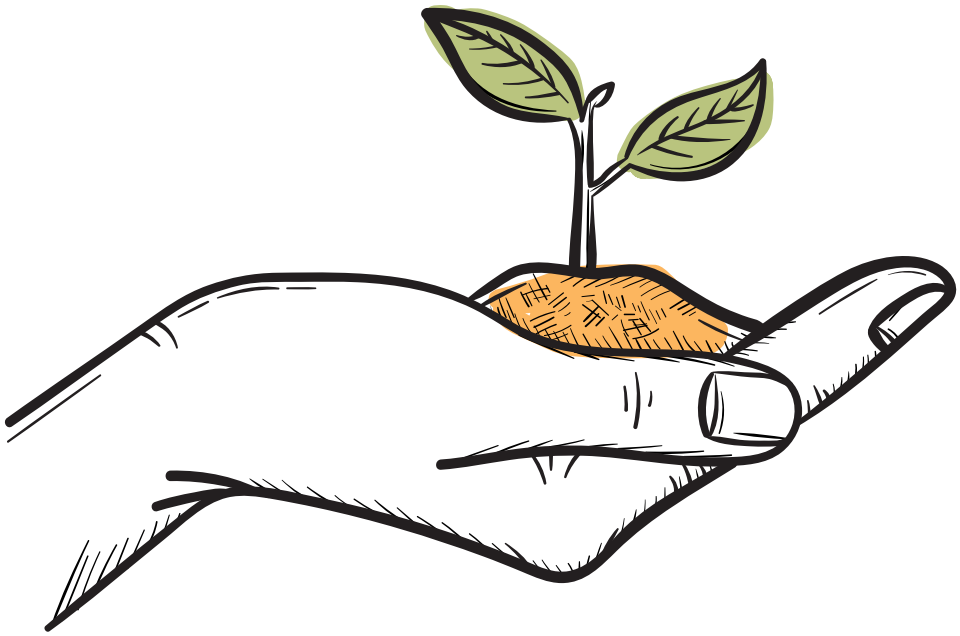
BEFORE YOU SOW

6 Seed Growing Principles You Must Know Before You Plant



THE BEGINNERS GARDEN

By: Jill McSheehy

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HI, I'M JILL!

Welcome to Before You Sow!
In this guide, you'll learn seed selection and growing basics that will help inform not only your seed purchases but also your growing methods. As a first-time gardener in 2013, I had the same questions I hear gardeners ask me, and my goal is that by the end of this quick ebook, you'll have a better understanding of seeds and how they best grow. One thing to keep in mind: Never be afraid to experiment. As you gain more experience, feel free to break some of these rules! But also keep in mind, the wisest way to break the rules is to know the rules to begin with and why they're there in the first place. The "rules" I share here are meant for beginners and to help you get the success you're looking for the fastest.

INSIDE:

- Which plants to start from seed directly in the garden
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WHICH SEEDS TO DIRECTLY SOW IN THE GARDEN

One of the biggest points of confusion for newer gardeners is which seeds should be directly sown in the garden, and which ones are best either started indoors or purchased as transplants. While there are exceptions to the rules I'm going to share with you today, I want to at least give you guidelines to get you started.

Based on my experience when I was a new gardener, my testing these rules as a veteran gardener, and my watching other gardeners fail and succeed over the years, I'm going to share with you which plants I think beginning gardeners should almost always plant from seed directly in the garden. No indoor seed starting required, and no shelling out the cash for transplants from the garden center.

Before I give you the list, let's look at a few factors you need to consider when it comes to direct sowing. If you're new to the term, direct sowing simply means planting seeds directly in your garden soil.

First, why IS direct sowing better in some circumstances?

Some plants simply don't like to be transplanted. When their delicate roots are disturbed, it can set the plant back further than if you had just planted the seed in the garden in the first place. The first example that comes to my mind is cucumbers. I made the mistake my first few seasons, trying to plant them from seed indoors multiple times. Each time was a failure for different reasons. Although it's possible with experience, I don't recommend beginning gardeners try to transplant cucumbers.

