

## Why Heirlooms (Open-Pollinated seeds)? What advantages do they have over hybrids?

### **Flavor, flavor, flavor!**

One of the first reasons people grow [heirloom or open-pollinated seeds](#) is the flavor. Hybrids are bred for many characteristics such as uniformity (in shape or harvest time), high yields, withstanding rigors of transport, etc. But, sadly in the breeding process the desirable characteristics like flavor and nutritional value suffer. There's truly nothing as delicious as a sun-ripened home-grown tomato. You [tomato](#) lovers out there know just what I mean when I say we suffer each winter, waiting for the first delicious tomatoes of the next garden season. :-)

### **Higher nutritional value**

Interestingly, studies have shown [heirloom or open-pollinated vegetables](#) to be significantly higher in vitamins and minerals than their hybrid counterparts.

### **Seed saving ability, with true-to-type results.**

With hybrid plants the seeds you may try to save from them are often sterile, or if the [seeds](#) do produce, they revert back to either a parent plant, or a mutated version of both parent plants. Not exactly what you want when trying to [save seeds](#) from a plant you liked the fruit from!

### **Ability to adapt seeds to your own garden.**

One awesome benefit of growing and saving your own seeds is that over time you can "develop", so to speak seeds/plants that are well adapted to your own garden. Year-after-year saving of seeds gives you seeds that have "learned" how to adapt to your garden and gardening methods. "Take a nice, old variety that has a lot of redeeming qualities, and select what performs well in your garden and [save those seeds](#), and you can create your own locally adapted variety."

### **Longer harvest time instead of one big "uniform" harvest time.**

Hybrids are most frequently bred for a uniform harvest, all plants coming to maturity at one time, to allow for one big harvest, getting it all done in one fell swoop. This may work well for the commercial grower, but it is not really practical, or even desirable, for the home gardener.

## **Tried and true varieties.**

By the very fact that heirloom/open-pollinated varieties are “old” varieties, we know they have stood the test of time proving their excellent characteristics. The [seeds](#) that we have today are the result of careful selection for the earliest, hardiest, juiciest, best tasting, most healthy and heat/cold/disease tolerant varieties that were grown. These are the reasons they have been favorites for so many years!

## **Preserving seed diversity**

There is a big problem many are unaware of with the influx of hybrids, and the lack of seed saving. Many gardeners just buy their hybrids seeds, plant them and go about unaware. Numerous seed varieties are becoming increasingly rare and hard-to-find or some are just plain becoming extinct. This decrease in the diversity of seeds/plants is concerning. Why is seed diversity important? Seed varieties all have varying traits, including disease and pest resistance. When only a small number of varieties are popular and grown everywhere, then what happens when widespread disease or pest infestations happen? The crops that are susceptible fail, severely affecting food supply. This is exactly what happened in the well-known Irish Potato Famine. This is not the only concern, really. It is also sad to lose varieties that have been preserved, often times for hundreds of years, generation to generation. By growing the great heirloom varieties available, we are playing our part in keeping them going, preserving this piece of living history.

## **Organic Gardening: The basic why's and how's of growing organic.**

[Organic gardening](#) was for a while seen as something only the super health-nuts or hippies did. But, not so anymore, we are all becoming aware that the methods of gardening with chemicals that have become popular in recent generations are no healthier than the awful stuff called margarine. The more research that has come out showing the terrible side effects of synthetic fertilizers and the chemicals in commercial pesticides and herbicides, the more we realize, the hippies had something there! Funny thing, though, organic gardening is really not so recent as all that. Thousands of years of gardeners before us grew only with organic methods. Here we'll delve a bit into the whys of going organic, and a couple starting points to begin with if you aren't already on the bandwagon.

## **It's natural: Works with nature and is good for you and your garden.**

Many gardeners wonder what exactly organic gardening means. The simple answer is that organic gardeners don't use synthetic fertilizers or pesticides on their plants. Organic gardeners take advantage of nature and how it works, also working to replenish the resources their plants use up.

## **Chemical fertilizers and pesticides provide short term results yet, in the long term, damage the soil, ground water, and our health.**

Sure, Chemical fertilizers and pesticides are quite effective, but numerous studies have proven them to have terrible side-effects to humans, animals and even the soil. Round-up, for instance, causes numerous negative effects on the soil, effects that include compaction and resultant runoff, the killing of beneficial microbes and bacteria, and the exhaustion of necessary minerals and other nutrients that plants require.

