

10 Top Reasons Why Seeds Don't Germinate



10 TOP REASONS WHY

Seeds Don't Germinate

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There are a lot of reasons why seeds don't germinate. Knowing what can go wrong is the first step in solving the problem. If you're struggling to start seeds this spring, here are a few

things to look out for.

Why Aren't Seeds Germinating?

Here are a few common reasons why seeds don't germinate.

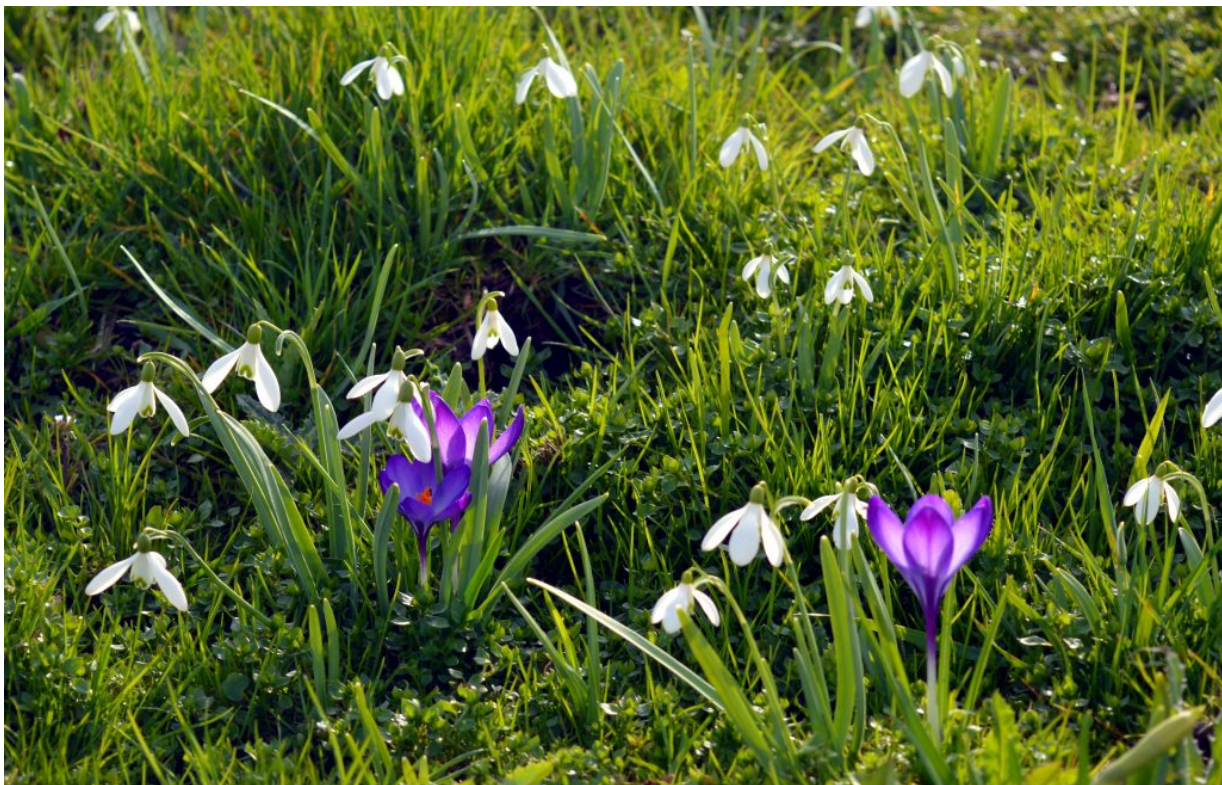
- **It's too hot.** It's a common misconception that seeds require heat to germinate. Not all seeds like it hot. Some germinate best when the soil is cool. The ideal temperature for lettuce seeds, for instance, is [between 40 to 85 degrees Fahrenheit](#). Closer to 80 degrees means seeds are less likely to emerge.
- **It's too cold.** Similarly, some seeds require plenty of warmth to germinate. Things like tomatoes, eggplant, and peppers do best if you use a heat mat. If you don't provide extra warmth, your seeds may take longer to germinate or not germinate at all.
- **The soil is too wet.** Seeds and [seedlings](#) need air to survive. If you drown your seeds in water, they may not be able to access oxygen, and they'll eventually rot. When starting seeds, you want your soil to be moist but not overly so.
- **Damping-off.** This is a fungal disease that commonly affects seeds and seedlings. Avoid it by using sterilized seed starting mix, disinfecting tools, and using quality seed. If you notice your seedlings continually succumbing to damping-off, it might be wise to throw out that seed packet.
- **Seeds are getting eaten.** In some areas, you may already be direct seeding outside. It's a great way to get a jump start on the season. Unfortunately, some animals, like birds and small mammals, don't really care that you're excited about the gardening season. If you plant seeds and wonder why they aren't germinating, it might be

because critters are eating them when you're not around. You can use netting or other protective covers, like cloches, to keep your seeds away from hungry mouths.