Other plants are just easier to plant directly in the garden rather than try to plant indoors or transplant. Crops with large seeds like beans, peas, and corn fit into this category. While they take transplanting better than cucumbers, it's just not worth the trouble. Plus, with these types of crops, you need to plant so many in order to get a good harvest, you'll spend a lot of time and resources (seed starting mix, indoor lights, your time, indoor space, etc.) on these crops. It's better to use those resources for other crops that need that indoor head start.

BEANS AND COWPEAS

Beans and their cousins, cowpeas, are easy to direct sow and in the right conditions will germinate within days. Most of the time, for a good sized harvest, we plant more beans than we'd want to allocate the space to start from seed indoors.

CORN

Same as beans, starting corn seeds indoors is an even bigger issue when it comes to quantity. Corn is wind-pollinated and needs dozens of plants for each kernel of corn to fill out. At a minimum, you'll want 4 rows, with each row 8 feet long. At a plant spacing of 12" you're looking at 32 plants and that's the bare minimum. I would recommend doubling that at least.

CUCUMBERS

They don't like their roots disturbed at transplant, and if they do survive a transplant, one cold night for a young cucumber plant can be fatal.

CARROTS

As a root crop, carrots like to grow in the same place they germinate. Plus, with carrots' tiny seeds and tiny seedlings, transplanting carrots is cumbersome. I've tried it in soil blocks and it was not worth the extra effort.

SPINACH

While I've successfully sown spinach from seed indoors (especially for a fall crop when the soil is too hot for the seeds to germinate), I've found spinach prefers not to be transplanted. It does not grow well in warm weather, so when the conditions are right -- namely, cool to cold -- they will germinate and grow just fine directly where they're sown in the garden. Plus, spinach develops a taproot that most greens do not, which also makes transplanting it tricky to do without harming the root.

GREENS

While most of these plants will take to transplanting just fine, they are so easy to directly sow into the garden, most of the time it's not worth the resources to start them from seed indoors. Often I start lettuce from seed indoors to get a jump on the spring or fall season, but with the right soil temperature, they will germinate well directly sown.

PEAS

Many gardeners transplant peas with good success. I've never done it because they are, like beans, simple to direct sow in the garden. They sprout quickly even in cool soil. And unless you just want a few snap peas for snacking, you'll be planting more plants than it might be worth to start indoors.

RADISH

Like carrots, radishes don't want to be disturbed. Plant them where you want them to grow and they'll sprout quickly and mature fast.

KALE

It's hard to go wrong with kale. They sprout easily and grow well in cool weather, but some types can be fairly heat-tolerant. While you can start kale seeds indoors, they're easy to direct sow.

MELONS

While starting melons from seed indoors may be necessary if you have a short growing season or if you want to make sure to get a large watermelon to full maturity, ideally they like to start where they'll finish growing.

SQUASH/ZUCCHINI

Similar to melons, it's possible to transplant squash or zucchini, but like cucumbers, they're a bit fussier when it comes to transplanting them. If you're a new gardener and you're not in a rush to get these in the ground, wait until the ground has warmed up and direct sow. If you do need to start them earlier indoors, only start them about 3 weeks before you intend to transplant them. That way they don't risk becoming root-bound in the container, which can hinder their growth.

OKRA

Unless you live in a short-season climate, okra is best to directly sow in the garden. In warm soil, it sprouts quickly and thrives in the heat. If you live in a short-season climate, you can start these indoors or transplant; just be careful not to start too early because okra develops a taproot and you don't want it to outgrow the container before you can transplant it in the garden.

DILL

Dill sprouts quickly in the garden soil, but I've had trouble trying to start it from seed indoors. Save yourself time and headache and plant it directly in the garden.

BASIL

Basil is easy to grow indoors and transplant, but it's just as easy to direct sow in the garden. If you want an early basil crop, they transplant well, but if you're pressed for indoor seed starting space or don't want to buy a transplant, sow these seeds directly in the garden.

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This may not be an entire list of vegetables and herbs to direct sow, but they are the main ones. Keep in mind, you may find veteran gardeners breaking some of these "rules," but know that most likely they have a specific purpose in mind, and they've developed enough experience to do so successfully. For a beginning gardener, I recommend getting the hang of direct sowing these crops before venturing into experimenting. Don't worry -- you have plenty of time to experiment and break the rules, but get some success and knowledge of how these plants grow under your belt first.

