



TURBO DRIPPER
4 / 8 /14 LPH



AQUARIUS PCND DRIPPER
4 / 8 LPH



K-GOL DRIPPER
2 / 4 LPH



K-GOL PC DRIPPER
2.5 / 4.5 LPH



K-LIN DRIPPER
1.2 / 2 / 4 LPH



K-LIN PCND DRIPPER
1.6 / 2.2 / 3.4 LPH



KOTHARI[®]
— IRRIGATION —

EXCELLENCE IN TOMATO CULTIVATION ONLY WITH KOTHARI DRIP IRRIGATION

Tomato belongs to Solenaceae family and is in second place after potato in the list of vegetables. Tomato can be grown in all seasons namely kharif, rabi and summer. So tomato is a very important crop in vegetable class. The importance in diet is immense because tomato has body protecting proteins in large quantity. Kothari Drip irrigation is very useful for irrigation and management of fertilizers for tomato crop. Drip irrigation not only saves water but saves fertilizers too improving quality of the yield.

Benefits of Kothari Drip Irrigation.

- 1) Kothari Drip Irrigation makes plants grow faster and there is equal growth of the crop.
- 2) Kothari Drip Irrigation continuously maintains moisture in the roots of tomato crop so during any growth stage there is no stress on the crop.
- 3) Depending upon the crop growth, fertilizers and water management can be done with Kothari Drip Irrigation, which leads to growth of flower bud and increases fruiting capacity.
- 4) Kothari Drip Irrigation saves 40 to 50 % of water.
- 5) Kothari Drip Irrigation decreases the spread of weeds, pests and diseases.
- 6) Cost of labour is saved.
- 7) Because of Kothari Drip Irrigation helps to increase fruit bearing capacity of tomato plant & the fruit weight increases. Fruit gets good color and shine and the production increases tremendously.

Climate: Tomato grows in hot climate but still it can be grown throughout the year. 13°C to 38°C temperatures are good for plant growth. Growth of flowers and fruits is good. Night temperature should be 18°C to 20°C for good fruit bearing. Average temperature should be 26°C to 32°C for good colour. Temperature, sunlight and humidity together affect the growth of crop. If there is 20°C to 32°C temperatures, 11 to 12 hours sunlight and 60 % to 75 % humidity, you get a good amount of tomato yield.

Soil: Medium to heavy soil but with good drainage is required for tomato cultivation. Soil pH should be between 6 to 8.

Season: Kharif – June, July for sowing of seeds (nursery), Rabi – September, October for sowing of seeds, Summer – December, January for sowing of seeds.

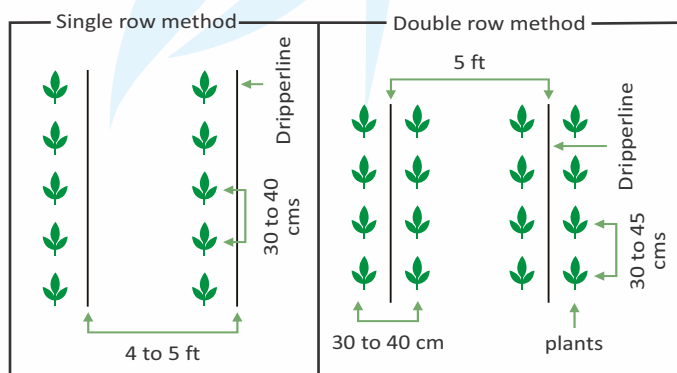
Seeds: 40 gms per acre of hybrid varieties . 400 to 500 gms of improvised varieties.

Soil Preparation: Preparation of soil is very important when cultivating tomato under Drip Irrigation. Lumps should be broken properly and crosswise harrowing should be done. Mix 30 to 40 bullock carts manure per hectore. Depending upon the type of soil prepare raised beds at the distance of 4 to 5 ft and of height 15 to 20 cms.

Nursery Management: Loosen the soil and prepare soil beds. Soil bed should be 1 meter wide, 3 meters in length, 15 cms in height. Mix 10 Kg manure and 50 gms 15:15:15 fertilizer on each soil bed. Level soil beds, make horizontal lines at the distance of 10 cms and sow seeds. Cover seeds with soil and supply light Irrigation.

10 days after sowing seeds, mix 10 gms of Phorate G on soil bed between two lines of plants. 15 days after sowing spray 0.4 ml per litre of water Confider or 0.5 gms/lit water Actara to prevent the spread of sucking pests. This spraying has to be done twice with 10 days gap in between, water soil beds before cultivation, to avoid breaking of roots. Plants can be protected from sucking pests by using anti insect nets. If nursery is in soilless media like cocopit, in plastic tray, etc then soil borne diseases can be avoided.

Transplanting : Transplanting should be done in the afternoon or when the sunlight is low. 25 to 30 days after sowing of seeds when the plants are of height 12 to 15 cms transplant them on the soil beds. Distance between the two lines should be 30 to 45 cms. Distance between the two plants should be 30 to 40 cms. Transplant in single row or double row method on a single bed depending upon the growing habits of the crop. High growing or spreading types should be grown in single row method whereas dwarf and less spreading type should be grown in double row method.



Drip Selection: Use Kothari Drip Irrigation Technology with Inline Dripper for tomato. Distance between the two drippers should be 30 to 40 cms. Depending upon the type of soil, flow should be 2 to 4 litres per hour.

Water Management: After transplanting irrigate immediately to make soil beds wet. Then depending upon the state of crop growth, type of soil and change in climate do the water management so that continuous moisture is maintained in the range of efficient roots of tomato. Water stress in the flowering stage or fruiting stage affects production. Less or more water causes flower drop. So proper water management is very essential.

State of crop growth	Initial Plant growth	Fast growth	Flowering stage	Fruiting stage	State of Fruit growth	Total state of growth
Crop coefficient	0.4 to 0.5	0.7 to 0.8	0.9 to 1.0	1.0 to 1.1	0.85 to 0.95	0.8 to 0.9

1) Water requirement (WR) = Evapotranspiration (Eto) Crop coefficient(kc)

2) Water requirement in litres per unit area = Area of land under cultivation (meter square) X water requirement (WR)

Fertilizer management: Use fertigation method to get the tomato yield as expected. Nutrients required per metric ton of tomato production = 4 kg Nitrogen, 1.1 kg Phosphate, 5.5 kg Potash, 0.8 kg Magnesium.

If expected yield per acre is 40 metric tons then nutrients required per acre are: 160 to 170 kg Nitrogen, 44 kg Phosphate, 220 kg Potash & 32 kg Magnesium.

Before transplanting mix 200 kg Single Super Phosphate + 50 kg Magnesium Sulphate + 10 kg Micronutrients + 100 kg neem cake per acre of soil.

Fertigation Management:

Crop growth Stage (days)	Urea	Ammoniu- -sulphate	Potassium nitrate 13:0:45	Phosphoric acid or 12:61:0	Murate of potash (white)
10-30	-	72.0	-	6.0	17
31-60	15	15.0	-	17.5	50
61-80	22	48.0	-	12.0	66
81-100	58	-	25	12.0	31
101-120	84	-	10	2.5	42.5
121-140	65	-	-	1.2	66.5
141-170	55	-	-	1.2	66.5
Total	299	135	35	52.4	340

Note: Above table is for guideline only, so kindly make the changes as per change in the type of soil, crop growth stage and climatic changes.

KOTHARI®

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