- **You've got duds.** Sometimes, seeds, even from quality retailers, just aren't going to germinate. Most reputable seed companies have a germination percentage figure on their seed packets to let you know how many seeds are expected to germinate. The lower the percentage, the more likely you are to have a few non-starters. If you continually find yourself with duds on your hands, it's time to find a new seed supplier.
- **Your seeds are too old.** Seeds don't last forever. They'll last a shorter time if they're [stored haphazardly](#). Some types of seeds also last longer than others. If your seeds aren't sprouting, check the date on the packet. I often buy packets of seed that contain way more seed than I know I'll be able to use. I like to share seeds with other gardening pals to make sure they don't go to waste.
- **You're not being patient enough.** Some seeds take a while to germinate. While lettuce seedlings usually pop up within less than a week, many herbs take a lot longer to sprout. Others can take months. Seeds will also take longer to germinate if the conditions aren't quite right.
- **Your seeds need an extra helping hand.** Some seed types require periods of freezing weather or soaking in water to sprout. Always carefully read the back of a seed packet to check if this needs to be done. Some flower seeds have hard coatings, so you need to go through these steps to weaken the coating.
- **You've planted them too deep.** This is more of an issue when direct sowing. Only plant as deep as

the length of the seed. So for small seeds like carrots, you want to make sure you're sowing them very shallowly.

How To Do A Spring Garden Clean-Up



It's springtime! The season that signals to every gardener that it's time to get started is here. In my neck of the woods, it's also the ugliest time of year. I become tempted to start my spring garden clean-up right away, but I know that soon the buds from my maple trees will fall and make a new mess. I might as well wait and avoid having to contend with mud and grime. It's also important to wait a bit so you can [prevent harm](#) to hibernating beneficial insects hiding in garden debris.

Planning a Spring Garden Clean-Up

Here's how to plan your spring garden clean-up.

- **Wait until it's warmer.** The temperature should consistently fall in the 50 degrees Fahrenheit range before you start your big spring clean-up. Tackling spring tasks too early may disrupt overwintering [insects](#) and other critters—some of them helpful garden creatures.
- **Grab the rake.** Clean up any leftover leaves from the fall. But don't toss them all away. Put them in your compost! Remember never to rake when the ground is wet. It's bad for your grass, and it makes the job tougher.
- **Prune dead branches.** Spring is a great time to prune many trees and plants. Not all plants have the same pruning requirements, though. I recommend keeping a notebook handy for all regular garden tasks, so you know exactly what needs to be done—whether it's planting out kale or pruning perennials.
- **Remove dead plants from garden beds.** Toss them in the trash and not the [compost](#)—just in case. I also like to start beds fresh by adding a top layer of compost. It adds nutrients and provides a clean slate.
- **Purge.** Throw away anything that's broken, rusting, or looks worse for wear. This seems like a no-brainer, but trust me, it doesn't take much for a person to hoard garden accessories and tools. Keeping dirty, rusty implements won't save you money. You might even lose cash in the long run by using contaminated tools.

What to Start in April

Can you believe it's already the end of March!? Time flies!

I'm pretty relaxed these days when it comes to planning my planting schedules. I used to work hard to start things way in advance, but the weather is way too unpredictable, and, in the

end, it doesn't save me labor down the road.

West Coast Seeds has great, [region-specific planting charts](#) to help you get started with your gardening season this month. In my area, April is usually around the time when the soil warms, and it's no longer frozen. However, it's still cold, and there's a high chance of frost, so I focus on planting hardy greens and other cool-season crops.

