

## Tower Garden Maintenance Guide Sheet

### Weekly Care

#### *Water*

- Add water when reservoir is half empty. This will be 10 gallons
- Refill until water is a finger's distance from the top
- Check twice a week, for instance, Monday and Friday, or Wednesday and Saturday.
- Water will be absorbed faster with larger plants. It may need to be refilled twice a week with plants that are several months old
- Smaller plants may not need water for 1-3 weeks
- Hose water is perfectly fine, it does not need to be filtered or reverse osmosis

#### *Nutrients*

- Add nutrients to reservoir whenever water is added. Nutrients do not need to be added if water is not added
- Add 10 mL per gallon
  - Water Level:
    - ½ Empty: 100 mL of A and B
    - ¾ Empty: 150 mL of A and B
    - Completely Empty: 200 mL of A and B
- Always add the same amount of A and B
- Mix nutrients into water

#### *pH*

- The pH is perhaps the most important part of tower garden health. Even if nutrients are in the water, if the pH is not within the proper range, the nutrients cannot be absorbed
- Optimal Range for the tower garden is 5.5-6.0
- 5.5 to 6.5 is adequate
- pH naturally rises, therefore it is better to keep the pH closer to 5.5, because in several days it will be near 6.0, usually in about one week
- Most pH kits have pH+(Up) and pH-(Down). pH- will likely be the only one needed. In very rare cases, the pH of the water will be low and need pH+
- Adjusting the pH
  - Rinse out testing vial
  - Fill vial with 2-3 mL of reservoir water
  - Add 2-3 drops of pH Indicator Solution and swirl
  - Check the water color based on the chart, either on Indicator Solution bottle or in test kit
  - Add ½ capful (approximately 3-5mL) of pH- if the pH is too high (For Tower Garden or General Hydroponics brand)
  - Stir water and retest in 5 minutes
  - If pH is still above 5.5, determine how much ½ capful changed the pH.

- Add another ½ capful of pH-, or a portion of that to incrementally lower the pH (2-3 mL suggested)
- Retest, and lower pH until within the correct range
- NOTE: Be careful not to lower pH too much and then add pH+ to correct.
  - To correct overly added pH
    - Either let sit to naturally rise (will take several days);
    - Add water to raise the pH; OR
    - Empty reservoir, refill, and restart the balancing process
- NOTE: Always balance pH last, after adding nutrients to water
- NOTE: Check pH twice a week, best when monitoring water level

## Troubleshooting

### *Lack of Water Flow*

- Check pump for debris clogging filter
  - Rinse filter
- Check top section of tower to see if holes are plugged
  - Use a toothpick or run finger over the holes to clear debris
- Check power
- If none of the previous solve water flow issues, a new pump might be necessary
  - Pump should be 370-400 GPH with a max height of 6.5 ft

### *Poor Growth*

- If water, nutrients, and pH are in proper order, it is best to change out the water completely after about 3 months
  - This will refresh and revitalize the plants

### *Tower Cleaning*

- It is best to breakdown the tower 2-3 times per year to maintain the best growing conditions.
- Check for buildup of dirt and debris around the pump
- Ensure both timer and pumps work
- Having backups is a great idea