## **One big key to start with: Replenish resources as you use them. Healthy soil means easier and healthier gardening. "Feed the soil and the soil will feed the plants".**

It's really common sense. Plants get their nutrients from the soil. If we use up the nutrients, without replenishing them, our plants will be small, weak, and produce little for yields at harvest time. Another vital resource, of course is water, making sure you water consistently and evenly goes a long way in growing the best plants you can, plants that don't have to struggle against drought in the soil are able to put their energy into producing the best fruits. Interestingly watering, too little or too much, can affect even the flavor of the fruit from your plants.

## **Learn your insects: Get rid of the bad, not the beneficials.**

Organic gardening doesn't mean you have to share your harvest with the bugs, but you will probably have less than pristine looking plants and produce. Since in [organic gardening](#) you are trying to garden in cooperation with nature, sometimes you have to accept the occasional pest in the garden, not taking the typical line of attack that has been popular in recent generations of grabbing the nearest pesticide. Your first line of defense should be vigilance. Inspect your plants regularly for signs of a problem and take organic methods of action quickly. Keep in mind, though, not every insect is a foe and that action doesn't necessarily mean pesticide. Just picking bugs and eggs off plants and putting them in a bucket of soapy water is frequently a first

step for organic gardeners. Learn which are the beneficial insects and keep them around, they will help do your work for you, getting rid of pests.

### **Barriers can be a huge help with seasonal damaging insects, moths, etc.**

Floating row covers prevent moths and other insects from landing and laying eggs. Yellow sticky traps can easily catch dozens of flying pests. Foil, coffee can, or PVC pipe collars around the base of plants can stop cut worms and many borers in their tracks.

### **Use diversity to your benefit. Inter-planting can help prevent total crop loss to pests. Learn companion plants.**

Inter-planting and diversity will protect you from losing an entire crop to an infestation. Large swaths of a single plant are pretty, but are also a landing strip for interested insects. If you mix up your plants then a pest attracted to a certain plant may not find all of that variety and you'll still end up with at least part of your harvest. When inter-planting it's a great idea to look into what plants go well together, and even what ones do not, to maximize the health and yield of your plants. Companion planting is another organic method of helping your plants to do their best.

### **Control weeds!**

#### **There are simple, organic methods to reduce your work here, too.**

Weeds steal nutrients from your plants, reducing their vigor. The age-old practice of cultivating between plants with a hoe, not only suppresses weeds, but aerates your soil, too. A good workout in the garden on your knees pulling weeds, or wielding a hoe is healthy for you, and your garden, too. But, what if your health isn't able to keep up with the weeding, what if you are strapped for time, and always get behind on the weeding? There are helpful hints on reducing the need to weed. Once you have a handle on the early growth of weeds, for instance, we like to put organic grass clippings around our plants. Not only does this suppress weeds extremely well, but when rained on or watered the nutrients leech down to the soil and feed the plants. Another barrier to weeds we have used with much success is black plastic mulch. It keeps the soil moist, blocks the weeds, and even heats the soil, which helps plants grow faster.

## The Importance of Good Soil:

“Start at the very beginning, a very good place to start”

**Few of us start with great soil, but we can all build it.**

Turning a poor soil into a plant-friendly soil is not difficult to do, once you understand the components of healthy soil.

**Using gardening methods which improve rather than hurt the soil play a huge part in successful gardening.**

A few basics include. Tilling less frequently, or some prefer not at all. Protect the good insects in your soil. Insects helps aerate the soil, tilling too much kills them off. Add organic matter.

**Organic matter added to garden soil improves the soil structure and feeds the microorganisms and insects.**

Organic matter improves any type of soil. Compost, leaf mold, manure (use somewhat sparingly) and green manures are all decaying organic matter. They loosen and enrich soil and provide food for the soil dwelling insects. For the best soil, sources of organic matter should be as diverse as possible. Using green mulches like grass clippings, add nutrients, and later when tilled in at the end of the season, add organic matter to the soil as well.

**Organic matter also contains acids that can make plant roots more permeable, improving their uptake of water and nutrients, and can dissolve minerals within the soil, leaving them available for plant roots.**

Although it only makes up a small fraction of the soil (normally 5 to 10 percent), organic matter is absolutely essential. It binds together soil particles into porous crumbs or granules which allow air and water to move through the soil. Organic matter also retains moisture (humus holds up to 90 percent of its weight in water), and is able to absorb and store nutrients. Most importantly, organic matter is food for microorganisms and other forms of soil life.

