

Spider Lily: A Novel Loose Flower

D. Mahesh Reddy¹ and V. Bhargav²

¹Ph.D. Scholar, Department of Floriculture and Landscaping, College of Horticulture, Dr. Y.S.R. Horticultural University, Anantharajupeta, Annamayya district, Andhra Pradesh.

²Assistant Professor, Department of Horticulture, College of Agriculture, Central Agriculture University, Pasighat, Arunachal Pradesh.

*Corresponding Author: bhargavhorti12@gmail.com

Spider lily (*Hymenocallis* sp.) belongs to family Amaryllidaceae, is a perennial bulbous flower plant and is native to Southern United States and South America. It is grown as a important loose flower crop in Southern Gujarat of India. The genus name *Hymenocallis* is derived from the Greek word *hymen* meaning 'membrane' and *kallos* meaning 'beauty' (beautiful membrane), in reference to the membrane that unites and forms the staminal cup. These are most suited as border plants in the greenhouse, beside the walls and water channels, in herbaceous borders and walkways, beside the grass, and in garden beds; nonetheless, they prefer sunny locations. It is used as loose flowers for garlands, veni, gajra making and decoration of stages in marriages. It has medicinal properties which is used in traditional medicine to treat various ailments such as gastric ulcers, wounds, and respiratory problems.

Species

- *Hymenocallis amancaes*: These are deciduous Peruvian species, leaves are 30 cm long and strap shaped, flower stalk is up to 50 cm height producing 8 yellow fragrant flowers.
- *Hymenocallis caribaea*: It is an evergreen species, distributed in West Indies, leaves are 50 cm long strap shaped, spike is 60 cm with about 8 white fragrant flowers.
- *Hymenocallis narcissiflora*: These are deciduous species from Peru, leaves are 50 cm long, flower stalk is 50 cm long with white fragrant 3 to 4 flowers.
- *Hymenocallis pedunculata*: These are deciduous species from Peru, leaves are 22 to 45 cm long strap shaped, flower stalk of 40 to 60 cm with 2 to 6 white scented flowers.
- *Hymenocallis speciosa*: It is an evergreen species from west indies, leaves are 60 cm long, flower stalk is 30 to 40 cm tall with 5 to 7 white fragrant flowers.

- *Hymenocallis littoralis*: These is a potential loose flower crop in western India. It flowers throughout the year and continues up to 5-6 years from single planting. These species possess some anti-viral activity lycorine, an antifeedant activity against desert locust.
- *Hymenocallis ovata*: It is native of West Indies, leaves strap shaped and 25 cm long, flowering in September-October, flowers white, fragrant with greenish tube and on a 30 cm long stalk.

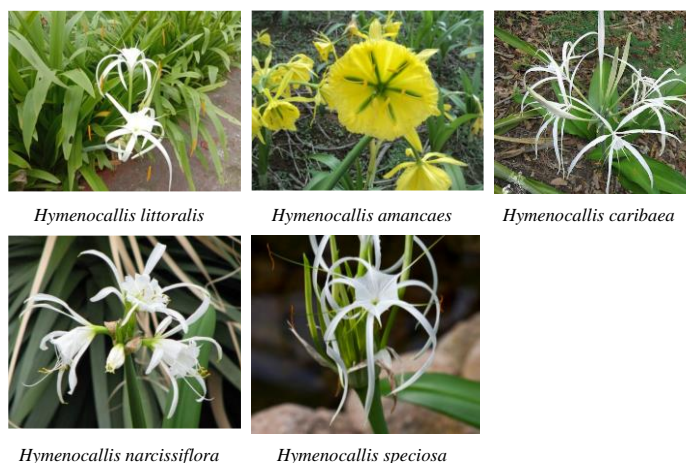


Fig 1: Some important species of Spider lily

Soil and climate

Well drained, medium black soils and rich organic soils with pH of the soil having 6 – 7.5 are ideal. It requires tropical climate (warm temperature and sunny situations). Low temperatures below 15°C and dry climatic conditions can inhibit growth and quality of flowers. The plant is hardy and drought tolerant and grows well in full sun or partial shade.

Propagation

It is commercially propagated by bulbs. Bulblets and seeds are also used but ripe seeds are stored for utilising in next sowing season. Bulbs of 4 – 6 cm diameter planted at 5-10 cm depth of the soil are best for growth and yield. Best planting time is May – June months. Bulbs are planted in 90 cm apart between lines and 60 cm in plant-to-plant distance.

Water management

First irrigation should be given after planting of bulbs. Adequate water is needed during growing season and flowering. Frequent irrigation of 5-7 days interval should be followed.

Manures and fertilizers

During final ploughing of soil 25-30t/ha of FYM should be incorporated into soil. Fertilizers are 300 kg N, 225 kg P and 200 kg K per hectare should be applied every year. Phosphorus and potash should be given as basal dose whereas, nitrogen should be given in four split doses, *i.e.* June, September, December and March.

Intercultural operations

Earthing up: It should be done when plants attain some 20 cm height and in perennial cropping every year at the start of the growth to cover the exposed roots. This helps in conserving the moisture for healthy growth of the bulbs and plants.

Weeding: It should be done during early stages of growth which helps in minimising crop weed competition against nutrients.

Harvesting: A matured unopened flower bud started turning white just to open the next day should be harvested during early morning hours. It is perennial crop and gives economical production up to 7-8 years. Maximum yield is obtained in summer compared to both winter and rainy seasons. It produces 27 to 30 lakh buds per ha yearly.

Postharvest management

Grading: Two grades of buds are created based on the length of the buds, and bundles of 50 buds each are created. The bundles are placed inside plastic or gunny bags and secured with rubber bands and transported to markets.

Storage: Spider lily buds can be kept in cold storage for a week if they are pulsed with 250 ppm 8-HQC and 2% sucrose for 45 minutes before being packaged in tissue paper at a temperature of 2 °C.

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