

# Best Practices for Cleaning Greens Bubblers/Aerators

## Introduction

A bubbler, or aerator, is a useful tool for efficiently and effectively washing produce that may accumulate soil, debris, or insects in hard to wash places. They are most often used to wash leafy greens. Spa or jacuzzi blowers are used in conjunction with a piping system (most commonly PVC) with small holes drilled through it. The blower agitates and circulates the water in a tank. As air bubbles rise to the surface and water is circulated, soil, debris, and insects are gently loosened from the leafy greens. Greens bubblers are easy to DIY, but you should consider principles of hygienic design in choosing your materials and set-up. See “**Building a Better Greens Bubbler**” for tips on designing bubblers with cleaning and sanitizing in mind.

## Cleaning and Sanitizing, A Review

Keeping food contact surfaces clean and sanitized is crucial for reducing contamination that can cause foodborne illness. According to the FSMA Produce Safety Rule Subpart L §112.121, “You **must** inspect, maintain, and clean and, when necessary and appropriate, sanitize all food contact surfaces of equipment and tools used in covered activities as frequently as reasonably necessary to protect against contamination of covered produce.”

## Cleaning Schedule

At minimum, tanks with aerators should be adequately cleaned after a day’s use to minimize the risk from microbial contamination.



## Materials and Tools

- Detergent, for example dish soap
- Water from a known safe source
- Sanitizer labeled for food contact surfaces
- Scrub brushes, tube brushes
- Optional: spray bottles



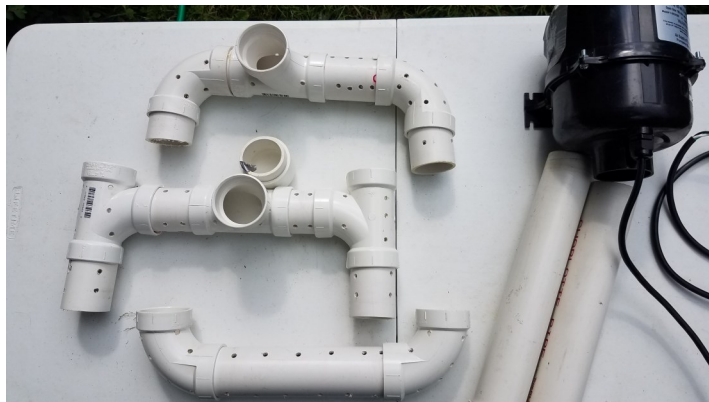
*An assortment of brushes including a long handled scrub or tank brush, large diameter bottle brush or flex handle bottle brush, and small diameter (1/2") bottle brush will help to clean hard to reach spaces.*



*Spray bottles can help ensure coverage in hard to reach spaces on PVC piping. Consider using color-coded bottles for water, detergent, and sanitizer to avoid confusion.*

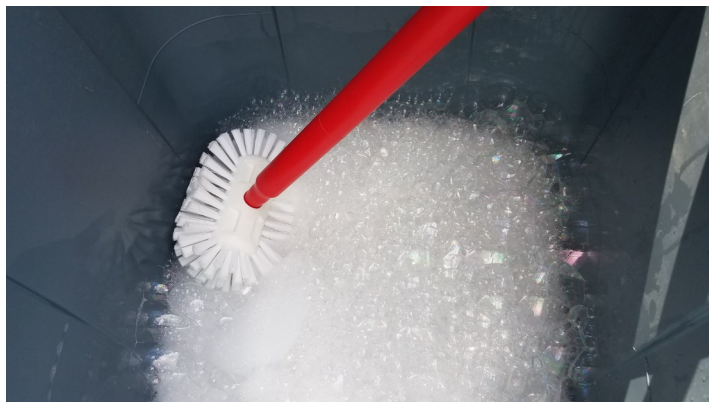
## How to:

1. Unplug the pump from electrical outlet.
2. Drain the bubbler tank.
3. Remove the blower and PVC piping from tank. Disassemble the PVC frame for easier and thorough cleaning. Set aside.
4. Rinse tank off with water.
5. Prepare detergent solution using a pail or spray bottle. You may choose to use the bubbler tank instead of a separate pail.



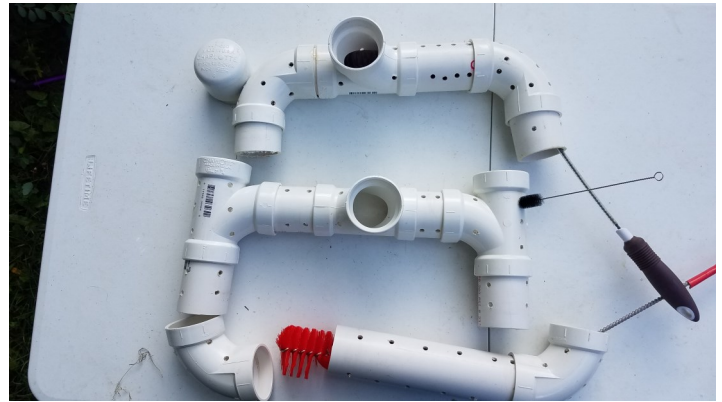
*Disassemble the PVC frame.*

6. Using the detergent solution and scrub brush, remove any stuck-on debris from the tank. You may need to use a long handled brush for deeper tanks.



7. Rinse the tank out with water and dump the discharge into a floor drain or away from the cleaning area. Continue to rinse with water until all suds are gone.
8. Spray down the tank with sanitizer solution. Follow sanitizer instructions if a final rinse step is required.
9. Flip the tank upside down onto a clean pallet or other clean surface. Allow to air dry.
10. Wipe down the bubbler/aerator motor with an appropriate cleaner.
11. Rinse the PVC pipes inside and out.
12. Using the detergent solution and your assortment of scrub brushes, clean the PVC framing.

13. Rinse the PVC pipes off with water.
14. Spray PVC pipes with sanitizer solution. Follow sanitizer instructions if a final rinse step is required.



*Flexible bottle brushes may be needed to adequately clean piping pieces that curve. Small diameter (1/2") bottle brushes are suggested for cleaning air holes.*



*Note: Pay close attention to attachment points where organic matter can collect and biofilms can form.*

15. Place the PVC pipes on a clean surface allowing for water to drain. Sweep floor and remove debris. Hose down floor removing remaining soil and debris. Avoid splashing on recently cleaned areas and surfaces. Squeegee water into floor drain.

**Don't forget to regularly clean and sanitize nets, baskets, and cleaning tools!**

