



Microvi MNE Provides Breakthrough for Sustainable Water Reuse in Agriculture

In the fresh and fresh cut produce industry there is significant and growing demand for water. Global challenges with water supply combined with increasing demand for produce dictate the need for effective methods for water reuse.

Traditional water reuse treatment methods like membrane technologies have many technical challenges. Issues include fouling, high costs, high use of chlorine and the inability to effectively treat at low temperatures.

Microvi MicroNiche Engineering™ (MNE) can be used as a pretreatment option to improve performance of treatment methods such as reverse

osmosis and has the advantage of successfully removing COD in low temperatures.

Over the course of four months, Microvi conducted trials integrating MNE with a reverse osmosis treatment process using produce wash water with chemical oxygen demand (COD) levels of over 280 mg/L. MNE was able to remove up to 80% of COD at temperatures as low as 6°C.

Using MNE can reduce the cost barrier for implementing water reuse practices across a range of agricultural sectors increasing food safety and fostering sustainable water reuse practices.

Project Details

Issue: Technical challenges with water reuse technologies

Solution: Microvi MNE™ for removal of COD

Key Results:

- Decrease COD by 80% at low temperatures
- When using MNE for pretreatment, a 65% increase in water to treat in normal process
- Savings of 60% in OPEX compared to chlorination process alone
- Alleviates risk of pathogens

CONTACT US TO LEARN MORE →

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