And the best part about direct sowing? It's cheaper (no buying transplants) and it's easier (no indoor seed starting!). So direct sowing as much as you can is an investment in saving time and energy in the garden!

TIPS:

- Direct sowing is almost always cheaper and easier than buying and planting transplants.
- Some plants simply don't like to be transplanted, so direct sowing those is the best option altogether.

3 KEYS TO SUCCESSFUL DIRECT SOWING

Direct sowing is not just a matter of choosing which crops to plant from seed. For you to have success with directly sowing seeds in the ground, you need to understand three important factors.

KEY 1: SOIL TEMPERATURE

First is the critical role of soil temperature. This is one I learned the hard way. Certain seeds simply will not germinate in cool soil. I recommend investing in a soil thermometer and finding a resource that lists the ideal soil temperatures for specific crops. (You'll hear me talk about my online garden planning course, Dream to Garden, and in that course I have a cheat sheet that lists the ideal soil temperatures by crop.)

But even without a soil thermometer or a soil temperature chart, know that there is a correlation between whether a crop thrives in warm weather (like cucumbers) or cool weather (like spinach) and the optimum soil temperature.

Cucumber seeds need warmer soil and will not germinate in cool soil, and spinach seeds need cooler soil and will not germinate in hot soil. Those are two extremes but you get the idea.

This is also a good time to talk about mulch. In the spring, rake aside any mulch that may already be on your garden. This will allow the soil temperature to rise more quickly so you can plant sooner. Plus, you never want to plant seeds in mulch anyway. Once the seedlings are about 6” tall, you can return the mulch for weed control and moisture regulation. That brings us to factor number two: soil moisture.

KEY 2: SOIL MOISTURE

Second, soil moisture plays a role in the success of a direct-seeded crop. The soil needs to be not too wet but not too dry for a seed to sprout. Sometimes my bean seeds failed to germinate not because the soil temperature was too low but because the ground where I planted them was too saturated. This can be a problem with wet spring seasons, and it has maddened me to no end some years. On the opposite end, soil that dries out before a seed has a chance to grow roots will often die off before you even know germination has begun. In that case, you keep waiting for the seed to sprout, not knowing that it died off early.

Ultimately, you want your soil to be about as saturated as sponge slightly squeezed. I’ve also learned to let nature be my guide. If the soil is too saturated at the time I want to plant, I just need to give it some more time. You’ll be surprised how quickly soil dries out on a comfortable spring day. If you’re concerned about the soil being dry, just plunge your finger in the soil at the depth the seed was planted, and see if you feel moisture. A good thing to know is the smaller the seed, the more shallow it will be sown, which means the soil will dry out more quickly.


KEY 3: SEED DEPTH

That brings us to factor number three: seed depth. A general rule in planting seeds is to plant the seed at twice the depth as the seed is long. For a large bean seed, that will be about an inch or two. For a small carrot seed, you're barely going to scratch the seed into the surface of the soil.

While this doesn't have to be precise -- you don't see veteran gardeners planting seeds with a ruler -- try to find the sweet spot between deep enough that the soil's moisture is fairly stable (and not prone to drying out on a warm, dry day) but not too deep that the sprout doesn't have enough energy to reach the surface. For smaller seeds like carrots and lettuce, you'll need to water more often simply because they are closer to the surface, where the soil dries out more quickly.

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Soil temperature, soil moisture, and seed depth are three factors that if you get them right, you should see your seed germinate within a week or two.

In the next lesson, we'll talk about which plants are best given a head start by growing indoors -- and whether you do it yourself or you purchase from a garden center.

TIPS:

- Purchase an inexpensive soil thermometer to make sure the soil temperature is optimum for germination.
- Measure the soil's temperature as close to sunrise as possible.
- Plunge your finger into the soil to the second knuckle to ascertain soil moisture, or purchase a moisture meter.

