

Growing

(GARDENERS)



A beginner's
GUIDE
to gardening

by Patrick Steiner
for the Good Food Box



Interior Health

CARING FOR PLANTS

General rules for successful gardening

This booklet will focus on providing tips for successfully growing your seedlings. Information will be given for growing in containers as well as in a garden.

The pots you will receive your seedlings in can be used to grow the parsley and lettuce. The tomatoes and broccoli will need to be transplanted into larger containers or into a garden space outdoors.

Growing herbs and vegetables is not just about providing yourself with high quality fresh food for you and your family. It's also about having fun and enjoying the process of growing plants.

If you're a seasoned veteran this booklet will remind you of some of the basics for gardening; if you're a beginner use this tool as a guide, but always remember that careful observation and following your intuition are what makes for successful gardening. We all have a green thumb, it's time to discover yours. Good luck and happy growing.

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CHOOSING A SITE

Light requirements

All plants need a dependable source of bright light for optimum growth. If you have containers on a windowsill or patio keep this in mind as you plan their placement. If you have a garden, think about how much direct sunlight it receives throughout the course of the day, taking into consideration shade from buildings or trees.

Leaf and root crops require at least four hours of direct sunlight daily, while fruiting crops such as tomatoes need at least eight, preferably more in both cases. Plants will still grow in conditions where less light is available, but they will be smaller, grow slower, and be less vigorous, or they may get "leggy" as they reach for the light, and fall over.

For your parsley seedlings, choose a spot in your home with as much natural light as possible. A south facing window works well; or you can move the plant during the day to whichever window gets the most sun. If the seedling begins to lean in the direction of the light, turn the pot around once each day; the seedling will regrow towards the light, but turning it daily will help it develop a stronger stalk

HARDENING OFF

Hardening off means gradually exposing seedlings that have been started indoors to the harsher effects of direct sunlight, cold wind, and cooler temperatures. You will have to harden off your parsley plant if you plan to grow it outside on a windowsill, patio or in the garden.

Hardening off is easy to do. Harden plants off 5-7 days before you want to put them outside for good. Start by exposing the plants to half a day of outside weather, try to put them in a spot where they will receive some direct sunlight, but not be exposed to too much wind. A spot with partial shade can also be helpful so as not to shock them. Then bring them back inside until the next day.

Do this every day, gradually increasing the amount of time they spend outdoors. Eventually, you will want to put them in a place where they get some breeze, which will help toughen up the stalks of the plants. After about a week of this the plants should be ready to live outdoors.

The parsley, lettuce and broccoli transplants you will receive can all handle cool nights and light frost. They could be planted outside as early as mid to late April, but to avoid problems you will be getting them on Good Food Box Day in May (May 18th).

Tomatoes are more sensitive to cold, so keep your tomato plants indoors at least until the end of May, unless you have them in a very sheltered area, including a roof at night to keep the frost off them.

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TRANSPLANTING

Into containers

Because broccoli and tomatoes are larger plants they need more nutrients and more space for root growth than the 3 inch pot we have given you will allow for. You need to transplant these seedlings into larger pots. Try to find pots with a 12 to 18 inches diameter. Many thrift stores carry used gardening pots.

Other common household items can be used also; buckets work well, or 4 litre milk jugs with the tops cut off. Just remember the first rule of all container gardening: They must have drainage holes. No exceptions. You can use just about any container, but make sure you drill, or punch, drainage holes into the bottom of it. If you have a favourite metal or clay pot to use that doesn't have holes, you must use an inner pot that does have holes.

Once you have found the larger pot you will use, you need to fill it with a soil mix. You can buy this at any garden center, nursery and even hardware stores. The "Sunshine Mix" brand is very popular and affordable. If you want an organic soil mix, try the product called "Sea Soil" which many stores carry. Or ask the advice of the retailer. Fill your pot to within 1 to 2 inches of the rim.

Dig a hole in your soil mix large enough to accommodate the rootball of the seedling you are going to transplant. Transplant your seedlings by turning them upside down and gently squeezing the sides of the pot they are in. You should find the plant slides out easily. Disturbing the roots as little as possible, place it into the area you have dug in your soil mix.

Always transplant seedlings a tiny bit deeper than they were growing in the original pot. Gently pat the soil mix back into place around the seedling, and water it immediately. This helps the plant recover quicker from transplant shock. Remember, don't transplant until the plants have been hardened off.

