

Great Market Potential of Arum Lilly in Indian Commercial Nurseries

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India, arum lilies commonly known as "calla lilies" are cultivated by various growers, including both commercial farms and nurseries.

Some notable regions are below mentioned.

Himachal Pradesh: Favorable climate for bulb growth.

Karnataka: Known for flower production, including arum lilies.

Maharashtra: Many nurseries focus on ornamental plants.

Tamil Nadu: Increasing interest in floriculture.

Recently it is growing very well in pots and selling commercially in Kadium nurseries in Andhra Pradesh state and they are exporting to many countries.

The Notable Growers are Floriculture Farms: Various commercial growers specialize in ornamental flowers and may include arum lilies.

Local Nurseries: Many small-scale nurseries offer arum lily bulbs and plants.

Detailed practices of Arum Lilly described here

Arum Lilly (*Zantedeschia aethiopica*) belongs to the species of flowering plants in Araceae family, it is also called as calla Lilly. Genus of 8 species of tuberous or rhizomatous perennials, found in moist soils

and swamps or at lake margins in Southern Africa. They are grown for their unusual, white or brightly colored spathes, borne in spring and summer.

Most bear lance shaped, or narrowly to broadly arrow or heart shaped leaves.

1. **Elliottiana hybrids** have usually broadly heart shaped. usually mid to dark green leaves, most covered with translucent white dots, and usually yellow spathes, 15cm long, surrounding golden yellow spadices.

a. **Zantedeschia Schwarzwalder**

It is an Elliottiana hybrid with heavily white spotted leaves and blackish maroon purple spathes produced in summer; it needs 10-15 degrees centigrade temperature. These tubers can be planted outdoors after the threat of frost has passed. They're suited to both garden and pot growing. Plant at 5 cm deep and 15 cm apart in a warm, sunny position.

b. **Zantedeschia mango**

It is an Elliottiana hybrid with white spotted leaves and deep orange spathes, tinged red, borne in summer, grows 65 cm height and it needs 10-15 degrees centigrade temperature

c. **Zantedeschia "Crystal blush"**

It is with unspotted leaves and creamy white spathes, delicately flushed pink, in summer, it grows height to 55cm.

d. **Zantedeschia "Cameo"**

Elliottiana hybrid with white-spotted leaves and straw-yellow to salmon-orange spathes produced in summer.

e. **Zantedeschia "Captain Rodin"**

It is an Elliottiana hybrid with white-mottled leaves. It bears creamy white spathes with a pink flush in summer. Grows height to 140-60 cm (16-24in)

f. **Zantedeschia 'Celeste'**

It is another Elliottiana hybrid with white-mottled leaves and

dark pink spathes in summer. 1 to 60cm (24in)



g. Zantedeschia Golden arum

Rhizomatous perennial with erect, heart-shaped, dark green, basal leaves, to 28cm (1 lin) long, covered with translucent white spots. In summer, produces yellow spathes, 15cm (Gin) long, with yellow spadices. It grows about to 60-90cm

II. Rehmanni hybrids have lance shaped rarely spotted mid to dark green leaves and white to pink or dark purple spathes, 12cm long surrounding yellow spadices.

a. Zantedeschia little suzie

It is a compact Rehmanni hybrid with unspotted leaves and numerous small pink spathes to 5 cm long borne in summer 30-45 cm height.

b. Zantedeschia rehmanni (Pink arum):

Rhizomatous perennial with semi erect lance shaped, dark green, basal leaves, in summer, products slender, white to pink or dark purple spathes, 12cm long with yellow spadices it grows to 40 cm height.

c. Zantedeschia aethiopica

It may be cultivated as marginal aquatic. Where temperatures fall below 10 degree centigrade, grow less hardy arum lilies in a warm green house or as houseplants, or plant out in a sunny site in summer. All parts may cause mild stomach upset if ingested and contact with the sap may irritated the skin.

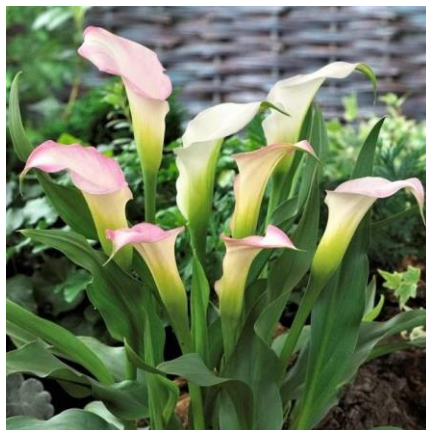
Cultivation

Planting

- *Zantedeschia* likes warm conditions to grow in, so planting is advised after frost is over.
- It is best to wait until the tubers have shoots starting to develop before planting.
- Plant the tubers 5–10 cm deep in well drained potting mixture or soil, when soil temperatures have risen in late spring.
- Don't overwater the plants. At the time of planting, apply a slow-release fertilizer. Excessive nitrogen will encourage a bounty of leaves and long stems,

squelching bud production. In a fertile soil, no further food is needed.

