

ABSTRACT OR SUPPORTING INFORMATION

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Use of Hydrogen Peroxide to Disinfect Hydroponic Plant Growth Systems

Hydrogen peroxide was studied as an alternative to conventional bleach and rinsing methods to disinfect hydroponic plant growth systems. A concentration of 0.5% hydrogen peroxide was found to be effective. Residual hydrogen peroxide can be removed from the system by repeated rinsing or by flowing the solution through a platinum on aluminum catalyst. Microbial populations were reduced to near zero immediately after treatment but returned to pre-disinfection levels 2 days after treatment. Treating nutrient solution with hydrogen peroxide and planting directly into trays being watered with the nutrient solution without replenishment, was found to be detrimental to lettuce germination and growth.