



Use KleenGrow to control algae and diseases such as Powdery Mildew, Botrytis, Pythium, Phytophthora, Fusarium, Erwinia and Xanthomonas on propagation and finished crops. Use KleenGrow as a bulb and seed dip to control disease problems such as Penicillium, Xanthomonas and Fusarium bulb rots. Primary mode of action is membrane disruption, which contributes to the broad-spectrum control and 7 - 14 day residual control on crops.

### PROPAGATION - SUGGESTED RATES AND APPLICATION TIMES

#### Step 1: Bulb, Bare-root and Cutting Dip and First Watering

Use **PACE KLEENGROW** as a dip and at first watering for bulbs, bareroots, cuttings, plugs, and newly sown seeds.

Test ppm level of **PACE KLEENGROW** dipping solution regularly using La Motte test strips. Add **PACE KLEENGROW** when necessary to maintain 40 ppm.

#### Step 2: Misting

Inject the **PACE KLEENGROW** solution into the irrigation mist line either by using a Dosatron, HE Anderson or metering pump. Prepare a Stock tank when needed. Adjust rate per misting frequency and type of propagated material.

#### Step 3: Foliar Applications: Weekly

Apply **PACE KLEENGROW** on propagation for weekly spray, sponch or drench using overhead irrigation, booms, or manual sprays per rate in the *Disease Control Rate in Propagation* chart above. See: *Tank Mix Compatibility Chart*.

#### Step 4: Drip Irrigation and Sub-irrigation: Weekly

Use a Dosatron, HE Anderson or metering pump to inject from a **PACE KLEENGROW** stock tank prepared per Stock Tank rate chart. **PACE KLEENGROW** may be injected into irrigation line simultaneously with liquid feeds but do not mix together in a stock tank.

KleenGrow™ DISEASE CONTROL DIRECT APPLIED RATE FOR PROPAGATION				
Use for Dip, Mist, Spray or Subirrigation Systems	fl.oz/100 gal	ml/l	PPM	Injection Ratio
BULB/BEDDING /PERENNIAL/ORNAMENTAL DIP	6.83	0.53	40	1:1875
BEDDING /PERENNIAL MISTING*	0.34	0.03	2	1:37,500
ORNAMENTAL MISTING	0.85	0.07	5	1:15,000
BEDDING /PERENNIAL/ORNAMENTAL SPRAY OR SUBIRRIGATION - WEEKLY	6.83	0.53	40	1:1875

*\*Misting cycle should be reduced due to the residual of KleenGrow™*

KleenGrow™ STOCK TANK MIXNG RATE FOR PROPAGATION		
USING 1:100 INJECTOR	fl.oz/1 gal	PPM
BEDDING /PERENNIAL MISTING*	0.34	2
ORNAMENTAL MISTING	0.85	5
BEDDING /PERENNIAL/ORNAMENTAL SPRAY, DIP OR SUBIRRIGATION - WEEKLY	6.83	40

*\*Misting cycle should be reduced due to the residual of KleenGrow™*

### BARE-ROOT STORAGE, CUT FLOWERS, AND SEEDS - SUGGESTED RATES AND APPLICATION

**Seed Dip:** Dip seeds using a **PACE KLEENGROW** solution between the rates of **0.13-1.0 fl.oz/1gal**. Submerge for **30 seconds to 5 minutes** to ensure complete contact. Determine **PACE KLEENGROW** rate and soaking time by the type of seed coat. For pre-treated seeds, lower rates and shorter soaking times are generally recommended. Checking germination rate is recommended.

**Bulb or Bare-root Dip for Storage:** Dip into **0.13-0.25 fl.oz/1gal** and submerge for **30 seconds** before putting into storage.