- Under glass, grow in loam based potting compost in full light .when in growth ,water freely and apply a balanced liquid fertilizer every 2 weeks until the flowers have faded. Keep just moist in winter. In outdoors, grow in humus rich moist soil.



Propagation methods

Arum lilies can be propagated through several methods

1. Divisions: Commercial method of propagation

Timing: Best done in early spring or fall.

Method: Carefully dig up the rhizomes, and separate them into smaller sections, ensuring each has roots and at least one growing point.

Replant: Immediately replant the divisions in well-draining soil.

2. Seed Propagation

Timing: Seeds can be collected when the fruit matures.

Method: Sow seeds in a seed tray with a light soil mix. Keep the soil moist and in a warm location.

Germination: It may take several weeks to months for seeds to germinate.

3. Offsets

Method: Arum lilies often produce offsets or smaller bulbs around the main plant.

Timing: Can be removed during the same time as division.

Replant: Plant offsets in individual pots or directly into the garden.

- We observed that sometimes seeds germination take 4-6 month time and flowering takes at least 1year time for first bloom.

After Flowering Care:

Zantedeschia flowers can be removed as they begin to fade from the plant. Deadheading each stem prevents the production of seed, as well as encouraging bloom. Each spent flower stem should be removed carefully all the way back to the base of the plant. Dead or yellowing foliage can also be pruned in this manner, helping to maintain a healthy and tidy appearance within garden beds.

Plant protection:

While care for *Zantedeschia* is relatively simple, there are some common problems that gardeners need to be aware of:

Rot: Rot disease in arum lilies, often caused by pathogens like fungi or bacteria, can lead to wilting, yellowing leaves, and a mushy texture in the roots and rhizomes.

Causes:

Fungal infections: Commonly caused by pathogens like *Pythium* or *Phytophthora*.

Bacterial infections: Can also result from bacteria in overly moist conditions.

Poor drainage: Waterlogged soil is a major contributor to root rot.

Symptoms:

- a. Wilting or drooping leaves.
- b. Yellowing or browning foliage.
- c. Soft, mushy roots or rhizomes.
- d. Foul smell from decaying tissues.

Prevention and Management

Soil management: Ensure good drainage; consider raised beds.

Watering practices: Avoid overwatering; allow the soil to dry between waterings.

Sanitation: Remove and dispose of infected plants and debris.

Fungicides: Drenching Copper oxy chloride 2.5gr per litre of water

Powdery mildew: Powdery mildew on arum lilies is a fungal disease characterized by a white, powdery coating on leaves and stems.

Causes

Fungal pathogens: Primarily caused by *Erysiphe* or *Microsphaera* species.

Humidity and temperature: Thrives in warm, dry conditions with high humidity.

Symptoms

- White, powdery spots on the upper surfaces of leaves.
- Leaves may become distorted, yellow, or die back.
- In severe cases, growth may be stunted.

Prevention and Management

Cultural practices: Space plants adequately for air circulation.

Watering: Water at the base of the plant to keep foliage dry.

Fungicides: Spray potassium bicarbonate 3gr per litre

Cultivation for specific purposes

For Landscape designs: Use calla lilies in mass plantings, mixed borders and along streams

For slopes and hillsides: Mass along a slope, by itself, or in combination with other vegetative or flowering plants.

For containers: Calla lily can be grown in a pot as an indoor houseplant, or outdoors during warmer months. Planting alone or in combination with other plants with similar cultural needs is also suggested to become focal point in between other pots.

Some ideas for Container growers:

Zantedeschia (also known as Calla Lilies) is ideal for planting in containers for houseplants or for seasonal outdoor bedding displays.

- Plant just under the surface of the soil with the eyes of the rhizome facing upwards.
- Water freely throughout the summer months and feed with a fertilizer every two weeks.
- Plant one rhizome per 8" pot or 3 to a 16" pot, need more bulbs if go with above of these size.
- Depending on how you want your display to look, you can space your rhizomes 30cm (12") apart or plant in groupings of 3 rhizomes slightly closer together.

• **Available Colors:** Pink, Red, Orange, White, Yellow, Purple

• **Light:** Full Sun to Partial Shade

• **Growing Height:** 40-90cm / 16-35"

• **Planting period:** Spring for Summer Flowering

• **Soil Type:** Loam-based compost

- **Hardiness:** Tender - Need lifting and protecting over winter
- **Scented:** No
- **Border Position:** Middle

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