Like I mentioned previously, this year, I'm keeping this super simple. I haven't done any seed starting, and I'll be focusing on planting flowers and crops that are easy to grow by direct seeding. As for more demanding plants? I'll probably plant a pepper and tomato plant, but that's about it. I've had so much trouble with squash bugs that I'm likely going to skip squash altogether this year. Hopefully, skipping a year will deter pests from returning in 2022. What do you hope to grow this year?

How To Get Free Seeds From The Government



HOW TO GET FREE SEEDS
From The
Government

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At first glance, seeds seem like a relatively inexpensive purchase. However, when buying several varieties, the cost can really add up quickly. A frugal gardener knows that there are

plenty of ways to find seeds for cheap or [free](#). Here's how to get free seeds from the government.

Getting Free Seeds From the Government

The [U.S. National Plant Germplasm System](#) is a website managed by the USDA. It allows users to search for and order seeds. Type in 'kale,' for example, and you'll see a slew of varieties. Available seed varieties will have a shopping cart icon to the right.

But hold on. There's some important fine print on the website that's worth mentioning:

"Distribution of germplasm from NPGS collections to fulfill requests from individuals seeking free germplasm strictly for home use is generally considered inappropriate use of limited resources and conflicts with U.S. Government policy of not competing with commercial enterprises. Requestors can be asked, in an appropriate manner, to justify the use of specific NPGS germplasm instead of suitable commercially available germplasm."

That said, the USDA encourages educators, scientists, seed savers, and public gardens to use the service. Like the USDA, I encourage home gardeners to find other ways to source seeds. Supporting heirloom seed sellers, for instance, is an important way to encourage seed saving and biodiversity.

Other Ways to Get Free Seeds

Here are a few ways to source seeds for free (or cheap):

- **Online gardening forums and Facebook groups.** Lots of home gardeners are eager to share or trade [seeds](#) with like-minded people. Want to get your hands on a certain variety? Ask the people in a Facebook gardening group. You may be surprised at how many people answer your request.

- **Etsy.** There are many seed sellers on Etsy that offer seeds for a steal. You might have to take some time to browse through tons of listings, but eventually, you'll find something that fits your needs.
 - **Promotions.** Many towns offer free plant material around Arbor day or other environment-related holidays or events. Promotional materials may include live plants and seeds.
 - **Friends and family.** Ask people that you know whether they have any seeds to spare. I often have a lot of excess seed each year, and I love giving it away to eager gardeners—especially people who are new to the hobby.
 - **Ask for them as gifts.** Birthday coming up? Ask people to give you seeds instead of other junk you don't need! It's an inexpensive but very thoughtful gift for a gardener.
 - **Seed swaps.** Spring is usually the time when seed swap events are popping up all over the place. Because of the pandemic, it'll be harder to find in-person events where you can source cheap or free seeds, but some organizations are going virtual and carrying on the yearly tradition anyhow.
 - **Save your own seeds.** What better way to save money on seeds than to save your own! It's a rewarding process that requires a bit of know-how, but if you can master seed saving, you'll always have stock on hand and ready to go.
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Which Indoor Plants Purify

Air?



WHICH INDOOR PLANTS
Purify Air?

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Let's get one thing straight. You probably won't improve your home's air quality by filling it with [indoor plants](#) that can purify the air. According to a [National Geographic](#) piece from

2019, houseplants won't do much to clean your home's air.

Most of the advice about air-purifying houseplants comes from an old NASA study. In a [2019 article in the Atlantic](#), Robinson Meyer reports that the study was indeed on the up and up, but it doesn't quite translate to the real world. Plants do have cleaning abilities, but they just can't handle cleaning an entire room, let alone a whole house of pollutants. Cleaning the air in your entire house would necessitate becoming a plant hoarder—which, come to think of it, isn't a terribly unappealing idea.

It's no surprise that this myth about indoor plants that can purify air has proliferated online. I believed it at one point! NASA did a study? It must be true! Unfortunately, that study results have taken on a life of their own. People love to talk about the air purifying qualities of plants.

But unless you're filling your home from floor to ceiling with plants—eliminating a clear path to walk—your pretty house plants aren't doing much to clean the air. You're better off investing in an air purifier if you're worried about air quality.

Houseplants still have a variety of benefits, though! They're attractive and are an inexpensive way to spruce up a room. They make great gifts, and research even shows that having houseplants can help boost your [mental health](#).

A Brief Word About Air Quality

In-home air quality is a complicated thing. Gardeners love to spend time outdoors but did you know that keeping your windows open can contribute to poor indoor air quality? If there's a lot of traffic nearby or the air is particularly bad outside, letting it in will only serve to tank the air quality in your home.

