JUST VERTICAL USER MANUAL

Flowering & Fruiting Plants

SUPPORT@JUSTVERTICAL.COM

WWW.JUSTVERTICAL.COM

Contents

Introduction - Flowering & Fruiting Plants

Flowering and fruiting plants require different care than non-flowering plants.

We usually recommend purchasing our AEVA for flowering and fruiting plants as there is more space for flowering and fruiting plants to grow. You can also grow flowering and fruiting plants with our EVE, however, this will require more maintenance and work.

In this manual, we will go through what your flowering and fruiting plants need in order to produce a great yield for harvesting.

Maintenance

Within this section of our guide, you'll find all the tasks you need to complete throughout your growth lifecycle with flowering and fruiting plants. With some (very minimal) easy-work, your garden will be happy, bright, and full of life across it's entire growing journey.

8 Week Maintenance Schedule

Complete each maintenance task at the frequency stated below to ensure your unit operates at peak performance and to maximize plant health and growth. The cycle repeats every 8 weeks. Browse the following pages to find instructions on how to complete each task specifically.

GROWING RESOURCE

Maintenance Calendar

Week #	1	2	3	4	5	6	7	8
Maintain Plants	■	■	■	■	■	■	■	■
Check Reservoir	■	■	■	■	■	■	■	■
Check & Trim Roots	■	■	■	■	■	■	■	■
Add Nutrients		■		■		■		■
Clean Reservoir								■

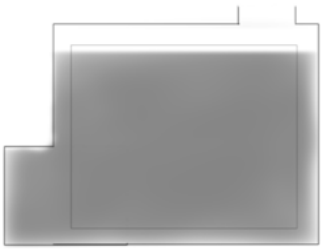
Adding Nutrients For Flowers & Fruits

For non-flowering plants, Aqua Vega A and Aqua Vega B will be sufficient. However, **for flowering and fruiting plants, Aqua Flores A and Aqua Flores B are required.**

After transplanting the flowering and/or fruiting plants from your seed starting kit, start with a brand new tank of water. Then add in 25mL of Aqua Vega A and 25mL of Aqua Vega B.

When the water is low, you can top up the water and add in 15mL of Aqua Vega A and Aqua Vega B.

Once the flowering and/or fruiting plants bloom, switch the nutrients to 25mL of Aqua Flores A and 25mL of Aqua Flores B with a fresh tank of water. You should top up the water every 2 weeks and add in 15mL of Aqua Flores A and 15mL of Aqua Flores B.

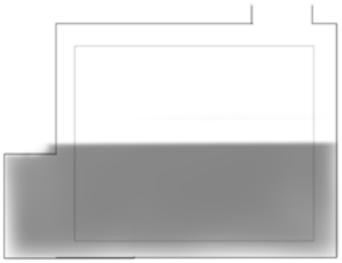


25mL

1

New Tank Of Water

On every new tank of water, add 25mL of Vega A and 25mL of Vega B nutrients.



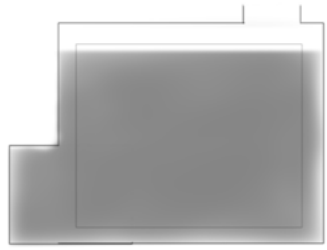
15mL

2

Used Tank Of Water

After every 2 weeks, add 15mL of Vega A and 15mL of Vega B to your reservoir.

Adding Nutrients For Flowers & Fruits (continued)

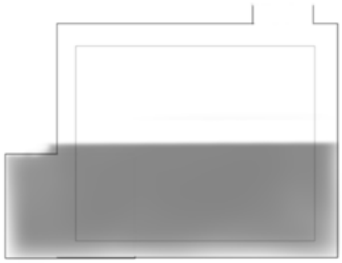


30mL

3

Flores Tank

Once there is fruiting plants/ or flower blooming. Switch the nutrients to 30mL of Aqua Flores A and B.



15mL

3

Top up Flores

Top up the water every 2 weeks and add 15mL of Aqua Flores A and 15mL of Aqua Flores B while the flower.

Light Times For Flowering & Fruiting Plants

When growing flowering and fruiting plants, **the light schedule required is slightly different to growing other varieties of plants.** Flowering and fruiting plants require the following:

- 12 hours with the light ON once your plants are transplanted
- 12 hours with the light OFF once your plants are transplanted

If you are looking at growing flowering and fruiting plants together with non-flowering and fruiting plants, your light schedule is determined by what is important to you. If you'd like to prioritize flowering and fruiting yield, switch to 12 hours on, 12 hours off. If you'd like to prioritize growth in your other plants, switch to 18 hours on, 6 hours off.

