MARIGOLD

- **African marigold:**
  *Tagetes erecta*

- **French marigold:**
  *Tagetes patula*

- **Family:** *Asteraceae*
In genus *Tagetes* there are 33 species, but commercially two species *T. erecta* and *T. patula* are grown in our country and in western countries another species *T. tenuifolia* is also grown.
Importance of Marigold

- Marigold is one of the most commonly flowers garden for garden decoration and extensively used as loose flower for making garlands for religious and social functions.
- It has gained popularity amongst gardeners on account of its easy cultivation, wide adaptability and year round flower production.
- Its free flowering habit, short duration to produce marketable flowers, wide spectrum of attractive colours, shapes, size and good keeping quality has attracted the attention towards it of many amateur and commercial flower growers.
- Marigold is also highly suitable for bedding, edging, herbaceous borders and pots.
Cultivars in Marigold

**African Marigold (Tagetes erecta):**

**French Marigold (Tagetes patula):**
- Pusa Arpita, Butter Ball, Flash, Colour Magic, Janie Gold, Janie Yellow, Star of India, Red Brocade, Rusty Red, Susana and Valencia

**Interspecies Hybrids:**
- Pusa Shankar-1, Nugget, Red and Gold, Red Seven Star and Show Boat.
Marigold can be grown in a wide range of soil. African marigold prefers well maured moist soil, while French marigold prefers well drained light soil. The ideal pH for growing marigold is around neutral.

Marigold can be grown in a wide range of climatic conditions throughout year except old winters when temperature is less than 10°C. Ideal growing temperature ranges from 15 to 35°C. Very high temperature also affects adversely growth and flowering. Avoid frost/ chilling injury.
Propagation

- Marigold is commercially grown through seeds.
- About 500-600g seed is sufficient to grow marigold in one hectare area.
- Double marigold cultivars are also perpetuated through 5-10cm long terminal stem cuttings taken during July-September.
- These cuttings are treated with IBA/ NAA 500ppm solution for 1-2 minutes before planting in beds/rooting chamber.
- The nursery becomes ready for transplanting at 4-leaf stage coming after 4-6 weeks
Ideal time for raising nursery in different areas

<table>
<thead>
<tr>
<th>Area</th>
<th>Summer Season</th>
<th>Rainy/Autumn Season</th>
<th>Winter Season</th>
<th>Crop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid hills</td>
<td>Jan.-Feb.</td>
<td>May-June</td>
<td></td>
<td>------------</td>
</tr>
<tr>
<td>High hills</td>
<td>Mar.-April</td>
<td>May-June</td>
<td></td>
<td>------------</td>
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</tbody>
</table>
Spacing

- **African Marigold:** 40 x 30 cm
- **French Marigold:** 30 x 30 cm
- **Dwarf cultivars:** 30 x 20 cm
- **Pots (20 cm):** 1 or 3 seedlings/pot
Nutrition

- **African Marigold:** 5 Kg FYM, N 30g, P 10g, K 10g/m².
- **French Marigold:** 3 Kg FYM, N 20g, P 10g, K 10g/m².
- All dose of FYM, 1/3rd N, full dose of P and K are mixed in soil at the time of final field preparation.
- Rest dose of N is applied in two split doses after 30 and 60 days of transplanting.
- In case of French marigold N is applied in two splits one at planting and second after one month of transplanting.
Irrigation

- Irrigation at 7-10 days interval during September-November and twice a week during March-June is ideal.
In pinching terminal growing shoot about 2-3 cm long is removed to overcome apical dominance and to promote side branching when the plants are about 15-20 cm height.
Staking

- String or rope is erected at 20, 35 and 50 cm above the ground level in three rows at the same distance along the rows.
Hoeing once or twice during first 40 days is ideal to control most of the weeds and to maintain soil in good tilth.

Atrazine or Basalin @ 1-1.5 kg (a.i.) /ha is ideal for spray as pre-planting.
Diseases and Insect-Pests

- Damping off and collar rot (*Rhizoctonia solani, Pythium, Phytophthora*)
- Leaf and inflorescence blight (*Alternaria, Cercospora, Septoria*), and
- Viruses (Cucumber Mosaic)
- Red spider mites, thrips and Hairy caterpillars are important insects.
Damage by Red Spider Mites
Red spider mites attack in marigold
Thrips infestation
Thrips attack in marigold
Hairy caterpillars feeding on marigold
Aphids and mites feeding on marigold
Flower harvesting

- Fully open flowers are harvested during cool hours either in morning or evening in bamboo baskets or crates or gunny or poythene bags.
- Irrigation one day before harvesting increases the shelf life of flowers.
## Average Yield

<table>
<thead>
<tr>
<th>Category</th>
<th>tonnes/ha</th>
<th>Million/ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Marigold</td>
<td>10-18</td>
<td>1.5-2.5</td>
</tr>
<tr>
<td>French Marigold</td>
<td>8-12</td>
<td>6-8</td>
</tr>
<tr>
<td>Hybrids</td>
<td>15-20</td>
<td>3-5</td>
</tr>
</tbody>
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