

# Did You Choose The Proper Seeds For Planting?

Planting fruits, vegetables, and herbs is easy – you just toss some seeds into some dirt, add water, and wait for them to grow, right?

Well, in the most basic ways, yes. But if you want to grow quality plants and preserve your seeds long-term, you need to put a little more effort into finding quality seeds.

A tomato seed is a tomato seed, right? Wrong. It's a good thing you're reading this article! There are different types of plants, thus different types of seeds, and which type you choose will drastically affect the quality of future generations of plants.

Here's how to make the smart choice for growing healthy crops!

## You Need to Know the Types of Seeds

### GMO Seeds

GMO stands for genetically modified organism. What it means is that scientists take a standard seed or seeds and add organisms to the DNA strands of the plant. They may do this to make the plant more resistant to disease, or to make it grow denser in smaller space. Regardless of why it's modified, the seeds from these plants may not sprout, or thrive even if they do.

### Hybrid Seeds

These seeds have been made by pollinating one strain of plant with a different strain of plant. This is usually done to create hardier plants or plants with the best features of each parent plant. By doing this, hopefully, you'll get the results

that you want.

However, future generations of seeds are unstable. It's sort of like breeding "boutique" dog breeds. For instance, a puggle is a cross between a pug and a beagle. Don't get me wrong – I'm not making fun of this breed because I have one that sleeps with me every night. I'm just saying that, even though he's adorable, the mix was unreliable.

He could have been born looking like a pug with spots, super long ears and a long, straight tail, or he could have been born looking like a beagle with a curly tail and a long snout. There are a million variations that could have happened, and you can see that for yourself just by searching "puggle". And even by breeding him to another puggle, there's no telling what the puppies would look like.

Anyway, you get the idea about why hybrid seeds may not be the best way to go if you're going to store seeds for survival.

### Organic Seeds

Don't let the name fool you. The term "organic" simply means that the seeds were obtained from plants that were grown using natural methods. That's it. They may still be hybrids or from GMO plants.

### Heirlooms

These are seeds that have been handed down from generation to generation. They're going to grow the same type of plant and produce the same type of fruit each season and the yields will be similar, given similar growing circumstances.

# Why You Should Grow HEIRLOOM SEEDS

## What is Heirloom?

Heirloom seeds come from open-pollinated plants that pass on similar characteristics to the offspring plants. Depending on how they are grown, heirloom plants can be organic or non-organic.

## vs. GMO & Hybrid



### HYBRID

When different varieties of plants are cross-pollinated to create offspring plants that ideally obtain the desired characteristics from each parent plant.

Although hybrids do offer many benefits, they don't breed true, which means the offspring plant may not be identical to the parent plant.

### GMO

When the seeds are genetically modified using unnatural methods like gene-splicing to ensure resulting plants are displaying desired traits.

Gardeners are unable to save GMO seeds after harvest and must buy new seeds every year from companies like Monsanto.

## Benefits of Heirloom

Along with the benefit of being able to save your own seeds, heirloom plants also provide the following benefits.



Better Taste & Flavor



More Nutritious



Less Expensive

## Where to find them

Preserve the genetic diversity of our plant species today by growing heirloom seeds. Here are a few places where you may be able to get them locally.



Seed Exchanges



Local Farms



Botanical Gardens

## Credits

Check out [OrganicLesson.com](http://OrganicLesson.com) for more gardening tips and tricks.

<http://blog.seedsavers.org/blog/open-pollinated-heirloom-and-hybrid-seeds>  
<http://foodsecurity.uchicago.edu/research/preserving-seed-diversity/>  
<http://www.motherearthnews.com/organic-gardening/heirloom-vegetable-advantages.aspx>  
<http://gardening.about.com/od/vegetable1/f/Heirlooms.htm>

The only warning that I have about heirloom seeds is that you should make sure that the seeds will grow to crop in whatever area you intend to bunker down in.

### Open Pollinated Seeds

These are seeds from plants that have been grown and allowed to be pollinated as nature intended – by local birds, wind, etc. They're more genetically diverse, which allows plants to slowly and naturally adapt to local growing conditions. As long as the pollen isn't shared between different varieties of the same species of plants, these seeds will remain true-to-form every year.

## **How to Test the Quality of Seeds**

This may be putting the cart before the horse if you're storing your own seeds but many new growers overlook a critical step in planting crops – making sure the seeds will germinate. If you're planting seeds to grow food for survival, you could starve to death waiting for the seeds that you plant to grow.

