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# Indoor Gardening 101

By [E. Vinje](#)

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Even plants grown near a window will probably not get enough light during the winter months to thrive. There are a few things to think about when purchasing a grow light.

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Temperatures of 65-75°F are best for most plants. A variance of 10°F either way will probably be OK. Plants that are too hot will be small and weak. Plants grown at too-cold temperatures may have yellow leaves that fall off.

## Humidity

A lack of humidity in the house can be a challenge for indoor gardeners. Winter tends to be drier than summer, and if you run the heat in your house the problem is further compounded.

### You know you have a low-humidity problem if:

1. The tips of your leaves are turning brown
2. Plants look withered or puckered
3. Plants lose their leaves
4. You've researched how much humidity your particular plant needs and it isn't getting it.

### To increase humidity:

- Mist plants daily, or more often as needed. (Do not do this with hairy-leaved plants since the water hangs around longer and could cause disease.)
- Place a tray of water near your garden (don't put plants in the tray, this can lead to other problems). Fill the tray with lava rocks to increase surface area for evaporation.
- Place plants close together to create a microenvironment with a higher relative humidity.
- Run a humidifier (this might benefit your skin as well!).
- Purchase an [environmental controller](#), which can humidify or dehumidify depending on your needs.

## Growing Medium

Indoor gardens benefit from a good planting medium — soil found outside is not appropriate, since it's often too heavy and may contain weed seeds and insect pests. Instead look for a mix that is specific to indoor plants. A good [growing media](#) should remain loose and drain well, yet contain enough organic matter to hold nutrients and moisture.

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Most commercial organic mixes will work well, or you can create your own (see [Potting Mixes for Certified Organic Production](#)).

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Instead of growing indoor plants in a soil mixture, you may want to [try out hydroponics](#). Basically, this means gardening without soil. Soil holds nutrients and anchors plants roots. When growing hydroponically you provide the nutrients directly. Instead of being bound up in soil, the nutrients are readily available to the plants.

Some of the advantages of growing hydroponically include:

- Faster plant growth (up to 50% faster) since plants can easily access water and food.
- Roots grow throughout the media without becoming root bound, so containers can be smaller.
- Plants start in a disease-free medium and are less likely to become infected.
- If plants do become sick, the disease is usually in one plant, not all of them.
- Plants droop before they wilt, so you'll know to water them before they are damaged.

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Peppers  
Salad Greens  
Kale  
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Basil  
Parsley  
Oregano  
Lavender

Geranium  
Pansy  
Zinnia  
Roses  
Candytuft

Strawberries  
Blueberries

### VEGETABLES

Carrots  
Onions  
Tomatoes, especially cherry types  
Beans, Bush

### HERBS

Cilantro  
Rosemary  
Chives  
Catmint

### FLOWERS

Alyssum  
Marigold  
Petunia  
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Shasta Daisy

### FRUITS

Apples, dwarf varieties  
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Don't stop there, as mentioned above, almost anything — fruits, flowers, herbs and vegetables — can be [grown in a container](#).

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Plants can be grown from seed (started inside and staying inside) or they can be transplanted from your outdoor garden at the end of the season. Plants will need to be acclimated before bringing them in the house and again when you put them outside in the spring or fall.

## Moving Plants Outside

Plants and seedling grown inside need a period of “[hardening off](#)” before they can permanently live outdoors. The hardening off process gives them time to develop a thicker cuticle and avoid water loss while being better able to withstand the harshness of weather. The following steps will help acclimate indoor plants to life in the great outdoors.

1. 7-10 days before you want to transplant your plants, place them outside in a shady spot or cold frame for 3-4 hours.
2. Each day, increase the time spent outdoors by 1-2 hours. Bring plants back in each night.
3. After 2-3 days, place plants in morning sun, then move them into the shade in the afternoon.
4. If the temperature stays around 50°F, plants should be able to stay out all day and night after 7 days.
5. In about 7-10 days transplant your seedlings or plants. If possible, transplant on a cloudy day and water thoroughly.

To acclimate plants by withholding water or by using a cold frame, read [How to Harden Off Plants](#).

## Moving Plants Inside

At the end of the growing season you may want to [move plants inside](#) to your indoor garden. After potting these plants (if they are not already in containers) they will need a period of acclimation, just as plants going the other direction do.

## Maintenance

### Watering

Plants grown in containers dry out more quickly than their soil-grown counterparts and require frequent watering (see [Watering Potted Plants](#)). Always use room-temperature water and add enough water that it runs through the drain holes of your pot or container (do not let water collect in a saucer or under the plant — this can lead to rot or disease).

Use your finger to feel the soil or use a moisture meter to be sure you are not over or under watering plants.

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Do you have a hard time remembering to water the plants? Read [How To Make a Self Watering Garden](#) or [How to Make a Self-Watering Seed Starter in Ten Minutes](#) to learn how to start a garden that water's itself.

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[Organic fertilizers](#) and [hydroponic nutrients](#) for indoor plants abound. Follow the instructions on the package for how much to use and how often to fertilize.

If you compost at home, you can make a compost tea to water your indoor plants. Here's how:

1. Fill a bucket about 1/3 full with finished compost.
2. Add water until the bucket is full.
3. Let the bucket sit for a few hours, if not three or four days (don't let it freeze!).
4. Using cheesecloth or a fine screen, strain the mixture into another container. (Anything leftover can be thrown into the garden or back into the compost bin.)
5. Add water to the liquid until it is the color of weak tea.
6. Apply the compost tea to the soil around your plants.

## **Troubleshooting**

[Growing Indoor Plants with Success](#) (PDF) – To be a successful indoor gardener, you need to understand how the interior environment affects plant growth and how cultivation differs from growing plants outdoors (University of Georgia Cooperative Extension).

## **Recommended Product Categories**



### **Growing Media**

The mixes and media we offer in this section are for both soil and soilless growing.

[View all](#)



### **Hydroponics**

If you're growing indoors, hydroponics is the ticket to impressive growth and yields.

[View all](#)



## **Grow Rooms**

No matter if your grow room is large or small, we've got the equipment you're looking for!

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## **Clone Machines**

Achieve strong, healthy root systems from cuttings you take from your prized plants.

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Onions  
Tomatoes, especially cherry types  
Beans, Bush

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Cilantro  
Rosemary  
Chives  
Catmint

### FLOWERS

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Petunia  
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Shasta Daisy

### FRUITS

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Plants grown indoors will need an extra boost of nutrients or fertilizer since most of the nutrients in the soil or growing medium are quickly taken up by the plants or leached out during watering.

[Organic fertilizers](#) and [hydroponic nutrients](#) for indoor plants abound. Follow the instructions on the package for how much to use and how often to fertilize.

If you compost at home, you can make a compost tea to water your indoor plants. Here's how:

1. Fill a bucket about 1/3 full with finished compost.
2. Add water until the bucket is full.
3. Let the bucket sit for a few hours, if not three or four days (don't let it freeze!).
4. Using cheesecloth or a fine screen, strain the mixture into another container. (Anything leftover can be thrown into the garden or back into the compost bin.)
5. Add water to the liquid until it is the color of weak tea.
6. Apply the compost tea to the soil around your plants.

### **Troubleshooting**

[Growing Indoor Plants with Success](#) (PDF) – To be a successful indoor gardener, you need to understand how the interior environment affects plant growth and how cultivation differs from growing plants outdoors (University of Georgia Cooperative Extension).

## Recommended Product Categories



### Growing Media

The mixes and media we offer in this section are for both soil and soilless growing.

[View all](#)



### Hydroponics

If you're growing indoors, hydroponics is the ticket to impressive growth and yields.

[View all](#)



## **Grow Rooms**

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## **Clone Machines**

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## Plant Nutrients

Indoor growers know that quality plant nutrients are crucial to their success.

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## 25 Responses to “Indoor Gardening 101”

1.  Pattiemelt on October 3rd, 2013 at 3:44 pm <#>

You didn't include LED lights in your section on lighting. LED grow lights are now available in full spectrum or in red, blue or white so you can have different lighting for plants that are in different stages (seedlings, budding, blooming, fruiting, etc). They give off little to no heat so can be placed closer to the plants & use less electricity than other lights. Plus they don't contain mercury so are safer & better for the environment than fluorescents. They may be a little more expensive than fluorescents, but they last up to 50 years so they pay for themselves in electricity savings & in longevity.

