



Production Technology of Alstroemeria

(* Daripalli Srilakshmi, Heera Lal Atal and Meikam Ichancha)

**Ph. D Scholar, Department of Floriculture and Landscape Architecture, Bidhan
Chandra Krishi Viswavidyalaya, Mohanpur, West Bengal**

* sirireddy.0600@gmail.com

Summary

- Introduction
- Uses of Alstroemeria
- Cultivars of Alstroemeria
- Suitable soil and growing medium
- Climate condition
- Multiplication methods
- Sowing time and method
- Required spacing
- Nutrient management
- Irrigation
- Flower harvesting

Introduction

Alstroemeria, sometimes known as the Peruvian lily or Inca lily, is a genus of flowering plants in the Alstroemeriaceae family. Although they are all native to South America, some have taken up residence in the United States, Mexico, Australia, New Zealand, Madeira, and the Canary Islands. Almost every species is restricted to one of two separate biodiversity hotspots, one in central Chile and the other in eastern Brazil. Alstroemeria species from Chile grow in the winter, whereas those from Brazil thrive in the summer. Except for *A. graminea*, a small annual from Chile's Atacama Desert, others are long-lived perennials.

Uses of Alstroemeria

Alstroemeria is multipurpose flowering plant, it can be used for cut flower, pot plant, herbaceous border and as a garden flower.

Cultivars of Alstroemeria

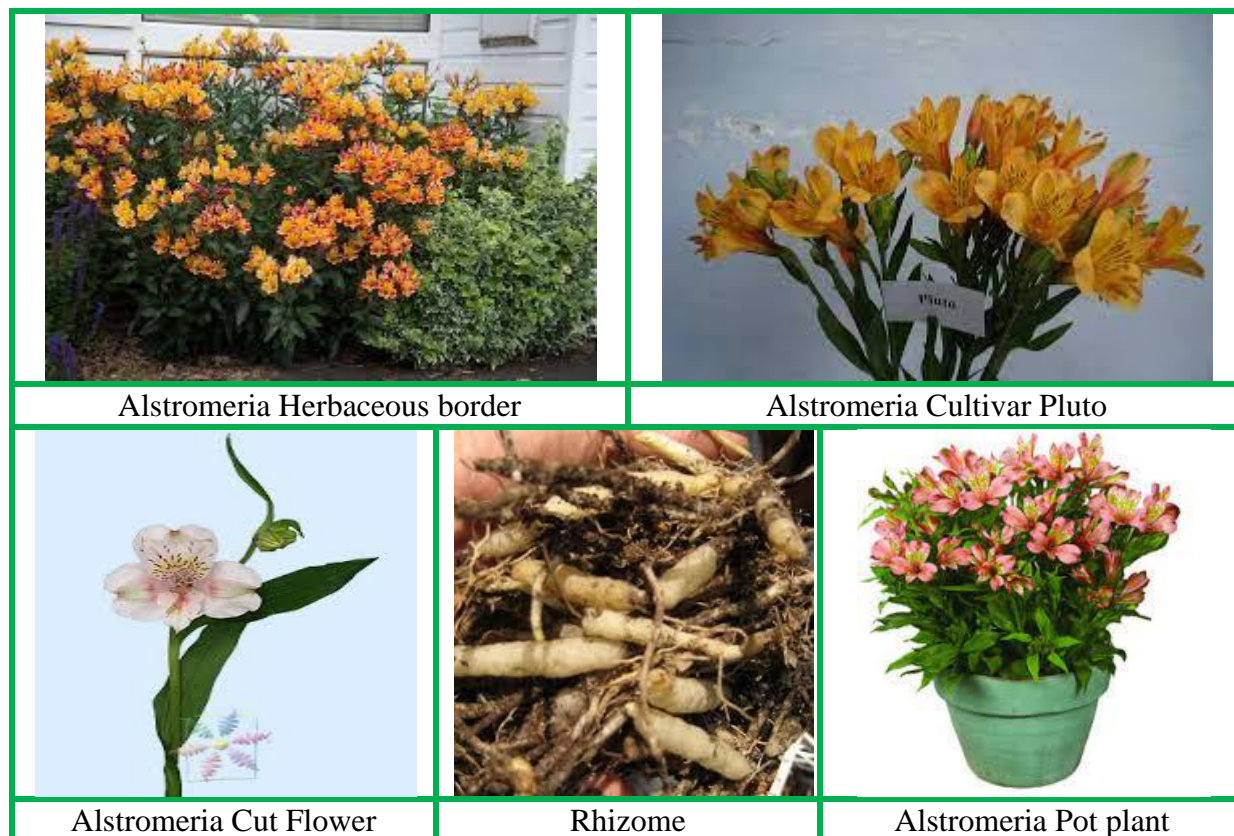
Pluto, Serena, Piantium, Aladdin, Reena, Caperi, New Pink, Rosita, Tiara, King cardinal, Sangria, Mona Lisa, Jessica, Gold finger, Victoria, Diana, Ursula, Azula, Amanda, Jupiter, Purple sensation and Granada.

Suitable Soil and Growing Medium

A cool, well-drained, high-organic-matter medium is ideal for Alstroemeria cultivation. The ideal soil pH ranges from 6 to 7. Sphagnum peat-moss, soil, and sand, or soil, perlite, expanded clay, and gravel, make up the ideal medium.

