

WATER BENEFIT CERTIFICATE PROJECT

PROVIDING SUSTAINABLE SOLUTIONS TO AGRICULTURE

MORE YIELD WITH LESS WATER

REPLACING FLOOD IRRIGATION WITH DRIP IRRIGATION AMONG SMALLHOLDERS IN RURAL INDIA

WHAT IS THE PROBLEM?

Smallholder farmers don't take decisions lightly. In rural India, there are about 180 million smallholder farmers owning less than 2 hectares of land each. Climatic conditions are tough. Maximum temperatures are above 30°C throughout the year, and they peak at above 40 °C in May. Given the heat, 750 mm of rain per year is far from generous. And 90% of that rain falls in just five months between June and October. Outside the rainy seasons, farmers have to revert to ground water sources, which are increasingly strained by overexploitation.

Irrigation for agriculture alone accounts for over 80% of water use in India, more than any other sector. However, much of this water is applied inefficiently using flood irrigation, which remains the prevailing irrigation practice among farmers in India. This results in considerable losses of water – around 60% of water applied – in the form of surface run off, percolation and bare soil evaporation that does not contribute to any increases in yield.

WHAT IS THE SOLUTION?

Jain Irrigation Systems Ltd. is a company with deep roots in agriculture. As one of the leading developers and producers of irrigation technology in the world, Jain Irrigation has developed a special relationship with both small and larger-scale agricultural producers in its home country of India, and actively develops solutions to their needs that are both affordable and environmentally sustainable.

To address the issue of water scarcity, Jain Irrigation is helping smallholder farmers to switch from the prevailing flood irrigation practices to drip irrigation using its own drip technology. Unlike flood irrigation, which applies water indiscriminately to a field in large quantities, drip irrigation supplies water directly to the crop's root zone using a network of pipes and tubes.

As a result, over 90% of water applied is actually consumed by the crop as opposed to 35-40% using flood irrigation. In addition to decreasing water losses, drip irrigation applies water more frequently and in smaller volumes. This enhances the health of the crops and results in higher yields of 30-80%.

PROJECT KEY FACTS

Location:
Maharashtra, India

Project type:
Drip irrigation

Project standard:
Gold Standard Water

Total water volume:
640.000 m³/a

Number of WBC's:
100.000/a

Project Start Date:
October 2014

Project Auditor:
SGS






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HOW DO WATER BENEFIT CERTIFICATES HELP?

Despite the benefits of using drip irrigation, the penetration rate in India is very low at about 2% of the potential land appropriate for this method. The primary barrier is the initial financial cost of investing in drip equipment. Using the revenue from WBCs, Jain Irrigation will make drip affordable to approximately 40 contract farmers growing onion in northern Maharashtra. Over time, the project will be expanded to include farmers across India growing other water-intensive crops such as banana and sugarcane.

ADDITIONAL BENEFITS AT A GLANCE

-  Drip irrigation increases crop yield, which allows farmers to sell more without increasing their inputs and resulting in higher incomes.
-  Fertilizers are used more efficiently via application directly through the drippers. This saves 30-40% of the fertilizer required when using flood irrigation.
-  With water applied more efficiently, less water must be pumped from precious groundwater sources. This eases pressure on the catchment and reduces the greenhouse gas emissions associated with pumping.



WHO IS BEHIND THE WATER BENEFIT CERTIFICATE STANDARD?

The Gold Standard Foundation, First Climate Markets AG and more than twenty **Water Benefit Partners** (blue chip corporates, public institutions, NGOs, research institutes) have developed the Water Benefit Certificate Standard as an innovative financing mechanism to support water projects in regions particularly affected by water-related problems. **Water Benefit Partners** is a Public Private Partnership (PPP) that was formed in 2011. The partnership was initiated by First Climate Markets AG and is co-funded by the Swiss Development Cooperation (SDC).