[Reply](#)

- o  aquaponic grower on February 5th, 2014 at 10:03 am <#>

If you want an led that actually puts off enough lumens, they will actually put off a lot of heat. Leds that are strong enough to benefit photo syn. Require heat sinks on the diodes because of the amount of heat generated. Cooler leds do not provide enough lumens to benefit the plant as much as a simple cfl and the cfl is way cheaper. Wait until leds progress a few more years. Most of the leds on the market now are a waste of money and pure hype.

[Reply](#)

-  Anonymous on September 1st, 2014 at 7:38 am <#>

Totally agree. LEDs are way too expensive right now. CFLs, though not as efficient, IMO are the most cost effective way to grow indoors right now (depending of course on several other variables.)

[Reply](#)

-  Coral Brune on May 10th, 2017 at 12:35 pm <#>

I've recently heard there was a report on LEDS that says they are damaging to the human eye. So I at least would wait to spend money on them for growing lights.

[Reply](#)

2.  Cindi Mason on December 1st, 2014 at 10:35 am <#>

How will the tomatoes be pollinated?

[Reply](#)

-  E. Vinje on December 1st, 2014 at 10:43 am <#>

Tomatoes are self-pollinators. Each blossom contains all it needs to produce fruit — it has both male and female parts. Usually a bit of wind supplied by a fan — or a light shake — is all it needs. This article should help:

<https://www.planetnatural.com/hand-pollination/>

[Reply](#)

-  MOOSE on November 28th, 2016 at 12:17 pm <#>

I used this for a research report.

[Reply](#)

3.  Elizia on January 21st, 2015 at 8:21 am <#>

Do Vegetables Taste Better Grown Outside or Inside in a Grow Tent? I live in an apartment and I am trying to figure out whether it is better to grow my plants in a grow tent with an HID light or outside on my balcony. I want to make sure that growing inside of a grow tent with a sun lamp and potting soil mixture does not change the flavor of my vegetables. My balconies are very shady and I'm trying to get the best quality and taste from my crops.

[Reply](#)

4.  Shelli on February 18th, 2015 at 11:30 am <#>

Are strawberries, blueberries and lemons self pollinators as well?

[Reply](#)

- o  Brynn on August 11th, 2016 at 1:08 pm <#>

Most blueberry varieties require another plant to cross-pollinate. Strawberries and lemons are self-fertile but it's a good idea to hand-pollinate using a q-tip.

[Reply](#)

5.  Nancy on March 14th, 2015 at 10:18 am <#>

Wow, I'm excited. Just found your website. i didn't know I could grow so much indoors, when my house is so shaded. Can't wait to get started. ...and you really give the details, which is very necessary, because I don't have a clue about what I'm doing, but veg. and fruit are the larger portion of what I eat and, due to health, I've needed to go organic! :) Thank you for sharing your knowledge and experience! :)

[Reply](#)

6.  Lori on April 6th, 2015 at 8:26 pm <#>

I am currently growing my garden inside, I have planted green beans, beets, mustard greens, bell peppers, 3 types of tomatoes, zucchini, tigger melons, watermelons, squash, 13 types of herbs, a apple tree, lemon tree and a orange tree, as well as raspberries and 10

different strawberries. I am so excited each morning to go in and see the growth of all the different fruits and veggies. The trees are dwarfs so they will be beautiful and fragrant by the patio door. My grand kids all have their own pots and are also growing their own veggies. Nothing like an indoor garden year round.

[Reply](#)

- o  juli on July 9th, 2015 at 3:19 am <#>

Lori, that's awesome! I am looking to do the same thing since I have the space in my home and our winters here in PA are long. Do you mind sharing what method you use? hydroponics, soil?

[Reply](#)

7.  Brii on April 26th, 2015 at 12:08 pm <#>

For the record: a tomato is not a vegetable, it is a berry that is classified as a member of the fruit family of edible plants.

[Reply](#)

8.  Armando Sanchez on June 22nd, 2015 at 3:28 am <#>

Great information, I will start planting this week with your advise thanks.

Question, growing in volcano ash, is this tougher and if so how will veggies taste?

[Reply](#)

9.  Hollee on March 1st, 2016 at 8:48 pm <#>

I started growing tomatoes peppers and zinnias about a week ago and with my flourecent grow light 5 zinnias already have broke through the soil! It's so exciting to see their growth!

[Reply](#)

10.  Lois Sandbourne on March 7th, 2016 at 9:07 pm <#>

Great to see so many people embracing indoor gardening! We have self watering pots to make it even easier. I know from personal experience that herbs need a bit of attention (At least, here in Australia where it's warmer) and even a day or two of neglect can push back your growing progress.

[Reply](#)

11.  Jane on May 11th, 2016 at 5:15 am <#>

I am moving to bush Alaska to teach and want to grow vegetables in my apartment. Can someone guide me to quality information on what I would need and how I would do it? Thank you!

[Reply](#)

12.  joanne franklin on June 18th, 2016 at 11:15 am <#>

Indoor gardening can be a bit more complex than outside gardening but you can watch them grow to big, beautiful plants with great lighting, feeding and watering.

[Reply](#)

13.  Dennis on July 28th, 2016 at 1:13 pm <#>

I want to add garden plants to my biology classroom. Any thoughts. Also, if you were to plant tomatoes, for example, would they continue to produce all year, or do they need to be replaced after a harvest?

[Reply](#)

14.  KM9788 on August 7th, 2016 at 8:36 pm <#>

I am beyond excited that I found this website. I teach a combined grade 3-4 class in Alberta, Canada, and really want to grow a 'salsa garden' in my classroom. Grade 4 Science is Waste in Our World & Plant Growth and Changes. If we can manage it we will grow tomatoes, onion, garlic, peppers, and cilantro. I plan to turn an old fish aquarium into a green house and purchase a grow light. All of the information is a God send!

Does anyone know how long it may take for each of these to grow? I would like for them to be ready all around the same time and assume I'll have to stagger their planting depending on their grow time.

[Reply](#)

15.  Dan on April 13th, 2017 at 6:27 am <#>

Could you please suggest some pre-made indoor gardening systems?

[Reply](#)

16.  Coral Brune on May 10th, 2017 at 12:39 pm <#>

In central coastal California i am starting indoor cherry tomatoes at a 10 ft high 8 foot wide set of 3 windows facing west. Is this enough light and warmth?

[Reply](#)

17.  esther on May 25th, 2017 at 11:37 am <#>

I just bought a kale seedling from home depot last week and it's end of may already. I am new to planting and just read that it is almost harvest time for kale but my seedling is still so small, only 3 leaves. Will I still be able to plant it indoor in a pot throughout the summer and have a harvest in couple months? I was hoping to buy my first seedling and then get seeds from it for next season =(

[Reply](#)

18.  RDSWYSD4 on October 31st, 2017 at 10:44 am <#>

I have been indoor gardening for quite a few years now. I use compact fluorescent to supplement a SW corner window area in the home. I just use bins full of soil as a medium. Websites often show pictures of these giant plants with Beefsteak tomatoes hanging off of them etc. Now, this is possible, but keep in mind you totally need perfect conditions, lighting etc to make this possible. I have whittled my indoor garden down to just a few tried and true "sure things" that will definitely provide some fresh produce throughout the winter on a budget (minimal lighting expense etc). Lettuce of any variety thrives indoors. Once mature I have enough with one 24" row to provide 2 nice sized salads per week. Radishes do great inside, but don't always expect big plump ones.

Carrots do okay indoors but like with radishes, don't expect enough to supply your juicing habit. Cilantro! Why get that "mystery cilantro" from the grocery store that you bring home only to find it half rotten and flavorless. Kale does amazing indoors and you can have baby kale in your salad all winter. These are just some of my successes. There are many failures like tomatoes, beans, peppers, etc. Yes, it is possible to grow these, but you really need the lighting and warmth, etc. So, don't get your hopes up too high for indoor gardening. But don't be discouraged either. I highly recommend planting some of the tried and true "sure things" mentioned above while experimenting with other crops. It is so gratifying to shun the nasty grocery store product in the winter and have your own. It's relatively inexpensive, loads of fun and adds "life" to the home in the winter. Thanks for all of the great info!

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## Potted Plant Pests

By [E. Vinje](#)

**Natural and organic solutions for dealing with bugs on houseplants.**

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Unlike plants grown in the ground, potted plants enjoy a relatively pest-free environment. In most cases, they are potted in quality soils or soilless mixes, and are often grown closer at hand, so they are inspected more frequently. As a result, they tend to have fewer problems with insects and disease.