WHICH SEEDS TO ALMOST (ALWAYS) TRANSPLANT

We just talked about which crops I believe are best fits for direct sowing in the garden. Now let's talk about which ones almost always need to be transplanted. Thankfully, it's a much shorter list, but first, let's understand why some plants are best suited for transplant.

The main reason is timing.

For warm weather crops like tomatoes and peppers, starting them indoors about six weeks prior to transplanting them into the garden gives them a head start. This is more important in some climates than others. In my climate, with hot summers, I get a better harvest when my tomatoes mature before the heat sets in. On the opposite spectrum, gardeners with shorter growing seasons need the head start to get a good harvest in before the cool fall arrives.

For cool weather crops like broccoli, starting them indoors ahead of time -- whether in the late winter for an early spring planting or in the mid-summer for a fall planting -- ensures they're growing in the garden at the optimum time.

For a spring planting, this gives them every chance to come to a full head before heat sets in and causes them to bolt, ruining the harvest. For a fall planting, this allows them to, again, develop a full head before either the day length stops the growth or freezing temperatures kill them altogether.

For the list of plants that I almost always recommend transplanting into the garden instead of direct sowing, you have two options. One is to start them from seed indoors yourself. This is what I do.

The other is to purchase the transplants from a local nursery or garden center. While this will be a more expensive option per plant, it may actually be more economical if you only have a few and you don't have supplies for indoor seed starting yet.

Some new gardeners opt for buying all transplants their first year, getting the hang of gardening in general, and then they move to indoor seed starting as they gain experience gardening. Either way, choose what works best for you for this season!

Here is a list of plants I always recommend transplanting into the garden, whether you start them from seed yourself or purchase transplants:

TOMATOES

As mentioned earlier, they can use the head start in most growing areas. Another benefit to transplanting tomatoes is that when you transplant them, you bury them deeper than they grow in the pot. This allows them to grow more roots along the stem (something unique to tomatoes), which helps the plant not only better access nutrients and water, but it also helps keep them stable in spring winds.

PEPPERS

Peppers take a long time to grow from seed, and they can use the head start. They also languish in cool soil and cool weather, so they can't be transplanted in the garden as early as other garden crops.

Because of their longer growth time and their fondness for hot weather, I start them from seed at the same time as my tomatoes, but I transplant them into the garden 2-4 weeks later.

BROCCOLI, CABBAGE, CAULIFLOWER, & BRUSSELS SPROUTS

These long-season brassicas need the head start so they can grow in their optimum season -- cool weather. Gardeners like me in warmer climates have better success growing these as fall crops, and if we want to grow them in the spring, we have to start them from seed in mid-winter.

ONIONS

Unless you want to grow onions for their greens only (as green onions or scallions), onions for bulbs can be difficult to grow from seed. They require such a long growing period that timing is tricky. For that reason, I recommend new gardeners stick with planting either onion sets (mostly long-day onions for gardeners in the north) or transplants (mostly short-day or intermediate day onions for gardeners in the south and middle of the US).

MOST HERBS

With the exceptions listed in the section on which crops to plant from seed, I recommend planting most herbs as transplants, and I recommend buying those transplants from your local nursery or garden center. Starting herbs from seed can be slow and frustrating. More than once, I've given up because of their long germination time. Sometimes they've powered through anyway, but other times it was all a futile effort. Because of this, I recommend newer gardeners (and even veteran gardeners with too many irons in the fire to mess with starting herbs from seed) to buy transplants of their favorite herbs like mint, lemon balm, thyme, rosemary, oregano, sage, parsley, and others.

The good part about the plants best suited for transplant is that comparatively speaking, there are few. That way, if you're just beginning with indoor seed starting, there's no need to get overwhelmed with starting everything indoors. Or, if you're buying transplants, there's not that many you need to purchase. But knowing which ones are best helps you not only plan your purchases but also plan best where to spend your time and energy.

If you do want to try your hand at indoor seed starting, in the next section I will go over different levels of indoor seed starting to help you know how and where to get started, and which plants to choose first.

TIPS:

- Know which crops are best suited for warm or cool weather; this will determine when plant.
- Most perennial herbs are more difficult to grow from seed; opt to purchase transplants.
- Local nurseries and plant sales often have better deals and selection than big-box stores.