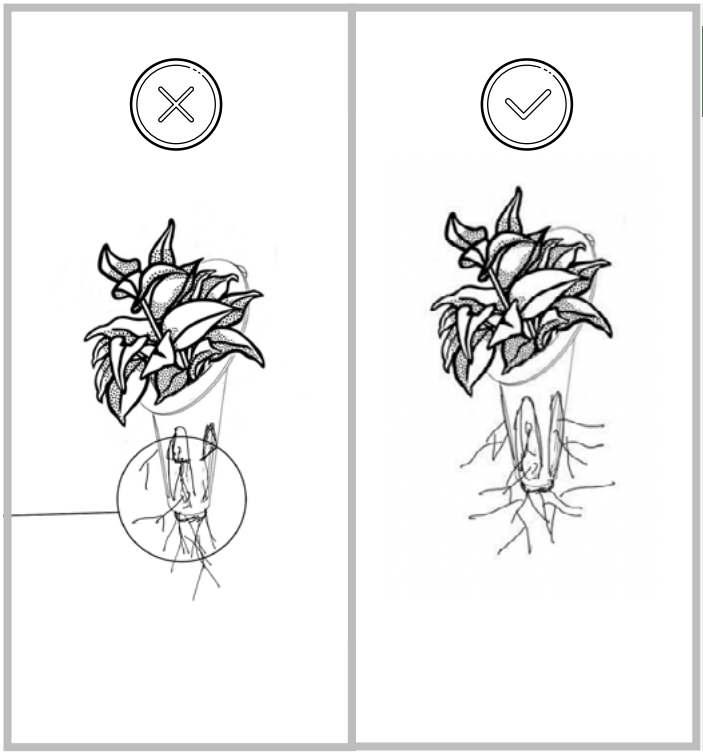
Checking Plants

1 Checking For Dying Plants

It is common for leaves on plants to die as the plant continues to grow within your garden (see trimming below). Each week, search and pick off any yellowing leaves from your plants.

2 Harvesting

Harvesting is essential for your plants' growth. Harvest consistently when your plants are ready to eat. You can find more information about harvesting in our section below titled 'Harvesting' on Page 27.



3 Plug Positioning

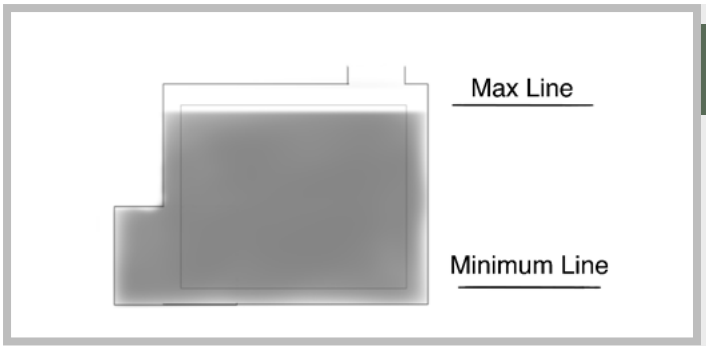
Ensuring your plants are positioned correctly in the plant pots. Positioning can make the difference between small and large growth.

Make sure all the peat moss plugs are pushed all the way down into the plant pot, as shown in the images to the left.

Checking The Reservoir

Check your water levels and top up on a weekly basis or as needed. Only add nutrients every 2 weeks (as indicated in the nutrients section above of the manual).

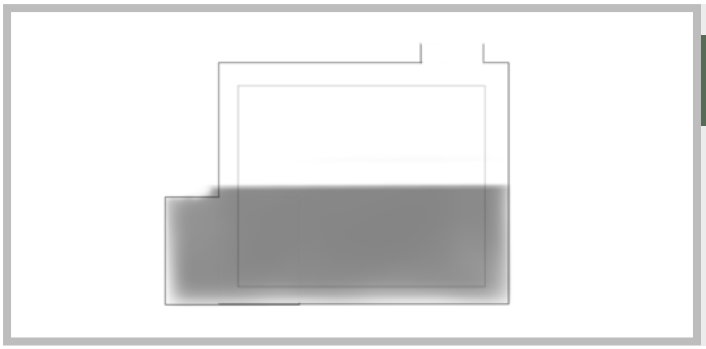
Friendly reminder: even if you added additional water, that does not mean you need to add nutrients as well.



1

Full Reservoir

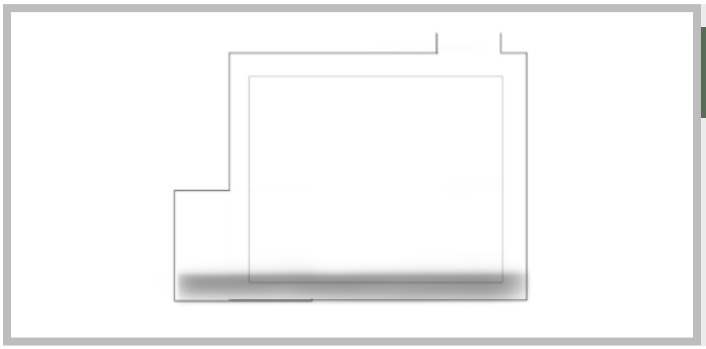
Your reservoir is full. This tank of water will last up to 2 weeks, dependent on plant size. Check water levels weekly.



