

**RAMA UNIVERSITY, KANPUR, UTTAR
PRADESH**

Faculty of Agricultural Sciences & Allied Industries



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**Course: Production Technology of Ornamental Crops, MAPs, &
Landscaping (HOR-221)**

Lecture 12

Jasmine

Introduction: Jasmine is a sweet scented plant grown both as shrub and climber. Flowers and flower buds are used for making garlands, bouquets and Veni and for religious offerings. Jasmine oil extracted from the flower is highly valued as it is used in manufacturing perfumes, cosmetics, creams, hair oils, soaps and shampoos. Jasmines are native of tropical and sub tropical regions and belongs to family Oleaceae.

Varieties: *Jasminum auriculatum* Vohl

Parimullai: A clonal selection from germplasm. Buds are white. Corolla tube is moderate. Flower yield is 7.8 t/ ha and concrete recovery is 0.29%.

CO-1: This is a local selection from a local type. Buds are white and bold with long corolla tubes. Concrete recovery is 0.34%.

CO-2: A clonal selection from germplasm. Buds are white with longer corolla tube than Co-

1. Different variants identified basically on the flower characters are Long Point, Long Round, Medium Point, Short Point, Short Round and Big Mullai. *Jasminum grandiflorum* (Linn.) Kobuski: CO-1, CO-2, Arka Surabhi, *Jasminum sambac* Ait: Double Mogra, Gundumali, Iruvatchi, Kasthurimalli, Madanban, Oosimalli, Ramabanam, Single Mogra, Soojimalli, Khoya and Arka Aradhana

In general, mild tropical climate is good for proper plant growth and flower

production. In India jasmines are grown under open field conditions. Hence, for successful cultivation mild winter, warm summer, moderate rainfall and sunny situations are required.

Soil: Jasmine gives good result in well-drained rich loam soil. Water logging conditions damages plants of jasmine. Soil pH vary from 5-8.

Propagation : Jasmine can be propagated by seed propagation or vegetative means i.e. cutting, layering budding and grafting. Seed propagation, though uncommon, is necessary for crop improvement through hybridization. Multiplication through sucker in *J. arborescens* and *J. multiflorum* has also been found successful.

Cultural operations

Weed control: Manual weed control is effective if done properly but chemical weed control (Paraquat and glyphosate at 2.0 kg a.i./ha) is economical.

Pruning: Pruning influences plant growth, flower bud initiation and differentiation and ultimately resulted in more flower production. Among the various dates of pruning from third week of January to third week of March at Coimbatore, maximum flower yield was observed in third week of January in *J. auriculatum*. In *J. sambac* maximum flower yield was recorded by pruning on last week of October.

Chemical defoliant: Various chemical defoliant reduced the apical dominance and encourage lateral shoots. Application of 3000 ppm of pentachlorophenol was found more effective in flower production than potassium iodide ,boll'seye ,ethrel and paraquat dichloride in *J. grandiflorum*.

Manure and fertilizers: For higher yield, a fertilizer dose of 120 g N, 240 g P and 240g

K/plant proved to be the best in *J. auriculatum* under Coimbatore conditions. In *J. sambac*, a basal dose of FYM (10 kg/plant) and N, P, K, Fe, and Zn at 60,120,120,25 and 4 g/plant in two split doses (December and June) is recommended for higher flower yield under Coimbatore conditions. Biofertilizers i.e. Azospirillum and phosphobacteria along with 75% of recommended nitrogen and phosphorus doses resulted in maximum flower yields in *J. sambac* cv Gundumalli and *J. grandiflorum* cv CO-2 at Coimbatore.

Diseases

Fungal: Leaf blight, Rust and

Wilt. Viral: Mosaic and Phyllody.

Insect pests: Bud worm, gallery worm, tingid bug and scales, Mites, Hopper, bug, leaf roller and blossom midge, scales and nematodes.

Harvesting: Flowering in jasmynes starts from second year or some earlier, but economic yield is generally obtained from third year. The stage of flower harvest depends upon the purpose of use. For fresh flower fully developed unopened flower buds are picked early in morning, while for extraction of concrete only fully opened freshly picked flower are required which are picked early in the morning. Delay in picking result in gradual reduction of concrete yield. Care should be taken that flowers are not badly handled and should not be wrinkled and damaged during harvesting. For concrete extraction, fully open flowers are harvested in the morning (6 to 8 am). In India jasmine flower are harvested manually. In other countries for harvesting purpose suction harvest erisused.

Grading and packaging: Flower bud should be graded according to corolla shape, size and freshness before packing in the boxes or baskets for marketing. Corrugated cardboard boxes are proper packing material for distant market while bamboo basket may be used for local market.

Harvested flower should be given cold treatment before packing. Flowers are packed so as to maintain some moisture and air circulation in the basket. Water is sprinkled on the newspaper covering the inside of the basket.