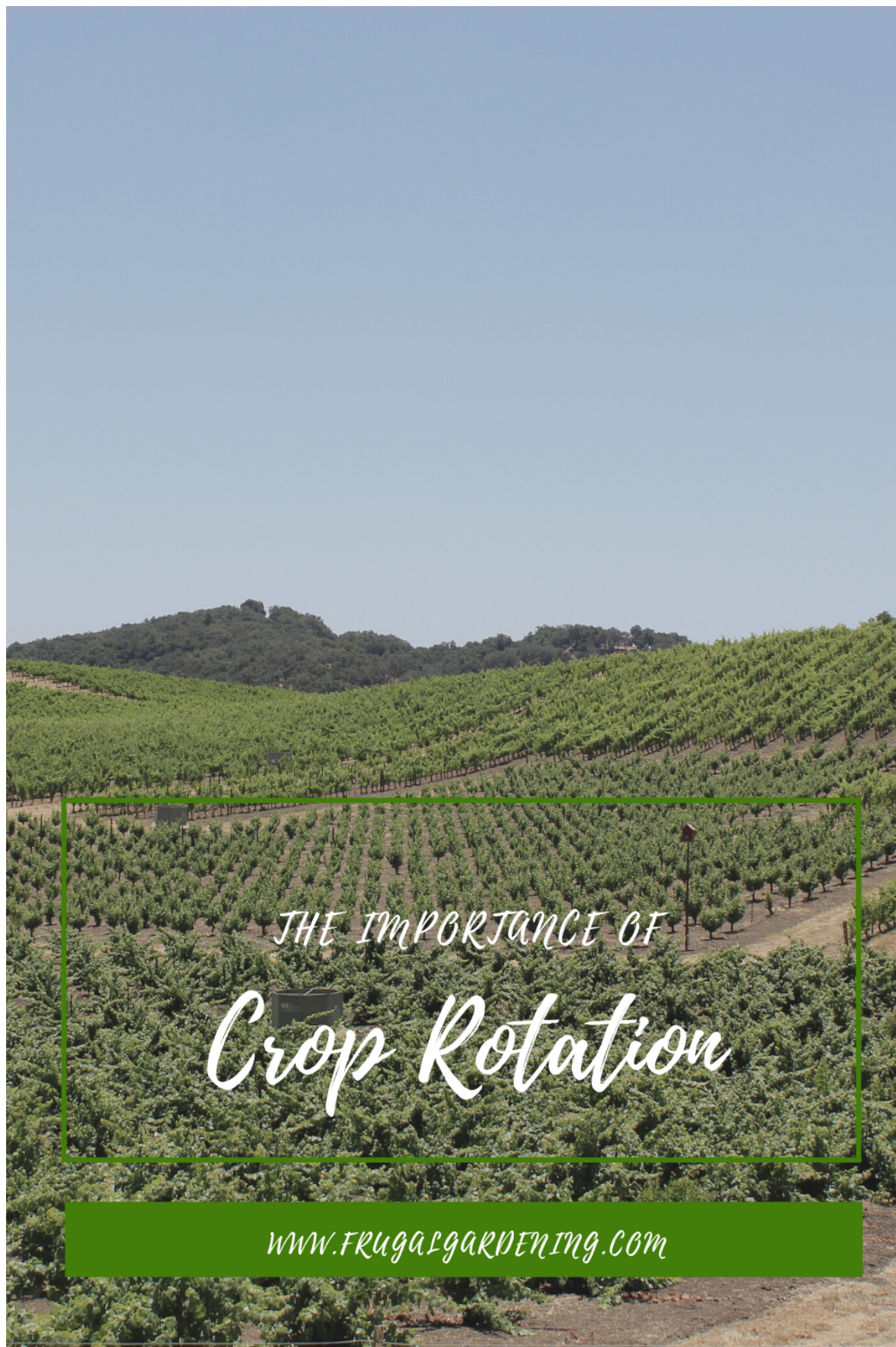
Other things that can contribute to [poor air quality](#) include:

- Cooking
- Faulty appliances
- Fuel-burning appliances, like a gas stove or furnace
- New construction
- Household products like cleaning supplies and candles
- Mold

Don't let their lack of air-purifying abilities dissuade you from acquiring [houseplants](#). They certainly won't make your air worse. Here's a video that goes through some of the easiest houseplants to take care of. Bonus: they're also some of the easiest to find for cheap!