2

Half-Full Reservoir

Half-full reservoir. This tank of water will last up to 1 week, dependent on plant size.



3

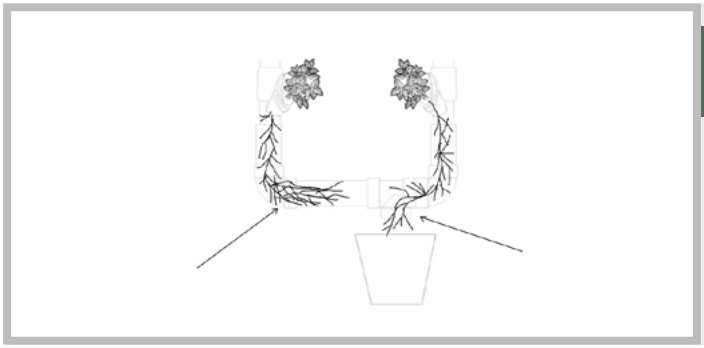
Empty Reservoir

Reservoir is empty. This tank of water needs to be refilled to the original fill line.

Trimming Roots

Trimming the roots in your garden is one of the most important tasks you can do, even with flowering plants. Once you get the hang of removing the plants from their plant sites, the task will only take you about 5 minutes each week.

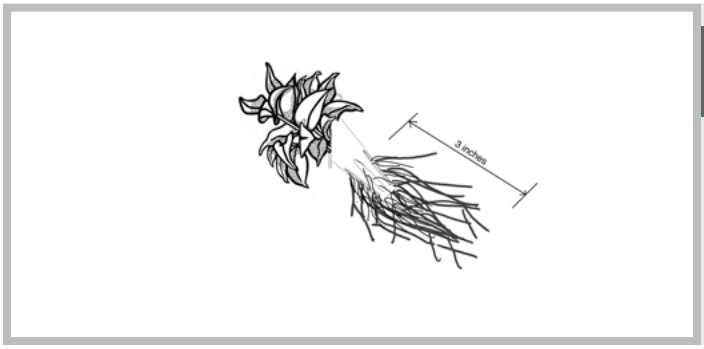
By trimming the roots of all the plants, it allows proper water flow throughout the unit and reduces any chances of leaks.



1

Check Your Garden

Trim roots on both the bottom and sides once they get larger than 3" to ensure the roots don't grow into the drain.



2

Check Your Plants

Ensure that you check your roots weekly. Each time the roots grow longer than 3", cut your roots back.

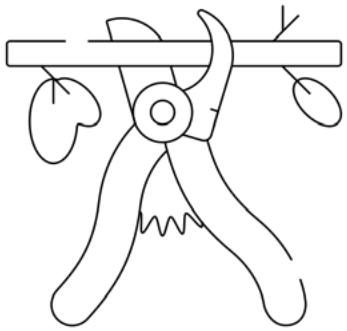
REMINDER

Adding Nutrients

Forgotten how to add nutrients when you're growing flowering and fruiting plants? Remember, the process is a little different. Refer to the previous pages to see a guide on how to manage nutrients when growing flowering & gruiting plants!

Maintaining Flowering & Fruiting Plants

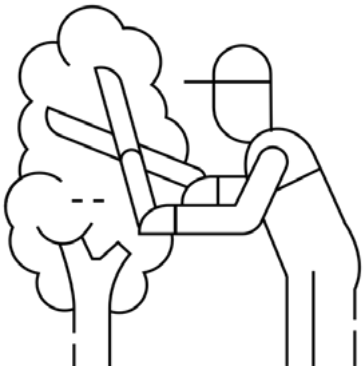
Flowering and fruiting plants need special care once they grow larger in size and even more so when the plant(s) bloom. This section will go over the basic gardening maintenance that pertains to both flowering and fruiting plants.



1

Pruning

Prune when leaves or stems become yellow or disfigured. Simply remove leaves with your hands. If the leaves on a whole stem are yellowing, remove the stem above promising buds with scissors to prevent stubs.



2

Trimming

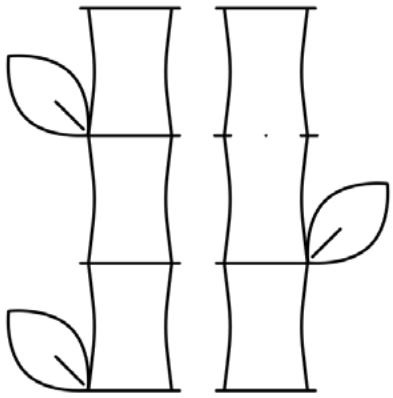
Trim when your plant is becoming overgrown. Simply remove leaves with your hands or stems with scissors/shears. If removing a stem, remove the stem above promising buds to prevent stubs.

TIP

Plant Bolting

If the main stem of your plant is going 'woody', then the plant is bolting and it is time to harvest the plant in full and replace it with a new plant.