4 LEVELS OF INDOOR SEED STARTING

If you're interested in indoor seed starting, you probably have many questions. Although we won't go into the minutia of "how" to start your seeds indoors in this ebook, today we're going to talk about something I don't hear anyone telling beginning gardeners. It's something I stumbled upon by accident in my own gardening journey, and I believe a full understanding of it will help you become more successful starting your own seeds indoors.

What no one really talks about is that in my view, there are "levels" of starting seeds indoors. Knowing these levels is good news because you can identify which level you need to start with and also have a plan for increasing your indoor seed starting as your experience grows.

I started out my first season at the beginner's level, only starting a handful of seeds indoors. Now I start almost all of my seeds indoors that I don't sow directly in the garden. (My main exceptions are herb transplants.)

Starting seeds indoors gives a sense of accomplishment that goes beyond planting in the garden, and from a practical standpoint, in the long-run it's more economical. Plus, when you start seeds indoors, you have more varietal choices of what you'll grow than what you can purchase at your local nursery.

Let's talk about the four levels of indoor seed starting I've identified through my own gardening experience. As we discuss them, find which one fits you best and make your plans accordingly.

BEGINNER

The first level I call the Beginner's Level. In this level you're focused on three basic warm season crops: tomatoes, peppers, and basil. These three are fairly easy to grow indoors and are planted at the same time inside.

You'll need a grow light, of course, but as long as you're not feeding the whole community, just one inexpensive LED grow light should sustain 12-16 plants. A seedling heat mat is helpful to speed germination, but if your house stays warm you can get by without it. (Or just put your seed trays on your clothes dryer or refrigerator until the seeds begin germinating.) Other equipment you'll need is seed starting mix seed starting trays. A seed starting kit is a great choice for beginners.

As I mentioned, you'll plant these three plants from seed at the same time -- about 6 weeks before your average last frost date. In most cases, when the seedling has grown to over 2-4x the depth of the tray, you'll need to transfer the seedling to a larger container -- also known as "potting up." I have used solo cups with holes poked in the bottom for this, but there are other options.

After a hardening off period, where you gradually introduce your seedlings to the outdoors, little by little, you'll transfer these plants into your garden space. Tomatoes and basil can be planted after your last frost, and peppers follow 2-4 weeks later.

If you're a brand new indoor seed starter, I recommend you focus on these crops your first season. But if you're a go-getter or you're ready to expand on this level, you can move to what I call the Beginner Plus.

BEGINNER PLUS

In the Beginner Plus level, you'll add to your tomatoes, peppers, and basil some cool weather crops of your choice. Popular options are lettuce, cabbage, broccoli, and kale. The main difference in these crops is that you'll start them indoors earlier. Since they go in my garden about a month before my average last frost date, I usually start them 3-4 weeks before my tomatoes, peppers, and basil, or 9-10 weeks before my average last frost date.

Since these crops will only share grow light space with the tomatoes, peppers, and basil, you can get away with using the same grow light, eliminating the need for another light. Often, too, by the time I start my warm season crops, I can begin letting the cool season crops get sun outside during the day, eliminating the need for them all to share the same grow light.

Another difference in these crops is that in many cases, I don't have to pot up these plants before they go into the garden. For this reason, these crops are easy additions to your indoor seed starting routine.

INTERMEDIATE

If you've mastered the Beginner Plus level and are ready to move up in your indoor seed starting adventure, you might want to consider starting peas, beets, melons, squash, and zucchini indoors. I call this the Intermediate Level, but these plants are a bit more challenging to grow indoors. The biggest challenge -- and what sets them apart from the others -- is the timing.

While the plants in the Beginner and Beginner Plus level usually grow indoors for 4-8 weeks, these plants won't need that long. You may think this is a good thing, and in a way, it is. But the challenge lies in the fact that they are more picky about when they get transplanted. Leave them inside too long (or more commonly, start them too soon and you can't plant them outside when necessary), they will at best become stunted in their growth and at worst die altogether.



