

# PRACTICE: Drip Irrigation



## PRACTICE

**Drip irrigation to reduce water use and yield climate benefits**

## PROBLEM

**Poor practice in water and fertilizer use contributes significantly to climate impact of Coca-Cola's products.**

## DESCRIPTION OF PRACTICE + RESULTS

Drip irrigation technology provides many benefits – including:

- improved yield,
- reduced water use, and
- reduced fertilizer use. Farmers can apply nitrogen several times in smaller targeted amounts, optimizing nutrient uptake and reducing climate impact from the release of nitrogen dioxide from fertilizers into the atmosphere.

“Company A” evaluated the impact of drip irrigation technology on water and chemical use efficiency, and its effect on the energy footprint of potato production over a period of 3 years. The results from their work on potatoes in the US and India follows:

### US

In the US, studies show irrigation water reductions of more than 20 percent, with an average yield increase of 19 percent. By utilizing drip irrigation to deliver crop inputs, producers can reduce the number of tractor passes over the field, while optimizing timing and accuracy of delivery. Drip irrigation improves plant health and crop yields, and save one tractor pass over fields, which equates to a savings of \$15 per acre when implemented in the US.

### INDIA

In India, approximately 40 percent of the potato-growing area (2 million out of 5 million acres) is water-scarce. Therefore, the use of drip irrigation provides an opportunity to improve productivity.

Company A facilitated loans at favorable rates to small scale farmers to help with needed equipment. Company A states that “As a result of the program—affecting 850 farmers covering more than 1,000 acres in the state of Maharashtra—the average yield has increased from 5.5 metric tons to 7.2 metric tons per acre in drip irrigation fields, a 31 percent increase in productivity. The drip irrigation program has also delivered a 50 percent reduction in water usage in potato cultivation, resulting in a total water savings in 2010 of 200 million liters of water, versus flood irrigation.”

Based on the success in Maharashtra, Company A is replicating the program in other water-scarce Indian states. The company hopes to expand drip irrigation acreages threefold over the next three years



## RELEVANCE TO COCA-COLA

Optimizing farming practice – water and fertilizer use – is critical for Coca-Cola to meet its climate commitments. Drip irrigation can provide significant productivity, water, and climate benefits when implemented well.

## RESOURCES

**Illustration of Commercial Drip Irrigation with resources –**

*<http://www.infonet-biovision.org/default/ct/293/soilConservation>*