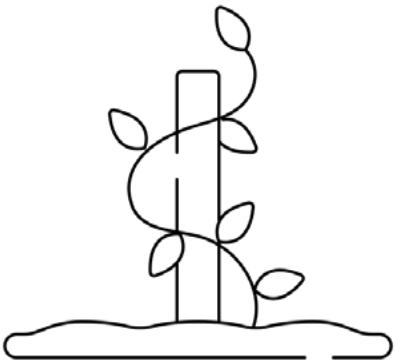
Maintaing Flowering & Fruiting Plants (continued)



3

Staking

Staking plants is the process of using an object to support a plant. If plants are collapsing under their own weight, place a sturdy object (like a support stick) in the peat moss plug and attach the plant to the object.



4

Trellising

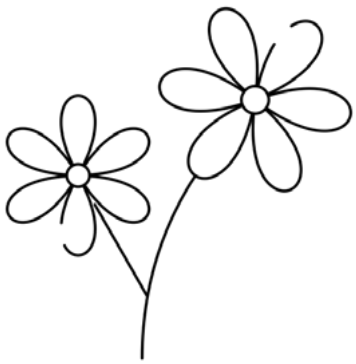
Trellising is the process of guiding the direction of growth of a plant. Use a support stick and plant ties to guide the direction of growth of your plant upwards towards the light of your garden.

Pollinating

Pollination is the process of moving pollen within the flower of a plant so the plant bears fruit. As your garden is indoors, it is unlikely that bees or other pollinators will be available to pollinate your plants.

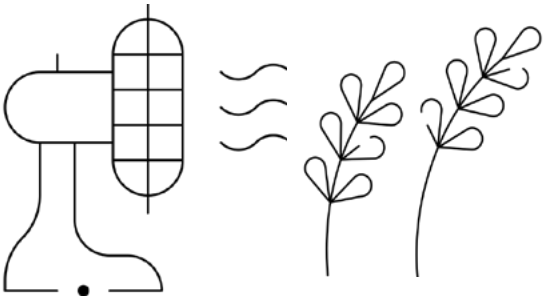
It is essential to **pollinate your plants as soon as flowers appear** on the plant(s) you're growing. The different methods of pollination are outlined below.

Remember, pollination is essential for fruit or vegetable growth. Without it, you will lose the opportunity to grow fruit or vegetables.



1 Hand Pollination

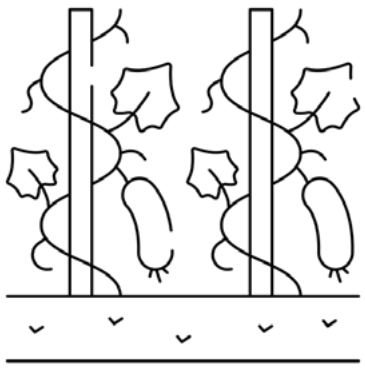
Simply tap and shake each flower with your hands a few times to move pollen through the flower. Do this for every flower. Complete this task up to 3 times a week.



2 Wind Pollination

Place a fan near your garden. Turn the fan on a low setting facing your garden. Let the wind move the flowers, facilitating pollination. Note that this method can't be used with plants with male/female flowers.

Pollinating (continued)



3

Cucumbers

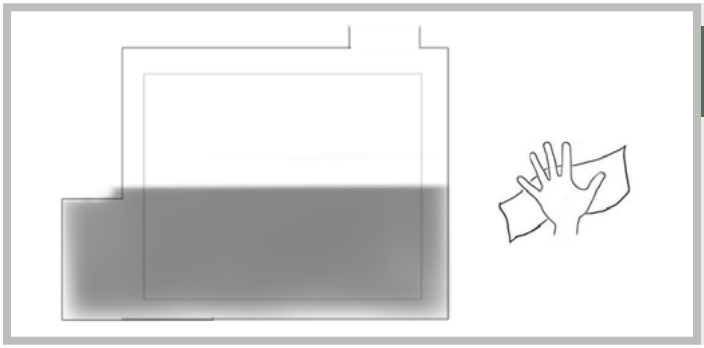
Cucmbers require a bit more work as they have both male and female flowers. Using a small brush, rub the inside of the male flower. Then rub the female flower. This moves male pollen to the female plant.

TIP

Male vs. Female Flowers

Unsure whether a flower is male or female? Female flowers have a small, immature cucumber (ovary) at the base of the flower.

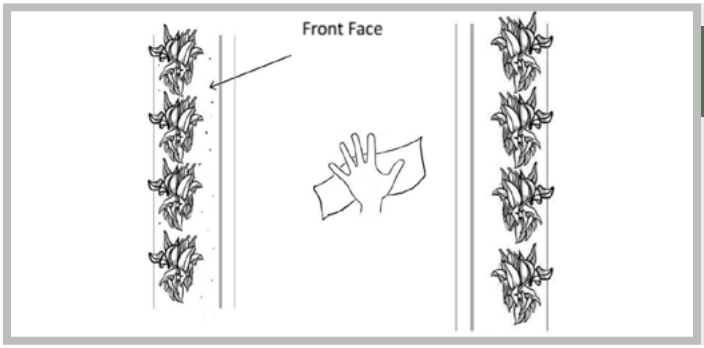
Cleaning The Unit



1

Reservoir

Wipe off any accumulation of debris or salt buildup on the inside of the reservoir.