The benefits to giving these crops a head start indoors are numerous. You can beat certain insects and diseases. In the case of squash and zucchini, and get a bigger harvest before having to battle squash bugs, powdery mildew, and more. You can ensure the plant grows for the longest in the garden in its optimum conditions, like with melons. You can give peas, which stop flowering in hot weather, a head start for optimum production in the spring. You can start beets in a controlled environment to aid germination. These are just a few reasons why some gardeners bump up to this intermediate level with these crops.

The key here is to transplant them early, before the roots start circling the container. This is especially true with melons and squash. Wait too late to plant them in the garden, and they won't do well.

Because these are intermediate level crops for indoor seed starting, it's my opinion that you wait until you have a handle on the first level crops before trying these. But if you do start with these, watch them carefully. If it doesn't work out, adjust next time with the new knowledge you attain in the process. Most successful gardeners become that way by testing and adjusting, so be prepared for this. Embrace the journey!

Finally, we come to the level of indoor seed starting that I call Advanced. Some seeds require extra special attention.

ADVANCED

Flowers like echinacea and milkweed need to be cold stratified. If that's a new term for you, it means the seeds need to be placed in a cold environment -- simulating winter -- before they will germinate at a good rate. You can look up the details if you're ready to tackle this, but I just planted my seeds in trays and placed the entire tray in a half-closed zip loc bag in a refrigerator for a month. After a month, I brought the seed tray inside my grow room and put it under lights. Seed catalogs will usually specify which seeds require this treatment.

Some seeds germinate best when their seed coat is nicked slightly, a process called scarification. Seeds that benefit from scarification are those with hard seed coats. Scarification helps the seed absorb water, necessary for germination.

Seeds that can benefit from scarification include nasturtium, beans, okra, and some specific flowers. I've never done this, personally. Beans and okra do just fine when I direct sow them in my garden, but sometimes I struggle with nasturtium, which I start indoors. My limited observation in this area is that if you're starting any of these seeds indoors -- in a controlled environment -- these seeds may benefit from scarification. Direct sow them in the garden's optimum conditions, and with the right soil temperature and moisture level, they can usually figure it out on their own.

Finally, I'd list some notoriously difficult-to-germinate seeds under this "Advanced" category. Examples are parsley, lavender, and cilantro. Personally, I've started all of these seeds indoors with [limited success], but because they aren't dependable, and they can take a very long time to germinate, I generally skip trying to start these indoors. But, if you've mastered the other levels of indoor seed starting and like a challenge, hone your skills and try some of these more challenging seeds.

As we conclude, my question to you is two-fold. First, at which level would you describe yourself now? Second, which level do you want to achieve this year? My goal in dividing these indoor seed starting levels is to help you challenge yourself while not starting at a more difficult level than you need right now. New gardeners who try crops at more advanced levels find themselves frustrated and they don't understand why they can't get certain seeds to grow indoors, or the transplant isn't successful. They don't realize that some plants are simply easier than others. Start with the easier crops and go from there. Before you know it, you'll advance through the levels and become an expert indoor seed starter in no time.

TIPS:

- Be prepared to "pot up" plants after they outgrow their seed starting space.
- Avoid planting too many seeds per cell; you'll need to "thin" them before they begin competing with one another, and this is a waste of seeds. Plan for 2-3 seeds per cell, culling to the strongest one after they develop leaves.

GETTING STARTED WITH INDOOR SEED STARTING

Now that you know which seeds are best directly sown into the garden and which ones you can start indoors, you've passed the major hurdle of most aspiring seed-starters. But I don't want to just leave you with "what;" I want to give you a few basic principles that will help guide you as you begin.

Consider this the most basic primer. There is no end to youtube videos, podcasts, books, and articles on indoor seed starting, and I recommend you learn from other gardeners in these areas. But from my experience, there are some basic points of knowledge that I think many beginners don't get from these sources. In this section, I'll give you my viewpoint on what a beginning seed starter needs to know about the most critical elements of indoor seed starting: light, soil, and water.

LIGHT

The most common question beginners ask is this: "Do I need a grow light?"