With that said, there's no predicting what could attack your plants. Just because they are confined to pots does not mean that they will be excluded from pest problems. Insects can creep into any garden and fungal spores are present in the air at all times. While the chances of [potted plant pests](#) are much smaller with container gardens, you still need to take precautions.

*Got bugs? At Planet Natural we offer a large selection of [organic pest control solutions](#) that are guaranteed SAFE and effective. From [beneficial insects](#) and [botanical sprays](#) to [natural disease fighters](#), we only carry the best.*

**IT'S ORGANIC!**



## Bon-Neem

[Specially formulated to kill mites, aphids, whitefly and more on contact.](#)

| \$14.95 ~~\$10.95~~ [Read more](#)

- Purchase only **healthy plants** and thoroughly wash them before planting. Many insects gain entry (especially indoors) on new plants.
- Always plant in a **clean growing media** and in clean containers. Do not reuse potting mixes.
- Grow plants in the **conditions they prefer** (i.e., give them proper sunlight, nutrients and water). Healthy plants are better able to resist insect and disease problems.
- Wash your **hands and garden tools** after handling infected plants. Insects and fungus often travel from plant to plant on dirty tools.
- Remove **severely infested plants**. Plants that have had more than half of their leaves damaged are probably not worth saving.

No matter how careful you are, sooner or later you may have to deal with a pest problem of some sort. When that happens, don't send out an SOS. Think IPM. That stands for [Integrated Pest Management](#) and it's a great way to conduct organic pest control.

IPM combines various techniques to produce a long term control of the pest population. It consists of the following:

1. Monitoring for pests on a regular basis.
2. Identifying the pest and understanding its life-cycle so that treatment can be chosen and timed to be most effective.
3. Establishing a tolerable threshold of injury. The emphasis is on control, not eradication.
4. If action is required, begin with safe and sensible pest control measures that are the least harmful to you and the environment.

**Tip:** Since most **container plants** need to be watered daily, use this time to check over the leaves, paying close attention to the undersides of leaves.

When growing in containers, it is often easier to **handpick larger pests** — like caterpillars, slugs and snails — and destroy them than it is to deal with a toxic can of Bug-B-Gone.

Problems with **smaller pests**, like [spider mites](#), [aphids](#) and [whitefly](#), can be tougher to control and may spread several plant diseases.

**Note:** Sometimes a heavy stream of water from a garden hose is all that is needed to reduce many pest infestations.

## Home Remedies for Natural Pest Control

Long before there were chemical pesticides, there were gardeners. Here you will find how they dealt with the common problems we all face today.

### Plant Diseases

Fungicides are among the most toxic chemical in the gardener's arsenal. Use **organic fungicides**, when possible or try these least-toxic alternatives:

### SAFE & EFFECTIVE



### [SNS 244](#)

[Made from 100% pure food grade materials to safely kill fungal spores on plants.](#)

| ~~\$25.00~~ [\\$21.95](#) [Read more](#)

- Listerine – Mix 1 teaspoon of Listerine into 1 quart of warm water.
- Hydrogen Peroxide – 1 Tablespoon per gallon of water.
- Baking Soda/Oil Combination – 1/2 Tablespoon Baking soda, 1/4 teaspoon cooking oil mixed in 1 quart of warm water.

All of the above recipes should be mixed directly into the sprayer and applied every 10 days or until there is no evidence of fungus.

***Get rid of powdery mildew with [SNS 244 Fungicide](#). Made from 100% pure food grade materials, it works by killing fungal spores through a biochemical interaction. Safe to use on delicate new growth, clones and most plants.***

## **Insect Pests**

Alcohol for mealy bugs: Indoor plants are susceptible to mealy bugs, which are identified as white, cottony looking fuzz on the undersides of leaves and in the leaf joints. Here's how to control them:

Dip a Q-tip into rubbing alcohol and then directly apply it on the mealybugs. The bugs will disintegrate, leaving your plant unharmed.

Soap/Oil spray for container plants: Probably the best overall insecticide, this recipe is made from dish washing liquid and cooking oil. You do need to apply it more frequently than chemical pesticides, but who wants to use poison around the home? Here is the recipe:

- 1/2 teaspoon dishwashing liquid
- 1/4 teaspoon cooking oil
- 1-quart warm water

Mix all ingredients in a small spray bottle. Mist upper and under sides of leaves every 10 days to control mealy bug, spider mite, aphid, thrips, or any other sucking or chewing insect.

## **Recommended Products**



### **[Mite-X](#)**

[Begin applying Mite-X -- made from plant extracts -- as soon as insects first appear.](#)

| ~~\$11.95~~ ~~\$7.95~~ [Read more](#)



### [Safer Soap](#)

[The original insecticidal soap! Concentrated formula makes 6 gallons of spray.](#)

| ~~\$9.95~~ ~~\$6.95~~ [Read more](#)



### [Diatomaceous Earth](#)

[Food grade diatomaceous earth works within 48 hours -- contains \*NO\* toxic poisons!](#)

| ~~\$16.95~~ ~~\$12.95~~ [Read more](#)



### Liquid Ladybug

Contains aromatic plant oils to safely and rapidly kill two spotted spider mites.

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### Neem Oil - RTU

An easy to use, ready to spray formula that works both indoors or out.

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### **One Response to “Potted Plant Pests”**

1.  Alicia on July 19th, 2017 at 5:16 am <#>

I don't have these problems. It's as though something is sucking the life out of my outdoor container plants from inside the soil. They are dying from the bottom up

[Reply](#)

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## Preparing Garden Soil

By [E. Vinje](#)

**Grow on a strong foundation and you'll produce healthy, nutritious vegetables and beautiful flowers year after year.**

- [Compost & Soil](#)
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Healthy soil is the basis of healthy plants and a healthy environment. When garden soil is in good shape there is less need for fertilizers or pesticides. As author and respected gardener Frank Tozer writes, “When building soil you not only improve your plants health, but you can also improve your own.”

Organic soil is rich in humus, the end result of decaying materials such as leaves, grass clippings and compost. It holds moisture, but drains well. Good [organic garden soil](#) is loose and fluffy — filled with air that plant roots need — and it has plenty of minerals essential for vigorous plant growth. It is alive with living organisms — from earthworms to fungi and bacteria — that help maintain the quality of the soil. Proper pH is also an essential characteristic of healthy soil.

So, how do you know if your [soil is healthy](#)? And what do you do if it isn't?

*If you're looking for the fastest ticket to a lush garden, start at ground level. Planet Natural offers a large selection of [amendments](#), [potting soils](#), [inoculants](#) and [testing kits](#) to help you produce healthy, productive plants year after year.*

## Determining Soil Health

Of the 17 or so elements thought to be essential for plant growth, nitrogen, phosphorus and potassium are the most important (see [What's in a Number?](#)). They are known as primary or macronutrients because plants take them from the soil in the largest amounts. Fertilizers that contain all three of these nutrients are labeled complete fertilizers, but they are hardly complete in an absolute sense. Calcium, magnesium and sulfur, known as secondary nutrients, are also important to many plants. Lesser or micronutrients include boron, copper, iron manganese and zinc. Some [plant micronutrients](#) have specific functions such as cobalt, which isn't used by most plants but helps legumes fix nitrogen. Another critical component of your soil is its acid-alkaline balance or pH reading. All these essentials — and the proper texture — makes for healthy soil.

## Testing

### #1 SOIL TESTER



## Soil Test Kit

[You'll appreciate this easy, fast and fun way to achieve better growing results.](#)

| ~~\$17.95~~ \$12.95 [Read more](#)

One way to determine what minerals are lacking or abundant in your soil is to get it tested. Local [Cooperative Extension Services](#) often offer low cost soil tests. These tests usually measure levels of soil pH, magnesium, phosphorus, calcium, potassium, and sometimes nitrogen. They may also report the soil's micronutrient content, but this isn't essential to the gardener who adds plenty of organic matter to her soil. For a less intensive test, pick up a do-it-yourself version such as the **Rapitest Soil Test Kit** and do your own simple, rewarding chemistry.

