



# Post-Harvest Clean Up

by Bob Taylor

Do not underestimate the need for post-harvest clean-up. Failure to do this properly can result in never-ending disease problems, plumbing blockages, broken pumps, etc.

Two separate procedures are required:

### Disease preventative

At the end of each crop, it is necessary to sterilize the entire system to help prevent disease problems in the next crop. The following guide will help remove organic build-up such as pathogens, algae, slimes and dead or decaying plant matter (figure 11.4a).

**Step 1** Remove all plants and media then do as much manual cleaning as possible. External cleanliness of the system and growing area is as important as the internal cleanliness.

**Step 2** Partly fill the system with water. Lower the water's pH below 5.0, then with subdued light conditions, add household chlorine bleach\*\* (1.9 ounces/ quart) at four teaspoons per gallon.

**Step 3** Mix well then soak system for 24 to 72 hours. While system is soaking:  
Re-circulating systems: Run the pump for at least 15 minute cycles every hour\*.

Run-to-waste systems: Run the pump for a short burst once every hour\*.

**Step 4** Discard this solution then flush the whole system several times with small volumes of fresh water to remove all traces of chlorine and dislodged material.

Note: Several small volumes are more effective than a single flush.

**Step 5** Where fine drippers and sprayers are used, it may be necessary to individually dismantle and clean each unit.

\*\* Ensure to follow necessary safety precautions and contact no metal parts.

### Precipitate removal

Over the long-term, it is sometimes useful to conduct an acid flush to help remove precipitates (white precipitates of calcium

Note that there must be adequate 'contact' time (e.g. minimum of 24 hours) between the chlorine and all surfaces such as system side walls and pipes. Pay particular attention to areas where there is usually zero water flow like dead-spaces in taps. Flooding may be necessary to contact hidden surfaces (e.g. underneath the upper surface of the channels).

Also, note that chlorine bleach will not dissolve algae or general solid material. Only wet brushing will remove those contaminants.



Fig 11.4 Post harvest clean-up helps remove buildup such as algae (11.4a) and salt precipitates (11.4b).

sulphate and phosphate – figure 11.4b) that cannot be dissolved with plain water or wet brushing.

**Step 1** Add water and enough hydrochloric acid\*\* to the tank to achieve a pH of 2.0. If using rain or reverse osmosis water, dilute 30 per cent of the hydrochloric acid (normal commercial strength) by around 1000 fold (e.g. 3/4 teaspoons per gallon).

**Step 2** Soak the system for 24 to 72 hours. While system is soaking:

Re-circulating systems: Run the pump for at least 15 minute cycles every hour.

Run-to-waste systems: Run the pump for a short burst once every hour and collect the discharge.

**Step 3** Afterwards, neutralize solution up to pH 5.0 to 6.0 with soda ash before discarding.

**Step 4** Flush whole system several times with fresh water to remove all traces of acid and dislodged material.

**Step 5** Where fine drippers and sprayers are used, it may be necessary to individually dismantle and clean each unit.



Root browning is a typical symptom of the root disease 'pythium'.

**MY**



For more articles by Bob Taylor visit  
[www.maximumyield.com](http://www.maximumyield.com)