

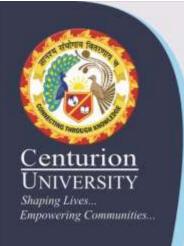
# **Center for Smart Agriculture**

**Floriculturist** 



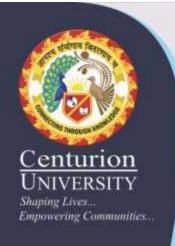
**Module 3:** Cultivation practices of important flower crops

**Session 11:** Cultivation practices of jasmine



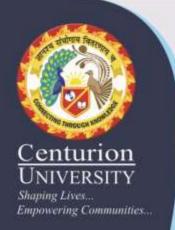
- ✓ It is one of the oldest fragran, important commercial flower cultivated in India.
- ✓ They are mainly grown as climbers, shrubs and rarely as pot plants.
- ✓ Garlands are being used for personal adorning by women, making garland, veni preparation and in religious offerings.
- ✓ Production of perfumed oils and *attars*.





# **Important Species**

- 1. Jasminum auriculatum: Mullai
- 2. Jasminum grandiflorum: Spanish Jasmine
- 3. Jasminum sambac: Arabian / Tuscan jasmine
- 4. *Jasminum pubescens (multiflorum)* Kakada **Soil and climate**
- ✓ Jasmine prefers mild tropical climate.
- ✓ Loamy (or) Red loamy and well drained garden soil is the best suited.
- ✓ The ideal requirements for successful cultivation of these plants are mild winter, warm summer, moderate rainfall and sunny days.



### **Varieties**

#### J. auriculatum

- ✓ Parimullai
- ✓ CO-1 Mullai
- ✓ CO-2 Mullai
- ✓ Others Long Point, Long Round, Medium Point etc

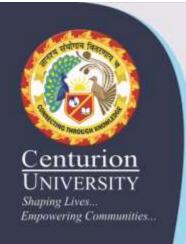
# J. grandiflorum

- ✓ Arka Surabhi
- ✓ CO-1
- ✓ CO-2

### J. sambac

- ✓ Ramanathapuram
- ✓ Gundumalli
- ✓ Khoya
- ✓<sub>4</sub>Others Ramabanam, Single Mogra, Kasthurimalli





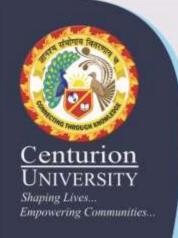
# Propagation and planting material

Jasmines are commercially propagated by cuttings

- ✓ J. auriculatum Semi-hard wood
- ✓ J. grandiflorum Terminal cutting
- ✓ J. sambac Terminal and Semi-hardwood cuttings.
- ✓ IAA (or) IBA treated at 1000 ppm for terminal cuttings and 2500 ppm for semi-hard wood cuttings.
- ✓ The treatment is quick dip method of the basal cut end before planting in the medium.
- ✓ Best rooting medium is sand: Vermiculate: moss at 1:1:1 ratio.





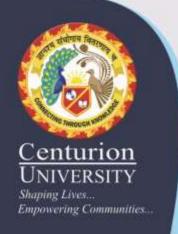


### Plant spacing, density and season

Species	Spacing	Density (P/ha)	Season
J. auriculatum	1.5 x 1.5 m	4400	Jun to Nov
J. grandiflorum	2.0 x 1.5 m	3350	do
J. sambac	1.25 x 1.25 m	6400	do

# **Planting**

- ✓ Land with proper drainage, irrigation facilities and sunny location are essential.
- ✓ Pits of 45 cm3 are dug at least one month before planting and exposed to sunlight.
- ✓ A few days before planting, pits are filled with 2 parts of FYM and one part each of fresh earth and coarse sand.
- ✓ Pits are to be watered to settle the mixture.
- ✓ Well rooted, healthy and strong plants are planted one in each pit.

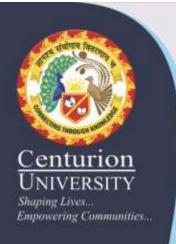


### **Nutritional requirement**

Species	Quantity(g/plant)		plant)	Method
	N	$P_2O_5$	K <sub>2</sub> O	
J. auriculatum	60	120	120	Six split doses at bimonthly
				interval
J. grandiflorum	100	150	100	In two split doses first June-
				July and second dose at
				December after pruning
J. sambac	60	120	120	Two split doses first at June-
				July and second at November
				after pruning

### **Foliar nutrition**

- ✓ Spraying of zinc 0.25% and magnesium 0.5% before flowering increases the yield of flowers.
- ✓ Spray FeSO<sub>4</sub> at 5g/lit. at monthly intervals until the chlorotic symptoms disappear.

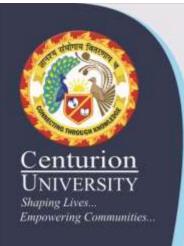


# **Irrigation**

- ✓ Sufficient amount of moisture in the soil is necessary for proper growth and flowering.
- ✓ Jasmines can be irrigated once in ten days depending on the soil and climatic conditions.

### Weeding

- ✓ Commonly done manually but is expensive.
- ✓ Chemical weed control is effective and economical.
- ✓ Spraying with Oryzalin 1 or 2 application is effective.
- ✓ Mulching also reduce weed population.

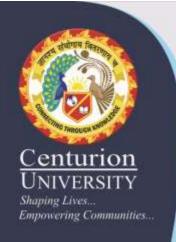


# **Harvesting**

- ✓ Jasmine gives economic yield only from the third year and upto 12-15 years and then starts declining in their yield.
- ✓ For fresh flowers, fully developed unopened flower buds are picked in the early morning
- ✓ While for extraction of concrete only fully opened fresh picked flowers are required.

#### **Yield**

Species	Yield (kg/ha)	Concrete recovery (%)	Shelf life
J. auriculatum	4636- 9022	0.28-0.36 (13.44 -28.24 kg/ha)	28-30 hrs
J.grandiflorum	4329-10144	0.25-0.32 (13.85 -29.42 kg/ha)	24 hrs
J. sambac	739- 8129	0.14 – 0.19 (1.18 -5.44 kg/ha)	28-30 hrs



# **Plant protection**

#### **Pests**

- ✓ Bud worm
- ✓ Red Spider Mite
- ✓ Blossom midge

#### **Diseases**

- ✓ Leaf Blight
- ✓ Wilt
- ✓ Nematode
- ✓ Root rot



**Yellowing of leaves:** It is caused by 3 factors viz., iron deficiency, nematode infection and root rot disease.

**Iron deficiency:** It can be rectified by spraying ferrous sulphate 5 g/lit at monthly intervals until the chlorotic symptoms disappear.



