

# Troubleshooting: Common Tower Garden Challenges (and How to Avoid Them)

## Maintenance Mistakes:

### Water leaks around growing ports or section seams.

Let's begin with one of the easier problems to fix (or avoid altogether).

- To function properly, Tower Garden must be on a level surface. If your Tower Garden is leaking, make sure it's level.
- If you verify it is level, but it still leaks, you may need to simply push the grow pots together more tightly.
- If water is coming from the pump cord hole, tie a loose knot in the cord and place inside the reservoir to catch drips.

### The pump suddenly stops pumping.

- Make sure the pump is plugged in properly.
- Check roots halfway through the growing season. If your pump stops working plant roots may have jammed it.
- To fix this:
  - Unplug the pump.
  - Pull the pump up through the access port.
  - Remove the pump filter cover.
  - Flush the filter with water to remove any debris.
- Trim roots that grow down into the reservoir to prevent clogging the pump.
- Trim roots up to half their length (this will not harm plants).

### pH constantly drifts out of the recommended range.

Tower Garden grows plants with only minerals, oxygen and water, no soil. So, the quality of the water in your Tower Garden is very important.

Using heavy chlorinated, hard or softened water will most likely cause problems. Fluctuating pH is just one.

What to do if your pH is not balanced:

- **For hard water**, fill your Tower Garden using an RV water filter.
- **For softened water** (i.e., water from a home softener system), fill your Tower Garden using a reverse osmosis filter system or buy distilled water.
- **For heavily chlorinated water**, leave the water out in the sun for 48 hours. Alternatively, run the water through your empty Tower Garden for a day or two.

### Algae growth on rockwool.

Algae growth is relatively common if it appears at the base of your plants on the rockwool. This is typically harmless to plants and not actually a problem.

### Pests infest your indoor Tower Garden.

Your Tower Garden can be grown indoors or outdoors, but be aware that bringing a Tower inside from outside could come with unwanted pests. If you experience pests:

- Without natural predators indoors, pests multiply very rapidly and can become very troublesome, very quickly.
- Even if plants appear to be healthy and show no visible signs of problems, you should still think twice about bringing them inside. Aphids, small caterpillars and the eggs of certain pests can hide on the underside of leaves.
- Reducing the risk of an indoor infestation is accomplishable: start all your indoor plants fresh, and regularly check your plants for signs of trouble. The earlier you catch a pest problem, the easier it will be to control.

## Plant Problems:

### Seeds won't germinate.

Sprouting seeds can be a little tricky. There are a number of reasons seeds may not germinate. The three of the most common are:

- **Poor seed quality.** For best results, start with the best seeds. While the seeds that ship with Tower Garden are of top-notch quality, if you're buying new seeds, make sure to source them from a reputable provider.
- **Old or expired seeds.** Some seeds have shorter shelf lives than others. So, when in doubt, try using new seeds.
- **Temperature.** Like plants, most seeds have temperature preferences. Generally, the seeds of warm season crops germinate best in warmer environments, while those of cool season crops prefer cooler ones. In fact, some gardeners refrigerate spinach seeds—which are notoriously stubborn—to encourage germination. (If you try that, just be sure to move the seeds out of the fridge as soon as they sprout.) For seeds of warm season crops, consider using a heating pad.

If you address these factors and still have problems, here are some more tricks to try:

- **Soak your seeds.** Initially soaking seeds overnight often speeds germination, as it helps moisture break through a seed's outer coating.
- **Germinate using the "baggie" method.** The process is simple: distribute seeds on a dampened paper towel placed in an open sandwich bag. (This creates a sort of miniature greenhouse.) Check the bag every few days—moistening the paper towel as needed— and, as soon as the seeds germinate, transplant them to rockwool cubes.

### Seedlings wilt after transplanting.

Though wilting can be a symptom of various problems, one cause concerns Mineral Blend concentration. Keep these points in mind:

- When you're starting a fresh Tower Garden (i.e., one full of small seedlings), you should fill it with a half-strength nutrient solution. That ratio is: 10mL of Mineral Blend A + 10mL of Mineral Blend B per gallon of water.
- If you're using full-strength nutrients and your seedlings are wilting, try diluting the solution. Your plants should perk up.
- After you've been growing for a week or so, you can increase the solution to full-strength.
- Another time you should be using half-strength nutrients is in hot weather. Heat evaporates the water more quickly, resulting in a more concentrated solution.

### Plants grow slowly.

As soon as your seeds sprout, they need light. Without it, they'll grow lanky and weak. That means they won't have the resources they need to develop strong root structures.

As a result, when you put them in your Tower Garden, your seedlings will likely struggle to grow (if they even survive).

So, for healthy, happy seedlings, give them light. And once they're about three inches tall and have roots protruding from the rockwool, you can transplant.

But the need for light doesn't cease post-planting, of course. Outdoors, most plants require at least 6–8 hours of sun. Indoors, they'll need 14-16 hours of artificial light. Many people assume light from a south-facing window is all indoor plants need for proper development, but the light that filters through window panes is rarely enough.

To ensure your indoor garden grows to its full potential, use LED Grow Lights.

### Tomatoes (or other plants) take over.

Given free reign, certain vining plants, like tomatoes, will probably overwhelm the world. They're voracious growers, sending out vines, tendrils and roots to help them ever expand.

This characteristic makes them pretty easy to grow. Unfortunately, it also makes them bad neighbors. It can get crowded. And when plants grow together so thickly like that, they create the ideal conditions for leaf fungus diseases.

To prevent all of the above, just do a little pruning here and a little harvesting there. This will help keep your plants' growth in check (with the added benefit of making them healthier and more productive).

### Plants don't produce.

With declining pollinator populations, many gardeners are finding they must "be the bee" to ensure a consistently hearty harvest.

If you're growing indoors or if you don't see many bees or other pollinators around your garden, you'll probably want to consider hand-pollinating your plants.

### Crops taste bitter (or turn black and die).

There's a time for everything, but it's not always time for everything. When it comes to outdoor growing, certain seasons are perfect for growing certain crops. Others? Not so much.

Lettuce is refreshing and delicious in the fall and spring. But try growing it in late July, and—depending on your growing zone—it will likely bolt.

Likewise, if you try to grow tomatoes in November, they may not even make it past the seedling stage. And as soon as a little frost hits, they won't make it.

So be strategic about what plants you decide to grow each season.