Climate Condition

Alstroemeria likes a cool, partly shady environment. Thermo and photophase control are required for blooming process control, and the thermo-phase need must be met before the photo-phase requirement. The optimum temperature in the greenhouse at night and during the day is 15 and 18 degrees Celsius, respectively. For at least 6-8 weeks, the newly planted rhizomes/plants should not receive more than 13 hours of sunshine, allowing the roots to develop properly before flowering. Following then, supplemental light for more than 16 hours each day provides early, abundant blossoming for a longer period of time. During the summer, when the air temperature hits 30 degrees Celsius and the soil temperature exceeds 18 degrees Celsius, the plants go dormant and should be separated.



Multiplication Methods

Alstroemeria is traditionally propagated by division of rhizomes, ideally during dormancy. In greenhouses, however, continual division after 10 to 12 weeks is used. Several days before division, the plants are cut back to a height of 10 to 15 cm. The oldest section of the rhizomes is eliminated during division.

Sowing Time and Method

Alstroemeria is ideally planted in September-October or February-March. Alstroemeria can be grown in both open fields and greenhouses in beds that are 15 to 20 cm deep and allow the plant roots to grow during the 3 to 4-year production cycle. Rhizomes are planted 7 to 10 cm deep at their growth point.

Required Spacing

The spacing varies depending on the cultivar and the aim of the cultivation, whether it's for cut flowers, planting material, or both. Plant to plant and row to row spacing should be between 40 and 50 cm. In order to grow Alstroemeria in pots, the rhizomes should be plated

shallowly, with growth tips 2.5 to 3 cm below the surface of the soil. This helps the plants to sprout additional branches, giving the appearance of a full pot.

Nutrient Management

Because Alstroemeria favours soil that is rich in organic matter, 3 to 5 kg/m² of leaf mould or well-rotten farm yard manure should be put to the soil. N (3.8-5.6%), P (0.3-0.7%), K (3.7-4.8%), Ca (0.6-1.8%), and Mg (0.6-1.8%) are the recommended nutritional doses (0.2- 0.4 percent). Alstroemeria can also be grown with a mixture of (20N: 8.8P: 16.6K) @ 2.5g per litre. Nitrogen should be applied in the form of nitrate. The soluble salt concentration should never exceed 1.5 mhos/cm.

Irrigation

Irrigation is dependent on the meteorological conditions. However, it is beneficial to keep the soil/medium moist for optimal growth, flowering, and rhizome development, for which irrigation at 7-10 day intervals is excellent. Irrigation water can also be used to apply nutrients.

Staking

Three rows of galvanised or plastic wire mesh with a square of 20x20 cm should be placed at a height of 30 cm from one another. Bamboo sticks and twine can also be used to support Alstroemeria plants in three rows in the beds.

Flower Harvesting

Spike harvesting is determined by cultivar, market, and consumer preferences. When 4-5 florets have opened, the shoots/spikes are cut for the local market. Distant market: When the first floret begins to open and the others have attained 50% colour. Pulling rather than cutting shoots/spikes will encourage more shoot production.

Conclusion

When grown in cool conditions, alstroemerias (Peruvian or Inca lily) produce a large number of flowers in a variety of colours ranging from white to orange, yellow to apricot, as well as red, pink, and purple. So there are plenty to grow in the garden, in a border, or in a container because they brighten up a garden and have a good vase life for up to two weeks, which is a long time for a cut flower. They are generally all-year crops, with production peaking in the spring and early summer. The alstroemeria flower is quickly becoming one of the most popular florist flowers, whether used alone or in mixed bouquets. Because these lilies represent friendship, devotion, and commitment, they are sent for a variety of occasions and to a wide range of recipients.

References

1. De Hertogh (1989). Alstromeria cut flower. Holland Bulbs Forcer's Guide. Section C-1.
2. Imtiyaz tahir nazki, raiz ahmed lone, gazanfer gani, muneebahmad wani and madinat ul nissa. Studies on spacing and time of planting onvegetative, floral and rhizome parameters of Alstroemeria cv. 'ALLADIN. 2017. *Agriculture Update*. **12** (7): 2088-2091.
3. Sankari, a.m. anand, s. Nagalakshmi and Arulmozhiyan, R.. Alstroemeria. 2011. *Rashtriya Krishi*. **6**(2) :6-8.
4. Singh, M.K. (2006). Performance of Alstromeria cultivars under polyhouse condition. *Indian Journal of Horticulture*. **63**(2):195-198.
5. Sujit Rai and Manju Rana. Comparative Evaluation of Growth and Flowering Characteristic of Alstroemeria Varieties under Sikkim Condition. (2019). *Int.J.Curr.Microbiol.App.Sci*. **8**(8): 929-933.

6. Sung-Soo Lim, Sang-Il Lee, Se-Chan Kang and Jong-Bo Kim. (2012). Alstroemeria plants and its biotechnological applications. *J Plant Biotechnol* . 39:219-224.
7. [Growing alstroemeria in the foot hills of himalaya – IHBT. https://www.ihbt.res.in.](https://www.ihbt.res.in)
8. [Growing Information Alstroemeria Cut Flower. https://www.alstroemeria.com >](https://www.alstroemeria.com)