

Sanitation

Standard Operating Procedure

KleenGrow

HARD SURFACE DISEASE AND ALGAE CONTROL

KleenGrow™ is an EPA registered 4th generation DDAC quaternary ammonium designed to create a biodegradable, broad spectrum, non-corrosive, long-lasting multi-use product for effective control of pests on hard surfaces and greenhouse crops. When used in the *Pace ACBD Sanitation Program*, **KleenGrow™** can provide greater than 95% better disease and algae control than the standard disinfecting program.

Use to disinfect surfaces such as greenhouse structures, floors, benches, cool pads, irrigation lines, plastic pots/trays and tools.

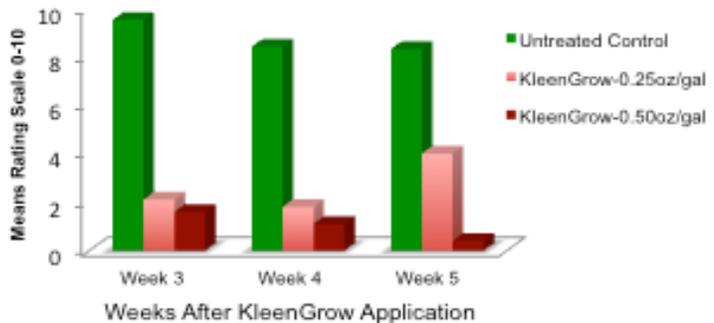
Long Lasting

The active ingredients in **KleenGrow™** do not evaporate. Consequently, **KleenGrow™** will continue to control disease-causing organisms from 7-30 days even when re-wetted on crops and hard surfaces.

Great Organic Tolerance

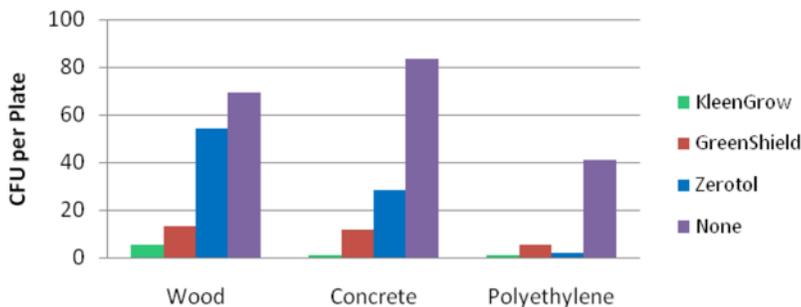
KleenGrow™ can easily penetrate through soil and debris thus providing better contact to pests resulting in more effective control of diseases and algae deep within dirty greenhouse surfaces.

Algae Control on Pot Surface After Drenching with KleenGrow



Research by Dr. Janice Elmhirst

Using Disinfectants to Control Thielaviopsis basicola on Greenhouse Surfaces



Research by Dr. Ann Chase

Safe and Mild

KleenGrow™ is non-corrosive to equipment, structures, growing areas and most importantly, not harmful to plants when applied at the recommended rates.

KleenGrow™ is biodegradable and is a 6.5 neutral pH so easy to handle. The label provides PPE and use directions per application.

Disease Control

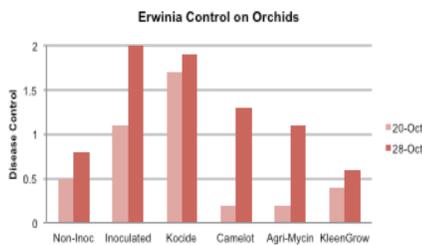
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DISEASE AND ALGAE CONTROL ON GREENHOUSE ORNAMENTAL, FOLIAGE AND FLOWERING CROPS

KleenGrow™ is a blend of wetting agents and surfactants that can provide control of algae and diseases such as *Powdery Mildew*, *Botrytis*, *Pythium*, *Phytophthora*, *Fusarium*, *Erwinia* and *Xanthomonas* through membrane disruption. **KleenGrow™** can safely be used on propagation, bulbs/seeds, and finished crops.

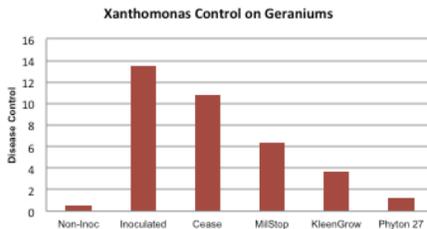
Bactericide: 7-14 day residual control provides more effective and longer bacterial control



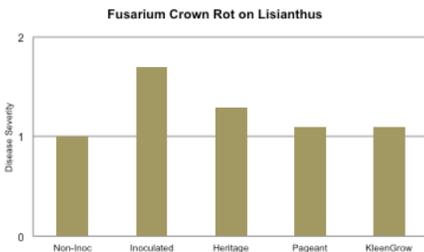
KleenGrow™ has residual activity in water. Since bacteria move within water, bacterial cross contamination can be kept under control when adding **KleenGrow™** to irrigation water or tank mixes, either continuously, weekly, or at bi-weekly intervals.

KleenGrow™ is both curative and preventative depending on the rate and frequency of applications. It is effective and safe to use in standard IPM, as well as beneficial insect and mite IPM programs.

Dr. A. Chase provided research to support control of *Erwinia* and *Xanthomonas* at 6fl.oz/100 gallons.



Fungicide: Active in water and soil, on leaves, stems, and root surfaces for broad-spectrum control.



KleenGrow™ mode of action: membrane disruption. Provides the broad-spectrum control.

This unique mode of action can control life stages of pests found in water, soil, or on the plant's surface.

Dr. A. Chase provided research to support control of *Fusarium* at 25fl.oz/100 gallons.

1.0fl.oz/100gl
Subdue Max



KleenGrow 12fl.oz/100gl +
0.5fl.oz/100gl Subdue Max

Algaecide: Kills Algae thus increasing soil permeability and drainage



Untreated KleenGrow treated

Dr. J. Elmirst provided research to support control of *Algae* when drenched with 13 and 25fl.oz/100 gallons.

Tank Mixing: To increase microbial control and decrease cost.

KleenGrow™ is an easy and cost effective product to add to your IMP program for multiple uses.

Use alone or in a tank mix with most fungicides, bactericide, insecticide, or miticides. *Check compatibility chart before mixing.*