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*Shaping Lives...
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LECTURE -7

PRODUCTION TECHNOLOGY OF MARIGOLD



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- ✓ Marigold has gained popularity amongst gardeners and flower dealers on account of its



Easy culture & wide adaptability
Free flowering and short duration
Wide spectrum of colour, shape, size
Good keeping quality

- ✓ Used for garland, veni and other decorations.
- ✓ It is highly suitable as bedding plant, in an herbaceous border, also as shrubbery in landscaping.
- ✓ French marigold is ideal for rockery, edging, hanging baskets and window boxes.
- ✓ Some species of *Tagetes* are used for essential oil extraction.
- ✓ Trap crop





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Varieties

Tagetes erecta (African marigold)

Eg: Pusa Narangi Gaiinda, Pusa Basanti Gaiinda, Orange Lady, Golden Climax, Fire Glow, Honey comb etc

Tagetes patula (French marigold)

Eg: Burpees Nugget, Cupid Yellow, Orange flame, Valencia, Cupid Yellow, Melody etc

Tagetes tenuifolia

Eg: Golden Gem, Lulu, Pumila, Ursula, etc





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Climatic Requirement

- ✓ Marigold requires mild climate for luxuriant growth and profuse flowering.
- ✓ High temperature & severe winter adversely affects flower quantity and quality.

Soil Requirement

- ✓ Soil that is well drained, deep fertile, sandy loam and friable having well water holding capacity
- ✓ pH of 7.0-7.5 is most desirable.

Spacing

Tagetes erecta

- 1) 40 x 40cm
- 2) 40 x 30cm
- 3) 45 x 30cm
- 4) 60 x 45cm

Tagetes patula

- 1) 20 x 20cm
- 2) 20 x 10cm
- 3) 30 x 30cm
- 4) 30 x 20cm



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Propagation

By Seeds

- ✓ Seed rate of 1.5 kg is required for one hectare area
- ✓ For better seed germination, optimum temperature range between 18 to 30 °C is required.

By Terminal Cuttings

- ✓ About 10 cm long cuttings are made and treated with seradix No.1.
- ✓ This method is commonly followed for maintaining the purity of varieties.
- ✓ Seedlings of one month old with 3-4 true leaves have to be selected for transplanting to the main field.





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Manures and Fertilizers

- ✓ 100 kg N, 100 kg P₂O₅ and 100 kg K₂O should be mixed at the time of preparation of land.
- ✓ Remaining 100 kg N per ha should be applied in 2 splits @ 30 and 40 days after transplanted.

Weeding

- ✓ 3-4 manual weeding are required during the entire growth period.
- ✓ Pre-emergence: Atrazine @ 1-2 kg/ha, Pendimethalin @ 1.5-2 kg/ha
- ✓ Post-emergence: Paraquat @ 1.5 kg/ha, Glycel @ 1 kg/ha



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Irrigation

- ✓ Season of planting determines the frequency of irrigation.
- ✓ Frequent irrigation at the interval of 4-5 days is required.

Pinching



- ✓ Apical portion of the shoot is removed at the early stage to get more number of axillaries which in turn produces more flowers.
- ✓ Pinching the plants at 40 days after transplanting enabled the plants to yield more flowers.

Staking

- ✓ It means providing support to the tall plants
- ✓ Needs to be staked with the help of bamboo sticks.





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Diseases

1. Damping off
2. Collor rot
3. Leaf spot
4. Blight
5. Inflorescence blight
6. Powdery mildew



Viral diseases

Marigold is infected by
Cmv, Aster yellow virus



Pests

1. Red spider mite
2. Hairy caterpillar
3. Leaf hopper
4. Japanese Beetle
5. Tarnished plant bug
6. Slugs





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Harvesting

- ✓ Marigold flower should be plucked when they attain the full size depending upon the variety.
- ✓ Plucking of flowers should be done in cool hours of the day *i.e*, either in the morning or evening.
- ✓ Field should be irrigated before harvesting so that, flowers keep well for longer period after plucking.
- ✓ Plucked flowers should be covered with moist gunny bags if kept overnight before taking to market.

Yield

- ✓ African marigold 11 – 18 (t/ha)
- ✓ French marigold 8 – 12 (t/ha)