**Worm Castings is an excellent organic soil amendment, hard to find in retail stores, but a great addition to your soil. The nice thing is, you *can* order them by mail.**

An amazing fact about [worm castings](#): God in His infinitely awesome abilities in creation made worms to produce organic fertilizer. Even if what they take in for food has any chemicals or such, it comes out the other end organic, filtered by their amazing digestive system. They have been lab tested over and over, and this is how they always come out, pure and 100% organic.

[Worm castings](#) (a.k.a. worm manure, vermicompost, or worm excreta) are rich in plant nutrients, trace minerals and growth enhancers, and incorporating castings into the soil significantly increases microbial life in the root zone. Worm castings are extremely beneficial in that they stimulate plant growth more than any other natural product, enhance the ability of your soil to retain water, and also inhibit root diseases such as root rot. The humus in worm castings removes toxins and harmful fungi and bacteria from the soil. [Worm Castings](#) therefore have the ability to fight off plant diseases. One of the best features of worm castings is you can use as much as you want without the fear of burning tender young plants as other fertilizers are known to do. Unlike other animal manure and artificial fertilizers it is absorbed very easily and almost instantaneously by plants. The amazing thing is, while the nutrients are easily available they are at the same time naturally endowed with a slow release feature, causing the nutrient benefits to last up to 2 months!

**Turning kitchen and garden waste into compost, the Black Gold of gardens, is an excellent step we can all take in providing our own soil amendment.**

Why not make this the year to finally try your hand at creating your own [compost](#)? You hear about it all the time, you know the benefits, but it seems so daunting to try. There's plenty of helpful info out there, ideas on simple starting methods for beginners. You have plenty to feed the pile/bin, we all have kitchen scraps, and garden or yard waste to feed the pile with. Give it shot, you can't have any less than you do now even if it doesn't work out!

**Interesting fact: George Washington Carver was a major pioneer in teaching of crop rotation, a big help in replenishing soil, rejuvenating the yields and success in farming.**

Crop rotation is a systematic approach to deciding which crop to plant where in your [vegetable garden](#) from one year to the next. It is as important a factor in soil health as amendments, and reduces the amount of work you have to put into achieving healthy soil for your plants.

Different crops have different nutrient requirements and affect soil balance differently. Some, like corn and tomatoes, are heavy feeders that quickly deplete soil nitrogen and phosphorus. Thus, if you plant corn in the same spot year after year that plot of soil will run low on nitrogen and phosphorus more quickly than other parts of your garden will. By changing the location of corn each year, you'll be able to renew the plot where it grew the preceding year, so your soil won't get out of balance.

Following up with nitrogen fixing plants, like beans or peas, in an area which had heavy feeders the year before replenishes the soil.

The other benefit of crop rotation is reduction of diseases and pests. Plan your rotation by plant families, because pests and diseases will usually affect all members of the same family. For example, Colorado potato beetles like to eat potato plants, but they also enjoy feasting on tomato leaves and eggplant foliage. Since these beetles overwinter in the soil, if you plant eggplant in a spot where you grew potatoes the year before, you could be inviting a beetle problem for your eggplants from the day they're planted. Likewise, several serious bacterial and fungal diseases overwinter in plant debris in the soil.

**Don't forget, building healthy soil is an ongoing process, one to work at each garden season.**

## **Preventing Disease At least as much as possible!**

**Prevention is much easier than treatment.**

Isn't this the truth in so many things? The old adage "An ounce of prevention is worth a pound of cure" rings true in the garden, too. Treating a problem with plant disease is much harder

than taking some precautionary steps ahead of time. And, if you wait until it's too late, you may lose the battle and all your hard work will be lost.

### **Follow good sanitation practices to keep plant diseases to a minimum.**

Good sanitation includes picking up plant debris, trimming away dying or unhealthy stems and branches, and keeping weeds to a minimum. Foliage or stems left over from diseased plants can result in having to deal with those same diseases or pests next year. Clean tools are another important step in a disease free garden. If you cut or trim diseased/dead foliage make sure to clean your tools, to prevent spread to other plants.

### **Fertilize just enough to keep plants healthy, and no more than that. Healthy plants resist disease better than weak ones.**

Over-fertilizing can lead to problems; this causes plants to put out large amounts of weak foliage, fresh growth that is attractive to pests and diseases (it also causes lots of foliage with no fruit, not a happy result). An even sparing amount of organic fertilizer (or regular applications of compost or composted manure) will help your plants stay healthy. Healthy plants are much better able to fend off diseases.