2

Front Face

Wipe off any debris, splashed water, or nutrient runoff weekly to maintain the visual appeal of your unit.

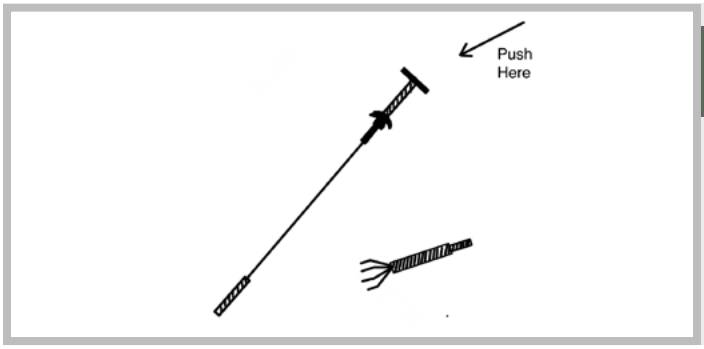
TIP

Salt Stains

If you notice there are reoccuring salt stains on the front face, check the roots of the plants. If the roots are longer than 3”, or thick on the sides of the pot, they will cause a small leak in your unit.

Deep Clean Of The Garden

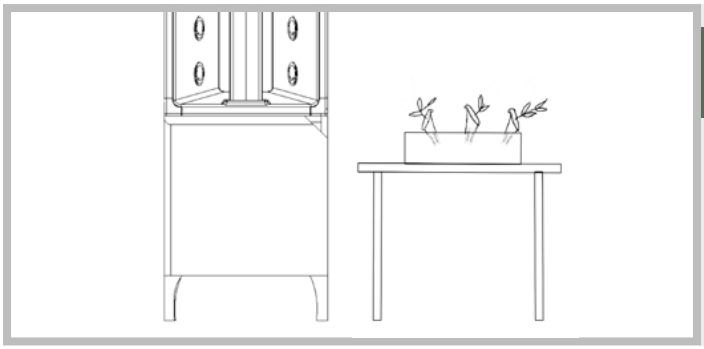
After a full growing lifecycle of your flowering or fruiting plants, we recommend you deep clean the inside of your garden to get rid of any debris.



1

Quick Grab

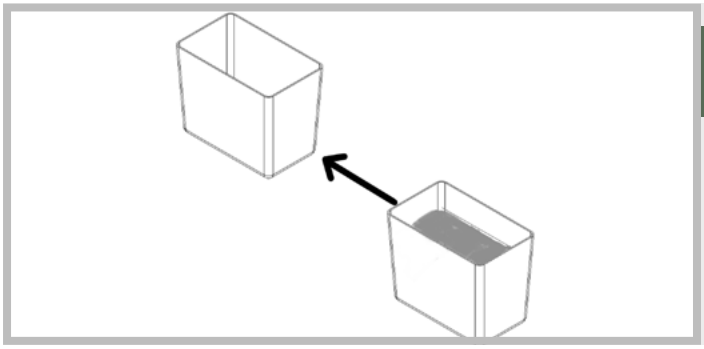
Remove the bottom plant pot and utilize the quick grab tool to grab roots that may be stuck in the drain and other debris.



2

Plant Removal

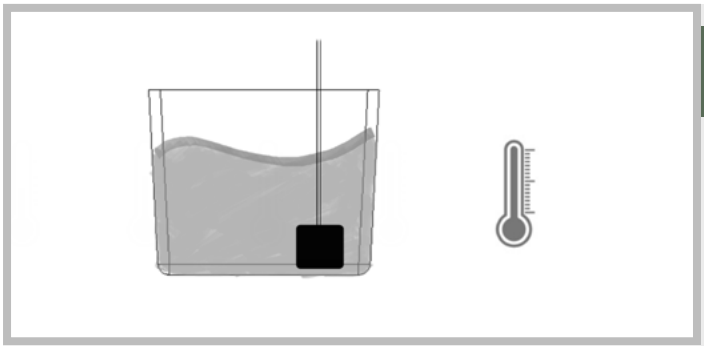
Remove ALL your plants from your unit and place the plants in a container filled with cold water.



3

Empty Reservoir

Empty the reservoir. You can save the nutrient water in another container for re-use or pour it down the sink.