<https://www.youtube.com/watch?v=Vy3oE5xAivY>

The Importance of Crop Rotation



THE IMPORTANCE OF
Crop Rotation

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It's that time of year again! Gardeners are starting to plan out the season. Usually, I spend this month sketching out a rough plan for my garden—taking crop rotation principles into

account. I also start some seeds in my basement. This year, though, the pandemic has me changing up my plans. I'm giving my garden a break. I'm still going to grow stuff, but it'll be less intensive. My focus will be to support pollinators and beneficial bugs by growing food sources like nectar-filled flowers. I'll also try to build healthy soil by sowing cover crops. I'll grow a few edibles in containers on my patio, but I think it's time to give the soil a break this year.

Growing food is an inherently taxing process. It requires a lot from the soil. Over time, if you continue to grow and grow without returning anything back, you'll end up with depleted, unhealthy soil.

Rotating crops and planting nitrogen-fixing plants like beans can help reduce soil "fatigue." By introducing crop rotation into your gardening routine, you also:

- Reduce instances of [pests](#)
- Limit disease
- Improve the soil's ability to retain water
- Recycle nutrients
- Reduce the need to use store-bought products like fertilizer and pesticides
- Improve soil condition

What does it mean to rotate crops? By rotating crops, you don't plant stuff from the same family in the same spot for several years.

You can also let some of your beds rest for a season—which is what I'm doing this year.

It definitely involves a lot of planning, so I recommend using a spreadsheet or notebook to keep notes. I know you think you'll remember your plan a few years down the road, but it's unlikely that you'll remember what you planted in bed 'A,' 3 years from now.

Other considerations for successful crop rotation:

- **Test your soil.** Test the soil for [nutrients](#) and pH every year or so. Never fertilize for no reason. You should know what's missing before you dump fertilizer willy-nilly.
- **Keep a close eye.** Carefully monitor your garden to catch pests and diseases before they become a huge problem. You may need to alter your plans if a specific pest is an issue.
- **Use cover crops.** Recycle nutrients into the soil and prevent carbon from getting released into the atmosphere by sowing cover crops or green manure.

Source:

https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1167375.pdf

5 Things To Consider When Recycling Soil



5 THINGS TO CONSIDER

When Recycling Soil

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It's the end of the growing season, and you've tossed your spent container tomato plants in the compost. Can you reuse the soil next year? Here's a soil recycling checklist to go

through before repotting plants in old soil or using last year's soil leftovers in the spring.

Pitfalls of Recycling Soil

Reusing soil is the perfect way for a frugal gardener to save money, but there are some risks involved in potting up new plants with old soil. Here are a few things to keep in mind:

- **Diseases may be lurking.** Soil may contain diseases like viruses or fungi that can infect newly planted plants. Don't reuse soil from a pot with a plant that died of or showed signs of disease.
- **Food may be scarce.** Recycled soil may be deficient in nutrients. Old soil will be depleted of nutrients. You'll need to cut the soil with fertilizer or compost for the best results.

Soil Recycling Checklist

Here are a few things to keep in mind for your soil recycling checklist:

- **Check for [diseases](#) or pests.** Was the previous plant showing signs of disease such as yellowed leaves, stunted growth, or general poor health? If the last plant that grew in that soil was diseased. Toss out the soil rather than recycle it or try to sterilize it.
- **Eliminate weeds.** Are there weeds actively growing in the pot or container? Are there weed seeds hidden inside? Pull the weeds, sterilize the soil, or use it for something other than potting soil.
- **Fertilize.** Old nutrient-depleted soils need to be revived with a fertilizer like compost. Mix some in to boost fertility before recycling the potting soil.
- **Do some testing.** Get the [soil tested](#) to check for pH or nutrient imbalances that can affect nutrient uptake and

plant health.

You can also use old soil for things other than potting up or planting new plants. Use soil to patch up holes in your lawn or add bulk to very large containers. You can also mix old soil into your compost.

How to Sterilize Soil

Let it sit in the sun to kill insects, weed seeds, and pathogens. Alternately, you can also use your oven to zap all the nasty things hiding in old soil.

