



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

Eligible for
Government
Grants

KOTHARI[®]
— IRRIGATION —

EXCELLENCE IN ONION CULTIVATION ONLY WITH KOTHARI DRIP IRRIGATION

In India onion is cultivated on large scale in states like Maharashtra, Gujarat, Odisha, Karnataka, Uttar Pradesh, Andhra Pradesh, Tamil Nadu, Bihar, Punjab and Rajasthan. Onion is an important ingredient in Indian recipes, so it has great demand in India, but due to lack of appropriate management of water and fertilizers, we do not get onion production as expected. Onion is cultivated in close spacing method. If advance method like Kothari Drip Irrigation is used instead of traditional method then equal amount of water and fertilizers are supplied to the crop. As well as moisture is maintained continuously. So suitable environment is created for onion growth and total production increases.

Benefits of Kothari Drip Irrigation

- 1) Water is supplied equally with Kothari Drip Irrigation helping in maintaining uniform wetting strip, hence growth of crop is equal.
- 2) Onion is susceptible to air and water stress. Regular moisture maintenance becomes very easy with Kothari Drip Irrigation. So growth of onion crop is very fast.
- 3) Kothari Drip Irrigation helps to maintain proper moisture in active root zone, helps to get equal size of onions.
- 4) As compared to traditional way of irrigation Kothari Drip Irrigation saves 40 to 50% of water.
- 5) With the use of Kothari Drip Irrigation spread of weeds is lessened.
- 6) With the help of Kothari Drip Irrigation water is directly given to roots so spread of disease and pests is less.
- 7) Fertilizers are supplied equally and according to crop growth stage which increases the weight of onion and also gives good quality yield.
- 8) Kothari Drip Irrigation improves soil quality and hence onion production is increased by 50 to 60%.

Soil: Onion can be grown on almost all types of soils, but for good production of onion, sandy or organic matter rich clay soil is best. Do not plant onion in swampy soil.

Climate: Onion crop requires mild climate. Heavy rain, very hot and very cold climates are not suitable for onion crop. During initial growth of onion as well as during development of onion cold climate is necessary. Later on, medium to high temperature and dry air is required for the complete development of onion. For total growth of plants generally

21°C temperature is necessary. Onion should be grown in summer season in places with more than 100 cm rain.

Seeds and Nursery: 1.5 to 2 kg seeds are required per acre of land. Prepare nursery on soil beds for transplanting onion. For healthy growth of plants sowing of seeds should be done properly. See that the plants are not crowded in one place.

Transplanting and Plant Population: For transplanting of onion, loosen the soil and mix 10 ton of manure per acre in the soil. Depending upon the type of soil prepare soil beds at suitable distance.

Kothari Drip Irrigation is suitable for cultivation of onion. When cultivating under Drip Irrigation, prepare soil beds half circle in shape and 30 cm in height. Distance between two soil beds should be 4 to 5 ft. Keep distance of 10 to 12 cm between two lines and two plants. Plant 6 to 8 lines of onion on every soil bed. Before planting onion wet soil beds properly with drip irrigation. When doing this, operate drip till the soil beds are equally wet and then transplant onion after moisture is created.

Weed Control: After 4-5 days of transplanting spray Goal Weedicide. (2ml/litre of water).

Water Management: Onion roots are shallow type so for good onion production water management is very important. Efficient roots of onion are mostly at the depth of 15 cm and more than 70% of onion crops needs are fulfilled by these roots. With Kothari Drip Irrigation water and fertilizers can be supplied equally, so the roots grow well and capacity of absorbing nutrients is increased. Kothari Drip Irrigation is the best method of irrigation for onion crop.

Selection Of Drip: for irrigation of onion use Inline Drip Irrigation. Inline Drip Irrigation helps in maintaining uniform wetting pattern is maintained well. It is also possible to control the depth of moisture. Depending upon the type of soil distance between the two drippers should be 30 to 40 cm and the flow of drip should be 2 litre per hour.

Water requirement (WR) = Evapotranspiration (Eto)/crop coefficients(kc)

Crop growth stage	3 to 5 leaves	6 to 8 leaves	9 to 11 leaves	12 leaves to full growth	Full growth to start of shoot fall	30 % shoot fall
Crop coefficient	0.3 to 0.4	0.4 to 0.5	0.5 to 0.6	0.7 to 0.8	0.9 to 1.0	0.4 to 0.3

Onion roots are shallow and they need continuous irrigation. Irrigate the crop according to the type of soil.

Fertilizers Management: Before transplanting mix 5 metric ton compost, 100 kg neem cake, 200 kg Single Super Phosphate, 5 kg Zinc Sulphate, and 5 kg Borosol per acre in soil.

If fertilizers are supplied through drip irrigation then all plants get equal supply of fertilizers and growth of onion is equal. So use water soluble fertilizers for onion.

Days after transplanting	Total days	Fertilizers (kg per acre)			
		Urea	12:61:0	0:0:50	13:0:45
11 to 30	20	40	30	10	-
31 to 50	20	80	20	30	-
51 to 70	20	24	10	60	-
71 to 100	30	-	10	90	45
Total		144	70	190	45

- 1) Supply 3 kg of Magnesium Sulphate once a week between 30 to 90 days.
- 2) Till 30 to 75 days supply 4 kg of Calcium Nitrate separately (do not mix with other fertilizers).
- 3) Do not mix Murate of Potash and ammonium sulphate.
- 4) If you want to use Murate of Potash use only white one.

Note: Above table is for guideline purpose, so make changes as per soil type, stage of crop growth and climatic changes.

KOTHARI[®]

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