



Tomato

(*Solanum lycopersicum* Syn. *Lycopersicon esculentum* L.)

Season	Open cultivation in Dry season (Dec. - April) Protected cultivation in rainy season (May-December)
Variety	Arka Vikas, Ayush, Arka Samrat, Arka Rakshak, BT-10, BT-1
Soil	Well drained, organically rich and good water holding capacity soils are good. Suitable soils for early harvesting are sandy loam soils while high yield can be obtained from heavy and organically rich heavy texture soils with pH 6.0-7.0.
Sowing time	For open cultivation in Dry season -Early - (October); Main (November - December) and Late (January). For protected cultivation in rainy season: Early crop (April - May), Main crop (June); Late crop (July-August)
Seed rate	300 - 350 g /ha; 10 beds of 7 m length x 1 m width for one hectare area
Nursery management	Select well drained open space. Make the soil fine tilth and mix 10 kg FYM or 5 kg/sq. m vermicompost. Raise beds (1 m width and 5-7 m length) to 20 -30 cm with drainage facility. Seedlings can be produced in Pro-trays technique. Treat seeds with Bavistin or Thiram @2g/kg of seed. Sowing should be done at 5 cm apart lines at a depth of 1 -2 cm. Close lines with fine FYM and cover beds with dry grass till germination. Regular watering, drainage and disease - pest management should be done. Protect nursery by shelter to avoid damage from heavy rains.
Spacing	Single row: 50 -60 cm X 40-50 cm Double row bed system: 80 -100 cm (60 cm x 40 cm) + 50 cm (between beds)
Transplanting	Transplant 4 weeks old seedlings on raised beds (one seedling/hill) Make 8-10 cm pit at prescribed distance and apply mixture of recommended dose of FYM, DAP, MOP and fill half of pit by soil. Seedlings should be planted in remaining half portion of the pit. Transplanting should be done in evening hours and proper watering should be done immediate after planting.
Irrigation	Frequent irrigation needed in initial days, later on it can be done at 3 days interval. Furrow or drip irrigation is better. Mulching with plastic, dry grass, rice straw is suggested for good quality fruits.
Intercultural operations	Weeding and hoeing at 10-15 days interval is necessary. Avoid damage to plant stem or roots while field practices. Spray micronutrients mixture for better growth and fruiting.
Manuring Fertiliser	20 -25 t/ha Apply 30kg Nitrogen, 50 kg Phosphorus, and 50 kg Potassium per hectare as basal dose. Apply two doses of 30 kg N/ha each at 30 and 50 days of planting and phosphorus @ 30 kg/ha at 30 days after planting.
Disease and its control	For pest management use maize as barrier crop, marigold as trap crop, spray neem formulations; monocrotophos or cypermethrin @ 1 ml / litre at 15 days interval. For wilt management in polyhouse, use resistant varieties, modified growing media (coconut pith+vermicompost+lime), grafting technique
Harvesting Yield	Harvest red to pink stage fruits for transport or local markets 200 - 250 quintals/ha
Potted tomato technology	Developed to grow tomato in roof tops, stairs, kitchen gardens and area with problem soils. It provides bags with suitable growing media (Cocopith + Vermicompost+soil), variety (Ayush, Arka Samrat, Arka Vikash).