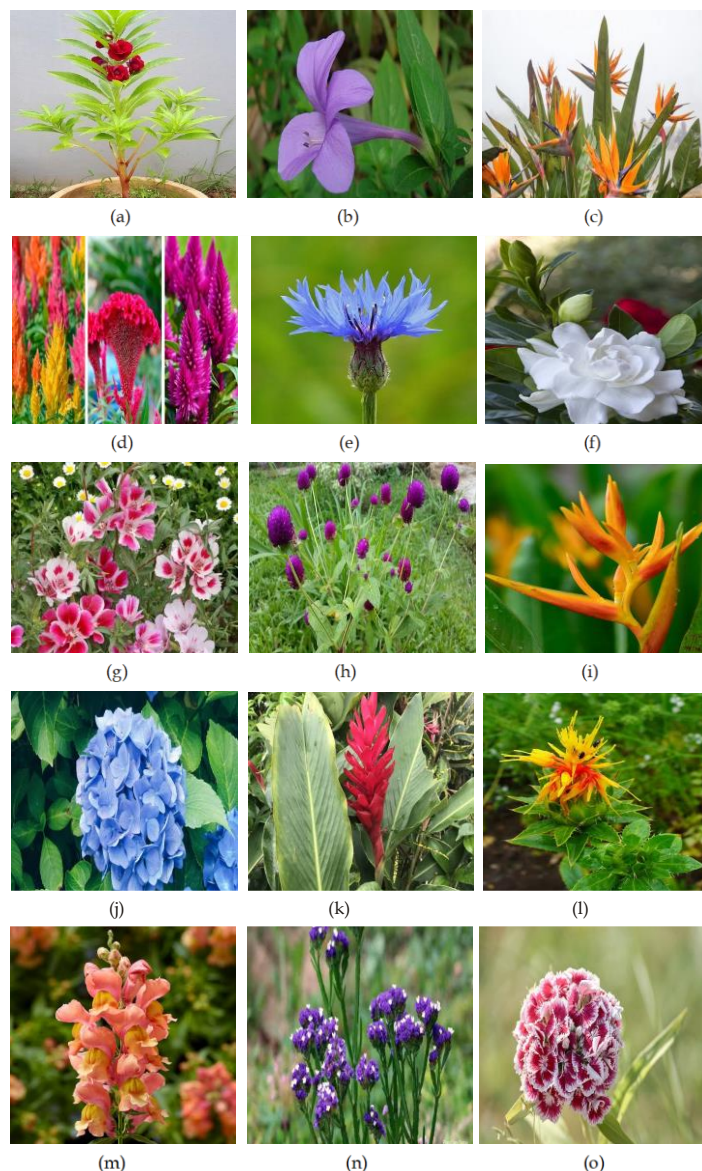
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The underutilized crops are those that have not yet had their full potential realized. They are also known as minor, orphan, neglected, underexploited, underdeveloped, lost, promising, alternative, local, traditional and niche crops. All these underutilized crops that were once extensively cultivated are now experiencing decreased usage due to various factors including agronomic, genetic, economic and cultural factors. Traditional knowledge of these species is quite known yet its scientific implementation is somehow limited. They are mostly found in wild habitats and have the potential to generate income through minor crop improvements. With consumer preferences shifting over time, the floriculture industry has been experiencing a rapid change with growing demand for ornamentals. The existence of enormous genetic diversity and varied agro-climatic conditions provide tremendous scope for diversification of novel ornamental crops, which fetch premium prices and possess a huge potential for the future global floriculture industry with their novelty and diversity. There are many promising ornamental plant species that remain unexplored and unexploited as they are cultivated mainly in rural communities and introduction of potential under-exploited crops helps to meet the ever-increasing demand of the global floriculture industry and contribute for increasing the national economy.

Importance of Underutilized Flower crops in the Floriculture Sector

- As local and international markets are saturated with traditional flowers, introduction of new crops helps to satisfy special market demands with their novelty in respect of their colour, form and texture.
- Reduce the risk of shortage of major flowers
- Relatively easy to cultivate with little care and less input requirements



(a) *Impatiens balsamina* (b) *Barleria cristata* (c) *Strelitzia reginae* (d) *Celosia argentata* (e) *Centaurea cynatus* (f) *Tabernamontana* spp. (g) *Pelargonium* sp. (h) *Gomphrena globosa* (i) *Heliconia psittacorum* (j) *Hydrangea* sp. (k) *Alpinia purpurata* (l) *Carthamus tinctorius* (m) *Antirrhinum majus* (n) *Limonium sinuatum* (o) *Dianthus barbatus*

- Can be grown in India's wastelands and marginal areas to meet the country's growing demand for flowers
- Long-term production is feasible with year-round flower supply

Fig. 1: (a) *Impatiens balsamina* (b) *Barleria cristata* (c) *Strelitzia reginae* (d) *Celosia argentata* (e)

- The conservation of unique flowers in a particular geographical area enriches cultural diversity
- Increases rural residents' income through eco-tourism
- Viable diversification from traditional crops during off-seasons can be achieved with the cultivation of underutilized flower crops
- Reduces over-dependency on a small number of major flowers
- Aid the underprivileged in generating revenue and sustaining themselves

Constraints pertaining to the implementation of underutilized flower crops

- Limited access to germplasm, especially on a national scale
- Insufficient knowledge of cultivation techniques and the post-harvest cold chain
- There is a lack of national policies to encourage underutilized crops research and development
- Interest by researchers, agriculturists, producers and extension workers is lacking.
- Although these crops are crucial to the local inhabitants' subsistence, they are nonetheless understudied and unrecognized by mainstream research and development initiatives