My basic answer is yes. Are there exceptions? Maybe, but I've seen only a few and they don't apply to most beginners. Even if you have a sunny, south-facing window, if you're starting seeds in January, February, or even March, the sun's angle and length of day isn't enough to get seedlings off to a good start. I started out with an inexpensive LED light, and that's what I recommend if you're just getting started.

It's VERY difficult to save leggy seedlings, and that's what most gardeners who rely on sunlight end up with. Make sure you read the directions on your light and put the light at the right distance above the seedlings. Most lights need to be very close, just a few inches above the seedlings.

SOIL

Second, let's talk soil. This is an easy one. Get a seed starting mix. Most seed starting mixes should work, though I've seen gardeners have mixed results with coir-based mixes. I also don't recommend peat pots generally. I started with Jiffy seed starting mix and it always worked great.

WATER

Finally, water. It seems so simple -- plants need water -- but overwatering can be just as fatal to a seedling as underwatering. Go back to the soil analogy we talked about in an earlier video. You want the soil to have the moisture of a sponge squeezed slightly. A humidity dome or plastic wrap can help keep moisture in the soil of not-yet-sprouted seedlings so you don't have to worry about dislodging the seed with an overhead stream of water.

When the seedlings sprout, add water to the bottom of the tray until the soil takes up the water when the soil dries out. How do you know when the soil has dried out? I use weight as my guide. Every day, pick up your cell tray so you can get a feel for the weight when it's full of water. That way you can tell when it's dry. The top of the soil isn't reliable since the top will often dry out first, especially with hot lights. It's the root zone that's most important, anyway.

Having adequate light, a good seed starting mix, and a proper level of soil moisture will help your seedlings get the start they need.

Next, for our final lesson, we'll chat about the differences between heirloom and hybrid seeds so you can make the decision that's best for you.

TIPS:

- Do not try to start seeds indoors without a grow light.
- Saturate the seed starting mix BEFORE planting the seeds for best results and even moisture.
- Only sow seeds double the width of the seed -- the same principle of direct sowing applies here.

HOW TO CHOOSE BETWEEN HEIRLOOM & HYBRID SEEDS

Have you ever thumbed through a seed catalog and noticed the different labels or descriptions placed on seeds? Each catalog is different, but the most common designation you'll find is the descriptor of whether a seed is heirloom, open-pollinated, or hybrid.

You'll find many gardeners are passionate one way or the other on what kind of seed they choose. Others really don't care; they just choose what looks good to grow.

But as a new gardener, what do these terms really mean, and is it important to choose one or the other?

In my personal experience, and in my personal opinion, I don't think there's a one-size-fits-all answer. It depends. It depends on the crop, it depends on the climate, it depends on your personal preferences, it depends on your goals.

Today I want to define these common terms and help you identify which you may want to choose for your particular garden or for a particular crop you want to grow.

HEIRLOOM OR OPEN-POLLINATED

For this discussion, I will refer to both of these as “heirloom.” Technically heirlooms are always open-pollinated, but open-pollinated varieties are not always labeled as heirloom. And different seed companies designate heirloom differently. Confused yet? Yeah, it can get complicated. Simply put, heirloom and open-pollinated seeds are pure varieties. They have not been intentionally crossed with another variety, and as such, their seed can be saved from one year to the next. “Heirloom” simply designates a variety as having been known for at least 50 years, depending on the seed source.

HYBRID

Hybrids are varieties whose seeds form from intentional crosses between two parent plants -- different varieties of the same kind of plant. Hybrids are not genetically modified and actually happen in nature. If I grew a squash and a zucchini plant in my garden, the resulting fruits’ seeds would be hybrid because of the cross-pollination of bees. The difference between this and the hybrid seeds you purchase is that these crosses were intentional, bred for the resulting variety to have the best traits of both parents. Unfortunately, hybrid seeds can’t be saved with any certainty that the resulting plant will be the same. It could be, or it could become one of the parent plants, or it could be sterile.

With those definitions out of the way, why would you choose one over the other?

WHY CHOOSE HEIRLOOM SEEDS

Most gardeners who choose heirloom varieties for their entire gardens do it for three reasons:

1. Nostalgia -- being a part of the history of a plant
2. Unique flavors and appearance
3. The ability to save seed

Truly, heirlooms are special. Knowing the history of a particular plant gives the gardener a part of that history and the ability to pass it on to future generations.