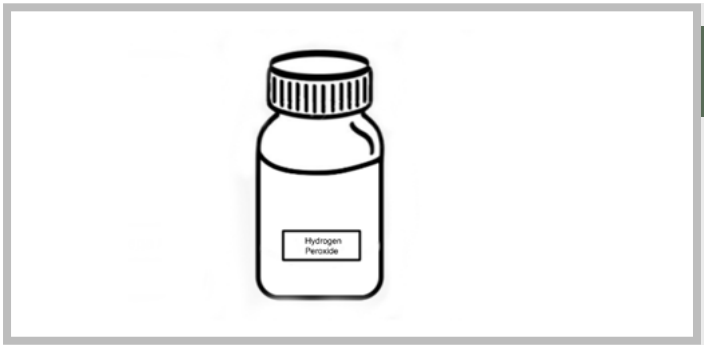


4

Refill Reservoir

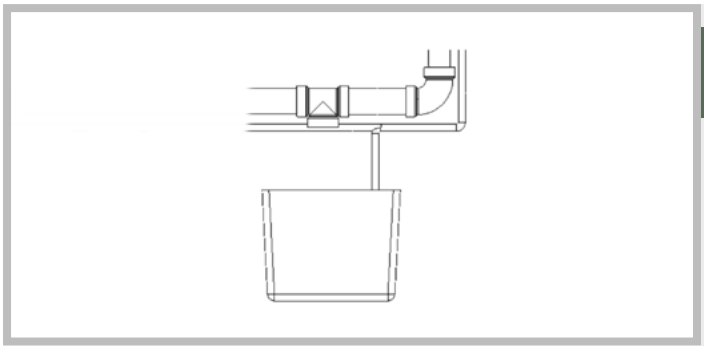
Fill the now empty reservoir with warm water.

Deep Clean Of The Garden (continued)



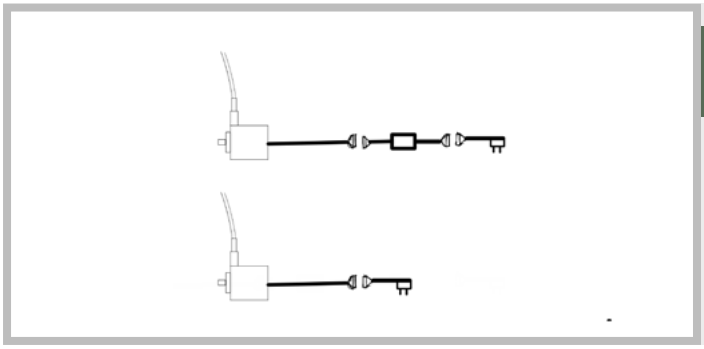
5 Hydrogen Peroxide

Add the amount of Hydrogen Peroxide recommended on the bottle to your now filled reservoir.



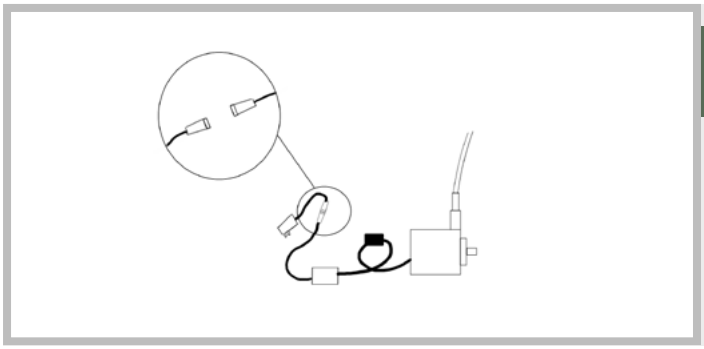
6 Re-Insert Reservoir

Make sure the drain is directly above the reservoir to allow your EVE to flush properly.



7 Run Pump

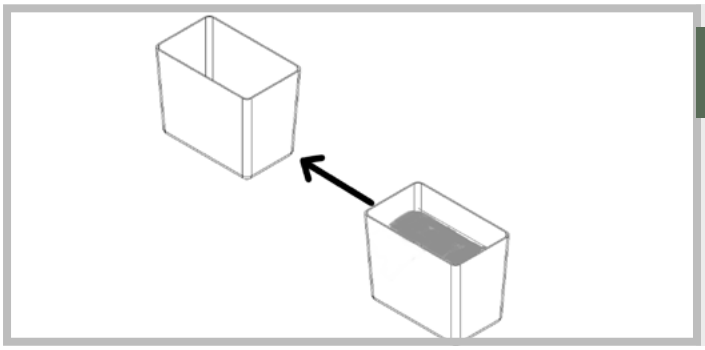
Allow the pump to run continously for 15-20 minutes. To let the pump run, disconnect the black box from the pump.



8 Pump & Reservoir

Unplug the pump and reconnect the black box. Rinse out reservoir and pump.

