

Alstroemeria: A potential floriculture crop for the temperate regions: A short communication

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INTRODUCTION AND IMPORTANCE

Alstroemeria (*Alstroemeria* spp.), commonly known as the Peruvian Lily or Lily of the Incas, is a herbaceous, tuberous-rooted perennial native to South America. Globally appreciated for its vivid colours, exotic beauty, and long vase life, Alstroemeria has earned its place among the top-ranking cut flowers in international floriculture trade. With consumer preference steadily shifting toward exotic and long-lasting flowers, Alstroemeria has emerged as a highly promising commercial crop not only as cut flowers but also as potted plants.

Its unique requirement for cooler growing conditions makes it an ideal candidate for cultivation in India's temperate and sub-temperate hill regions. The crop thrives in temperatures between 10°C to 20°C and produces flowers year-round under controlled or semi-controlled environments, making it highly suitable for hill horticulture.

HISTORICAL BACKGROUND AND INTRODUCTION IN INDIA

The formal introduction of Alstroemeria in India dates back to 2001, when the Ministry of Agriculture, Government of India, initiated efforts to diversify and modernize Indian

floriculture. Under this initiative, three Model Floriculture Centres were established for pilot introduction and evaluation of exotic floriculture crops. These centers were located at:

- Ooty, Tamil Nadu (Nilgiris)
- Srinagar, Jammu and Kashmir
- Chail, Himachal Pradesh

At Chail, the implementation and varietal evaluation were led by Nav Bahar, Shimla, under the supervision of Dr. M.K. Singh. Four initial cultivars were introduced and evaluated for performance under mid-hill conditions. The results were encouraging, particularly in terms of stem strength, flower colour, yield per plant, and vase life.

The objective of these introductions was to assess adaptability in different agro-climatic zones and encourage cultivation among hill farmers as a high-value alternative crop.

PRESENT SCENARIO AND INSTITUTIONAL LEADERSHIP

Currently, the cultivation of Alstroemeria in India is primarily concentrated in the hilly regions of:

- Himachal Pradesh
- Jammu & Kashmir
- Sikkim
- Nilgiris (Tamil Nadu)

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Plate 1. Germplasm block of Alstroemeria at Dr YS Parmar University



Tiara



Summer Heat



Alladin



Havana Tes



Capri



Paraiso Tes

In Himachal Pradesh, three premier institutions are actively engaged in the research, breeding,

and promotion of Alstroemeria:

1. Dr. Y.S. Parmar University of Horticulture

- and Forestry (UHF), Nauni, Solan
2. Institute of Himalayan Bioresource Technology (IHBT), Palampur
 3. ICAR-IARI Regional Station, Katrain (Kullu)

Among these, Dr. Y.S. Parmar UHF Nauni has emerged as the lead centre for *Alstroemeria* research and development. The Department of Floriculture and Landscape Architecture has not only introduced and maintained over 30 cultivars but also spearheads varietal evaluation under protected cultivation conditions. The Institute is also leading in developing new genotypes and around 20 developed through seedling selection method have been maintained.

DUS TESTING GUIDELINES : A NATIONAL FIRST

A major recent development is the allocation of a PPV&FRA (Protection of Plant Varieties and Farmers' Rights Authority) funded project to the Department of Floriculture and Landscape Architecture, Nauni. Under the leadership of Dr. Bharati Kashyap, the project focuses on:

- Development of DUS (Distinctness, Uniformity, and Stability) Testing Guidelines for *Alstroemeria* in India
- Evaluation of 32 cultivars under DUS parameters

- Scientific documentation and standardization of diagnostic descriptors

The DUS guidelines will play a crucial role in enabling formal registration of varieties, granting breeders' rights, and opening the pathway for intellectual property protection. These steps are essential to encourage private and public-sector breeding efforts, support export readiness, and ensure varietal purity across nurseries and production sites.

FUTURE SCOPE AND CONCLUSION

With over two decades of successful trials and adaptation, *Alstroemeria* is now poised to become a mainstream floriculture crop in India's temperate regions. Its superior traits - cool climate suitability, excellent post-harvest life, diverse colour range, and steady market demand - make it a viable economic crop for small and medium hill farmers.

As India strengthens its floriculture export strategy and protected cultivation expands, crops like *Alstroemeria* will be instrumental in driving agri-diversification, rural incomes, and innovation in the floriculture sector. Continued investment in DUS standardization, germplasm collection, and farmer training will ensure this exotic lily blooms across India's temperate belts - both in fields and in markets.

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