

CASE STUDY

Effective bacterial control using XZIOX in the irrigation system on a salad growing farm

Our Technical Engineer and Supervising Chemist performed a study on the effectiveness of XZIOX in treating the water supply used in the irrigation system for a salad farm.

The Company

The site has multiple large-capacity glass houses propagating mixed salad. The seeds are grown in small plastic trays which are placed on metre wide irrigation “grow” mats. These grow mats are selectively fed with water and a nutrient mix from irrigation tapes at 18 m³/hr.

The Problem

The moist nutrient rich mats, in a well-lit environment, proved to be an ideal environment for growing green algae. This spreads very quickly across the entire mat surface blocking the feeding holes. Irrigation was seriously compromised, and many trays of salad were dying. The mats were also proving to be an ideal breeding ground for flies, causing hygiene and health and safety issues. The mats proved impossible to clean and had to be periodically replaced at a considerable expense.

The Objective

Apply the XZIOX Chlorine Dioxide into the irrigation program to eliminate the green algae spreading across the irrigation matting, reduce crop losses and eliminate the flies from within the glass houses.

The XzioX Solution

A water meter, stock tank and dosing pump for XzioX Chlorine dioxide were installed in the irrigation line after the nutrient mix had been added. The dose rate was set to 1.50 ppm XZIOX Chlorine Dioxide, and every time the mats were cyclically irrigated the water was treated.

The Results

The growth of the algae was severely retarded with any existing algae being oxidised and turned into black powder. This allowed easy cleaning and longer lasting mats. This treatment greatly reduced the crop losses by ensuring good irrigation. In addition, the treated mats proved to be a deterrent to flies from laying their eggs and the enhanced sterile environment in the glass houses repelled their presence. No occupational issues were encountered.



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APPROVED UNDER REGULATION
31 OF THE WATER SUPPLY
REGULATIONS 2000