**Cut Flowers:** **PACE KLEENGROW** can be added to sanitize flower bucket water to help reduce stem block and improve hydration of cut flowers. It can also be used as a bucket wash to remove dirt and disease contamination. Clean flower bucket using **PACE KLEENGROW** at a rate of **0.5 fl oz/gal**. Add **PACE KLEENGROW** to the flower bucket water at a rate of **0.06-0.13 fl.oz/gal (1/2-1 tsp per gallon)**.

### WELL-ROOTED CROPS - SUGGESTED RATES AND APPLICATION TIMES

**Foliar or Drip Applications: Every 7-14 days crop depending** Spray, drip, sponch or drench **PACE KLEENGROW** onto well rooted crops either as a tank mix or alone. Use lower rates for bedding and perennial crops and higher rates for foliage, ornamentals, shrub and tree crops. Follow rate and tank mix charts below. Apply using an irrigation system, boom, or manual spray. A Dosatron or HE Anderson injector may be used to inject product.

KleenGrow™ DISEASE CONTROL DIRECT APPLIED RATE FOR WELL ROOTED PLANTS				
Use for Spray, Sponch or Drench	Application	fl.oz/100 gal	ml/l	PPM
BEDDING /PERENNIAL/ORNAMENTAL	Greenhouse Weekly	6.83	0.53	40
ORNAMENTAL/PERENNIAL	Field Weekly	13.0	1.0	75
BEDDING /PERENNIAL/ORNAMENTAL	Greenhouse Bi-Weekly	13.0	1.0	75
PERENNIAL/ORNAMENTAL	Field Bi-Weekly	25.0	2.0	150

### Pre-Shipping Spray:

#### Follow Foliar Instructions for rates delivery system.

Use **PACE KLEENGROW** as a pre-ship watering per the rate chart above by injecting into a watering station just prior to shipping.

KleenGrow™ STOCK TANK MIXING RATE FOR WELL ROOTED PLANTS				
USING 1:100 INJECTOR	Application		fl.oz/1 gal	PPM
BEDDING /PERENNIAL	Greenhouse	Weekly	6.83	40
ORNAMENTAL/PERENNIAL	Field	Weekly	13.0	75
BEDDING /PERENNIAL/ORNAMENTAL	Greenhouse	Bi-Weekly	13.0	75
PERENNIAL/ORNAMENTAL	Field	Bi-Weekly	25.0	150

## SUB-IRRIGATION - FLOOD BENCHES AND FLOORS

### Weekly or Biweekly Treatment: Every 7-14 days.

Add **PACE KLEENGROW** to flood floor recirculating water tank weekly or every other week per the *Disease Control Rate in Well Rooted Production Crops and Production Stock Tank Mixing Direction* charts above.

*Note: PACE KLEENGROW may be injected into irrigation line simultaneously with liquid feeds. DO NOT mix together in a stock tank.*

### Continuous Injection:

Inject into irrigation lines or add **PACE KLEENGROW** to flood floor recirculating tank by pouring or injecting into the water storage tank, or by direct injecting into incoming water line as water flows into benches or floors. Use a metering pump such as the Etatron metering pump from Dosatron or HE Anderson pump for accurate injecting.

KleenGrow™ INJECTION RATE FOR SUB-IRRIGATION SYSTEMS				
	fl.oz/1 gal	ml/l	PPM	injection Ratio
APPLY USING DIRECT INJECTION	0.34	0.53	2	1:37,500
APPLY USING A WATER TANK	0.85	0.1	5	1:15,000

### Check the ppm level

Check ppm level of **PACE KLEENGROW** and check weekly when using water storage tank. If *direct irrigation line injecting*, check ppm level just after the metering pump and then at the furthest flood floor or bench. Check initially to determine correct metering pump setting, then monthly to check pump setting.

*Use the LaMotte® QAC Test Strips to check ppm levels between 10 and 75 and use a Pace Quat Titration Kit for ppm levels below 10ppm. Check with Pace 49 representative for more detailed direction as to settings and pump set-up.*

*Note: Use Pace 49 - End of Season Greenhouse and Irrigation Line cleaning for maximum protection.*