

How To Grow Strong, Healthy *Seedlings*



The key to a healthy garden starts with strong seedlings. Whether you start your garden from seed, or purchase seedlings from a seedling provider, the overall success of your garden will depend on the quality and health of the seedlings used when starting the garden. If you use weak seedlings, you'll probably end up with slow-growing, unproductive plants that invite pests and other problems.

In this guide, you'll learn seven techniques that professional growers use to cultivate hearty seedlings that become fruitful plants.

Benefits of Starting from Seeds

Why would you grow your own seedlings rather than buy them from a professional grower? There are a few advantages:

- **You save money.** A single seedling will typically cost you about the same amount as a full packet of seeds. So for a couple of dollars, you could either get one plant or — if you choose seeds — potentially dozens.
- **You have more options.** Seedling providers offer an array of plants. But you'll find that many varieties — and often the most interesting ones — come only in seed form.

Bonus benefit: If you're gardening with kids, starting from seed serves as a fun, educational experience. What better way to learn about a plant's life cycle than to watch it from the very beginning?

7 Steps of Growing Spectacular Seedlings

With so many advantages, you may be wondering, "Why doesn't everyone start from seed?" Well, frankly, it's slower and a little more challenging. This guide will help you master the process. Let's dig in.

1 Decide the best time to plant your seeds.

As with most gardening activities, seedling success has a lot to do with timing. Start your plants too early, and an unexpected frost might kill them. Start them too late, and they may not have enough time to mature.

Fortunately, seeds often come with planting schedules stamped on their packet. But if yours don't, there are also planting calendars you can reference.

2 Gather all the supplies you'll need.

Cultivating healthy seedlings requires only a few things. First and foremost, you'll need the seeds.

You can order high-quality seeds online or from seed catalogs. Local garden shops and seed swaps are also great sources. (A key benefit of buying online is that you can often see product reviews from other gardeners, which may give you an idea of what to expect.)

Wherever you get them, you'll want to use relatively fresh seeds. After a year or two, most seeds don't germinate as well, especially if they haven't been stored in a cool, dark place.

Besides seeds, it's helpful to have:

- A seedling tray (a food storage container or glass baking dish will also do)
- Rockwool cubes and vermiculite
- Grow lights (fluorescent shop lights are an inexpensive, but effective option)
- A small fan
- An outlet timer

Tower Tip: *The Tower Garden Seedling Starter Kit comes with a seedling tray, plus rockwool cubes, vermiculite, and seeds.*

If you've used any of your seed starting supplies before, make sure to clean everything well. You don't want to expose your seedlings to disease before you even transplant!

3 Plant your seeds.

Many gardeners find that soaking seeds overnight in a shallow bowl of water improves and speeds germination rates. And this seems to work for most plants. (That being said, don't worry about soaking smaller seeds, such as those for lettuce and greens — they're too easy to lose, and they usually sprout well anyway.)

Before you plant your seeds, thoroughly soak your rockwool cubes for half an hour or so. Then plant the appropriate number of seeds based on crop type:

- **For lettuces and greens**, plant 6–12 seeds per cube.
- **For herbs**, plant up to 6 seeds per cube.
- **For vegetables with larger seeds** (e.g., tomatoes, cucumbers, peppers, beans), plant 1–2 seeds per cube.
- **For other types of seeds**, refer to the instructions on the seed packet.

Once you've planted the seeds, fill each rockwool cube seed hole with dry, coarse-grade vermiculite. (For smaller seeds, fill the hole only half-full.) This will ensure seeds have enough moisture to germinate.

***Tower Tip:** Not all seeds must be sprouted before being transplanted. Some you can seed directly into your Tower Garden. These include plants that grow very quickly after germinating, such as beans, cucumber, and squash.*

4 Provide the ideal conditions for germination.

Before your seeds sprout, temperature is a critical factor. Most leafy greens and herbs will germinate well in the 55–75°F/13–24°C range. But fruiting crops usually prefer the upper end of that range. If your propagation area is cooler than that, a heating mat may help.

Following successful germination, you'll want to turn off the heating mat.

5 Keep your seedlings healthy.

It probably goes without saying that your plants need water. But how much? How often? Essentially, you want your rockwool cubes to stay moist but not oversaturated. Adding about a quarter inch of fresh water (replacing any existing water) to the seedling tray daily should do the trick.

As soon as you see something green peeking out of your seeds, you should give them lots of light. Keep in mind, despite what you might have heard, light from a window — even a big, southern-facing one — likely won't be enough, especially in the winter.

If it's too cold to move your plants outside in the sun, placing a Tower Garden grow light just inches away from your

young plants will work well. Seedlings will typically grow best with 14–16 hours of daily grow light exposure. (This is where an outlet timer comes in handy.)

Seeds contain all the nutrients they need for their first few weeks, but after they run out of their reserves, they'll need to be fed. So once you see true leaves — the leaves that come after the first pair of cotyledon leaves that were formed inside the seed — you can start adding a capful of Mineral Blend A and Mineral Blend B every other day to supplement your plants' diet.

6 Make your seedlings strong.

To get your seedlings ready for the great outdoors (assuming you're not planning to keep them inside), you need to toughen them up a little.

How? Routinely "pet" your new seedlings and/or set a fan to gently blow on them. This will make your plants stockier, which will help them better resist real wind and other outdoor elements. It also promotes air circulation around your plants, preventing plant diseases.

By the time your seedlings have a few pairs of leaves, weeding out the competition — that is to say, thinning some of your seedlings with a sharp pair of shears to leave only one plant per rockwool cube — can be wise.

The plants that benefit from thinning typically fall into the heartier, fruiting crop category (e.g., tomatoes, squash, peppers). For most herbs and greens, on the other hand, you can usually grow multiples per rockwool cube.

7 Transplant!

When your seedlings are about three inches tall and have roots protruding from the bottom of the rockwool cubes, it's time to transplant.

If you started your seedlings indoors, it's a good idea to harden them off before placing them in an outdoor Tower. Do this by placing them outside in partial shade for a few days before adding them to the Tower.

***Tower Tip:** Hardening off prevents shock, which can delay your plants' development.*

Finally, plug your new, happy, hardened seedlings into your Tower Garden and watch their growth explode!

Common Seedling Problems (and Solutions)

You should be closely monitoring your seedlings from the time that you plant the seeds. Here are a few common problems to watch for:

- **Seeds won't sprout.** How old are your seeds? (The fresher, the better.) Keep in mind that certain seeds may take up to two weeks to sprout. Also, see step four to verify you've created the ideal sprouting conditions.
- **Seedlings grow tall and thin.** Leggy growth likely means your plants aren't getting enough light. Confirm that they're either under grow lights for 14–16 hours per day or outside in the direct sun for 6–8 hours daily.
- **Slow growth and/or pale-yellow leaves.** Have you been feeding your seedlings? This could be a symptom of inadequate nutrition.



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