*The [Rapitest® Soil Test Kit](#) features a “color comparator” and capsule system that’s designed for simplicity of use with accurate results. Give it a try! It’s a fast and fun way to achieve better results from your gardening efforts!*

pH levels can be critical to your plant's ability to absorb nutrients. Most minerals and nutrients are best available to plants in soils with a pH of between 6.5-6.8. If your soil is acidic (low pH, at or below 6.0) or alkaline (high pH, above 7.0) it doesn't matter how rich it is in nutrients, the plants won't be able to absorb them. pH is usually included in a soil test, or you can buy a [pH Meter](#) and determine the acid-alkaline balance of your soil on your own.

The best time to get the soil tested is in the spring or fall when it is most stable. This is also the best time to add any [soil amendments](#) or [organic fertilizer](#) should your soil fall short of minerals or nutrients.

## **Soil Texture and Type**

In addition to uncovering your soil's pH, macronutrient content and mineral levels you'll want to examine its texture.

Soil texture depends on the amounts of sand, silt and clay it holds. A handy description of the three main soil components and an easy test to determine your soil type can be found at [NASA's](#)

[Soil Science Education Page](#). Sand constitutes the biggest pieces of soil particles and feels gritty to the touch. Next in size are the silt particles which are slippery when wet and powdery when dry. The smallest pieces are clay. They are flat and tend to stack together like plates or sheets of paper. You don't need an expert to determine soil texture. Just pick up a little and rub it between your fingers. If the soil feels gritty, it is considered sandy. If the soil feels smooth like talcum powder, it is silty. If the soil feels harsh when dry and slippery and sticky when wet, the soil is heavy clay. Most soils will fall somewhere in between.

Sandy soils tend to be nutrient-poor since water and nutrients rapidly drain through the large spaces between the particles of sand. These soils also tend to be low in beneficial microbes and organic matter that plants thrive on.

Silty soils are dense and do not drain well. They are more fertile than either sandy or clay soils.

## SOIL BUILDER



### [Garden Compost](#)

[Provides organic matter and natural nutrients for flowers and vegetables.](#)

~~\$8.50~~ \$5.95 [Read more](#)

Heavy clay soils are quite dense, do not drain well and tend to be hard and crack when dry. Because there isn't much space between the clay particles, there usually isn't much organic matter or microbial life in the soil. Plant roots have a hard time growing in the hard material.

## Improving Garden Soil

Adding organic matter in the form of compost and aged manure, or using mulch or growing cover crops (green manures), is the best way to prepare soil for planting. Adding chemical fertilizers will replenish only certain nutrients and do nothing for maintaining good, friable soil. Organic matter will help supply everything your plants need.

*All the riches of the earth! **Black Gold® Compost** provides organic matter and natural nutrients for flowers and vegetables — improves soil texture and structure. Includes Canadian sphagnum peat moss and forest humus to increase vegetable yields and flower blooms. Contains NO sewage sludge or biosolids!*

## **Air**

Just like humans, plants need air, both above ground for photosynthesis and in the soil as well. Air in the soil holds atmospheric nitrogen that can be converted into a usable form for plants. Soil oxygen is also crucial to the survival of soil organisms that benefit plants.

Good soil provides just the right space between its particles to hold air that plants will use. Silty and heavy clay soils have small particles that are close together. These dense soils have little air. Sandy soils have the opposite problem; their particles are too big and spaced out. The excessive amount of air in sandy soil leads to rapid decomposition of organic matter.

Adding organic matter, especially **compost**, will help balance the air supply (the perfect soil is about 25% air). Also, try not to step in the beds or use heavy equipment that can compact the soil. Avoid working the soil if it is very wet.

## **Water**

All forms of life, including plants and soil organisms, need water, but not too much or too little. Healthy soil should be about 25% water.

In soils with too much pore space (sandy soils), water quickly drains through and cannot be used by plants. In dense, silt or clay soils, the soil gets waterlogged as all the pore space is filled with water. This will suffocate plant roots and soil organisms.

## **BEST COMPOSTER**



[Garden Gourmet](#)

[Features a patented venting system to enhance the decomposition process.](#)

| ~~\$104.95~~ \$61.20 [Read more](#)

The best soils have both small and large pore spaces. Adding organic matter (see below) is the best way to improve the structure of your soil through the formation of aggregates. Additionally, organic matter holds water so that plants can use it when they need it.

## Soil Life

A healthy organism population is essential to healthy soil. These little critters make nutrients available to plants and bind soil particles into aggregates that make the soil loose and fluffy. Soil organisms include earthworms, nematodes, springtails, bacteria, fungi, protozoa, mites and many others.

*Reduce curbside waste with the [Garden Gourmet Composter](#). It's the #1 selling bin for homeowners who want to beautify their property and reduce pressure on overtaxed landfills — and it's great for your soil!*

Some of these organisms can be purchased and added to the soil, but unless the environment is suitable for them, they will languish. Better to create an ideal habitat by providing the food (organic matter), air and water they need and let them thrive on their own.

## Organic Matter

Adding compost will improve almost any soil. The texture of silty and clay soils, not to mention their nutrient levels, are radically improved from initially having the compost mixed in. All soils get better with annual applications on top. [Organic compost](#) can be purchased by the bag or by the yard, or you can make it yourself at home.

Compost and other organic materials hold soil particles together in aggregates and help to retain moisture. They also absorb and store nutrients that are then available to plants, and compost is a food source for beneficial microorganisms.

[Making your own compost](#) can be as easy as piling brown layers (straw, leaves), and green layers (grass clippings, livestock manure, food waste) on top of one another. Keep the pile moist and turn it often.

If a pile is too messy, or you are concerned about rodents and other animals getting into your pile, there are all kinds of [composters and bins available for purchase](#) to contain your vegetable scraps and make turning a cinch.

## Mulch

Organic (straw, hay, grass clippings, shredded bark) cover the soil and insulate it from extreme heat and cold. Mulches reduce water loss through evaporation and deter the growth of weeds.

They break down slowly, enriching the soil with organic matter. Visit the [Clemson University Cooperative Extension Service](#) for an in-depth discussion of mulch and mulching techniques.

Inorganic mulches (pebbles, gravel, black plastic, landscape fabrics) will prevent rapid evaporation and keep weeds down just as an organic mulch does. Unlike organic mulches, they do not need to be replaced every year and will not attract insects and rodents. However, inorganic mulches do not benefit the soil by breaking down and adding organic matter which improves soil structure and nutrient content. If you're looking to improve your soil structure, use a clean, seed-free, high-quality garden mulch.

## Fertilizer

Dry or liquid fertilizer can add nutrients to the soil that might not get there any other way. Organic garden fertilizers work a little slower than their synthetic counterparts, but they release their nutrients over a longer time frame. Additionally synthetic fertilizers are bad for the environment and can make the soil worse in the long run as beneficial microorganisms are killed off.

## IT'S ORGANIC!



### [Nutri-Rich \(4-3-2\)](#)

[Includes essential nutrients and micronutrients that slowly release over time.](#)

| ~~\$27.95~~ \$19.95 [Read more](#)

Organic [dry fertilizers](#) are mixed into the soil according to the directions on the label and then watered. They work more slowly than [liquid fertilizers](#), but last longer. Fertilizer blends contain different amounts of nitrogen, phosphorous and potassium. The ratio is listed on the label (for example 5-10-5). Other fertilizers may contain bat guano, rock phosphate, molasses or other ingredients. There are dozens of [recipes for making your own organic fertilizer](#). Most are variations on nitrogen-phosphorus-potassium theme with added nutrients that come from seed meals, ash, lime, greensand or other mineral dusts and additional organic materials, often kelp, leaf mold or cured manures. You can find good basic recipes [here](#) and [here](#).

*High performance and easy to apply! [Nutri-Rich Fertilizer Pellets](#) offer the most natural source of slow-release nutrients to promote healthy plant growth, bountiful yields and brilliant flowering. Each 50 lb bag covers 1,000 sq ft.*

Liquid fertilizers are sprayed directly on the plant foliage or onto the soil. Popular organic liquid fertilizers include fish emulsion and seaweed blends. Compost teas are another liquid fertilizer that is easy to make and takes advantage of the compost you have piling up in the yard.

If you are using a foliar spray, be sure to wet the underside of the leaves. This is where the stomata, the microscopic openings that take in gases, are located. As they open to let in carbon dioxide and release moisture, they will quickly absorb the fertilizer. Read the labels of the liquid fertilizer you choose as some could burn crops and should be applied only to soil.