With today's modernized agriculture, unique strains of plants are being lost without home gardeners to pass them on.

You will also find some of the most complex and unique colors and flavors from heirloom plants. Think of the Cherokee Purple Tomato or yellow carrots. With heirlooms, you aren't limited to bland grocery store cookie-cutter vegetables. You can grow something truly unique.

Saving seed, once the backbone of food production, has become lost in our industrial age. Yet the tide has shifted as more gardeners saw the weak links in the food chain during the pandemic. When we save seed we're preparing for our next gardens and we're saving money on future buying. But more than that, seeds and plants as living, evolving creations, adapt to environments. The most successful seed savers choose the best plants from which to save seed and thereby over the years are able to cultivate those nuances that make the strongest characteristics of a plant grow even stronger.

WHY CHOOSE HYBRID SEED

So, with all the praises I just sang about heirloom seeds, why on earth would a gardener choose a hybrid seed? Most gardeners who choose hybrid varieties of particular crops do it for three reasons:

1. Specific disease or pest resistance
2. Specific desirable characteristics obtained in the breeding process
3. They're not planning on saving the seed anyway

The most compelling reason to choose a hybrid variety is for disease resistance. As much as we love heirlooms, they have a reputation for not always being able to withstand all attacks against them, and choosing a hybrid will highly depend on any disease issues in your own garden or climate. In areas where certain tomato wilts like fusarium or verticillium are rampant, choosing a hybrid with resistance to these wilts is wise (although, some heirloom varieties have been identified as having some resistance to certain diseases -- in either case, this resistance will be listed in the seed catalog). If you know your climate or garden has an ongoing disease issue, it's a good idea to consider a hybrid bred to contain a level of resistance.

Another reason to choose a hybrid is for a specific desirable trait. Though I have only tried a handful of hybrids in my garden, I can give you two examples.

One is the Ambrosia cantaloupe. I've tried many heirloom cantaloupe varieties, but they don't compare to the taste of the Ambrosia. I'm sure I could keep trying to find a tasty heirloom, but at this point, I grow Ambrosia every year for flavor alone. The other example is the Juliet tomato. In my Arkansas summers when my heirloom tomatoes stop setting fruit in the heat of August, Juliet keeps right on producing.

Finally, you may choose a hybrid if you have no intention of saving seed. For example, because I plant multiple squash varieties simultaneously, I know I won't be able to save those seeds. Because of that, I may choose an heirloom because of flavor or another unique characteristic, but because powdery mildew is an issue in my climate, I choose hybrid varieties that resist that disease better than an heirloom. And because I don't plan to save seed, I can choose strictly based on my end goal.

We've touched on just the basic points of heirloom and hybrid seeds. Truly, if you ever dive into the science and experimentation that goes into plant breeding -- whether by hybrids, saving the best of heirloom varieties, and more -- it's truly a fascinating subject. But for your purpose as a home gardener trying to choose the best seed for your garden, hopefully these explanations have helped you understand which seed might be right for you. You may want an heirloom-only garden. You may not care either way. Or you may be like me and default to heirloom but intermix specific hybrids for specific purposes. The good news is trying new varieties is an endless pursuit and one that will give you years of enjoyment as a gardener.

Have fun with it!

TIPS:

- Hybrid seeds are often more expensive; be prepared.
- If you plan to save seed, research how far one variety must be from another, to avoid an unintentional hybrid pairing.
- If a variety has disappointed you in the past, try something new next season!

WHAT'S NEXT

This concludes our discussion on what you need to know before you sow. I hope you've found this guide helpful as you begin and pursue your own gardening journey!

For more resources expounding on concepts here, consider my garden planning course Dream to Garden, which helps you plan when to plant these seeds and transplants we learned about. The doors only open a few times per year, so if it's not open now, get your name on the wait list and I'll let you know when it opens next!

CONTACT ME:

Jill McSheehy | The Beginner's Garden

journeywithjill.net | jill@journeywithjill.net

Dream to Garden: journeywithjill.net/dreamtogarden