

Eco-Shield Water Horticultural Applications



ECO-SHIELD CHEMICAL FREE WATER SANITATION

Eco-Shield is our new concept for building a fortress of safety around your products, farm, processing plant and staff; and our innovative Chemical Free Water Sanitation System is a foundation of this.

Key Diagnostics believes that protecting the health and safety of everyone, including our planet, is paramount.

Our desire isn't just to provide substitutes but to find solutions that are greener and safer whilst providing scalable improvements.

Post Harvest and Horticultural Applications

- Certified for Organic Use and Halal
- Irrigation & Hydroponic Water Treatment
- Hydroponic & Aquaponic System Sanitation
- Container, Tray and Crate Sanitation
- Sanitising Processing Equipment
- Non Chemical Post Harvest Washing
- Non corrosive and non toxic
- Biofilm Reduction in Water Lines
- Water Recycling & Reduced Water Use
- Immersion Bath Disinfection
- Sanitising Ice and Chilled Water
- Foliar Spray for Disease Control
- Soil Drench & Root Zone Pathogen Control
- Plant Growth Enhancement
- Compost Treatment for Microbial Reduction
- Greenhouse Sanitation - Surface & Equipment
- Seed Disinfection & Faster Seed Germination



Horticultural Applications - From the Farm to the Fork.

The use of hypochlorous acid in horticultural and post-harvest production provides a safe, effective and sustainable solution for pathogen control. Its application throughout the production from seed to supermarket packed produce will allow greater water recycling while reducing the reliance on harmful chemicals. This results in higher efficiency, lower costs and safer produce for consumers.



Seed Stage

- Seed Disinfection for 10-30 minutes for the killing of seed-borne pathogens such as *Fusarium spp.*, *Pythium spp.*, *Alternaria* and *Clavibacter michiganensis*.
- Longer soaking can increase seed germination by up to 8-50%.
- Chemical free sanitation of seedling trays and equipment.



Irrigation & Hydroponic Water Treatment

- Removes biofilm and slime control from pipes and drippers without the need to flush with chemicals.
- Treating source water from ponds, dams and rivers.
 - Removal for microbial contaminants including *E. coli*, *Pseudomonas*, Fungi and Algae.
- Microbial control of recirculating hydroponic nutrient solution.
- Reservoir and system sanitation between crops - higher doses can be used for deep disinfection without disassembly of equipment.



Greenhouses & Hydroponics

- Preventative foliar spray to control powdery & downy mildew, *Botrytis cinerea*, *Alternaria* and bacterial leaf spots.
- Can be applied via misting or fogging without damaging leaves or require rinsing. No withholding period.
- Chemical free tool, glove & hand dips & foot baths.
- Root zone protection reduces pathogens, increases yields and longer crop cycles.
- Safe for plants and staff.



Post-Harvest Processing Plants

- Produce surface disinfections - wash, dip and spray.
- Chemical free pathogen and microbial control - *Listeria*, *Salmonella*, *E. coli* and yeast and moulds.
- Extends product shelf life through microbial reduction.
- Controls biofilms and cross-contamination, extending production time without hazardous chemicals.
- Wash water disinfection in flume and spray tunnels.
- Treats waste water for safe irrigation use.
- Allows greater water recycling, reducing cleaning downtime and lowers water usage.
- Ready-to eat and fresh cut sanitation - ideal for delicate products without affecting texture, flavour or colour.
- Ice and chilled water treatment - imagine ice that continues to sanitise as it melts, extending shelf life.
- Reduces odours and staining.