## **Cover Crops**

Cover crops are a temporary planting, usually sown in the fall, that help protect the soil from wind and erosion and add valuable organic material. They also establish a dense root structure that can have a positive effect on soil texture. Cover crops also suppress weeds, deter insects and disease and help fix nitrogen. When the crops are turned into the soil, they become green manure (see [Overview of Cover Crops and Green Manures](#)). Rye and alfalfa are common cover crops.

Cover crops are planted at the end of the growing season ([winter cover crops](#)) or during part of the growing season itself ([summer cover crops](#)). Legumes such as cowpeas, soybeans, annual sweetclover or velvet beans may be grown as summer green manure crops to add nitrogen along with organic matter. Non-legumes such as sorghum-sudangrass, millet, forage sorghum, or buckwheat are grown to provide biomass, smother weeds, and improve soil tilth.

Winter cover crops are planted in late summer or fall to provide soil cover during the off season. Choose a legume crop for the added benefit of nitrogen fixation. Growers in northern states should select cover crops, such as hairy vetch and rye, with enough cold tolerance to survive hard winters. Many more winter cover crops are adapted to the southern U.S. Cool-season legumes include clovers, vetches, medics, and field peas. They are sometimes planted in a mix with winter cereal grains such as oats, rye, or wheat.

After you have harvested your summer crops, add compost and any other amendments (such as lime) that you have determined your soil needs. Disperse the [cover crop seeds](#) and rake lightly. If you grow vegetables into the fall, plant cover crops seeds in between the rows a month or less before you expect to harvest.

## **ELEVATES PH**



## Oyster Shell Lime

Contains up to 39% calcium (Ca), plus many other important plant nutrients.

~~\$18.95~~ \$15.95 [Read more](#)

Don't let your cover crops go to seed or they may prove invasive. When spring comes around, till the crop into the soil 2-3 weeks before planting. A rototiller is an easy way to incorporate cover crops into the soil.

## **pH**

Don't plan on changing the pH of your soil with one dose of a wonder material. As explained at [Savvy Gardener.com](#) it should take a season or two to moderate the pH and then a little effort every year to maintain it. Whether the soil is acidic or alkaline, adding lots of organic material every year will help balance it out.

***Finely ground [Oyster Shell Lime](#) is a by-product of the seafood industry. Contains up to 39% calcium plus a natural balance of other nutrients and micronutrients. Raises pH in acidic soils and corrects calcium deficiencies, too! Each 50 lb bag covers 1,000 sq ft.***

Acidic soil can be buffered with powdered limestone added to the soil in the fall. (Autumn is the prime time to do this because it takes several months to work). Be aware that plants like azaleas and blueberries grow better in acidic soil, but most plants don't.

To raise the pH of sandy soil by about a point, add 3-4 pounds of ground limestone per 100 square feet. For loamy soil, 7-8 pounds of limestone per 100 feet should help, and 8-10 pounds per 100 feet is appropriate for heavy clay soil. Limestone should be applied at least two to three months ahead of planting to give it time to work.

Wood ash can also raise the pH of soil, but care must be taken in its use. Applying too much wood ash may result in high pH readings and take nutrients from your soil. Spread only light amounts on top of your soil in the fall and make sure to thoroughly turn the soil in the spring.

Seeds that come in contact with ash may not germinate. If using wood ash every year, keep a close eye on your soil's pH and stop using it when the proper reading is achieved.

Alkaline soil on the other hand, needs to be made more acidic. This can be done with the addition of sulfur, sawdust, conifer needles, sawdust or oak leaves. In sandy soil you can lower pH by approximately one point by adding 1 pound of ground sulfur per 100 feet to sandy soil, 1.5-2 pounds per 100 feet in loamy soil and 2 pounds per 100 feet to heavy clay soils.

## Soil Texture

To make sandy soil less sandy, mix 3-4 inches of organic matter (like compost) into the soil. Use wood chips, leaves, hay, straw or bark to mulch around plants and add at least 2 inches of organic material each year. If possible, grow cover crops and turn them into the soil in the spring (see cover crops discussion above).

## LOWERS PH



### Elemental Sulfur

[Lowers pH in alkaline soils and is used around acid loving plants such as azaleas.](#)

| ~~\$24.50~~ \$18.95 [Read more](#)

If silty soil is a problem, you can improve it by adding an inch of organic material each year. Try to avoid compacting the soil — don't walk on it or till it unless absolutely necessary. Raised beds are a great way to use silty soil without having to intensively work it.

Heavy clay soil will be improved with the addition of 2-3 inches of organic matter worked into it. Then add another inch or more to the top each year. Raised beds will improve the drainage and keep you from walking on it, which can compact the soil. Try not to till unless necessary.

***Lowers pH in alkaline soils! [Yellowstone Brand® Elemental Sulfur](#) contains 90% sulfur with 10% bentonite as a binder. Also useful as a soil amendment around acid loving plants such as blueberries, azaleas and rhododendrons. Broadcast 10 lbs. per 1,000 sq ft.***

## Nutrient Deficiencies

Typically, [bone meal](#) is recommended to boost phosphorous levels in the soil while [blood meal](#) is suggested for raising nitrogen levels. However, both of these are products of slaughterhouses. Fortunately, there are some alternatives.

In lieu of blood meal or fish emulsion, try [alfalfa meal](#) or [alfalfa pellets](#) (sold for rabbit food). Or grow alfalfa as a cover crop to make nitrogen available to plants. Alfalfa also adds a bit of phosphorous and potassium and works well as a compost accelerator.

Like alfalfa pellets, [cottonseed meal](#) can be purchased at your local feed store and provides nitrogen to the soil. It is pretty acidic, however, so use it in combination with lime unless you want to lower the soil pH.

As a substitute for bone meal, add [soft-rock phosphate](#) to increase phosphorous levels.

As a side note, unless you can find organic alfalfa or cottonseed meal, adding them to the soil isn't strictly "organic." Non-organically grown alfalfa and cotton seed may contain pesticide and herbicide residues. Organic fertilizers will add nutrients without danger from chemicals.

## Recommended Products



### [Bone Meal \(2-14-0\)](#)

[A very strong source of phosphorous and contains up to 24% calcium.](#)

| ~~\$59.95~~ [\\$52.95](#) [Read more](#)



### **Kelp Meal (1-0-2)**

[An excellent source of micronutrients and beneficial plant growth promoters.](#)

| \$104.95 ~~\$89.95~~[Read more](#)



### **Azomite (0-0-0.2)**

[This natural re-mineralizer helps grow stronger plants and better tasting crops.](#)

| \$29.95 ~~\$24.95~~[Read more](#)



### [Dried Blood \(13-0-0\)](#)

[Used for years by growers as a powerful, slow release source of nitrogen \(13%\).](#)

| \$76.95 ~~\$65.95~~[Read more](#)



### [Sul-Po-Mag \(0-0-22\)](#)

[Also known as sulfate of potash-magnesia, Sul-Po-Mag contains 22% potash \(K\).](#)

| \$49.95 ~~\$44.95~~[Read more](#)

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### **15 Responses to “Preparing Garden Soil”**

1.  Joe Van Lente on July 8th, 2013 at 10:21 am <#>

Was wondering if you have done any soil amending with boiled rice hulls?

[Reply](#)

2.  rob on March 28th, 2015 at 8:35 am <#>

Hi I've been trying to get the right type of soil to add to my garden seem they start off good but the get stunted or diseased so when I go to a gardening store what ingredients should I buy, I know that I will get disease free plants I do add black soil and I use a little tiller to combine the soils what are you thoughts, tomatoes are the big problem that I have thx..

[Reply](#)

3.  Alicia Lawrence on April 2nd, 2015 at 1:29 pm <#>

Excellent post on garden soil, Eric! For those looking for additional info on testing your garden soil and making sure it is perfect for your garden, check out this free ebook: [http://www.saferbrand.com/resource/uploads/SaferBrand\\_E-pub\\_Gardening\\_Secrets\\_In\\_The\\_Soil.pdf](http://www.saferbrand.com/resource/uploads/SaferBrand_E-pub_Gardening_Secrets_In_The_Soil.pdf)

[Reply](#)

- o  Leslie on July 14th, 2016 at 5:53 pm <#>

Hi, Alicia,

I know you posted some time ago, but I am trying to track down a copy of the eBook, Gardening Secrets in the Soil. It is no longer available at that website. Do you have a copy you could email to me, or know where I can track one down?