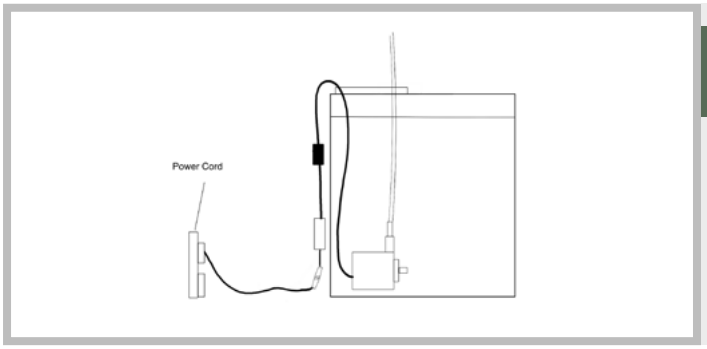
Deep Clean Of The Garden (continued)



9

Replace Materials

Return the nutrient water back into the reservoir and the plant pots back in the EVE.



10

Completion

Plug the pump back into the power cord and you have now completed the cleaning process

FUN FACT

What Is Hydroponics?

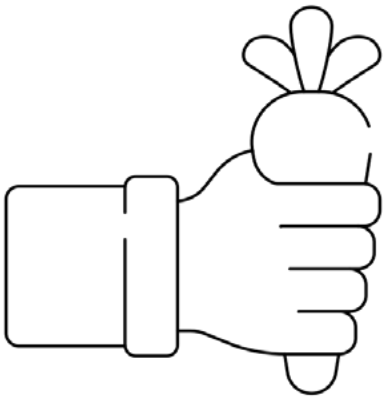
By definition, hydroponics means “working with water.” It is the method of growing plants both indoors and outdoors without soil, using mineral nutrient solutions in a water solvent.

Harvesting

Now the fun begins. Harvesting is one of the most gratifying and fulfilling activities of operating your indoor garden.

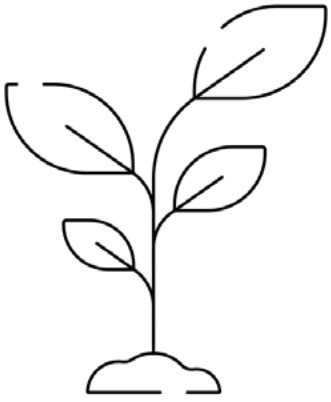
There are two main considerations when harvesting your plants: harvest volume and harvest positioning.

Read on to find handy tips on both these considerations and some common tips on harvesting some more popular varieties of plants.



1 Harvest Volume

Always harvest less than 1/3 of the plant. Simply remove the fruit or vegetable with your hands. Ensure that the fruit or vegetable is fully grown, ripe, and ready to be picked.



2 Harvest Positioning

Nodes are bumps on the plant stems. Nodes are an important area where new cells develop on a plant. We suggest to cut above the node to encourage plant regeneration.

Harvesting For Specific Plants

HARVESTING

Baby Cucumbers

It takes 14-21 days for germination. The plant will require a specific pollination process after it blooms of using a paintbrush to touch the male flower and then the female flower. It takes 50-55 days for the plant to mature after transplanting. You can harvest when the plant is near maturity when the baby cucumbers are around 2-3 inches long. Only harvest the mature baby cucumbers for optimal taste.

HARVESTING

Cherry Tomatoes

It takes 7-14 days for germination. The plant will require pollination after it blooms. It takes 60-70 days for the plant to mature after transplanting. You can harvest when the plant is near maturity. Only harvest the mature cherry tomatoes for optimal taste.

HARVESTING

Dwarf Starberries

It takes 14-42 days for germination. The plant will require pollination after it blooms. It takes 150 days for the plant to mature after transplanting. You can harvest when the plant is near maturity. Only harvest the mature dwarf strawberries for optimal taste.

Harvesting For Specific Plants (continued)

HARVESTING

Hot Anaheim Peppers

It takes 14-21 days for germination. The plant will require pollination after it blooms. It takes 100 days for the plant to mature after transplanting. You can harvest when the hot anaheim peppers are around 2-3 inches long. Only harvest the mature hot anaheim peppers for optimal taste.

HARVESTING

Marigold

It takes 5-15 days for germination. It takes 60 days for the plant to mature after transplanting. Once the plants exceed maturity, the will begin to wilt and will eventually fall off the plant.

HARVESTING

Nasturtiums

It takes 14 days for germination. It takes 60-80 days for the plant to mature after transplanting. Once the plants exceed maturity, the will begin to wilt and will eventually fall off the plant.

HARVESTING

Petunia

It takes 5-15 days for germination. It takes 60 days for the plant to mature after transplanting. Once the plants exceed maturity, the will begin to wilt and will eventually fall off the plant.

Troubleshooting – Hardware

Despite our best efforts, sometimes things can still go wrong with your unit. Don't fret. Here are some frequently used troubleshooting steps that will help you get your unit back to running in no time.

If you find that our troubleshooting section will not resolve your issue, you can reach out to support@justvertical.com to get your specific issues resolved.

Water Not Being Delivered To Plants

Follow below to rectify any issues related to water not being delivered to plants.

