

## MARIGOLD

(*Tagetes species*)

Marigold a native of Mexico and South America is one of the most important flowering crops grown commercially in different parts of India. It has gained popularity because of its easy adaptability to various soil and climatic conditions, longer bloom period and beautiful flower that has excellent shelf life. Marigold constitutes one of the top five commonly cultivated loose flowers and is used in urban as well as rural areas.



### Varieties/ Species

**Species:** *T. erecta*, *T. patula*, *T. minuta*,  
*T. signata*, *T. lucida*

**Varieties:** Pusa Narangi Gaiinda, Pusa Basanti Gaiinda

### Soil

Sandy loam soil with pH range 7.0-7.5 having good aeration and drainage is ideal.

### Growing environment

It is advisable to plough the land during summer to expose the soil to the sun for sterilization. The land has to be ploughed well up to a depth of 30 cm nearly or fortnight prior to transplanting of seedling. Seed germinates at temperature ranging 18-30 °C.

### Nursery raising

Bed size 1m wide and raised to 15 cm should be prepared by adding well-rotten cow dung manure and sand. Sand may be mixed only when soil is heavy. To minimize the mortality of the plants in nursery, the soil should be drenched with 0.2 % Captan before sowing. Seeds should be sown at the depth of about 2 cm and cover with thin layer leaf mould. Seeds are grown in second week of February.

### Propagation

Marigold is generally propagated by seeds and tissue culture. In order to maintain genetic purity, cutting is recommended which root in 3--4 weeks.

### Nutritional requirement

For good growth macro and micronutrients and organic manure is required. In addition to farmyard manure, it is advisable to apply 200 kg/ha of Nitrogen, 80 kg/ha each of phosphorus and potash for getting good vegetative growth and flowering. It is better, if two foliar spray of urea (0.2 %) are done at an interval of 15 days.

### **Irrigation**

The plants should be irrigated at intervals of 2-3 days to keep the soil moist and cool. Winter crop needs watering at 8-10 days intervals.

### **Plant Protection**

**Leafminer:** Leaf miner tunnels the leaves and depletes the chlorophyll content. Spray of Monocrotophos (1.5 ml) or Methyl O Demathon or Phosphomidon 0.5 ml/l offers good control.

**Red spider mite:** The symptoms appear near flowering time. Plant gives dusty appearance. Spray of Kelthane (2 ml l) or Cascade or Vermitec (0.8 ml) is recommended.

**Leaf hopper:** Cupping or rotting of leaves, wilting of shoot tips and leaflets are the symptoms of infestation. Spraying with Malathion or Rogor (2 ml) is beneficial.

**Damping off:** Damping off is caused by *Rhizoctonia solani* and appears as brown necrotic spots girdling the radical, later on extends to plumule and pre emergence mortality. Sterilization of soil before raising seedlings and post emergence seedling treatment with copper fungicide minimize the disease menace.

**Powdery mildew:** Initially whitish powder, tiny, superficial spots appear on leaves, later on the whole aerial parts of the plant covered with a whitish powder. Spraying with Calixin or Sulfex will minimize the disease infestation.

### **Harvesting and yield**

The flowers are harvested when they are fully open. Store the flower under shade. A yield of 20-22 tonnes of fresh flower can be obtained from one hectare.