[Reply](#)

-  Steve on July 18th, 2016 at 7:34 pm <#>

[http://images.saferbrand.com/is/content/woodstream/safer/us/content/pdf/SaferBrand\\_E-pub\\_Gardening\\_Secrets\\_In\\_The\\_Soil.pdf](http://images.saferbrand.com/is/content/woodstream/safer/us/content/pdf/SaferBrand_E-pub_Gardening_Secrets_In_The_Soil.pdf)

[Reply](#)

4.  Matiullah on February 7th, 2016 at 3:03 am <#>

Fantastic. The information regarding the practice of preparation of good and healthy soil for gardening purpose is of great value. It will facilitate the gardeners towards quality production in their gardens. Thanks for publishing and sharing such nice information.

[Reply](#)

5.  GAANA on February 15th, 2016 at 7:36 am <#>

EXCELLENT, VERY INFORMATIVE.

[Reply](#)

6.  Annie Hawthorne on March 8th, 2016 at 6:21 am <#>

Great and very helpful post! I just moved to a new place and I finally have a small garden to take care of. Your tips and advises are exactly what I need right now, because I'm thinking to start with preparing the soil for the spring. Thanks for all the useful information you've shared!

[Reply](#)

7.  Kirby Clements on March 31st, 2016 at 7:44 pm <#>

Great info, I just finished turning my garden soil over preparing for spring planting. I mixed garden material with the soil by using a tiller and will start planting in a week or so. Looking forward to the results.

[Reply](#)

8.  Jordan on May 2nd, 2016 at 10:52 am <#>

Awesome, Lots of Info, great for gardening if you are new to it.

[Reply](#)

9.  Duncan on July 22nd, 2016 at 3:29 am <#>

Great article, but was wondering how long before planting should I put my Organic Soil Mix out? Let's say I was going to plant in late March?

[Reply](#)

10.  Michael Rogus on August 21st, 2016 at 3:22 pm <#>

Thank you for the info found here. My question to anyone would be, I live in the Phoenix area of Arizona and growing a healthy lawn is a task. I like to grow vegetables and fruits in my yard. Is my best bet to check the pH level first then follow your advice in this article or do you have any other information?

[Reply](#)

11.  Emmanuel on October 26th, 2016 at 4:47 pm <#>

I am trying to create an app that can teach individuals on how to plant for the first time, but my problem is how they can evaluate the soil by themselves to see to determine if is good for planting, like questions and answered and generating a solution if a problem has been detected.

[Reply](#)

12.  The Missus on February 7th, 2017 at 8:27 am <#>

Boy, I sure am ignorant when it comes to soil and planting. No wonder my plants don't so well. And when they do grow well, it's usually by accident. Like when I accidentally planting some basil in the shade and it grew like crazy. I thought that herbs liked the sun, so I planted them in direct sunlight and they only did 1/4 as well as the same basil seeds did in the shade next to the house. My father had such a green thumb. I do not.



[Reply](#)

13.  Tom Gammell on May 28th, 2017 at 6:48 am <#>

I lost a favorite recipe for amending my vegetable garden soil. It contained sphagnum peat, Canadian peat, line, 10/10/10 as I recall. I don't know what else or the amount of each. Can someone help me? We hope to plant the garden in the next week.

[Reply](#)

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## Why Are Today's Vegetables Less Nutritious?

By [E. Vinje](#)

**How building soil, growing heirlooms can stop nutrient decline in vegetables and fruits.**

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*“Let food be thy medicine and medicine be thy food.” – Hippocrates*

It’s an old question among those interested in the quality of the food we eat. Do we get enough nutrition from the fruits, vegetables, and other foods we consume? Or do we need to supplement our meals with vitamins and minerals?

The answers to this two-part question is both no and yes. No, we don’t get enough nutrition from our foods and yes, we do need to supplement to make up the difference. This thinking has been backed by one simple fact. There’s been **a decline in the nutritional value of vegetables and fruits over time.**

## **#1 SOIL TESTER**



## Soil Test Kit

[You'll appreciate this easy, fast and fun way to achieve better growing results.](#)

| \$17.95 \$12.95 [Read more](#)

*If you're looking for the fastest ticket to a lush garden, start at ground level. Planet Natural offers a large selection of [amendments](#), [potting soils](#), [inoculants](#) and [testing kits](#) to help you produce healthy, productive plants year after year.*

That was the conclusion of a [study](#) (PDF) offered in 2003 that compared the levels of 13 nutrients in 43 different plants in the years 1950 and 1999. Seven of the 13 nutrients — protein, calcium, phosphorus, iron, riboflavin (vitamin B2) and ascorbic acid, a form of vitamin C — showed “statistically reliable declines” over those 50 years (the other seven nutrients showed statistically meaningless changes). The most notable decline, some 38%, was seen in riboflavin, [a nutrient critical to the body's utilization of other nutrients](#).

An earlier study from England that compared crops in the 1930s and 1980s found “marked reductions” in mineral content over those years in the 20 fruits and 20 vegetables it surveyed.

Then there's the loss of phytonutrients, the [compounds that fight cancer, heart disease, diabetes, and dementia](#), among others, something commercially raised produce sorely lacks compared to that in the diets of our foraging ancestors.

Nothing against supplements — your healthy **Planet Natural** blogger takes his vitamins, and then some, everyday. But shouldn't we be focused on **growing more nutritious fruits and vegetables** rather than concentrating on yields and profits?

It's often thought that depletion of minerals and **decline in general farm soil quality** after years of heavy chemical fertilization are to blame in nutrient reductions. Various [studies](#) make this correlation. But it turns out that the answer to the nutrition-loss question isn't as simple as that. There's another factor, one that should cheer growers of heirloom crops and organic gardeners in general.

The 2003 study suggests that as big — or bigger — a factor in nutrient declines as soil depletion is **the kinds of fruits and vegetables now being raised**. As commercial growers and seed companies have developed and planted varieties for larger yields and easier care, something has been lost. That something is nutrition.

## FREE SHIPPING!



### Garden Seeds

All heirloom seeds offered by Planet Natural are non-treated and non-GMO.

[View all](#)

The irony here is that some GMO crops are said to be more nutritious — “bio-fortified” — than their non-genetically engineered counterparts. [Where’s the proof?](#)

*All the [heirloom garden seed](#) offered by Planet Natural is non-treated, non-GMO and NOT purchased from Monsanto-owned Seminis. Planting instructions are included with each packet and shipping is FREE. Let’s grow together!*

The trade off between yields (read “profits”) and nutrition loss looks differently to corporate agriculture as it does to home gardeners. In the home garden, **nutrition levels don’t have to be sacrificed for yields**. Healthy soil means our crops can have good nutrition and yields, especially when we grow heirloom varieties.

Growing the most healthy and nutritious food that we can has always been one of the prime motivators behind home gardening. We do all we can to **make sure our [soil is healthy](#)**, containing everything our plants need and nothing, like pesticides and other chemicals, they don’t. Now we know that **growing traditional crops and [heirlooms](#)** also give us a nutrition edge.

The knee-jerk answer to the nutrition problem, even offered in the above study, is to eat *more* of the now-less nutritious foods. That seems a less attractive possibility when we’re eating commercial produce of poor quality and indeterminate freshness. Not surprisingly, I find it easier

to eat more of the fresh, [home-grown or farmers market tomatoes](#) than the ones I pick up at the supermarket. Eating more of those commercial quality tomatoes isn't an appetizing thought.

## Recommended Products



### Organic Compost

Contains NO sewage sludge or bio-solids that are often found in commercial brands.

| ~~\$19.50~~ \$14.95 [Read more](#)



### Dried Blood (13-0-0)

Used for years by growers as a powerful, slow release source of nitrogen (13%).

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**[Azomite \(0-0-0.2\)](#)**

[This natural re-mineralizer helps grow stronger plants and better tasting crops.](#)

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## Indoor Plant Care

By [E. Vinje](#)

**Growing houseplants successfully means providing the best care possible. Here's how.**

- [Indoor Gardens](#)
  - [Greenhouses](#)
  - [Houseplants](#)
  - [Hydroponics](#)
  - [Indoor Gardening](#)
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Indoor plants add color, texture and warmth to the home. They allow year-round access to gardening and can even improve air quality. Many houseplants are easy to grow, but they must be given appropriate care in order to thrive. Since your plants were probably started in a greenhouse — grown under ideal conditions — moving them into your home takes a bit of adjustment on their part.