<https://www.youtube.com/watch?v=-RNNQPxnUYE>

Source:

<https://www.bhg.com/gardening/yard/soil/how-to-reuse-potting-soil/>

How to Dye Flowers With Food Coloring



With the pandemic still limiting social outings, parents may be dreading the upcoming spring break. This fun little project is a great way to expend some creative energy during the March break or all through the summer. Dye [flowers](#) with food coloring and make a rainbow to display in a favorite vase.

Use storebought flowers or pick your own to keep the cost of this craft project low.

Why dye flowers with food coloring?

Aren't flowers already colorful? Most flowers come in a variety of colors. Using [food coloring](#), you can tint easy-to-find white flowers and create a vibrant DIY bouquet.

The project isn't just a fun one. It's also a great science experiment to demonstrate to kids how plants take up [water](#).

Easy-to-source flower options:

- Carnations
- Daffodils

- Tulips
- Roses

Note that wood-stemmed flowers will take longer to change colors.

How to dye flowers with food coloring

This project is ultra-simple, but it can be messy, especially if you're getting help from uncoordinated little ones.

Make sure to put down a tablecloth to sop up any accidental spills. Use one that you don't mind staining or grab a disposable one from the dollar store.

Here's create colorful flowers with food coloring at home:

1. Fill small cups with water, about halfway
2. Add different colors of food coloring to each water-filled cup.
3. Feel free to mix dyes!
4. Cut the ends of the flower stems
5. Place the flowers in the cups, with their stems in the water. Don't soak the petals.
6. Let the flowers soak
7. Petals will change colors over hours and days.

Here's a video showing the process:

Source:

<https://www.sciencefun.org/kidszone/experiments/dyed-flowers/>

5 Houseplants That Won't Waste Your Money



5 HOUSEPLANTS

That Won't Waste Your Money

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Ever since the pandemic began, I slowly started buying houseplants. I'd scour my favorite online nurseries and pounce when they had a sale or [coupon code](#) up for grabs. Of course, I

already had some plants before the COVID situation, but adding more made my home feel cozier, livelier.

When buying [plants](#), I always opt for the smallest size because smaller plants are cheaper. I don't mind starting with tiny nursery plants. I feel accomplished when they start to outgrow their small pots. Still, it's a huge bummer when houseplants you've spent money on wilt and die.

I've been caring for a host of new plants this past year, and I can tell you which are worth your time and [money](#). Here are 5 houseplants that won't waste your money.

Snake Plant

When buying houseplants, I always look for ones that will fit my interior environment and my lifestyle. I have three types of lighting situations: two very sunny rooms, one partially shaded room, and another with very little light. When it comes to watering, I'm forgetful (but I have a handy app that reminds me when to care for my plants!) and prefer to fill my home with low-maintenance plants. Snake plants are the ultimate low-maintenance plants. They're also supremely attractive and give off a tropical vibe without needing specialized care.

Prayer Plant

Prayer plants provide a huge visual impact. Their showy leaves come in a variety of colors. The plants are also pretty easy to maintain. They like a lot of moisture, so they need frequent watering. If you tend to overwater your plants, prayer plants are a great option because it's tough to overwater them. They also don't mind partial shade conditions.

Zebra Plant

Buying manageable houseplants doesn't mean you're stuck with

visually boring specimens. I love the attractive stripey leaves on this plant. Zebra plants also require a lot of moisture, but the great thing about them is that they'll tell you when they're thirsty. The leaves immediately droop when it's time for watering—a handy signal for the forgetful gardener.

Calathea

These come in a slew of varieties, and they're all gorgeous. Calatheas can handle low light and have moderate watering needs. In my experience, they're pretty tough to kill!

Sword fern

A lot of people have trouble with ferns. I've heard past wisdom that they're fairly difficult to care for. I've had the opposite experience. As long as you provide them with plenty of water and keep the soil moist, they're happy. They also don't mind shade and actually prefer to be out of direct sunlight.

Quick plant care tips

I use an app that reminds me when it's time to water each of my plants. Previously, I'd water them all on the same schedule, which is a no-no. It's tough to remember each plant's individual needs, though. I suggest creating a spreadsheet with a watering schedule to help you get used to each plant's needs. Add reminders to your calendar, planner, or phone, so you don't forget.

Always have a [watering can](#)—any cheap one will do!—on hand, so you can water at a moment's notice.

I have two watering cans at the ready at all times. One is for watering, and the other contains liquid fertilizer. Having them both prepped and ready to go means I never skip out on

plant care tasks.

