



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 PAPAYA CULTIVATION ONLY WITH KOTHARI DRIP IRRIGATION

Papaya is very popular fruit from tropical zone. Qualities like faster growth, easy cultivation and long fruiting life, makes papaya an important crop after banana. Problems of digestive system like ulcers can be cured with help of protein rich and tasty papaya juice. Papaya grows in hot and dry climate but it still requires suitable amount of water throughout the season.

Kothari Drip Irrigation is a world class method of irrigation and if this is used for papaya, it saves water as well as fertilizers also equal quantity of water and fertilizers are supplied to the effective root zone of the crop. Therefore, depending upon the need of the crop, water can be supplied throughout the season. Hence production increases.

Kothari Drip Irrigation

- 1) Kothari Drip Irrigation creates uniform wet belt which helps in faster growth of plants.
- 2) Kothari Drip Irrigation helps to maintained balance between air and water in the range of roots.
- 3) Kothari Drip Irrigation helps to maintain moisture in the soil continuously as water is supplied in equal amounts. It reduces flower and fruit drop and increases fruit bearing capacity.
- 4) Kothari Drip Irrigation decreases spread of weeds, pests and diseases.
- 5) Kothari Drip Irrigation saves 40 to 50 % of water.
- 6) Kothari Drip Irrigation helps to increase the production.

Climate: papaya is a crop from tropical zone so requires hot and humid climate for good yield. For the growth of papaya maximum 40°C and minimum 10°C temperatures are required. For good growth of crop maximum 36°C to 42°C and minimum 15°C to 20°C temperatures are required. Fruit bearing capacity is reduced in less temperature and fruit remains immature. High temperature makes the shape of fruit small. In some types of papaya crop, changes in temperature affect male-female attributes.

Soil: Light to medium type of soil with good drainage and rich in organic material is required for good growth of papaya. Soil with good drainage is very important because papaya roots are very sensitive to anaerobic condition. pH 5.8 to 7.

Unisexual: In unisexual plants, male and female are on different plants. Plant 2-3 plants in one place and separate them during flowering stage. Male female ratio should be 1:10. Type-Coimbatore- 1, 2, 4 and 6.

Bisexual: In bisexual plants male and female flowers are on same plants. Grow single plant in one place. Type- Coimbatore – 3 and 7 Red lady – 786 (Taiwan) Surya, Curg, Honeydew, Pujamjesty.

Seeds: Unisexual - 200 gm/acre, bisexual 20 gm/acre

Nursery Management: Sterilize the soil for papaya nursery, spray 25 ml Formaldehyde mixed in a litre of water and cover soil with polythene paper for two days. Drain the soil properly with water and then add Tricoderma. After 15 days fill soil in the polythene bags and plant seeds. Do seeds treatment before planting. To protect from sucking pests cover the nursery with anti-insect nets spray with fungicide plus insecticide for protection from fungus and insects.

Planting Season: Papaya can be grown throughout the year in any season. It is advisable to grow papaya according to the market demand and climate. Generally it is better to cultivate during first week of May to last week of June .

Spacing: 1.8 m 1.8 m, 2 m 2 m, 2.1 m 2.1 m .

Kothari Drip Irrigation plan: Inline Dripper Method from Kothari agritech Pvt. Ltd. is used for irrigation of papaya crop. Depending upon the type of soil distance between two drippers should be 40 to 50 cms and flow of dripper should be 2 to 4 lit per hour.

Water management: Efficient roots of papaya crop are very sensitive to air stress so water has to be supplied in such amount that moisture is continuously maintained in the soil. Water the crops immediately after cultivation and make sure that soil is made equally wet. Do not water papaya plants unnecessarily.

Crop growth stage	Initial growth stage	Flowering Stage	Flowering to fruiting	Fruit development
Crop coefficient	0.3 to 0.4	0.5 to 0.6	0.8 to 0.9	1.1 to 1.3

1) Water requirement (WR) = Rate of Evapotranspiration (Eto) crop coefficient (Kc ,mm/day)

2)Water Requirement for unit area (litre/days) = Water requirement X area of unit area (M²)

$$3) \text{ Time of Irrigation} = \frac{\text{Water requirement (WR)}}{\text{Application rate}}$$

$$4) \text{ Application Rate} = \frac{\text{Drippers flow, litre/hour}}{\text{Distance between two laterals (m)} \times \text{Distance between two drippers (m)}}$$

Manage proper irrigation for papaya crop by using above given sources.

Fertilizer Management: Fertilizers management is very important for good papaya production. There is increase in the production if fertigation is done on time and according to the need of crop growth.

Before Cultivation: Mix 10 to 12 tons of manure in soil. During cultivation add 200 kg neem cake, 1.5 kg Boron, 250 kg Single Super Phosphate, 50 kg Potash, 50 kg Magnesium Sulphate, 10 kg Micronutrients per acre to the soil. During the stage of fruit growth Nitrogen and Potash dosage is very important.

Days after cultivation	Total days	Fertilizers (kg/acre)						
		Urea	Ammonium sulphate	Calcium nitrate	13:0:45	Phosphoric acid	Murate of potash	Magnesium sulphate
15-30	15	-	-	-	-	0.12	-	-
31-60	30	-	-	-	-	0.12	-	-
61-90	30	-	0.50	-	-	-	0.16	0.5
91-120	30	-	0.50	-	-	-	0.16	0.5
121-150	30	-	0.50	-	11	0.12	-	0.5
151-180	30	0.8	-	0.625	-	0.12	1.25	0.5
181-210	30	0.8	-	0.625	-	0.12	1.25	0.5
211-240	30	0.8	-	-	0.75	0.12	1.20	0.5
241-270	30	1.0	-	-	-	-	1.50	0.5
271-300	30	0.8	0.50	-	-	-	1.50	0.5
301-330	30	0.6	-	1.25	-	0.12	1.50	0.5
331-360	30	-	-	1.75	1.66	0.12	0.5	0.5
361-390	30	0.5	1.2	-	-	0.12	1.25	0.5
391-420	30	-	2.5	-	-	0.12	1.25	0.5
421-450	30	-	2.5	-	-	0.12	0.8	0.5
451-480	30	-	2.5	-	-	0.12	0.8	0.5

Note: Above table is for guideline only, so make necessary changes according to the type of soil, state of crop growth and climatic changes.

KOTHARI®

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