Into the garden

Before you transplant seedlings into the garden, you should prepare the soil so as to give your seedlings every advantage. This includes working it with a shovel or digging fork to a crumb-like texture, breaking up clods and removing stones, pulling out weeds and then raking the soil flat. The best days for transplanting are calm and overcast ones, which reduce the shock seedlings experience. If such a day doesn't happen try to transplant in the late afternoon so plants have the cool of evening and night to adjust to their new life, not the harsher effects of full sun and heat.

Transplant seedlings into the soil just slightly deeper than they were growing in their pots. Water the seedlings immediately. This helps ensure good soil contact with the rootball and provides water to the plant to reduce transplanting shock.



WATER REQUIREMENTS

In containers

Plants grown in containers always need more frequent watering than plants grown in the ground. This is because more of the soil's surface is exposed to the heat of the sun, and the drying effects of wind. Also, there is a smaller volume of soil from which the plant can draw water. For this reason, it is crucial to regularly water all potted plants. In the heat of summer this usually means once a day. If you forget for even a few days, the plant can become stressed and even die.

Water plants well, until you see excess runoff coming out the drainage holes. Some people even like to stand the pot in a basin of water, allowing the potted plant to wick up moisture through the drainage holes which helps the soil get wetted right through to the bottom. Whatever method you choose, remember to water pots regularly, and check plants for signs of stress like wilted leaves which tell you that you need to water the plant more. If soil has shrunk in the pot and pulled away from the sides it means it is too dry. Rewet the soil thoroughly and try to water more regularly.

In the garden

Plants need water in order to grow; soil should be moist, but never waterlogged. A waterlogged soil has very little space in it for oxygen, which is important for good root growth. At the same time, soil shouldn't be too dry. If you see cracking on the soil surface this can be a sign that it needs watering. Growing plants in a garden gives the plants a greater buffer against drying out, and against becoming waterlogged.

There is simply more ability for the soil to evenly distribute moisture in a larger area. Regular watering and careful observation by the gardener are the best ways to ensure plants do not get dried out. If you see plants showing signs of wilt or stress they may be too dry. To maximize the effects of watering and conserve soil moisture water plants towards the end of the day. The best way to water plants is to water the soil around the base of plants, not to water the plants themselves.

MULCHING

Mulch is a term for anything that is laid on top of the soil to help maintain soil moisture, keep down weeds, and add fertility to the soil. Common examples of garden mulch are straw, dried grass clippings, leaves, wood chips, etc. You can layer mulch right up to the base of plants without causing problems, as a matter of fact there are many benefits. You will need to water less frequently, as the mulch keeps sunlight off the soil and reduces evaporation. Soil temperature is also kept more constant which is good for the plants. If the mulch is thick enough it will keep weeds from growing and competing with your plants for space and nutrients. And lastly, if the mulch is made from organic materials like straw, grass or leaves, the bottom layer will slowly break down and return nutrients to the soil.

Mulching can be particularly helpful for potted plants. I've already mentioned how quickly the soil in pots dries out. A good layer of mulch on the surface of potted soil reduces evaporation, but it's also important to use some kind of mulch banked up around the sides of pots, where sunlight and wind can quickly dry soil out.

Other materials that people use for mulching include newspapers, cardboard, even plastic sheeting. All of these do a good job of retaining soil moisture and reducing weed growth, but they will not add nutrients to your soil as they break down. It is up to you to choose the right mulch for your garden, sometimes it can just be whatever is easiest for you to find. One word of warning: some people use sawdust or woodchips for mulching, but this dry, fibrous material can actually pull nitrogen out of the soil and away from the plants.

FERTILIZING

In containers

Plants grown in containers usually need the addition of fertilizer at some point in the growing season. There are two reasons for this. First, a pot has a limited amount of soil in it, which means less nutrients for the plant to draw from.

Secondly, because potted plants get watered more frequently they are subject to leaching. Every time you water your pots you will be losing some of the soils nutrients with the outflow of water through the drainage holes. But don't fear, there are simple ways for you to put fertility back into the pot.

You can add an organic fertilizer to the soil by carefully digging it into the top two inches of soil in the pot. The new nutrients will be carried to the plants roots each time you water the plant. Good choices for organic fertilizers are compost or worm castings. Both of these can be bought at nurseries or garden centers. Compost can be made in your own backyard or even on a balcony or indoors if you have a vermi-composter (worm composter).

Organic fertilizers are helpful because they don't harm your plants, your children or yourself. They release nutrients slowly, as the plant needs them, and they are high in organic matter which improves the water retention of your soil, increases aeration to plant roots, and improves the soil structure for optimum plant growth.