Prospective approaches to enhance the utilization of underutilized flower crops

- Exploration & exploitation of indigenous new ornamentals
- Support for research on new ornamentals is required
- Co-ordinated new crop research policies and initiatives ought to be given attention
- Train and assist farmers, floriculturists and business owners in the post-harvest handling, cultivation and value addition of underutilized flowers
- Events addressing the value and potential of underutilized flower crops on a regional, national and international scale should be held

- Encourage collaborations between local communities, NGOs, government agencies, research institutes and businesses to exchange knowledge and pool resources in order to promote neglected flower crops
- Data on consumer preferences that impact the purchase of flowers to be gathered

Conclusion

Floriculture In many regions of the world, floriculture has grown to be a profitable industry. The conventional, widely used decorative species and variants dominate the current flower market. However, there will always be a market for new goods and those who enjoy flowers will always be looking for something different. Significant opportunities exist for diversification and economic growth of underutilized flower crops. In this scenario, introducing potential underutilized flower crops aids in addressing the growing demand in the worldwide floral trade.

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Table 1: Details of Under-utilized flower crops

S. No	Under utilized flower crop	Scientific name	Family	Description
1.	Balsam	<i>Impatiens balsamina</i>	Balsaminaceae	Dwarf shrub good for ornamental hedges in sunny locations and mixed borders. Flowers are used as hair adornments and as offerings at temples. Can be propagated through seeds and cuttings. The flowering season spans from April to September.
2.	Barleria	<i>Barleria cristata</i>	Acanthaceae	Lilac, salmon, pink, orange, ruby, scarlet, rose or purple flowers can be single or double. Ideal for potted plants, borders and bedding. Easily propagated from seeds and cuttings.
3.	Bird of Paradise	<i>Strelitzia reginae</i>	Strelitziaceae	It's vivid orange and blue blossoms which are like an exotic bird bursting out from the broad leaves are making it more popular as cut flowers. Adaptability to full sun, semi-shade and many flowering seasons annually. Used in the landscape as indoor pot plant, specimen plant, shrub borders and water feature. Propagated through rhizomes.
4.	Cock's Comb	<i>Celosia argentata</i>	Amaranthaceae	Yields tall, feathery spikes and big crested flower heads resembling combs. Beneficial for borders, bedding, potted plants and shrubbery cover plants. As they keep their colour for a long-time dried flower heads make the greatest decorations for tables and vases and are propagated by seeds.
5.	Corn flower	<i>Centaurea cynatus</i>	Asteraceae	Cut flowers, border planting, culinary additives containing anthocyanins extracted from petals and the use of dried petals to give colour to beverages are a few of the many uses of corn flower. Propagated by seeds.
6.	Cape Jasmine or Pin wheel flower	<i>Taberna montana</i> sp.	Apocynaceae	Produces clusters of fragrant blooms that can be used for oil extraction or as cut flowers. They are propagated by cuttings and used as a border, hedge or as screening elements in landscaping.

7.	Geranium	<i>Pelargonium sp.</i>	Geraniaceae	Herbaceous perennials propagated through stem cuttings are grown as potted plants and excellent for window boxes and hanging baskets.
8.	Globe amaranth or Bachelor's button	<i>Gomphrena globosa</i>	Amaranthaceae	Propagated through seed and can be sown during February-March and May-June. Suitable for beds and borders, in rock gardens and very useful for cut flowers and dry flowers as they retain colour naturally
9.	Heliconia or False Bird of Paradise	<i>Heliconia psittacorum</i>	Heliconiaceae	Plants produce dark red or yellow-orange pendent inflorescence with spiralled bracts that alternate in a single plane and support the numerous small flowers which are best suited as cut flowers due to their vibrant hues, unique shapes, lengthy straight stems and outstanding qualities after being harvested. Can be grown as speciality cut flowers and are propagated through rhizomes.
10.	Hydrangea	<i>Hydrangea sp.</i>	Hydrangeaceae	pH indicator plant propagated through softwood cuttings. In acidic soils, this plant produces blue blooms and in alkaline soils, it produces red flowers. Hydrangeas can be grown in pots, gardens and as cut flowers.
11.	Red Ginger	<i>Alpinia purpurata</i>	Zingiberaceae	Long, fragrant inflorescences of vivid reddish-pink bracts that work well in floral arrangements as cut flowers. Suitable for hedging or screening purposes. All year long flowers are accessible and they are propagated by rhizomes, offshoots and seeds.
12.	Safflower	<i>Carthamus tinctorius</i>	Asteraceae	Produces vivid yellow, orange or red flower heads that are globular in shape. In India, the blossoms are used as less expensive alternative of saffron, whereas in China, the leaves are used medicinally and as a vegetable.
13.	Snapdragon	<i>Antirrhinum majus</i>	Plantaginaceae	It yields extremely fragrant spikes of blooms that can be used as cut flowers or a decorative plant for flower gardens and borders. In addition, the flowers generate a green dye and are extracted for oil and are propagated through seeds and cuttings.
14.	Statice	<i>Limonium sinuatum.</i>	Plumbaginaceae	Propagated by seeds, they have a variety of functions such as filler, dried flower and cut flower.
15.	Sweet William	<i>Dianthus barbatus</i>	Caryophyllaceae	Has Grown by seeds or terminal cuttings, they are used in flower beds, border areas, mass plantings, rock gardens etc.

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