

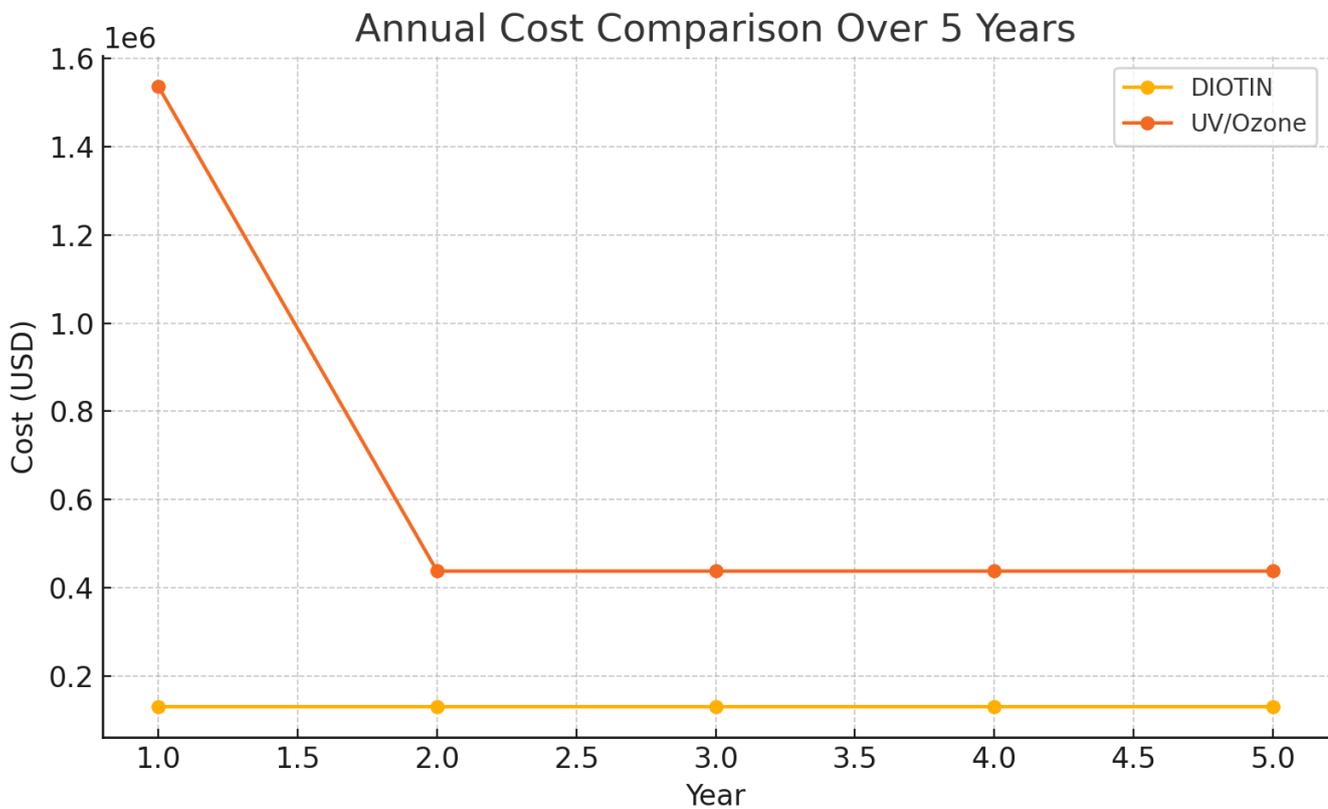
Commercial Analysis: DIOTIN vs UV/Ozone Disinfection