Fortunately, it's easy to tell if a batch of seeds is going to grow. There are a few germination tests that you can use instead of just tossing the seeds in the ground and hoping for the best.

### Water Test

Maybe you've found a really good deal on a batch of seeds at a trading event or even a yard sale, but will they grow? Toss them in a glass of water and wait a few minutes. If the seeds sink, they're good. If they float, they're not.

### Test Germination Run

Put at least 10 seeds from a single batch onto one half of a paper towel then fold the other half of the towel over the

seeds. Spray it down with enough water to moisten the towel. It may be helpful to spritz it with a 1:10 bleach to water ratio to keep them from molding.

Place them in the baggie and only partially seal it so that air can still get in. Label the bag and start a record with the date and how many seeds were started. Store it in a warm, dark place and dampen the towel as necessary to keep it from going dry. Within a couple of days, you should start to see germination.

Note daily how many seeds either germinate or mold and remove those seeds from the bag. All seeds will germinate within 14 days if they're going to.

Now, divide how many seeds germinated by how many seeds you started with and you have a pretty good idea of the germination ratio of your batch. Even if only half of them germinate, but they do it quickly, you may want to just plant twice the seeds instead of tossing the batch. If the germination ratio was low and they germinated slowly, you may just want to toss them.

Now that you've found some great seeds that you know will grow where you need them to, you need to store them.

## **Preparing Seeds for Storage**

This is an extremely important step in storing seeds so that they don't go bad, but it's fairly simple.

First, you need to decide if your seeds will germinate if you dry them. Seeds that can be dried are called desiccation-tolerant. Most garden plants fall into this category and can be dried and stored long-term. Desiccation-intolerant plants produce seeds that won't germinate if dried, but they can still be stored short-term. Some seeds, such as citrus seeds, are semi-tolerant which means that you can dry them but that

they lose viability quickly and germinate slowly once they're dried.

### Preparing Desiccation-Tolerant Seeds for Storage

These seeds are great for storing dried because during natural the ripening and drying process, they're preparing to go dormant. Most of their physiological processes slow down or stop altogether and they convert food reserves from sugars to fats and starches.

As a matter of fact, many seeds REQUIRE drying and a dormancy period before they can ripen, go dormant, and germinate again. Dry your seeds slowly and thoroughly using the sun (if you're in a low-humidity area) or a low-humidity, airy environment such as your air conditioned counter. You want the relative humidity to be between 30-40%.

Spread them on a tray or baking sheet 1 or 2 seeds deep. Most seeds should be dry in 1-2 weeks though larger ones will take a bit longer. You don't want them to be zero moisture, but they should be hard. For instance, corn should be dry enough to require a hammer to break it and squash seeds will break instead of bend.

### Preparing Desiccation-Intolerant Seeds for Storage

You can store these seeds for up to several months with some seeds by keeping them in cool, moist condition. Put them in a container with damp material such as peat moss or damp paper towels. Choose a container that allows at least some airflow (poke holes in the lid or leave the lid loose). They have to continue the respiration process to remain viable.

Store in the fridge but don't let them dry out or freeze. Plant them ASAP because they will eventually mold or rot.

# What About Storing Seeds?

If stored properly, seeds can last for years. To remain viable in storage, seeds need a proper temperature and moisture level. If there's too much moisture and enough warmth, seeds will germinate; not exactly what we're looking for!

Here are some tips:

- Keep the seeds out of light. They should be stored in a dark place or in opaque containers.
- Store in waterproof (actually, moisture-proof) container. Tossing in an oxygen absorber will help, especially if you're in an area that has an average of greater than 30% relative humidity.
- Store in an airtight container. Mylar bags are great, but baggies, mason jars or Tupperware containers will work, too.
- Keep seeds cool – under 40 degrees F and avoid fluctuations of temperature.
- Rotate your seeds on a first-in-first-out basis just like you do the rest of your supplies.
- Always, always, always perform a germination test before you plant your seeds.

If your seeds sweat inside the container, you haven't dried them enough and need to take them out immediately and finish drying them before they mold.

That's what you need to know to make a smart choice about your planting. And believe me, you will need this knowledge, because things are going to get from bad to worse about our food independence! **CLICK** on the banner below to find out more!



## **The 3 Pioneer Survival Lessons We Should All Learn**

[Watch Video »](#)

*This article has been written by Theresa Crouse for [Survivopedia](#).*