4 Advantages of Pruning Plant Roots



4 ADVANTAGES OF *Pruning Plant Roots*

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You've heard of pruning branches, but what about pruning plant roots? [Roots](#) aren't something we think about very often. Mainly because they're buried under the earth. Out of sight.

Out of mind. However, paying attention to your plant's roots can be an essential part of raising healthy houseplants.

Here's why you might consider pruning plant roots. Below, you'll also find a helpful video for guidance on how to prune plant roots.

Improve root growth

Young plants can sometimes fail to produce healthy, abundant root systems. When this happens, pruning the roots before transplanting may help encourage more vigorous growth.

Prevent or reverse root binding

If you've ever repotted a plant or left a seedling too long in its pot, you may have noticed that its root system begins to circle the bottom of the container. If this happens, it means the plant has become root-bound. Without anywhere else to expand, the roots become a ragged, dense mess. [Trimming](#) the roots can help encourage new root growth and improve the overall health of your plant.

An alternative to trimming is to use breathable [fabric pots](#). Obviously, this isn't a great option for indoor plants. For outdoor plants, though, fabric pots allow for air pruning. Because the fabric is breathable, it will enable the roots to breathe, preventing plants from becoming root-bound altogether.

Increases nutrient absorption

By pruning plant roots, you encourage nutrient absorption. The new root fibers help increase a plant's nutrient uptake from the soil. If you have a root-bound plant, it can't take up nutrients efficiently because it's incapable of growing a lot of new, healthy roots.

Slows down growth

Abundant growth is great, but a plant that grows too rapidly will quickly need to be repotted again and again. By pruning roots, you slow down overall growth keeping the plant the right size for its current pot for a little while longer.

Get more plants

You'll also need to prune roots if you want to [divide](#) plants. To divide plants, you'll need to separate the roots, clip them, and trim them to encourage new growth.

How to prune

The ideal way to prune a plant is to lightly trim part of its root system. Taking off too much can have the opposite effect and potentially damage the plant.

5 Reasons to Start a Garden This Spring



Normally, I don't need to think of reasons to start a garden. I'm intrinsically motivated to start anew each spring.

In the dead of winter, I usually get incredibly excited about the prospect of gardening in March. As soon as the seed catalogs arrive, I start to plan. I dream about the new varieties I want to try as I flip through the glossy magazines and I draw up sketches of my garden beds to decide what I want to plant where. I don't usually need a reason to get excited.

This year is a little different. With the pandemic raging on, lockdowns in effect, and stress levels getting higher every day, I feel disconnected from the things I enjoy—especially gardening. So, to boost my morale, I've been thinking much more intentionally about the reasons to start a garden. It's led me to realize that the reasons don't always have to be the same. They can change and evolve, and they don't always have to fit a specific mold.

Why You Should Start a Garden This Spring

Thinking about starting a garden this year? There are plenty of good reasons to get growing. Here are a few that I've been thinking about:

Home-grown lettuce is way cheaper than the grocery store stuff. The fancy [greens](#) you buy at the grocery store? They're incredibly easy to grow, and many varieties are cut-and-come-again. One tiny seed will net you multiple delicious salads!

You can share what you grow. Loneliness has been a recurring theme of this pandemic. You can't visit loved ones. Gatherings are too dangerous, so people have been spending more and more time alone. Sharing what you grow can help you connect with people you otherwise can't spend time with during this time. Sharing sustenance is a wonderful way to show you care.

It's a great family activity. These days school closures and adjustments have caused families to spend way more time together. Parents fret about the effect not being in school has on kids, but I say take this time to get into a hobby

together. School will be out this summer anyhow, so spend the time together cultivating a garden. Couples can also use gardening to bond and strengthen their relationship.

You can grow exotic ingredients. Going to the grocery store is no longer the safe haven it once was. You can't just pop into different supermarkets to find that one weird ingredient for your favorite [recipe](#). Grow it yourself instead! Love bok choy stir fry? Grow some in your garden.

To take your mind off of things. Gardening has a meditative quality. When I'm in the garden, I often forget about everything else. You can't always turn your brain off. Tuning into the world is important. But to have space where you can decompress is incredibly valuable.

What are some of your unconventional reason for starting to garden this spring? What's the one thing that's calling you back? Is it food security? Is it stress relief? Let me know in the comments.