

# JAIN TC PARK ∞

 Jalgaon, India

## Net Water Positive and Carbon Negative Facility with 100% Wastewater Reuse

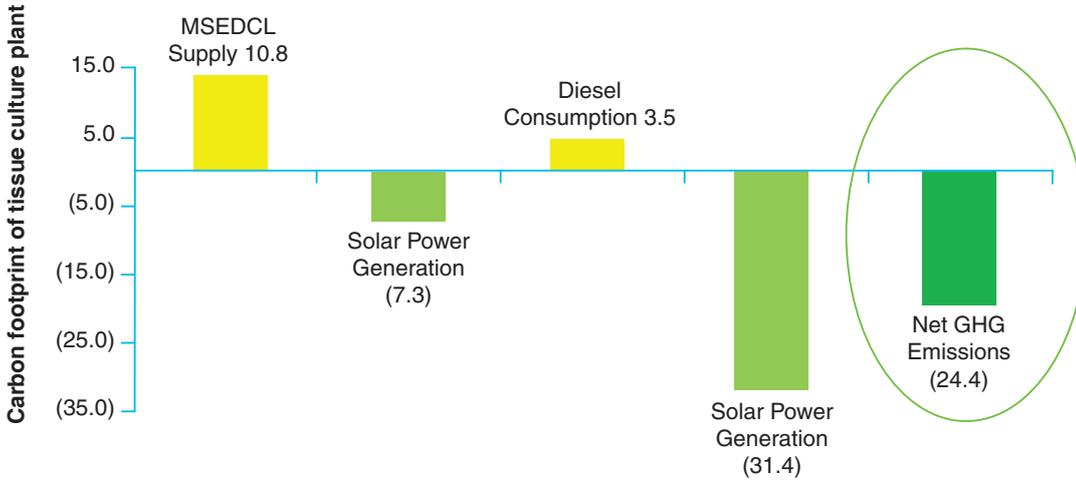
Jain Tissue Culture (TC) Park is a unique example of a farm contributing positively to water and carbon cycles, without generating any auxiliary waste stream. It is the world's largest tissue culture facility spread over close to 90 hectares near Takarkheda village in Jalgaon. It has an annual production capacity of 100 million tissue culture plants. A significant amount of energy demand is met by off-grid and on-grid solar installations totalling to 500 kW. During 2017, solar power met 40% of the energy demand for tissue culture production.





# CARBON NEGATIVE ∞

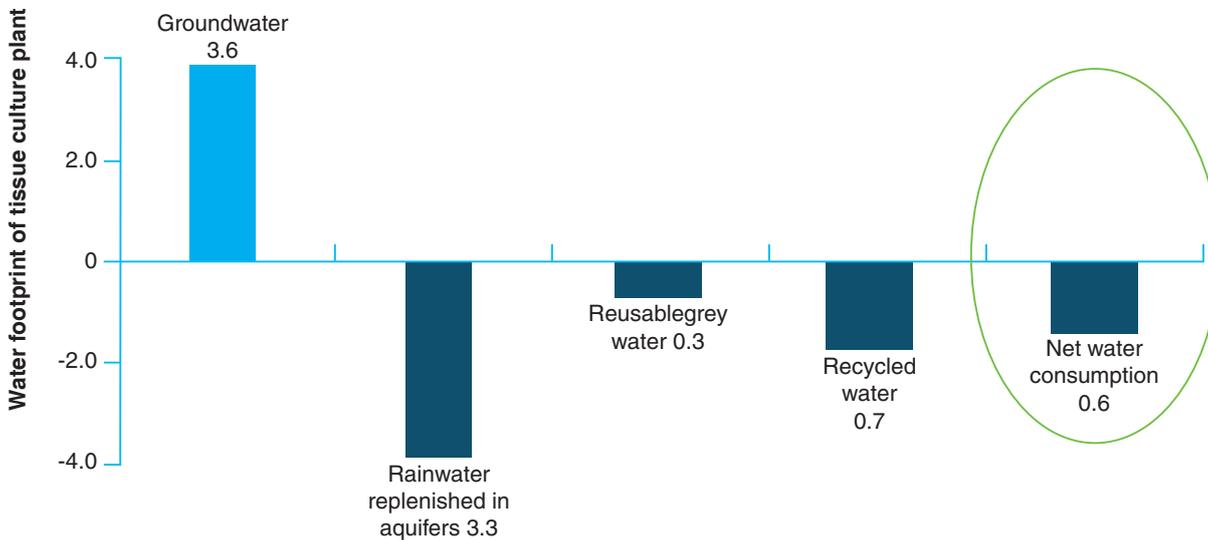
## GHG Emissions per Plantlet (gram CO<sub>2</sub>-eq)