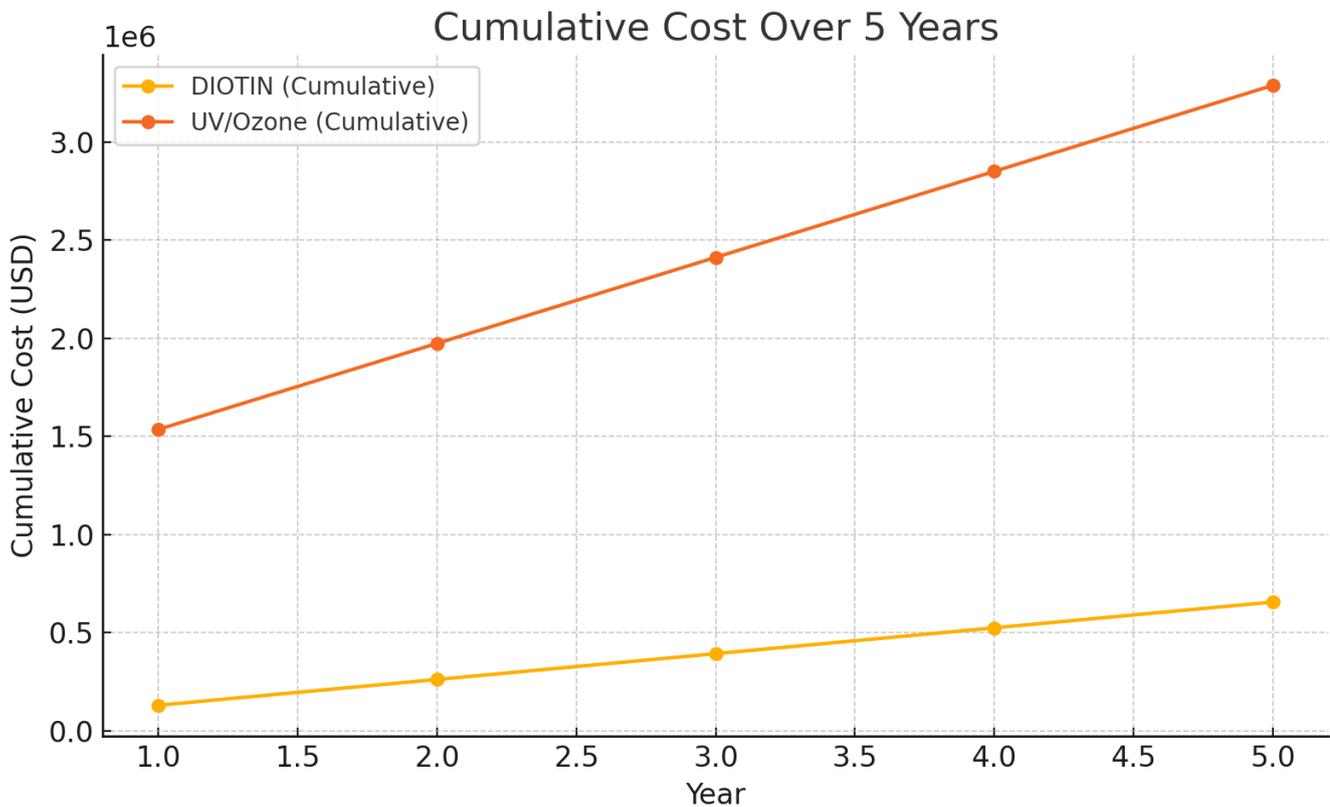
This report compares the commercial viability of DIOTIN - a zero CAPEX, environmentally friendly water treatment solution - with UV/Ozone disinfection systems for a 200,000 sqm greenhouse used for vegetable farming.

Key Metrics:

- Water usage: 4,380,000 m³/year
- DIOTIN dosage: 20 ml/m³
- DIOTIN price: \$15/kg
- UV/Ozone CAPEX: \$1.1M
- UV/Ozone OPEX: \$0.10/m³
- Energy cost: Estimated at \$0.12/kWh for UV/Ozone systems

Annual and Cumulative Cost Comparison





Environmental and Operational Considerations

DIOTIN Advantages:

- Zero CAPEX and minimal OPEX
- No harmful by-products
- No energy dependency or emissions
- Long shelf-life and easy storage
- Compatible with fertilizers and pesticides

UV/Ozone Disinfection Risks:

- High upfront capital expenditure
- Increased operational costs due to energy dependency
- Sensitive machinery requiring frequent maintenance
- Downtime affecting crop yields and requiring machinery replacement
- Generates by-products requiring further filtration

Estimated Downtime Cost:

- Assuming 3% downtime annually, losses in productivity and yield could reach tens of thousands USD each year.

Energy Use:

- UV/Ozone systems can require upwards of 0.5-1.0 kWh/m³
- For 4.38M m³/year, energy demand = ~2.19M to 4.38M kWh
- At \$0.12/kWh, energy costs alone could exceed \$262,800-\$525,600/year

Conclusion

Over a 5-year period, DIOTIN delivers significant cost savings, ease of use, and major environmental benefits compared to UV/Ozone disinfection systems.

For farmers and greenhouse operators, DIOTIN represents a safer, smarter, and more sustainable investment.