Proper watering and lighting are the most important components of indoor plant care, but humidity and temperatures also play a role. The trick is to try to mimic the climate of the place that plant came from.

Tropical plants thrive in warm, humid environments, while cacti and succulents prefer hot, dry climates. Of course, your home can't be everything to every plant, but you can take plant needs into consideration when choosing plants. And, with a few tricks, you can convince your green friends that they are living in their ideal environment.

## **A BESTSELLER!**



## **[Bordy Plant Waterer](#)**

[Going on vacation? The Scheurich Bordy will watch after your plants for 4 days.](#)

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## Plant Selection

The first thing to consider when [selecting a houseplant](#) is where you want to put it. Then match the space and lighting with the plant's requirements. Do you have a big spot by a sunny window or a small space with moderate light?

*With the right equipment, growing beautiful house plants is easy! At Planet Natural we have everything you need: [pots](#), [soils](#) and [fertilizers](#) to get started, plus [grow lights](#) to bring the green-giving magic of the sun indoors. Now, let's grow!*

Next ask yourself if you are looking for a plant with beautiful green leaves or would prefer a flowering plant. Some flowering houseplants are seasonal while others will bloom year after year (see [Top Choices for Easy Care Flowering Houseplants](#)).

A third consideration is how much time you can devote to a particular plant. A spider plant will take almost any amount of care (or neglect), while an orchid requires significant tender, loving care.

## Indoor Plant Care

### Water

Potting soil should be kept moist, but not wet. Of course, there are always exceptions — [succulents](#), and other thick-leafed plants do best when the soil dries out between watering. If the soil is kept too dry or too damp the plant's roots will begin to die, which can lead to inadequate growth or even death of the plant.

There are several methods to determine when a plant needs water. If the potting soil becomes lighter in color or cracked, it's probably time to water. Pick up your plant and gauge the weight after watering. After a few practice lifts, you'll be able to tell if the plant needs water just by picking it up. Of course, you can always stick a finger in the soil to determine how moist it is below the surface. For large plants, a hand-held moisture meter may be your best bet to determine how much water is present around the plant's root mass.

### Dehydration

Do NOT let plants get to the point where they are wilting or the soil is pulling away from the edge of the container. These symptoms indicate dehydration and at this point the plant is already seriously stressed and the roots may be damaged.

### 2-IN-1 WATERING CAN



## Sprayman

[You and your plants are gonna' love the award-winning, super-chic design.](#)

| \$16.95 ~~\$12.95~~ [Read more](#)

### Signs of underwatering include:

- Slow leaf growth
- Translucent leaves
- Premature dropping of flowers or leaves
- Brown, yellow or curled leaf edges

*You and your plants are gonna' love the [Scheurich Sprayman](#) — it's a watering can and spray bottle in one! Made out of high quality, transparent plastic, the award-winning design of this super-chic watering tool makes plant maintenance easy and fun.*

## Overwatering

Too much water is just as detrimental as too little. Frequent watering forces air from the soil and opens the door for root-killing bacteria and fungus to move in. Overwatering is the number one killer of houseplants.

- Signs of overwatering include:
- Fungus or mold on the soil surface
- Mushy brown (maybe stinky) roots at the bottom of the pot
- Standing water in the bottom of the container
- Young and old leaves falling off at the same time
- Leaves with brown rotten patches

Watering on Demand	
Plants requiring more water	Plants requiring less water

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>- Flowering plants</li> <li>- Plants potted in clay pots</li> <li>- Plants grown in small pots</li> <li>- Actively growing plants</li> <li>- Plants located in direct sunlight</li> <li>- Large-leaved or thin-leaved plants</li> <li>- Plants that are native to wet areas.</li> </ul> | <ul style="list-style-type: none"> <li>- Resting or dormant plants</li> <li>- Recently repotted plant</li> <li>- Plants grown in high humidity</li> <li>- A plant located in a cool room</li> <li>- Plants potted in non-porous containers</li> <li>- Plants with thick or rubbery leaves</li> <li>- Plants grown in a water retentive mix</li> </ul> |
|--|---|

For those who are too busy to keep up with a regular watering schedule, which requires checking individual plants every 3-4 days, there are several [self-watering devices](#) available. A moisture wick draws water from a dish of water into the root ball of your plant. Capillary mats and moisture tents also keep plants watered. You can always make your own [self-watering plant container out of a 2-liter pop bottle](#).

## Water Quality

### RECOMMENDED PRODUCT



#### [Moisture Meter \(Digital\)](#)

[Eliminates over and under watering by measuring moisture at the root level.](#)

~~\$12.95~~ \$9.95 [Read more](#)

Room temperature tap water should be fine for most indoor plants, even if there is chlorine or fluoride added to your city's water. Plants especially love rainwater or melted snow (unless you live in a region with acid rain). Avoid continuous use of softened water, which may contain sodium.

## How to Water

Plants can be watered from the top down or bottom up. When watering from the top, try not to wet the foliage, while ensuring the entire soil mass is moistened. Water should be coming out of the drainage holes in the bottom of the pot.

*The [Rapitest® Digital Moisture Meter](#) includes a handy plant care booklet and watering guide for over 150 plants. Use to prevent over and under watering by measuring moisture at the root level.*

If you prefer to let your plants do the work, set the plant in a dish of water and the roots (and capillary action in the soil) will pull up whatever they need. This method, known as bottom-watering, is a more thorough, if time-consuming, way to water plants.

**Tip:** Be sure to dump any standing water from the saucer one hour after watering.

## Drainage

Good drainage is essential to healthy houseplants. Start with a good, [organic potting soil](#) (not regular soil) that has been mixed specifically for indoor gardening.

Choose a container with drainage holes, or put a layer of pebbles in the bottom of a container without holes. The point is to not let the plant stand in water. From time to time, check that the drainage holes have not been clogged. And always empty standing water (don't run it back through the plant's soil).

## Light

As with watering, every plant has different light requirements. Many plants prefer direct sunlight, but this may be hard to get inside a house. Placing a plant in a window might offer enough light, but some houseplants will need supplementing from a grow light (see [Lighting Indoor Houseplants](#)).

## Flowering Plants

### CFL GROW LIGHT



### [CFL System](#)

[Low profile design provides more concentrated light than standard shop tubes.](#)

| \$109.95 \$75.00 [Read more](#)

Flowering plants generally do best in moderately bright light and for this reason windows located on the south, east or west side of the house are best for potted flowering plants. (African violets prefer north-facing windows.)

*Garden indoors all year long with a [Compact Fluorescent Grow Light](#). Low profile design provides more concentrated light than standard fluorescents. Plus, NO heat means that the lamp can be placed closer to your plants for more light energy and improved productivity.*

## Foliage Plants

Foliage plants can be divided into three categories: those requiring low light, moderate light and high light.

A dimly lit room should suffice for those few plants willing to survive in low light areas. Moderate light-needing plants will prefer a north-facing window, light diffused through a thin curtain or daylight without direct sun. Indoor plants that prefer high light will need to be in a south-facing window or under a grow light.

Some plants will benefit from being moved outside in the summer to get a little extra light. Read about [Moving Plants Indoors & Outdoors](#) here.

## Temperature

Many houseplants thrive in temperatures between 65-75° during the day and 55-60° at night. Of course, temperature preferences vary from plant to plant with tropical plants liking temperatures around 90° (or higher) and other plants growing better in cooler temperatures.

## Humidity

Most plants thrive in high humidity — around 80%. Unfortunately, most homes are much drier, especially in the winter when forced heat can even further drop the humidity.

Using a humidifier can help, but there are other ways to increase the moisture in the air near your plants. A small tray containing pebbles and water can boost local humidity as can grouping plants more closely together. Daily misting of the plant's leaves can help as well. For some plants, such as gardenias and orchids, keeping them in a bathroom or the kitchen (both usually have a higher humidity) can help.

## Fertilizer

### #1 ORGANIC FERTILIZER



### [Organic Fish & Seaweed \(2-3-1\)](#)

[Use on a regular basis for bigger crops, increased sugars and better blooms.](#)

| ~~\$18.95~~ \$15.95 [Read more](#)

Every time a plant is watered nutrients leach out of the soil. Even if that didn't happen, plants would quickly deplete the nutrients in their soil. Unlike plants living outside, houseplants don't have a regular source of nutrient replenishment unless you fertilize them regularly. (Newly purchased plants have been heavily fertilized in the greenhouse and can wait a few weeks before getting started on a fertilizing regime.)