Another good way to give plants a nutrient boost is with compost tea. See Page 10 for instructions on how to make this at home.

In the garden



A healthy soil grows healthy plants is the mantra of many an organic gardener. Indeed, the best thing you can do for success in gardening is to pay attention to your soil. The goal of most gardeners and farmers is to increase the organic matter of their soil. Organic matter increases the ability of your soil to support healthy plant life. It gives better aeration which is crucial to root growth, and increases water retention which helps reduce stress on the plant in times of heat and drought. High organic matter also tends to increase the amount of microscopic living organisms in your soil, which has many positive effects on plant growth.

For this reason, rather than recommending adding synthetic fertilizers to increase fertility, I recommend adding fertilizer that is high in organic matter. Compost or worm castings are one way to do this. Another method for fertility, if you have the garden space, is to grow cover crops like oats, rye or buckwheat that you cut, chop up, and turn back into the soil. This gives your soil a nitrogen boost and increases organic matter, but the process can take time and it is possible only if you can set some space aside in your garden for this purpose. You can also use mulches to add fertility to the soil, as mentioned above.

COMPOST TEA

How to make it

Compost Tea is a liquid, organic fertilizer that you can use both in the garden and for potted plants. It can be watered into the soil as a nutrient that will be absorbed by the plants roots or it can be sprayed or sprinkled directly on the plants leaves as a foliar fertilizer. It's easy to make, and fun.

Take one or two scoops of compost and place it in a bucket. Add water, stir and let it sit for the day. If you want you can stir the bucket each time you walk by. At the end of the day, using a sieve, strain the water out of the bucket - now you have compost tea. If compost isn't available you can use alternate materials like worm castings, or even kelp flakes or kelp powder (available at garden centres or health food stores). The idea is to make a nutrient rich "tea" to replace fertility in your soil or pots due to leaching and normal plant growth.

If you have a spray bottle, put some of the "tea" in the bottle, and spray it directly on the leaves of your plants. They will absorb the nutrients through small pores in their leaves. The best time of day to do this is in the evening so plants can absorb the tea before the sun evaporates it. Adding just a drop of dish soap to your spray bottle will help the compost tea adhere to the leaves without beading up (called a surfactant). If you don't have a spray bottle, use a whisk or even your fingers to sprinkle the plants leaves with the compost tea. Use any excess tea to pour around the base of the plant and feed its roots.

SPECIFIC REQUIREMENTS

Heat, light, and fertility for your plants

Parsley > Tolerates partial shade, but enjoys full sun. Grows well in cool or warm weather. Relatively light feeder for nutrients.

Lettuce > Tolerates partial shade to full sun. Thrives in cooler weather. Provide shade during spells of high heat. Mid to heavy feeder for nutrients.

Broccoli > Tolerates partial shade to full sun. Thrives in cooler weather. Heavy feeder for nutrients. Add compost to soil or compost tea when the central head is just beginning to form.

Tomatoes > Requires full sun and loves heat. Place in a spot that heats up. Consider mulching as it loves to have "cool feet". Heavy feeder for nutrients. Add compost to soil or compost tea to leaves throughout flowering period and early fruiting.

COMPOSTING

Make your own fertilizer

If you have space in the backyard you can make your own compost pile to add to the garden as a healthy fertilizer and soil builder. Here's the easiest way to do it: collect all the organic material you can get a hold of (kitchen scraps, grass clippings, leaves, etc.) and pile it into something like a flat haystack. Let the rain and snow fall on it, water it with the garden hose in summer during dry spells.

After a year, pull away any large pieces still visible (branches, etc.). What remains should be a pile of dark, rich-coloured compost. A product that looks a lot like regular soil, but is rich in nutrients and microbiotic life. It makes the best garden fertilizer. If you want to speed up the method, you can make compost in 3-6 months by doing a few things to the pile.

FASTER COMPOST

1. Lightly till the soil underneath the pile before laying on materials, to make it easier for worms to climb into the pile.
2. Chop all the material into small pieces before adding to the pile.
3. Alternate layers of soil with layers of debris.
4. Introduce air into the center of the pile, using one of these techniques:
 - > stick a garden fork down in several spots and wiggle it around.
 - > turn the pile over: put the bottom on the top or the left half on the right half.
 - > plunge a broom handle into the pile repeatedly to make air tunnels into the center of the pile.