1 Pump Position

Is the water in the reservoir covering the pump while it's running?

2 Pump Connection

Is the pump plugged into the power bar or an outlet?

3 Quick Connect Connection

Are the black quick connect power cables for the pump and its timer properly connected to each other?

4 Power

Check there is power to the outlet in your home.

5 Reset

Try turning the system off for 5 minutes and then turning it back on.

6 Supply Line

Check that the supply line is connected to the pump.

Leaking From The Pots Onto Front Face

This can be noticed by salt stains (white streaks) on the front face of the unit. This is caused by two main things:

- Large plants
- Plants with a large root mass

To solve this problem, ensure you are regularly trimming the roots on your plants. Trimming your roots on a regular basis not only avoids the garden from leaking, but also helps you grow healthier plants with more nutritional content.

Learn more about trimming your roots in the 'Maintenance' section of this manual.

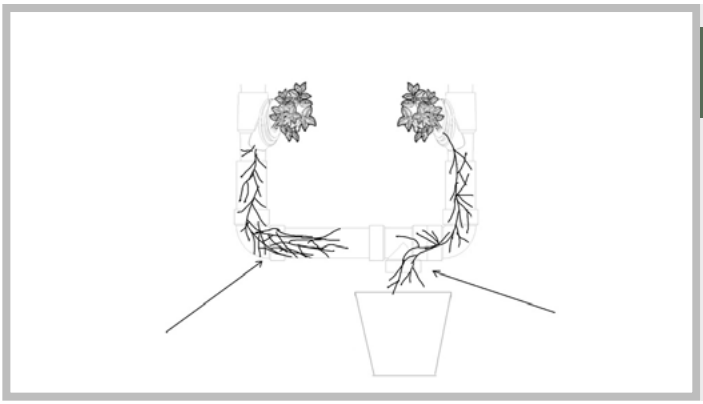
TIP

Rapunzel Roots

Longer roots as well as "rapunzel-like" roots will cause a leak in your garden. Make sure you maintain the roots in the your garden.

Leaking From The Bottom Plant Site

This issue is caused by a very large root mass in the bottom plant sites of the unit, or any debris that may have found its way into the unit. When roots or debris block water flow back into the drain, the water will be forced out from the bottom plant pot. If after trimming the roots the drain is still blocked, proceed to the blockage in the supply line or drain troubleshooting.



1 Root Maintenance

Do not allow the roots to grow into the drain. Trim your roots at least once a month. See our section in 'Maintenance' on root trimming.

Water Is Leaking From An Inside Pipe

On occasion, you may notice water leaking from an unidentified pipe. Follow these steps to rectify the issue.

1 Supply Line

Check the supply line (clear tubing) is securely in the tee.

2 Reservoir

Check that the reservoir is directly underneath the black drain pipe.

Plants Not Receiving Enough Water

Our gardens are designed to water all plants evenly. However, sometimes certain plants can get more water than others. This could be caused by the two reasons below.

1 Timer

The timer is not running as long as it should.

2 Supply Line And/Or Drain

There is a blockage in the supply line or drain.

These issues can easily be resolved. The pump can be manually run by removing the timer box and plugging the pump directly into the power bar. Let the pump run for several minutes and observe whether the plants are now getting enough water in which case the timer box may be defective or there may be a blockage in the drain.

If there is blockage in the drain, see our section in ‘Maintenance’ on deep cleaning of the garden to clear and troubleshoot.

Troubleshooting - Plants

Are your plants growing slower than expected? There could be one or more issues affecting this. First make sure your expectations are reasonable and in line with what plants are capable of (our system is amazing but not a miracle worker).

In the next few pages you'll find the most common issues we find with plant care.

Nutrient Deficiency/Saturation

Having too high a concentration of nutrients in your reservoir can cause tip burn on your plants. This is exhibited by browning or yellowing of the leaves. It could also cause wilting or weakening of the plant. If a large quantity of nutrients were accidentally added to your reservoir it is recommended that you empty your reservoir and add fresh nutrients.

Nutrient deficiencies can be indicated by poor plant health. Indicators of these could be plant wilting, yellowing of leaves, browning of leaves, etc. Please refer to the nutrient section for correct dosing.

Temperature

If your plants are exposed to extremely hot or cold air (under heating vent or next to a door in the winter) this could be stunting plant growth.

Air Flow

If your plants are not getting any air flow this can also stunt plant growth, ensure there is adequate air flow around your plants.

PH Levels

If you are running your garden on well water or otherwise irregular water test the pH level of the water source. A pH outside of the normal range could negatively affect your plant growth. Heavy metals in the water can especially can stunt plant growth.

TIP

Speak To Support

Have you got any specific troubleshooting questions not covered in the manual?

We have a dedicated support team that you can reach to discuss any and every problem you have. Simply email support@justvertical.com to contact our support team.

Thank You!

We look forward to growing with you.

SUPPORT@JUSTVERTICAL.COM

WWW.JUSTVERTICAL.COM