Fertilize once a month when plants are flowering or growing. During the winter, when plants are dormant or generally not growing much, fertilizer can be withheld.

*Made in the USA! Neptune's Harvest is a top-selling [Fish and Seaweed Fertilizer](#) that gets AMAZING results. This gentle, complete blend is a simple way to give your plants the optimal nutrition they need.*

If a plant is dropping its lower leaves, showing weak growth or an overall yellow-green color, it may need more fertilizer. It might also need more light or less water, so take the time to analyze all conditions before pouring on more plant food. Adding fertilizer when a plant does not need it can be worse than doing nothing at all.

**Tip:** If a plant is wilted, water well first then apply a fertilizer later — after it has recovered.

### **Fertilizer Types**

Choose an organic fertilizer specific to houseplants and read the instructions carefully. While [natural fertilizers](#) are less likely to burn or harm your plants than a synthetic fertilizer, it is important to apply the correct amount. In general, plants grown in low light will not require as much fertilizer as plants grown outside or in bright light.

To start, use about 1/4 the amount of fertilizer recommended on the label once a month. Then, if overall plant color becomes lighter, increase fertilizer applications to every 2 weeks. On the other hand, if the new growth is dark green, but the leaves are small and the space between the leaves seems longer than on the older growth, fertilize less often.

**Tip:** Soluble salts from synthetic fertilizers can build up over time and create a crusty layer of salt deposits on the soil surface. Remove this layer and leach the soil every 4-6 weeks with generous amounts of water to help avoid toxic salt build up. Excessive salts can damage roots and make the plant more susceptible to disease and insect attack.

## Repotting

If your plants are thriving and growing the way you want them to, eventually they will need a bigger pot — or some fresh potting mix. Repot plants in the spring when they are just starting to grow. Vigorous root growth will allow the plant to adjust to its new container quickly.

When it comes time to repot, choose an [organic soilless medium](#) made specifically for potting houseplants (maybe even specific to your species of houseplant). There are many to choose from, or you can make your own (see [Potting Mixes for Certified Organic Production](#)).

Choose a pot that is bigger than the current container, but not huge. A pot that is too-big can encourage root rot and other problems because the soil will remain wet for days, or even weeks before it can be used by the plant.

Take care with the root system when repotting to avoid damage. Carefully firm the soil around the root ball without compacting the soil. Leave enough space at the top of the new container for water and water thoroughly. (Click on [Repotting Houseplants](#) for step-by-step instructions.)

## Recommended Products



### [Happy Frog Soil](#)

[Alive with beneficial microbes and chock-full of the stuff that matters!](#)

| ~~\$11.95~~ \$7.95 [Read more](#)



### **T5 Fixture w/ Stand**

[Ideal for growing young seedlings, cuttings, flowers and house plants.](#)

| ~~\$71.95~~ \$61.95 [Read more](#)



### **Organic Leaf Shine**

[All ingredients are 100% non-toxic and will keep leaves clean and plants healthy.](#)

| ~~\$21.95~~ \$14.10 [Read more](#)



### [Froggy Plant Waterer](#)

[Fun, yet functional! Froggy supplies a needed drink to plants for several days.](#)

| \$12.95 \$9.95 [Read more](#)



### [Bloom Booster \(3-9-4\)](#)

[Promotes MAXIMUM blooms and strong root development in flowering plants.](#)

| \$13.50 \$9.50 [Read more](#)

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### **16 Responses to “Indoor Plant Care”**

1.  Marj on May 13th, 2014 at 7:41 pm <#>

This is an amazing website. I am a plant person, live in a small two bedroom duplex with 400 plants. I am going to try to figure out PayPal. Your prices are very reasonable for

natural products. I have not read whether you have information on how to protect plants during the winter. My son helped me build two pergulas, I wrap them in plastic during the winter, I still lost plants.

[Reply](#)

-  Ricky on April 30th, 2017 at 12:00 pm <#>

Paypal is simple and free. My advice do not use their prepaid card. Use their debit or connect with a bank you can trust so you have quality insurance of your money. I have a bank account I only use with Paypal. Also 400 plants 2 bedroom wow amazing...

[Reply](#)

2.  Christina Ryan on March 17th, 2015 at 3:50 am <#>

Selection of correct pot/s for your indoor as well as outdoor gardening is essential to grow your strains or plants with proper care.

# Aeration in pot soil

# Water level in your pot/s

# Proper water distribution with an order in your multiple pots

These are the basic needs for your strain/s. Irrigation system with eco grow pots can be a good choice for your gardening.

The irrigation system can semi-automate your system with its accessories like,

# Dipstick

# Eco Expension Irrigation Kits

to measure the water level as well as proper water distribution in your pots respectively.

[Reply](#)

-  RK on February 14th, 2016 at 10:43 am <#>

Thank you for helpful tips appreciated your input.

[Reply](#)

3.  Sylvia I. JOHNSON on October 23rd, 2015 at 10:38 am <#>

I am so grateful for plant lovers that take out time to share their knowledge. I got a clipping from a lady, I have no soil so it's been in water, with a little lamp close by, but indirect. It loves it. Now I'm afraid to plant it in dirt, since it's been in water two yrs. I've since gotten 4 plants in water by pinching. My mom got one too. Well, anyway, I thank you.

[Reply](#)

4.  anelisa on November 14th, 2015 at 12:50 pm <#>

This is real amazing i learn new things about plants everyday. But this just wraps up my knowledge and undstanding in a more easy way.

[Reply](#)

5.  Jay on April 23rd, 2016 at 4:37 am <#>

Hello, I have a 6 foot Corn plant in my small apt. that is about 4inches away from the ceiling. It is a beautiful plant and I got a very small cutting from a friend 3 years ago. I put that cutting in water until the roots formed and then transferred to a potting soil. I need help with proliferating my plant the easiest way possible without destroying it. I love the height, but know that it should be reduced, hopefully by 1 to 2 feet only. Looking forward to your response. Thank you.

Jay

[Reply](#)

6.  Karen on June 3rd, 2016 at 1:18 pm <#>

I have great light in my new house, the house plants are thriving. thriving a little too much. I have a corn plant that is almost to the ceiling – its busting out of its pot and I don't really want a bigger plant in here – how do I keep it the size it is?

[Reply](#)

7.  shanon on June 4th, 2016 at 3:44 am <#>

huh...can i use home made compost instead of fertilizers and salts???

[Reply](#)



- o E. Vinje on June 4th, 2016 at 5:01 am <#>

Hi Shanon –

Though most people think that compost is a fertilizer, it is actually a soil amendment. Fertilizers add nutrients to soil; amendments improve the soil so that plants can make use of those nutrients. Compost does contain low levels of plant nutrients, but its primary role is not to feed plants but to improve the soil so that plants can feed themselves.

[Reply](#)



8. Lorraine lawton on June 17th, 2016 at 3:57 pm <#>

I have little black fly's coming from my plants. What are they?

[Reply](#)



- o E. Vinje on June 18th, 2016 at 4:53 am <#>

Lorraine –

Here's our page on how to get rid of fungus gnats indoors.

<https://www.planetnatural.com/pest-problem-solver/houseplant-pests/fungus-gnat-control/>

Hope it helps!

[Reply](#)



9. John McKee on July 11th, 2017 at 9:29 am <#>

How does one encourage plants to grow new stems on lower limbs?

I am acquainted with “grafting”, but is there method of aiding existing nodnells to put out a new limb.

Thank you..."Learning" John

[Reply](#)

10.  Lauren on September 15th, 2017 at 8:20 pm <#>

Thank you for the information. I appreciate and enjoy your site. However, the video offers advice that non-plant folks should not follow: layering the bottom of a pot with rocks is not a good idea. It contributes to water retention through perched water and impedes proper drainage and root growth. I do hope that you will correct this in future informational videos.

[Reply](#)

11.  Dennis Nyongesa on October 3rd, 2017 at 11:13 am <#>

This is the best gardening site I have met so far and I think it will help me solve my house issues. Points are nailed and very clear on directions which motivates even those who don't like reading.

[Reply](#)

12.  Cheryl on November 1st, 2017 at 10:58 pm <#>

I have 2 Ficus Alli that until a few days ago seemed to be doing great. Now I notice extreme leaf loss, center branches drying up and are both covered in white spot. I used my flashlight to check for spider mites and scales but didn't see any. Can someone help me?

[Reply](#)

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