# SMART WATER USE ∞

Groundwater recharge through rainwater harvesting is the main feature at TC Park. 5% of the total area in TC Park is occupied with constructed percolation ponds. In addition, water is also replenished to aquifers through out of boundary percolation check dam. Water withdrawal for irrigation of TC plants is done through solar water pumps equipped with solar tracking panels.

## Water Consumption per Plantlet (litre)



Through rainwater harvesting, 24% more water than the consumption was replenished into ground in 2017. Moreover the water used for irrigation of plants in polyhouses is recycled through a channel of pipes and filters. Thus, each plantlet produced in TC Park its net water positive.

# USE OF TREATED SEWERAGE WATER FOR AGRICULTURE



Fatehabad & Tohana, Haryana

The first priority of most of the water in the dams, reservoirs, rivers is allocated for meeting urban drinking water needs and demand for agricultural water goes on the last priority. So, for rapid development in agriculture we needed to look at an alternative water source—treated sewage water.

In 2016, Haryana became one of the few states in India to use treated water for irrigation purposes.

Jain Irrigation is executing this wastewater reuse project in Haryana. The project reduced the demand on groundwater resources.

In this project the treated waste water from STP (Sewerage Treatment Plant) has been conveyed through network of underground, high diameter HDPE pipelines up to agricultural fields.

## IMPACT

## 100% WASTEWATER REUSE



# REPLACEMENT OF CANALS ∞

 Hoshiarpur, Punjab

## Using Large Diameter HDPE Pipes

As the open canals are either earthen and/or cement mortar lined they are susceptible to several water losses like evaporation, percolation and breakages of canal bunds either natural or manmade. Increase in water loss is more in a canal than in a piped conveyance system.

The above mentioned wastages have been effectively stopped by conveying water with JAIN HDPE large diameter pipes installed underground. Below the farms piping system in many parts of India proved to be one of the best solutions for the conservation of water.

Also, as the canal is replaced by an underground network of HDPE pipelines there is no requirement of farm-land acquisition from marginal farmers for construction of open canals. That is why farmers are very happy and welcoming such canal replacement projects in India.

In Punjab, more than 13 km length of Kandi canal (Stage II) has been replaced using underground gravity HDPE pipes and fittings.



## IMPACT

- Conservation of water and equitable distribution of water
- Water conveyance efficiency increased from 35% in canal system to 95% with the piped distribution network.
- Ensures year round availability of water
- Considerable reduction in maintenance cost
- Higher agri crop productivity



# BIODIVERSITY AT JAIN HILLS

 Jain Hills and Jain Valley, Jalgaon, India

We are driven by our mission to invest in watershed creation and biodiversity enhancement. We are keen to create and conserve the natural habitats for the native flora and fauna at our business locations. Spanning across 1,200 acres and comprising three major establishments namely; Jain Agri Park, Jain Food Park and Jain Energy Park, this project is allied with watershed development, soil conservation and guided with systematic biodiversity action plan. The premises also have an FAO certified training and demonstration centre where 50,000 farmers are trained annually on high-tech agriculture.

This project aligns Jain Irrigation’s activities to contribute directly to India’s National Biodiversity Targets (NBTs) and the Global Aichi Biodiversity Targets.



## IMPACT

### Conservation of iucn listed threatened species

Species	IUCN Status
Black-headed ibis and oriental white ibis ( <i>Threskiornis melanocephalus</i> ) migratory birds in India	Near Threatened
Common pochard ( <i>Aythya ferina</i> ) migratory bird in India	Vulnerable

