

ROI FEATURE

Voltea's CapDI[®]



Grower Saves Thousands With Innovative Water Treatment System

TOMATO FARMER

Puebla, Mexico

**ROI PAYBACK:
\$96,000 IN 8 MONTHS**

Water salinity is a crucial factor in whether a plant can thrive or die, because high sodium levels can negatively affect plant quality and significantly reduce production.

For growers, salinity levels have to be just right. But that's not always easy to achieve. Many municipal water systems or wells provide inconsistent salinity levels, and plants demand varying amounts of salinity at different stages.

One tomato and pepper grower in Puebla, Mexico that relies on well water faced severe financial pressure because of inconsistent salinity levels. The company was forced to purchase seedlings from a third-party source because the water quality wasn't suitable for growing them in-house.

The grower wanted better results from its water treatment system and, thankfully, found the perfect solution.

● THE ● CHALLENGE:

SPENDING ON SEEDLINGS

While integral to the economy, agriculture is also a drain on Mexico's water sources as the industry is responsible for 77 percent of the total water withdrawn. This can cause severe water scarcity issues, which directly affects salinity variability, making it even more difficult to obtain the high-quality water suitable for growing crops.

Tomato seedlings are known to have especially high sensitivity to salinity, which is why this grower was not able to produce the seedlings in-house.

The grower considered using a water treatment method that required the addition of chemicals to achieve the ideal salinity. However, this was not an environmentally responsible option and would add a step to the already extensive treatment process, as well as require additional spending.

Instead, the grower purchased the seedlings at a cost of several hundred thousand dollars from a third party, which was a major financial blow in an industry with tight profit margins. If the grower could just find a way to nurture its own seedlings, it would save money and control the whole growing process. It was time for a new water treatment solution.





● THE ● SOLUTION:

TUNABLE WATER TREATMENT; CONSISTENT RESULTS

By choosing Voltea's Membrane Capacitive Deionization (CapDI®), a salt-free water purification technology, the grower found a solution that met its every need.

CapDI offers a revolutionary way to treat water, removing salt ions and total dissolved solids (TDS) via an electrical current. The Industrial Series 12 System (IS-12) that was installed on-site provides a feature that is integral to consistently achieving ideal water quality sodium levels: **tunability**.

Operators can select the optimum ion removal rate for each of their crops, tunably removing and controlling TDS and sodium levels without taking away any beneficial minerals. For example, feed water might have 89 parts per million (ppm) of sodium, but one plant may require 21 ppm of sodium, while another at a different stage of growth requires 51 ppm. Voltea's technology produces consistent salinity levels, no matter the quality of the feed water.

System operators don't have to spend time monitoring water concentration because CapDI automatically accounts for any variations in feed water, ensuring consistent, high-quality water output that's specific to each crop.

● THE ● RESULTS:

IMPROVED WATER QUALITY; ANNUAL SAVINGS

In just eight months, the grower saw a remarkable ROI. The use of Voltea's technology resulted in:

- A savings of \$96,000
- 85% water recovery rate
- Reduction in energy use
- Ideal salinity levels for each crop
- Reduced maintenance

Being able to adjust salinity levels and produce higher quality water allowed the grower to achieve its original objective of growing seedlings in-house. The grower was shocked to find a solution that not only addressed water quality issues and reduced costs, but required less time and energy to maintain.

"It's truly a trouble-free piece of equipment," said a company representative. "There's no need for us to be there next to the system all the time looking after it - the IS-12 does all the heavy lifting for us. Not only is there reduced maintenance, but we now utilize water in an optimum way."

As demand for stricter water use controls increases, CapDI's environmentally friendly, tunable water treatment solution offers an innovative way to reduce water use and properly irrigate sensitive crops.



Voltea Industrial Series 12 (IS-12) System

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WATER
RECOVERY

85%

"We now utilize water in an optimum way."



ASK MORE FROM YOUR WATER!

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