

COMMON BIG ONION

Onion production depends upon the several biotic and abiotic factors and socio economic condition of farmers. All these factors vary from region-to-region and season to season.

Season of Planting

The sowing and transplanting time in different areas as follows

State/Season	Month of sowing	Month of transplanting
Maharashtra & Gujarat		
Kharif	May-June	July –August
Late Kharif or early Rabi	August-September	September- October
Rabi	November-December	December-January
Tamil Nadu, Karnataka and A.P		
Early Kharif	February-April	April-June
Kharif	May-June	July-August
Rabi	September-October	November-December
Rajasthan, Haryana, Punjab, U.P & Bihar		
Kharif	May-June	July-august
Rabi	October-November	December-January
West Bengal & Orissa		
Kharif	June-July	August-September
Late kharif	August-September	October-November

Raising of Seedling

Onion seeds are sown on nursery beds to raise seedlings for transplanting in the field. Raised beds sizes 3 x 0.6 m and 10-15 cm in height are prepared. About 70 cm distance is kept between two beds carry out operations of watering, weeding, etc. The surface of beds should be smooth and well leveled. Raised beds are necessary to avoid problem of water logging in heavy soils. In sandy soils, however, sowing can be taken up in flat beds . To avoid mortality of seedlings due to damping off, drenching of the beds with Bavistin (15-20g/10 litres of water) is effective.

In case of common big onion, 8-10 kg seeds are sufficient for raising nursery required to plant one hectare. Thus 100-110 beds of size 3 x 0.6m would be required for raising nursery required for sowing 8-10 kg seeds are treated with fungal culture of *Trichoderma viride* (4g/kg of seed) or Thiram (2g/kg of seed) to avoid damage from damping off disease. Sowing should be done thinly in lines spaced at 5-7cm distance. Seeds are sown at a depth of 2-3 cm and covered with a fine layer of soil followed by light watering by water. The beds should then be covered with dry straw or grass or sugarcane leaves to maintain required temperature and moisture. The watering should be done by water can as per the need till germination is completed. The cover of dry straw or grass is removed immediately after germination is complete.

The seedlings are ready for transplanting within 6-7 weeks of planting for kharif and 8-9 weeks old for rabi.

Preparation of main field: Plough the land to a fine tilth and incorporate 25t / ha of FYM at the time of last ploughing. Form ridges and furrows at 45 cm spacing, Plant 45- day old seedlings at 10 cm apart on both the sides of ridges.

Irrigation: Irrigate at planting on third day and subsequently at weekly intervals.

Application of fertilizers: Apply FYM 25 t / ha, Azospirillum 2kg and phosphobacteria 2 kg / ha, N 50 kg, P 150 kg and K 75 kg / ha as basal dose and N 50 kg / h as top dressing 30 days after planting. Apply zinc sulphate as basal dose @ 50 kg / ha at the time of last ploughing.

Plant protection

Pests

Thrips and Onion fly: Spray any one of the following insecticides based on the ETL of 1 maggot / hill.

Insecticide	Dose
Dimethoate 30% EC	7.0 ml / 10 lit
Profenofos 50 EC	2.0 ml / lit
Fipronil	2.0 ml / lit
Spinosad	0.5 ml / lit

Cutworm: Drench the soil with chlorpyriphos 50 EC @ 2 ml / lit

Diseases

Purple blotch / Stemphylium blight: Spray Mancozeb 2 g / lit or copper Oxychloride 2.5 g / lit or chlorothalonil 2.0 g / lit or Probineb 3.0 g / lit. Add wetting agent 0.5 ml / lit of spray fluid.

Basal rot : Treat the seeds or bulbs with *Trichoderma viride* @ 4g / kg at the time of planting and apply basally *T.viride* @ 2.5 kg / ha along with VAM 12.5 kg / ha

(or)

Follow the following IPM practices for pest and disease management

- ✓ Grow two rows of maize as barrier crop around field border.
- ✓ Select healthy onion seed bulbs
- ✓ Treat the bulbs with *Pseudomonas fluorescens* (5g / kg) + *Trichoderma viride* (5g / Kg)
- ✓ Apply *P.fluorescens* (1.25 kg / ha) + *T.viride* (1.25 kg / ha) + VAM Fungi (12.5 kg / ha) + Azophos (4 kg / ha) + Neem cake 250 kg / ha in soil.
- ✓ Install yellow sticky traps 12 / ha for thrips and leaf minor
- ✓ Install pheromone traps 12 / ha for cutworm (*S. litura*)
- ✓ Spray *P.fluorescens* (5g / lit) + *Beauveria bassiana* (10g / lit) on 30 DAP
- ✓ Spray application of Azadairachin 1% (2 ml / lit) on 40 DAP.
- ✓ Apply need based Tebuconazole 1.5 ml/lit or mancozeb 2g/lit or zineb 0.2g/lit for purple blotch disease management.

Yield: 15 – 18 t / ha in 140 – 150 days.

Market information

Crop growing districts	Perambalur, Trichy, Tirupur, Dindigul, Namakkal, Tirunelveli.
Major markets in TamilNadu	Oddanchatram, Coimbatore, Koyambedu, Dindigul
Grade specification	Colour and size Extra large onion (>6 cm dia.), medium (4 – 6 cm dia.), Small (2 – 4 cm dia), light red, light purple colour.