### **If you buy plants at the nursery don't buy any with evidence of disease.**

Look out for fungus on soil or plants, evidence of insects, and steer clear of yellowing or wilted leaves. Healthy plants are much better bet at being a healthy addition to your garden, avoiding unnecessary introduction of diseases from elsewhere, causing you more work from the get-go.

### **Allow the soil to warm before planting, letting the sun destroy fungal diseases before you start for the year.**

Some fungal diseases get a head start in our gardens because we plant when the soil is still too cool. Our plants are stressed, just trying to get a start in cooler than their ideal temperatures, putting more energy into just trying to survive, which makes them less able to fight off diseases, and before we know it, we're dealing with sick plants. The easiest way to eliminate this problem is to ensure that you're not planting until the soil has warmed in the spring.

### **Plant disease resistant varieties if/when you can.**

If you know you have a history of plant disease in your garden, an easy way to head things off at the pass is to seek out varieties known to be resistant to the particular disease you have encountered.



## **Rotate crops, the longer your rotation cycle, the more protection you'll get.**

Crop rotation is probably the number one way to keep diseases at bay in your vegetable garden. Since many diseases affect certain plant varieties the most. Planting vegetables in the same spots year after year practically guarantees that fungal diseases and other pests that overwinter in the soil will give you headaches all season long, year after year. It's helpful to know the different vegetable families, and how to rotate them in your garden. This also helps soil not get “worn-out” by plants that keep using the same type of nutrients every year.

## **Mulch- A layer of organic mulch, such as straw, grass clippings, or shredded leaves, prevents diseased soil from splashing onto foliage and keeps fruit off the bare ground, where pathogens might take hold.**

Mulches are very useful for maintaining soil moisture and keeping weeds down, but they are also a big help in keeping your garden disease-free. Stopping weeds is a big help, too, as weeds can stress plants by competing for nutrients and water. Weeds may also host plant diseases.

## **Water early or use soaker hoses.**

“Water in the morning” This is one of those old tried-and-true bits of advice that many think is just an old wives’ tale, but really, it makes sense. Many fungal diseases need damp, cool environments to thrive. So if our plants' foliage is wet overnight, that gives these diseases very favorable environment in our garden. The easiest way to prevent this is to water as early in the day as possible, so that your plants can dry off before nightfall. Bottom watering with soaker hoses eliminates this issue. Yes rain will get on the leaves, but adding our own water to the plants and leaves only perpetuates the problem.

## **Watch out for insect pests, they can harbor and introduce diseases to your plants.**

Insect pests, with their chewing and burrowing, are a problem in and of themselves, with the damage they can do to your plants. But, many of them, such as aphids, are a double-threat because they transmit diseases between plants. Stay vigilant, and try to eliminate insect pests as soon as you see them. This is a frequently overlooked and highly underestimated form of disease transmission, and is very interesting to research. Many plant diseases actually are perpetuated by the bugs, as they become a host and the pathogens that would have died over winter survive in the bodies of the insects. Also, frequently seen, insects make possible the existence of a [plant disease](#) by obtaining, carrying, and delivering into host plants pathogens that without the work of the insect, would have been unable to spread, and thereby unable to cause disease.

## Remove diseased stems and foliage A.S.A.P.

This is a simple organic start to disease control and often times, if caught, soon enough will prevent the spread throughout the rest of the plant, and you will still have at least *some* bounty in reward for your efforts.

### Our “St. Clare Favorite” Seed Varieties

- [Roma II Italian Bush Bean](#)
- [Slenderette Bush Bean](#)
- [October Dry Bean](#)
- [Vermont Cranberry Dry Bean](#)
- [Minnesota Midget Cantaloupe](#)
- [Tendersweet Carrot](#)
- [Black Aztec Corn](#)
- [Wisconsin SMR Cucumber](#)
- [Ground Cherry](#)
- [Green Ice Lettuce](#)
- [Buttercrunch Lettuce](#)
- [Prizehead Lettuce](#)
- [Cascadia Snap Pea](#)
- [Orange King Sweet Pepper](#)
- [Black Beauty Zucchini Summer Squash](#)
- [White Bush Scallop Patty-pan Summer Squash](#)
- [Delicata Winter Squash](#)
- [Pink Banana Jumbo Winter Squash](#)
- [Thelma Sanders Winter Squash](#)
- [Waltham Butternut Winter Squash](#)
- [Amish Paste Tomato](#)
- [Ann Russian Tomato](#)
- [Black Cherry Tomato](#)
- [Cherokee Purple Tomato](#)
- [Yellow Plum Tomato](#)
- [Moon and Stars Watermelon](#)
- [Sugar Baby Watermelon](#)